Research Partners

National Park Service, Katmai National Park and Preserve

National Parks Conservation Association
Research Purpose

• Review and suggest improvements to visitor economic impact assessment procedures in remote, isolated Alaska National Parks

• Compare Money Generating Model (MGM) & IMPLAN

• Case study: Katmai National Park and Preserve
Katmai NPP Background

• Created in 1918 to preserve the Valley of Ten Thousand Smokes
• Alaska National Interest Lands Conservation Act (ANILCA) expanded park to ~ 4 million acres
• Known for brown bears that congregate at Brooks Falls for the salmon run
• Sporting fishing continues to be a major draw
Research Challenges

• 2006 visitation survey estimates – limited, non-random sample did not match Park visitation estimates

• Visitor type categories – remote Alaska visitation do not match lower-48 and MGM

• Expenditure survey results- visitors, especially package visitors, confused by survey map and expenditure questions
Research Methods

• Adjusted visitation estimates
  o No staffed portals w/ visitor counts so estimation is difficult
  o Cross referenced Katmai Commercial Use Auth. (CUA) database
  o Developed a more accurate estimate of all visitors

• Adjusted for visitor patterns and itineraries
  o Air and boat access creates complexities and unusual patterns for day and overnight visitors

• Visitors not recorded in CUA data
  o Visitors with own planes and boats
  o Visitors dropped below mean high tide
  o Multiple days overnight visitors
  o Hunters & concession visitors
Katmai NPP 2006 Visitor Survey

- Expenditure group size (survey question # 23c)
- Length of stay in Katmai NPP (survey question # 12)
- Group expenditures by category inside Katmai NPP (survey question # 23a)
- Group expenditures by category outside Katmai NPP but in Alaska (survey question # 23b)
- Relative role of Katmai NPP in overall Alaska travel plans (survey question # 3)
Research Methods

Adjustments to economic modeling:
• Used IMPLAN software because more flexible
• Standard MGM expenditure and visitor type categories do not fit Katmai (or Alaska) visitors;
• Created visitor categories that fit Katmai visitor patterns
  o Independent day visitors
  o Guided day visitors
  o Overnight in park visitors
• Many visitors with guided package tours
• Adjusted package expenditures to allow IMPLAN model data input
Economic Modeling

Adjusting expenditure categories:

• Package day visitors expenditures adjusted to reflect breakout of independent day visitors
• Overnight visitor expenditures based on similar types of visitors to Alaska
• Allowed expenditures to be included in IMPLAN or a modified MGM
Economic Modeling

Five borough economic impact region based on visitor travel patterns, itineraries and expenditures
## Economic Impact Results

### Expenditures in Alaska by Visitors to Katmai NPP

<table>
<thead>
<tr>
<th>Description</th>
<th>2009$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Expenditures i/s Katmai NPP</td>
<td>$13,161,640</td>
</tr>
<tr>
<td>Direct Expenditures o/s Katmai NPP in Alaska</td>
<td>$40,117,130</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$52,859,210</td>
</tr>
</tbody>
</table>

### IMPLAN Modeling Results:

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Industrial Output</td>
<td>$73,066,210</td>
</tr>
<tr>
<td>Employment</td>
<td>650</td>
</tr>
<tr>
<td>Labor Income</td>
<td>$23,102,890</td>
</tr>
<tr>
<td>Value Added</td>
<td>$37,051,950</td>
</tr>
</tbody>
</table>
## Economic Impact Results

### Alternative 5-borough local model reducing expenditures un-related to Katmai NPP portion of Alaska visit

<table>
<thead>
<tr>
<th>Description</th>
<th>2009$$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Direct Expenditures i/s Katmai NPP</td>
<td>$12,335,900</td>
</tr>
<tr>
<td>Alaska - weighted for Katmai NPP influence</td>
<td>$19,411,820</td>
</tr>
<tr>
<td></td>
<td>$31,747,720</td>
</tr>
</tbody>
</table>

### IMPLAN Modeling Results:

<table>
<thead>
<tr>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Total Industrial Output</td>
<td>$47,319,200</td>
</tr>
<tr>
<td>Employment</td>
<td>390</td>
</tr>
<tr>
<td>Labor Income</td>
<td>$15,155,680</td>
</tr>
<tr>
<td>Total Value Added</td>
<td>$24,126,240</td>
</tr>
</tbody>
</table>
Recommendations

• Expand survey methodology to be random and full season, more survey locations

• Or better yet, use technology to reach more visitors @ lower cost

• New expenditure questions: suggested rewrite @: iser.uaa.alaska.edu/tmp/KatmaiAlaska-ginny.pdf

• Use IMPLAN economic impact software or create a new user interface for Alaska parks/public land
Research Limitations

• Did not include taxes and other public sector payments
• Economic significance is not VALUE
• Does not include VALUE of Katmai — visitor willingness to pay, habitat, ecosystem services, cultural preservation
The average for the Majority Native Areas as a whole is 77.6%.
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