

# Gateway spending as a complement to National Park entrance fees

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# National Park Service Proposes Targeted Fee Increases at Parks to Address Maintenance Backlog

- **Proposal would have raised fees on:**
  - Vehicle pass from about \$30 to \$70
  - Motorcycle pass from about \$25 to \$50
  - Per person from about \$15 to \$30
- **NPS estimated that the fee increase would increase revenue by \$70 million annually.**
  - 34% increase - \$200 million to \$270 million

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| Park Unit       | 2016 Annual Visits | Current Per Vehicle Fee | Proposed Per Vehicle Peak Season Fee | Peak Season Months | Proportion of Annual Visits During Peak |
|-----------------|--------------------|-------------------------|--------------------------------------|--------------------|---|
| Arches NP       | 1,585,718          | \$25                    | \$70                                 | May-Sep            | 64%                                     |
| Glacier NP      | 2,946,681          | \$30                    | \$70                                 | May-Sep            | 92%                                     |
| Grand Canyon NP | 5,969,811          | \$30                    | \$70                                 | May-Sep            | 58%                                     |
| Grand Teton NP  | 3,270,076          | \$30                    | \$70                                 | May-Sep            | 85%                                     |
| Joshua Tree NP  | 2,505,286          | \$25                    | \$70                                 | Jan-May            | 49%                                     |
| Olympic NP      | 3,390,221          | \$25                    | \$70                                 | May-Sep            | 76%                                     |
| Yellowstone NP  | 4,257,177          | \$30                    | \$70                                 | May-Sep            | 90%                                     |

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- The NPS projected revenue increase following a price hike implies the belief that demand for park visitation is inelastic.
- In other words, they believe that the percent increase in price is larger than the percent decrease in demand.
  - Are they correct?
  - What else matters?

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**In 2016, the National Park System recorded 330,971,689 visits, yielding \$18.4 billion in spending in gateway communities**

This spending relies heavily on:

- Volume of visitor groups attracted to the park
- Average length of stay of the visitors
- Average daily expenditures of the visitors

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## **Park fees are not based on market interactions =>**

- Not a straight forward change in demand to estimate;
- But we can find a proxy for willingness to pay
  - Travel cost
  - Specifically, fuel cost

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***Number of Monthly Visits = f(travel cost, population, seasonality, consumer sentiment)***



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| Variables               | Visits to all National Parks | Visits to Fee Increase Parks | Visits to Non-Fee Increase Parks |
|-------------------------|------------------------------|------------------------------|----------------------------------|
| Intercept               | 1.35                         | -12.28 ***                   | 2.62 **                          |
| Fuel Price (Ln)         | -0.14 ***                    | -0.28 ***                    | -0.12 ***                        |
| Population (Ln)         | 0.76 ***                     | 1.32 ***                     | 0.70 ***                         |
| Consumer Sentiment (Ln) | 0.04                         | 0.09 **                      | 0.04                             |

\*, \*\*, \*\*\* indicate parameters significance at 5%, 1%, and 0.1% respectively.



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| Park             | Coefficient on Fuel Costs |
|------------------|---------------------------|
| Arches NP        | -0.40***                  |
| Glacier NP       | -0.24 ***                 |
| Mount Rainier NP | -0.49 ***                 |
| Yellowstone NP   | -0.27 ***                 |

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## Yellowstone Example:

|                    | Current average travel cost | Travel cost with proposed change | Change in travel costs |
|--------------------|-----------------------------|----------------------------------|------------------------|
| Local (ID, MT, WY) | \$106.48                    | \$146.48                         | 37.6%                  |
| Nonlocal (US/CAN)  | \$287.92                    | \$327.92                         | 13.9%                  |
| International      | \$4,483.54                  | \$4,523.54                       | 0.9%                   |

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## Yellowstone Example:

|                    | 2016 Visitation estimates | Expected visits under fee change | Change in visits |
|--------------------|---------------------------|----------------------------------|------------------|
| Local (ID, MT, WY) | 382,167                   | 370,760                          | -2.98%           |
| Nonlocal (US/CAN)  | 3,095,551                 | 3,061,381                        | -1.10%           |
| International      | 343,950                   | 343,706                          | -0.07%           |
| <b>Total</b>       | <b>3,821,668</b>          | <b>3,775,847</b>                 | <b>-1.20%</b>    |

The -1.2% change represents an annual loss of \$3.4 million to Yellowstone gateways.

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- **Parks are increasingly being tasked with providing more and more of their budgets from visitor fees.**
- **Fee increases generate a potentially significant hardship on domestic visitors, particularly lower income families.**
- **Alternative fees structures in other countries may serve as an example.**