

BEAVER ISLAND TRANSPORTATION STUDY UPDATE



December 1, 2021

Mp2planning, llc

- ✓ Please note this meeting is being recorded as a Zoom meeting.

TASKS

1. Examine the current private/public partnership's effectiveness. What recommended changes need to be made to the operational agreement to reflect current and future needs. Is the current operator the best option? Is a public option a possibility?
2. Why have the passenger numbers declined? Are passenger fares and freight rates equitable or should they be reduced?
3. What does the Authority need to update in terms of vessels and infrastructure?
4. What are the Authority's best options for revenue enhancements?

DEMOGRAPHICS – HIGHLIGHTS – 2020 DATA AVAILABLE

Population				
	2010	2015	2019	2020 (New census)
Peaine Township	268	272	266	266
St. James Township	258	312	311	259
Total Beaver Island	526	584	577	525
Charlevoix County	26,228	26,134	26,188	26,054
Michigan	9,952,687	9,900,571	9,965,265	10,077,331
Household				
	2010	2015	2019	2020 (New census)
Peaine Township	124	128	133	141
St. James Township	109	141	161	135
Total Beaver Island	233	269	294	276
Charlevoix County	11,355	10,794	11,503	11,274
Michigan	3,843,997	3,841,148	3,935,041	4,041,760
Employment ¹				
	2010	2015	2019	2020 (Not available)
Charlevoix County	14,212	15,586	15,677	
Michigan	5,038,194	5,501,549	5,772,831	

SURVEY

Survey	Distribution	Completed Surveys	Response Percent
Mail back survey			
Mailed to property owners in Peiane Township	1,076	384	0.36
Mailed to property owners in St. James Township	862	217	0.25
Total Mail back	1,938	601	0.31
Boat Company email distribution	8,500	902	0.11

SURVEY RESULTS – MAIL BACK

- **More use of air service to travel between the island and mainland;**
- **Similar shift to air is seen in freight;**
- **General satisfaction with BIBCO service and fares;**
- **Over 70% stated it would be a minor/moderate to major impact/hardship if the Emerald Isle went out of service; and,**
- **No clear preference/consensus about the location of the mainland dock in downtown Charlevoix.**

SURVEY RESULTS – BIBCO EMAIL

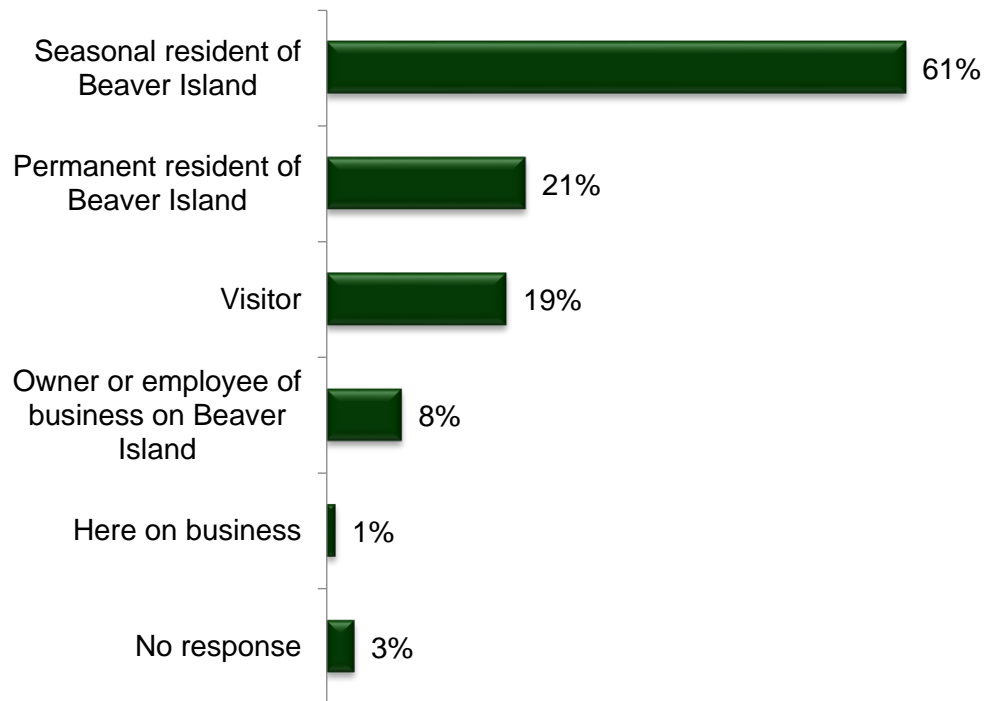
- **Seventy percent were visitors, 23 percent were seasonal.**
- **Few identified as residents.**
- **(70%) said they used the ferry for service to the island. Most make less than nine one-way trips per year.**
- **Over seventy percent believe the fares are reasonable**
- **About 60 percent thought the freight and vehicle rates were reasonable.**
- **Thirty-seven percent unsure about future technology while 37 percent thought future vessels should be powered by alternative energy sources.**
- **Twenty-four percent thought moving the downtown Charlevoix operation was a good idea while 35 percent said it would make no difference and 24 percent believe the downtown location is a good location.**

