

Using the
Harbor Economic Impact Model
for
**Regional Economic
Development Analysis**

Presentation to
AAHPA 2008 Conference

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Workshop Agenda

- **Overview of the USACE process**
- **Overview of the HEIM model**
- **How the HEIM can help**
- **Where to get information**
- **Challenges in using the model**
- **Where to get help**
- **Closing thoughts and contact info**



Acronyms

- **ADOT&PF** Alaska Department of Transportation and Public Facilities
- **HEIM** Harbor Economic Impact Model
- **RED** Regional Economic Development
- **USACE** U.S. Army Corps of Engineers

Overview of the U.S. Army Corps of Engineers Process

- **USACE uses four criteria to evaluate projects:**
 - National Economic Development benefits (NED)
 - Regional Economic Development benefits (RED)
 - Environmental Quality (EQ)
 - Other Social Effects (OSE)
- **This presentation focuses on the second item, RED analysis.**
- **More information about the USACE process can be found in the principles and guidelines document located at:**
 - http://www.usace.army.mil/cw/hot_topics/ht_2008/pg_1983.pdf

Overview of the U.S. Army Corps of Engineers Process

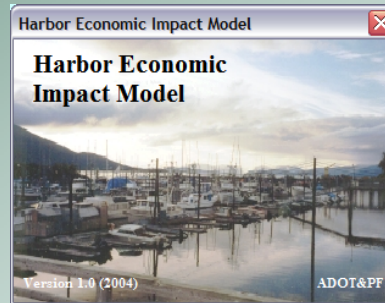
- **Regional Economic Development analysis provides valuable information about the effect and importance of the project on the community and the region.**
- **RED analysis considers:**
 - Change in employment
 - Change in income
 - Change in tax base
 - The community's on ability to sustain an expanded harbor (important for rate payers and harbor users)

Overview of the U.S. Army Corps of Engineers Process

- **An RED Analysis report might have the following sections:**
 - Introduction
 - Regional and Governmental Overview
 - Port and Harbor Overview
 - Harbor Economic Impacts
 - Sensitivity Analysis
 - Effects on Other Regional Harbors

Overview of the Harbor Economic Impact Model

- HEIM assesses the local and regional economic impacts of harbors in Alaska.
- It allows you to enter and track most of the information you need to complete an RED analysis.
- The model was developed in 2003-2004 with funding from the Alaska Department of Transportation and Public Facilities.



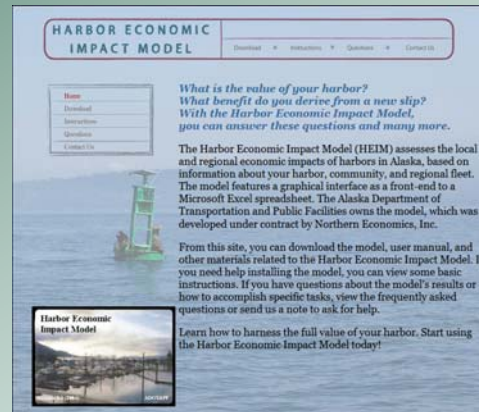
Overview of the Harbor Economic Impact Model

- HEIM uses information about your harbor, community, and regional fleet to evaluate the economic significance of your harbor.
- It's based in Microsoft Excel, which makes it easy to use and update.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Harbor Economic Impact Model - MASTER DATA												
2													
3	This sheet contains core data developed for use in the harbor impact model.												
4													
5													
6	ONLY CHANGE CELLS THAT ARE HIGHLIGHTED IN GRAY OR LIGHT GREEN												
7	IT IS RECOMMENDED THAT ONLY ADVANCED USERS MODIFY LIGHT GREEN SHADED CELLS.												
8	GRAY CELLS ARE MODIFIABLE DIRECTLY FROM THE MODEL INTERFACE.												
9													
10	YOU MAY CHANGE DATA IN THE FOLLOWING FOUR SHEETS:												
11	1. LOCAL HARBOR UTILIZATION (THIS SHEET)												
12	2. VESSEL EXPENDITURES												
13	3. HARBOR FEES AND EXPENDITURES												
14	4. AK BOROUGH IMPACTS												
15	5. TAXES												
16													
17	Annual Vessel Activity - Local Borough, Alaska												
18													
19													
20	Category												
21													
22	Primary Moorage - Number of vessels												
23	Permanent moorage - Local boat												
24	Transient moorage (halting or home port)												
25	Local	5	2	11	7	1	1	0	0	8	3		
26	Other Alaska	1	0	2	1	0	0	0	2	1			
27	Outside Alaska	7	3	15	10	1	1	0	11	5			
28	Total vessels in or visiting harbor	42	19	89	58	6	7	1	65	29			
29													
30													
31	Average days typical vessel is active per year												
32													
33	Local harbor activity - Number of days operating in or from local harbor												
34	Permanent moorage (pays local property taxes?)												
35	Primary moorage other AK harbors												
36	Primary moorage outside Alaska												
37													
38	Boat years of annual expenditures in local harbor community												
39	Permanent moorage (pays local property taxes?)												
40	Transient moorage (halting or home port)												
41	Local	4	2	8	5	1	1	0	6	3			

Overview of the Harbor Economic Impact Model

- The model is owned by ADOT&PF and is publicly available.
- A downloadable copy is available at www.harbormodel.com.



