

**UNDERGRADUATE RESEARCH SEMESTER/EXPLORATORY GRANT APPLICATION**  
**Budget Worksheet**

BUDGET ITEM	Department or College Funds	Outside Agency Funds	Personal Funds	Undergrad. Research Funds	GRAND TOTAL
Materials				\$435.64 See proposal for specific breakdowns.	\$435.64
Equipment					
Mileage to gather Data (.36 per mile)					
GRAND TOTAL					\$435.64

**NOTES**

Equipment and left-over materials purchased with this grant will remain the property of WSU.

You may not request money for gas purchases for travel. WSU reimburses travel expenses at a set mileage rate only.

## UNDERGRADUATE RESEARCH SEMESTER/EXPLORATORY PROPOSAL

### *I. Project Description*

#### *A- Background Information*

Wetlands are a key biome in the earth's ecological structure and are imperative to the survival of many different species, including migratory birds. One example of this biome is the Farmington Bay Waterfowl Management Area (WMA). This particular area has had over 200 species of waterbirds, songbirds, and raptors documented on the management area (Utah Division of Wildlife Resources).

This management area is crucial to the migratory birds' survival due to its strategic location along many birds' "flyway". A flyway is defined as a geographic route along which birds customarily migrate. The Farmington Bay WMA is a part of the Central Flyway which covers many locations, including Nayarit, Mexico. (Parsons-Bernstein, 2009).

#### *B- Research Questions and Goals*

The premise of this study is to obtain an economically quantifiable value that local residents place on the Farmington Bay WMA. My two questions are first, what is this value and second whether or not this value changes if other locations along the flyway are in danger (specifically Nayarit, Mexico)? The goals of the project are to provide the Great Salt Lake Nature Center at Farmington Bay with this information, which in turn they will be able to use when seeking government funding as well as for making better informed decisions concerning the community and WMA's relationship.

*C- Mentor's and Researcher's Roles*

This project is considered to be fairly independent. As a requirement for one of my economics courses, I am to join with a community-based organization and render a service that is Public Finance related, as well as beneficial for both parties involved. I will be working with the Great Salt Lake Nature Center at Farmington Bay in order to accomplish this. My mentors, Drs. Grijalva and Marinez , have agreed to assist me by helping to refine and edit my project. It is ultimately my question and my research; however, Drs. Grijalva and Martinez will be there to ensure a thorough and meaningful project. Along the dependency continuum, my project falls here:

Dependent |-----x---| Independent.

*D- Previous Training and Experience*

I am a Quantitative Economics major with a senior class standing. I have completed Business Statistics I, Business Statistics II, Principles of Micro- and Macro- Economics, International Finance, and Business Calculus. My cumulative GPA is 3.96. I am currently enrolled in Public Finance, as well as Intermediate Macroeconomic Theory.

I was also born and raised in a rural community surrounded with agricultural activity. Since childhood, I have been actively involved in many different aspects of the agricultural community. I feel that this background helped me to determine what type of research I would like to do. Agricultural and environmental economics are very related fields of study and I feel my background will aid me tremendously.

*E- Final Product*

The final products of this project will be a research paper as well as a presentation. It is important to note that I am a member of the Global Scholars Initiative and will be traveling to

Nayarit, Mexico in March for one week. While I am there, I will get a feel of the environmental situation; specifically an understanding of the importance of natural resources to this community. I will also establish contacts with Nayarit's environmental agency SEMARNT (equivalent of the United States Fish and Wildlife Service). If this research provides statistically legitimate results, I plan to conduct a similar project next year in Nayarit, and then compare the studies. With this in mind, I can not set a definite date of conclusion for the entire project. However, the section specifically concerning the Farmington Bay WMA will be completed by April 30, 2009.