ADDITIONAL SURVEY ANALYSIS – CROSS TABS

SURVEY RESULTS – MAIL BACK

Question 1 (check all that apply; totals do not equal 100%)

Which of the following applies to you?



ADDITIONAL SURVEY ANALYSIS – CROSS TABS

Question 2 Crosstabulation

		Q1. Which of the following applies to you?				Total	
		Seasonal Resident of Beaver Island	Permanent Resident of Beaver Island	Visitor			
Q2. How do you typically get to and from Beaver Island? ^a	Ferry	Count	217	39	73	329	
		% within Q1. Which of the following applies to you?	59.5%	33.9%	77.7%		
	Air Service	Count	230	102	39	371	
		% within Q1. Which of the following applies to you?	63.0%	88.7%	41.5%		
	Personal Boat	Count	8	2	6	16	
		% within Q1. Which of the following applies to you?	2.2%	1.7%	6.4%		
	Personal Plane	Count	19	3	2	24	
		% within Q1. Which of the following applies to you?	5.2%	2.6%	2.1%		
	No response	Count	1	0	1	2	
		% within Q1. Which of the following applies to you?	0.3%	0.0%	1.1%		
	Total		Count	365	115	94	574

Note: Question 1 allowed multiple responses, which means totals will not equal 100.

ADDITIONAL SURVEY ANALYSIS – CROSS TABS

Question 4 Crosstabulation							
			Q1. Which of the following applies to you?			Total	
			Seasonal Resident of Beaver Island	Permanent Resident of Beaver Island	Visitor		
Q4. How do you typically get your personal freight to and from Beaver Island? ^a	Ferry	Count	318	75	76	469	
		% within Q1. Which of the following applies to you?	87.1%	65.2%	80.9%		
	Air Service	Count	161	96	25	282	
		% within Q1. Which of the following applies to you?	44.1%	83.5%	26.6%		
	Personal Boat	Count	5	2	3	10	
		% within Q1. Which of the following applies to you?	1.4%	1.7%	3.2%		
	Personal Plane	Count	12	3	2	17	
		% within Q1. Which of the following applies to you?	3.3%	2.6%	2.1%		
	Other	Count	6	2	3	11	
		% within Q1. Which of the following applies to you?	1.6%	1.7%	3.2%		
	No Response	Count	2	0	7	9	
		% within Q1. Which of the following applies to you?	0.5%	0.0%	7.4%		
	Total		Count	365	115	94	574

Percentages and totals are based on respondents.

ADDITIONAL SURVEY ANALYSIS – CROSS TABS

Q5. Do you think passenger fares on the ferry are reasonable? * Q1. Which of the following applies to you? Crosstabulation

		Q1. Which of the following applies to you?				Total
		Seasonal Resident of Beaver Island	Permanent Resident of Beaver Island	Visitor		
Q5. Do you think passenger fares on the ferry are reasonable?	Yes	Count	267	63	71	401
		% within Q1. Which of the following applies to you?	73.2%	54.8%	75.5%	69.9%
	No	Count	83	46	15	144
		% within Q1. Which of the following applies to you?	22.7%	40.0%	16.0%	25.1%
	No response	Count	15	6	8	29
		% within Q1. Which of the following applies to you?	4.1%	5.2%	8.5%	5.1%
Total		Count	365	115	94	574
		% within Q1. Which of the following applies to you?	100.0%	100.0%	100.0%	100.0%

