**STATEMENT OF PURPOSE**

How does the underwater world connect to the land that we know so well? What happens beyond the coastline in order for it to function as such a tremendous boundary between our terrestrial home and the deep sea? I would like to grasp these concepts in such a way that I can share the ideas and visualizations with anyone.

I that feel that Oregon State University, as a known research university, is a place where I can gain the knowledge and experience needed to accomplish my goal of integrating GIS and ocean research. My thoughts for furthering my education are best said in the words of Sylvia Earle at the 1999 ESRI User Conference. She is quoted in an excerpt from *Arc User* magazine: “In the last decade, improvements in GIS tools have provided a quantum leap

in our ability to understand and manage marine ecosystems. Foremost among these new tools is three-dimensional GIS data modeling. Now suddenly I can see so much as never before in context. It’s that kind of ‘ah-ha’ breakthrough that these new integrating data systems allow. I can’t wait to see what’s going to happen as we begin to work together.”

I became interested in marine and coastal studies during a project with the Center for Coastal Studies at Texas A&M University-Corpus Christi. As an undergraduate research assistant, I developed a pilot project for riparian assessment, primarily using ArcView 3.2 and Image Analyst. By studying land use distribution and flow analysis, I determined watershed boundaries and queried riparian habitat classified from TM imagery along the major drainage areas within the five coastal counties of the Texas Coastal Bend. My paper, “Using ArcView GIS in Assessing and Preserving and/or Restoring Riparian Habitat,” was published in the 2000 ESRI User Conference Proceedings. In the summer of 2000, shortly after leaving my position in coastal studies, I went to the University of Washington as an intern for OUR Earth, a NASA Space Grant program.

My experience with the Department of Oceanography was invaluable. Under the direction of Dr. Miles Logsdon, I used Arc/INFO to delineate the Columbia River watershed. It took some historical research and the collection of several data sets to complete the tasks needed for an ongoing project for the Pacific Northwest Climate Impacts Group. The scope of their project amazed me. To model the entire ecosystem within the Columbia River watershed is so extensive. For the first time, I understood how powerful GIS is for environmental research and visualization.

Since graduating with a B.S. in geographic information science, I have felt a strong desire to choose a specialized field. For the last year, my position as GIS specialist at Digital Mapping Services (DMS), a GIS company in Corpus Christi, Texas, has been ideal for exploring my options.

I have used ArcGIS 8.1, All Topo Maps, Orthophotos, Adobe Acrobat, MS Access, and other software on a Windows workstation for most of the projects at DMS. Most of the projects involve oil-and-gas well and pipeline locations, with some significant work in locating camera locations for the U.S. Border Patrol on the Texas/Mexico border. In considering marine and coastal studies, my desire to pursue a career in the field was strengthened when I participated in a hydrographic survey. While spending time on the Corpus Christi Bay recording sonar images and magnetometer

readings, I found satisfaction in this type of fieldwork. I continued by processing and analyzing the sonar imagery in Seascan Review and ArcScene to distinguish anomalies. This is the job that confirmed my passion to be on the water and also to show the client what the bay floor “looks like.” The power of mapping and three-dimensional visualization is unlimited.

I look forward to earning my Master of Science in Geography with the understanding that I am still leaving my options open in a broad field. For this reason, I have researched some of the opportunities at OSU. My desire is to be part of research that will narrow the scope of my degree without disregarding the immense world of ocean GIS. Ideally, I would like my graduate research to incorporate the preservation of marine sanctuaries around the South Pacific islands. I understand the Dr. Dawn Wright has done significant research around American Samoa.

Her work history and current pursuits for more opportunities through grants are impressive. Dr. Wright actually had a great influence on my decision to apply to OSU, and I would like to request that you consider me as a graduate research assistant under her direction. Her enthusiastic response to my inquiry about the program via electronic mail made my decision to apply more concrete. Furthermore, because of the good reports that I have found about OSU, I am excited to be part of the geography program in any case. I hope you will give my application a sincere consideration.

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