How the HEIM Can Help with RED Analysis

- The Harbor Economic Impact Model is a valuable tool that provides you with a framework to organize and analyze the information you need.

Where to Get Information for the Model

- Odds are that you have much, if not all, of the information you need to run the model.
- Sources of information include:
 - Your harbor billing database
 - Vessel owner expenditure information (survey)
 - Your City and Borough offices (esp. finance)
- Some information may be in a form that you need to work with before adding it to the model.

Where to Get Information for the Model

- In general, you need to gather the following information:
 - Seasonality of harbor use
 - Permanent vs. transient users
 - Mix of users (commercial fishing, recreational, etc.)
 - Vessels on the waiting list
 - Harbor financials
 - User characteristics (see next slide)
 - Cost estimate and slip sizes for the new harbor



Where to Get Information for the Model

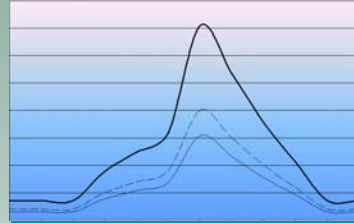
- **User information can be gathered from a survey of your users:**
 - Number of vessels by size and type
 - Homeports or location of off-season storage
 - Frequency of use
 - Duration of use
 - Spending in the community and region
 - Number of customers and their spending
 - Number of crew and their spending

Where to Get Information for the Model

- **Over the next several slides, we'll**
 - Go through the specific information you need
 - Discuss the form of the information needed
 - Look at how to work with the information

Where to Get Information for the Model

- Vessels using the harbor need to reflect annualized information.
- Transient use information needs to be modified to reflect vessel-years.
- Decision: How will you handle permanent moorage?
 - Option 1: Assume permanent use is already annualized.
 - Option 2: Track actual use of permanent slips.



Where to Get Information for the Model

- How you handle permanent moorage depends on your assumptions.
- If you assume permanent moorage is already annualized:
 - Develop vessel counts by size class
 - Proceed to look at transient users
- If you assume permanent moorage is not already annualized:
 - Follow the steps for transient vessels (shown next)

Where to Get Information for the Model

- Transient moorage should be tracked by your marina database.
- Transient use needs to be annualized, since many users will only use the harbor for part of the year.



The image shows a stack of several spreadsheets or data tables, likely representing marina databases or transient use records. The tables contain columns for various data points, including dates, vessel numbers, and usage details. The text on the tables is small and difficult to read, but the structure suggests a detailed record-keeping system.

Where to Get Information for the Model

- **The first step is to summarize your transient information:**
 - Vessel length
 - Number of days used (by month or year)
 - Type of vessel (commercial fishing, recreational, etc.)
- **Next, you'll need to group by vessel length ranges. The defaults are:**
 - Commercial Fishing, Charters, Commercial Recreation, and Other:
<22, 22-32, 33-43, 44-54, 55-75, 76-150, >150
 - Recreation: <22, 22-36, 37-54, 54-75, >75

Where to Get Information for the Model

- Summarized transient information (vessel-days) should look like this:

Length	Type			Total
	Comm	Rec	Other	
<22	2,000	6,000	0	8,000
22-32	7,500	12,000	0	19,500
33-43	15,000	4,000	500	19,500
44-54	3,500	500	0	4,000
55-75	2,000	0	0	2,000
76-150	5,000	0	0	5,000
>150	500	0	0	500
Total	35,500	22,500	500	58,500

Where to Get Information for the Model

- To annualize the information, simply divide by 365:

Length	Type			Total
	Comm	Rec	Other	
0-21	5.5	16.4	0.0	21.9
22-32	20.5	32.9	0.0	53.4
33-43	41.1	11.0	1.4	88.9
44-54	9.6	1.4	0.0	11.0
55-75	5.5	0.0	0.0	5.5
76-150	13.7	0.0	0.0	13.7
>151	1.4	0.0	0.0	1.4
Total	97.3	61.6	1.4	160.3

Where to Get Information for the Model

- Once you've annualized the vessel use information, you can enter it into the model.
- This information provides a picture of the *current* harbor.
- You can use the new harbor design, your waiting list, and plans for the new harbor to repeat this exercise based on the fleet you assume will use the new harbor.