ADDITIONAL SURVEY ANALYSIS – CROSS TABS

Q6. Do you think freight rates and vehicle prices on the ferry are reasonable? * Q1. Which of the following applies to you? Crosstabulation

			Q1. Which of the following applies to you?			Total
			Seasonal Resident of Beaver Island	Permanent Resident of Beaver Island	Visitor	
Q6. Do you think freight rates and vehicle prices on the ferry are reasonable?	Yes	Count	229	47	54	330
		% within Q1. Which of the following applies to you?	62.7%	40.9%	57.4%	57.5%
	No	Count	119	64	26	209
		% within Q1. Which of the following applies to you?	32.6%	55.7%	27.7%	36.4%
	No response	Count	17	4	14	35
		% within Q1. Which of the following applies to you?	4.7%	3.5%	14.9%	6.1%
Total		Count	365	115	94	574
		% within Q1. Which of the following applies to you?	100.0%	100.0%	100.0%	100.0%

ADDITIONAL SURVEY ANALYSIS – CROSS TABS

Q11. How would it impact you if the Emerald Isle ferry was out of service for an extended period of time? * Q1. Which of the following applies to you? Crosstabulation

			Q1. Which of the following applies to you?			Total
			Seasonal Resident of Beaver Island	Permanent Resident of Beaver Island	Visitor	
Q11. How would it impact you if the Emerald Isle ferry was out of service for an extended period of time?	No impact / not applicable	Count	12	6	16	34
		% within Q1. Which of the following applies to you?	3.3%	5.2%	17.0%	5.9%
	Minor impact	Count	61	26	31	118
		% within Q1. Which of the following applies to you?	16.7%	22.6%	33.0%	20.6%
	Moderate impact	Count	111	30	15	156
		% within Q1. Which of the following applies to you?	30.4%	26.1%	16.0%	27.2%
	Major impact	Count	122	36	24	182
		% within Q1. Which of the following applies to you?	33.4%	31.3%	25.5%	31.7%
	Severe impact	Count	49	17	7	73
		% within Q1. Which of the following applies to you?	13.4%	14.8%	7.4%	12.7%
	No Response	Count	10	0	1	11
		% within Q1. Which of the following applies to you?	2.7%	0.0%	3.1%	0.4%

ADDITIONAL SURVEY ANALYSIS – CROSS TABS

Q12. What do you think about an alternate location in Charlevoix where you would park, buy your ticket, check your luggage and freight, and then board the boat (possibly via shuttle)? * Q1. Which of the following applies to you? Crosstabulation

			Q1. Which of the following applies to you?			Total
			Seasonal Resident of Beaver Island	Permanent Resident of Beaver Island	Visitor	
Q12. What do you think about an alternate location in Charlevoix where you would park, buy your ticket, check your luggage and freight, and then board the boat (possibly via shuttle)?	Not a good idea – I like having the office and boat downtown	Count	131	26	19	176
		% within Q1. Which of the following applies to you?	35.9%	22.6%	20.2%	30.7%
	Would not make a difference to me	Count	109	32	41	182
		% within Q1. Which of the following applies to you?	29.9%	27.8%	43.6%	31.7%
	Sounds like a good idea	Count	113	56	29	198
		% within Q1. Which of the following applies to you?	31.0%	48.7%	30.9%	34.5%
	No Response	Count	12	1	5	18
		% within Q1. Which of the following applies to you?	3.3%	0.9%	5.3%	3.1%
Total	Count	365	115	94	574	
	% within Q1. Which of the following applies to you?	100.0%	100.0%	100.0%	100.0%	

ADDITIONAL SURVEY ANALYSIS – COMPARISON TO 2004

Question: Are you a? (question was check all that apply)

	2004	2021	Difference 2004-2021
Seasonal Resident	32%	61%	29%
Permanent Resident	59.8%	21%	-38.8%
Visitor	7.8%	19%	11.2%
Owner or employee of a business on the Island	N/A	8%	8%
Here on business	.4%	1%	.6%
No response	NA/	3%	3%

ADDITIONAL SURVEY ANALYSIS – COMPARISON TO 2004

Question: How do you typically get to and from the island?

