

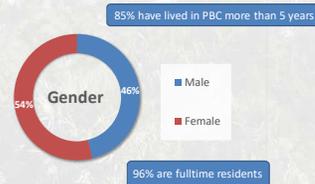
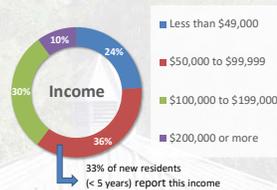
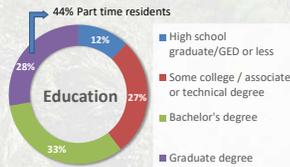
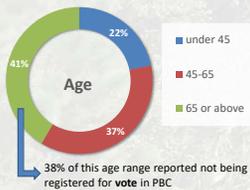
# Palm Beach Co. Ecosystem Valuation Survey

## Implications for Policy Decisions Regarding the Natural Areas Program

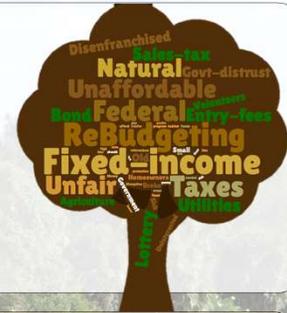
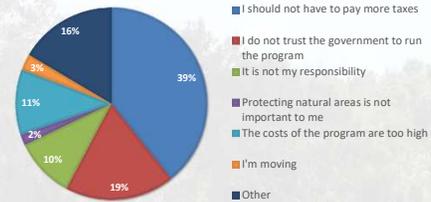
Kelly Ann Kennedy<sup>1</sup>, John Lai<sup>1</sup>, Damian Adams<sup>1</sup>, Jose Soto<sup>1</sup>, Elizabeth Pienaar<sup>1</sup>

Resources and Conservation

### Summary Demographics: (1,500 Palm Beach County Residents)



### WHY DON'T YOU SUPPORT THE NATURAL AREAS PROGRAM?



### Background

- Natural Areas is a public program in Palm Beach County
- Mission: Acquire and preserve environmentally sensitive land
- Policy makers discern public support to adjust funding
- Economic valuation of ecosystems aids in policy making<sup>1</sup>
- Policy implications may be applied to similar ecosystems in other areas<sup>2</sup>

### Introduction

- Surveyed Palm Beach County residents
- Primarily to inform policy makers about voter preferences
- Secondarily to educate residents about ecosystem services
- Identify factors that limit support for natural areas program

### Methods

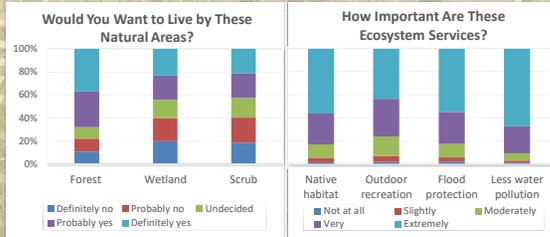
#### Survey details:

- 1,500 surveys from PBC residents during the summer of 2017
- Online and mail responses
- Covered ecosystem services and Natural Areas Program

#### Data analysis:

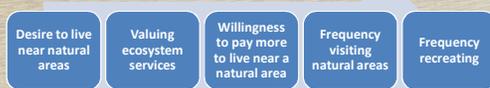
- Chi-squared statistics and cross tabulation

### Usage Benefits

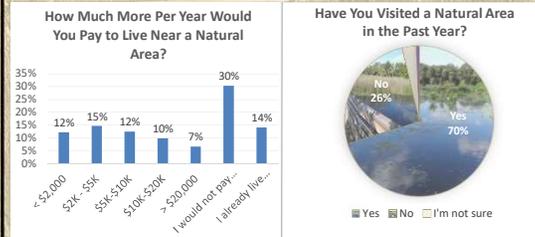


- More residents report wanting to live near **forests** than wetlands or scrubs
- Residents believe **water pollution reduction** is the most important ecosystem service listed
- 50% of residents who report living by natural areas are 65 years or older
- Outdoor recreation** is regarded as least important

Positive correlation

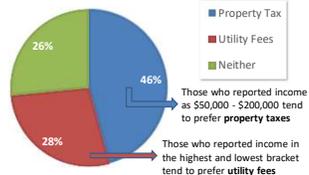


### Payment Preferences



- 56% of residents would pay more to live near a natural area
- 68% of people 65 or above reported not visiting a natural area in the past year
- 42% of people with an annual income of \$25,000 or less reported not visiting in the past year
- 75% of those who visited in the past year would also vote to increase utility fees or property taxes to fund the program
- Age, education, and income are positively correlated with increasing willingness to pay

### PREFERENCE FOR FINANCING NATURAL AREAS PROGRAM



Majority of residents **prefer property tax** as a payment vehicle

Strong correlation between support for both options: property tax or utility fee

### Correlation: Activity vs. Ecosystem Payments



As frequency participating recreation increases, so does willingness to pay increased fees to support the program

Older citizens are more likely to report frequently canoeing, cycling, and fishing

### Residents who would like to live near these habitats are most likely to participate in the following recreational activities (in order by correlation coefficient, greatest to least)

Forest	Wetland	Scrub
<ul style="list-style-type: none"> <li>Bird watching</li> <li>Canoeing</li> <li>Hiking/walking</li> <li>Fishing</li> <li>Cycling</li> <li>Horse riding</li> </ul>	<ul style="list-style-type: none"> <li>Bird watching</li> <li>Fishing</li> <li>Canoeing</li> <li>Horse riding</li> <li>Cycling</li> <li>Hiking/walking</li> </ul>	<ul style="list-style-type: none"> <li>Bird watching</li> <li>Canoeing</li> <li>Fishing</li> <li>Horse riding</li> <li>Cycling</li> <li>Hiking/walking</li> </ul>

**Bird watching** is most strongly correlated with living near natural areas; **Hiking/walking** is the least

### Results

- Majority would like to live near natural areas, value ecosystem services, and would pay more to support the Natural Areas Program
- Usage benefits factors and support for Natural Areas are directly positively correlated
- Increasing property taxes or utility fees may be a viable method for funding Natural Areas

### Conclusions

Policy implications to increase funding:

- Increase voter registration, accessibility for seniors
- Cater to popular recreation activities like bird watching
- Prioritize forest areas and advertise ecosystem services
- Residential areas near conservation land
- Minimize human impact on natural environment

### Future Work

- Model preferences of Palm Beach County residents to calculate marginal effects on payment vehicles using regression analysis
- Live interviews of residents may reveal further trends in opinions of Natural Areas Program

### Acknowledgements

- Funded by the University Scholars Program
- Credit to Elizabeth Pienaar for directing the survey
- Special thanks to John Lai who made this possible. Thank you for guiding this project every step of the way.

### References

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- Richardson, Leslie, John Loomis, Timm Kroeger, and Frank Casey. "The role of benefit transfer in ecosystem service valuation." *Ecological Economics* 115 (2015): 51-58.