Where to Get Information for the Model

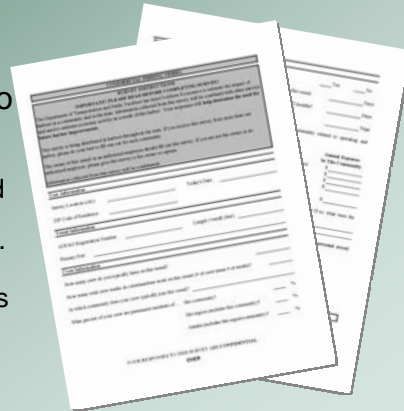
- A crucial element in your analysis is the mix of users.
- If you have information about vessel types in your database, use that information.
- If not, you may have to go to the vessel registration numbers to determine the type.

Where to Get Information for the Model

- Next, we look at what vessel owners (and their customers) spend in the community.
- Vessel expenditures will vary by *type* of vessel and *length* of vessel.
 - Annual spending (labor, fuel, lube oil, gear repair, maintenance, stores, miscellaneous variable costs, moorage fees, and other)
- Customer and crew expenditures
 - Visit-related spending (food, entertainment, lodging, and other)

Challenges in Using the Harbor Economic Impact Model

- You're missing user information.
 - Multiple resources exist to help with this segment:
 - On the *harbormodel.com* website, you can download the survey forms used in 2003 to develop the model.
 - DCCED's Alaska Visitor Statistics Program provides information about visitor expenditures.
 - Interviews of hotels and B&Bs can shed light on visitor patterns.



Challenges in Using the Harbor Economic Impact Model

- **You have information, but it's not in the right form.**
 - I've covered some of the analysis required, but you often have to figure out how to work with what information you have.
 - Ask yourself: How is this information going to be used in the process?
 - The answer may help you to find a way to make it work.

Challenges in Using the Harbor Economic Impact Model

- **Understanding and Interpreting Economic Impact (Input-Output) Analysis.**
 - A critical part of applying the harbor model's output in the RED analysis process is understanding how to interpret and use the economic impact information.
 - When considering impacts, you have to think about what spending takes place in your community, your borough, and elsewhere.

Challenges in Using the Harbor Economic Impact Model

- **Understanding and Interpreting Economic Impact (Input-Output) Analysis.**
 - The input-output model used for the harbor model bases everything on counties/boroughs.
 - The RED analysis requires that you look at your borough as well as your community.
 - This will require purchasing additional data for your community and then *correcting* that data based on business licenses.

Where to Get Help in the Process

- **Northern Economics developed the Harbor Economic Impact Model in 2003-2004 under contract with ADOT&PF. We know the model inside and out.**
- **We're experts in the economics of Alaska's harbors.**
- **We've used the model in a variety of situations:**
 - Economic impacts of marine facilities improvements
 - Evaluation of fiscal impacts from harbor expansion
 - RED analysis
- **Our expertise can help you to develop your RED analysis and to handle other harbor economics needs.**

In Closing

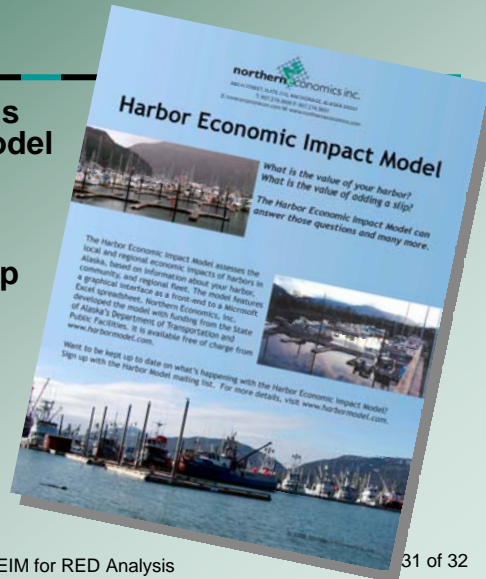
- **Regional Economic Development Analysis will likely play a role in your harbor's future.**
- **By planning ahead, you will be better prepared to arrive at the information you need to support the USACE process.**
- **Using the HEIM as a tool will help to focus your efforts on the information you need to complete a successful RED analysis.**

In Closing

- **Data contained in the HEIM is five years old and based on information on vessels and harbors in Southcentral Alaska.**
- **Because of the growing need to do RED analyses, is it worthwhile for the model to get an overhaul and update?**

In Closing

- I have flyers and cards that talk about the model and the website, so please pick one up.
- Visit the site and join the mailing list to keep up to date about the model.
- I'll post this presentation at harbormodel.com within the next week.



Contact Info / Questions

- Any questions?

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