	2004	2021	Difference 2004-2021
Air Service	29.8%	64%	34.2%
Ferry	64.3%	56%	-8.3%
Personal plane	2%	4%	2%
Personal boat	.4%	3%	2.6%
No response	N/A	1%	1%

ADDITIONAL SURVEY ANALYSIS – BUCKET ANALYSIS

Bucket	Description	Number	Percent
Positive	Mostly favorable, including general "thumbs up" type comments	77	26
Negative	Had a negative comment about some aspect of the operation	50	17
No to Downtown Charlevoix	Generally, either did not like the downtown operation or thought it would be better to move it to another location, generally the cement plant location	44	15
Faster Boat	Stated need for a faster boat with shorter travel times	18	6
Other	Many of the comments related to ideas people had to make service better; the need for reduced rates or season passes; or general statements on the study and its elements	92	33
New Boat	These comments indicated people seeing getting a new boat as key to continuing the ferry operation	10	3
TOTAL		291	100

FARE COMPARISON



BIBCO FARE COMPARISON – CONCLUSIONS

- Fares/freight rates are more complex than the comparison systems (charging for engine size or category vs. length for example)
- Fares are higher than the average of the comparison systems for passengers and similar cargo items (vehicles, equipment).
- Fares compared to publicly subsidized systems are overall higher than the public average.
- Fares compared to the private (non-subsidized systems) are overall lower than private systems' average.
- Freight rates are similar to regional systems (Freight service to Mackinac Island) in both fare rates and specificity and complexity of fare types.
- Overall fares do not seem to be out of proportion with the rates charged by the average of all comparison systems, though they are, on average, higher.

RIDERSHIP



RIDERSHIP – CONCLUSIONS

- Total annual passenger levels likely to remain constant at current levels, 30,000 for the ferry.
- Levels for freight and ferried autos also are expected to be constant.
- *The difference in travel time between air (15 minutes) and ferry (about 2.25 hours) is large. Thus, within practical limits, the air/boat shares are likely to be inelastic with respect to travel time. Air travel time is not likely to change very much, and a faster boat would still be much slower than air.*
- Air fare is \$110-\$117 round trip. Ferry fares range between \$65 and \$55 for a round trip. Round trip auto fare averages \$220. While air fare and ferry fare are on average \$48 different, it is unlikely that the choice of mode is greatly affected by fare.
- *This section assumes the estimates will not be further affected by the COVID-19 pandemic.*

CAPITAL PLAN

1 – 5 years

Capital Item	Priority
Beaver Island Dock reconstruction/rehabilitation	High
Emerald Isle Repower (engines and transmissions)	High
Support equipment (radar, GPS, keel coolers, etc.)	Moderate to High
New ferryboat	Moderate to High
Office building upgrades	Moderate

OPERATIONS PLAN

- The management Services Agreement/Building Agreements – Expires on 12/21/2023.
- Dock License Agreement – Expires May 31, 2026.
 1. Dock owned by BIBCO.
 2. Dock has many improvements made using state and federal dollars.
- Memorandum of Understanding for Fuel – Expires December 31, 2021 (this is renewed on an annual basis).
- The current arrangement seems to be working and is run efficiently. Any new agreement should address any deficiencies in the current agreement and ensure compliance with State/Federal regulations.
- It appears the current arrangement between both parties has been functional and efficient and is likely the best approach for both parties to continue.

UPDATED BOAT COSTS

- **150' PASSENGER/VEHICLE FERRY UPDATED CONSTRUCTION COST ESTIMATE – DRAFT**
- **2012 COST (ORIGINAL) - \$13,500,000**
- **ESTIMATED 2021 COST - \$17,537,452**
- **ESTIMATED 2026 COST - \$19,732,333**
- **ESTIMATED 2031 COST - \$22,349,254**

Draft cost estimates prepared by Elliott Bay Design Group, November 2021

CONCLUSION – TASK SUMMARY

1. Examine the current private/public partnership's effectiveness. What recommended changes need to be made to the operational agreement to reflect current and future needs. Is the current operator the best option? Is a public option a possibility?

CONCLUSION – TASK SUMMARY

2. Why have the passenger numbers declined? Are passenger fares and freight rates equitable or should they be reduced?

CONCLUSION – TASK SUMMARY

3. What does the Authority need to update in terms of vessels and infrastructure?

CONCLUSION – TASK SUMMARY

4. What are the Authority's best options for revenue enhancements?

YOUR TURN

- ✓ COMMENTS
- ✓ QUESTIONS
- ✓ PLEASE FILL OUT THE COMMENT CARD OR EMAIL COMMENTS TO lstrange@mp2planning.com