## *II. Methods and Timeline*

### *A- Methods*

In order to determine the economic value residents place on the Farmington Bay WMA, I will be using the Contingent Valuation Method (CVM). CVM is a survey-based method commonly utilized to place a monetary value on environmental goods or services which are not bought and sold in the marketplace (Carson, 1999). CVM attempts to capture a study's participants' willingness to pay for some environmental initiative (Callan et al, 2006). This method was used by John Loomis and Earl Ekstrand to determine the economic benefits of the threatened habitat of the Mexican Spotted Owl. In this study, it is noted that people place value upon environmental habitats even if they are not direct or potential users of the resource/areas. Loomis refers to this concept as "Existence Value" and defines it as the "the utility obtained from knowing that a species and its natural habitat exist, even if no visit is planned".

### B- Timeline

The timeline for this project is as follows:

- Meet with the Great Salt Nature Center representative and discuss possible survey questions and use of results – Mid February (Meetings will be regularly scheduled throughout the semester to keep all parties updated on the progress of project.)
- Create surveys to be sent to random sampling of addresses – End of February
- Prepare and mail surveys – March 1-7
- Send postcard reminders to unresponsive sample – March 21
- Compile, enter, and complete statistical analysis of data – April 1-4
- Evaluate results, begin paper and presentation – April 5-7
- Complete paper and deliver results to Great Salt Lake Nature Center – April 20
- Evaluate and determine appropriate research methods to repeat study in Nayarit, Mexico – April 30

### III. Budget Explanation

I will only need materials in order to complete this project. Any sort of equipment and traveling expenses that may arise, I will cover using personal funds. This is a more detailed breakdown of my materials budget request.

<i>Materials – Including Number of Units</i>	<i>Cost per each Unit</i>	<i>Total Cost</i>
<i>Photocopies-</i>		
<i>Surveys- One Sheet, Two Sided-250</i>	<i>\$0.08</i>	<i>\$20.00</i>
<i>Envelopes – Quoted by officedepot.com</i>		
<i>Outgoing and Return- 1 Box-500 envelopes</i>	<i>19.99</i>	<i>19.99</i>
<i>Mailing Labels</i>		
<i>Purchase of labels- 2 Packages- 1,000 Labels</i>	<i>13.45</i>	<i>26.90</i>
<i>Printing of labels- 20 Sheets</i>	<i>0.05</i>	<i>1.00</i>
<i>Postcard Reminders- 25 Sheets (50% Initial Response Rate)</i>	<i>0.13</i>	<i>3.25</i>
<i>Purchasing Addresses (Quoted by Survey Sampling International)</i>		
<i>One-Time Set Up Fee</i>	<i>75.00</i>	<i>75.00</i>
<i>250 Addresses</i>	<i>0.21</i>	<i>52.50</i>
<i>Postage (Quoted By US Postal Service )</i>		
<i>Envelopes- 500- One Stamp Each</i>	<i>0.42</i>	<i>210.00</i>
<i>Postcard Reminders- 100</i>	<i>0.27</i>	<i>27.00</i>
<b>TOTAL</b>		<b>\$435.64</b>

Note: All quotes were obtained from either WSU Bookstore or Printing Services unless otherwise noted.

## References

- Callan, Scott J., and Janet M. Thomas. Environmental Economics and Management : Theory, Policy, and Applications. Mason: Cengage South-Western, 2006.
- Carson, R. (1999). Contingent Valuation: A User's Guide. Retrieved February 2, 2009, from EconLit database.
- "Farmington Bay Waterfowl Management Area." Farmington Bay Waterfowl Management Area. Utah Division of Wildlife Resources. 29 Jan. 2009  
<[http://wildlife.utah.gov/habitat/farmington\\_bay.php](http://wildlife.utah.gov/habitat/farmington_bay.php)>.
- Loomis, J., & Ekstrand, E. (1997, December). Economic Benefits of Critical Habitat for the Mexican Spotted Owl: A Scope Test Using a Multiple-Bounded Contingent Valuation Survey. *Journal of Agricultural and Resource Economics*, 22(2), 356-366. Retrieved February 2, 2009, from EconLit database.
- Parsons-Bernstein, Justina. "From My Way to the Flyway." From My Way to the Flyway. The Great Salt Lake Nature Center at Farmington Bay. 29 Jan. 2009  
<<http://www.greatsaltlakenaturecenter.org/FromMyWayToTheFlyway.htm>>.