Capstone Project Abstracts
(listed alphabetically by last name)

Nicholas Begley
The Potential Public Health Benefits of Urban Farming: A Qualitative Analysis of Stakeholder Perspectives

The term urban or even peri-urban agriculture can be defined as an agriculture process that is being performed within and/or around areas of higher population densities rather than the traditional rural setting. Urban farming practices, such as community gardens, are commonly considered to have positive human and environmental health benefits associated with this type of model. However, these perceived and/or even documented benefits may vary among different stakeholders and the current literature. Additionally, not all examples of urban farming produce the same outcome, and those outcomes may depend on variables such as scale, location, population, and purpose. Furthermore, whether different stakeholders perceive the benefits of urban agriculture to be measurable or ambiguous may determine potential outcomes and/or possibly hinder the future development of urban agricultural systems. This research strives to narrow the definitions between urban and vertical farming, and highlight any policy barriers to adapting this agriculture model.

Robert A. Calkins
Serving with a Purpose: Evaluating Practical Options to Increase College Accessibility through National Service

The provision of educational benefits in exchange for national service has long been considered one of the best ways to increase college financial accessibility. Such a program is especially attractive because of its non-incidental benefit of engaging youth service to their national and international communities. Using the Forever GI Bill as a comparative tool for benefits, the national service program proposed here would provide participants with full college tuition for four years at an in-state public university. Program participants would volunteer to serve in AmeriCorps or Peace Corps for a period of three years to receive the full educational benefit through the program. The proposed national service program is found to have an individual cost benefit of 1:3.04 and a social cost benefit of 1:2.68. Social benefits include increased earnings and federal tax revenue, volunteer living allowances while in service, direct service benefits in AmeriCorps-served communities, and student loan and interest savings, whereas social costs include the cost of administering programs and losses in earning both during service and while attending college. After incurring debt in the first decade on the program, this national service program model is self-sustainable and eventually contributes additional tax revenue to the federal government.
Jessica Crabtree
The Invisible Mothers Study

The purpose of higher education has changed from a rite of passage for affluent families to being a prerequisite for financial independence. Yet higher learning hasn’t evolved, both in practice and in culture, into its new role. This is made clear in non-traditional students disproportionately high attrition rates, their significantly increased student loans, and their extended average duration to graduate. This study focuses on students with dependents, a subset of non-traditional students, and attempts to understand the factors that decrease their likelihood of success.

Given that postsecondary education is associated with higher incomes, better health, and improved educational outcomes among children, increasing parenting students’ college attainment can have far-reaching, multigenerational benefits for families and communities. It is particularly important to find ways in which colleges, universities, and policymakers can best serve parenting students.

This study is comprised of three different levels of analysis. First, a time series analysis of the demographics of US colleges from 1970 to 2016. Next, 35 parenting students from different cultural regions of the US were surveyed using a comprehensive survey tool supplied by the Institute for Women’s Policy Research. Finally, ten parenting students from four different cultural regions were interviewed.

Christin Deakins
Funding Urban Conservation: a study of Bothell’s Wayne Park

The city of Bothell is a rapidly developing suburban area experiencing a population boom. In December the city purchased Wayne Golf Course to preserve greenspace and expand the city’s 143 acre park system by an additional 89 acres. The purpose of this study is to evaluate the economic impact of the city’s purchase of Wayne Golf Course, and to explore funding options for the park’s maintenance and restoration projects. The city plans to develop 4 acres within the front 9 of Wayne Golf Course into an economic engine which will activate the land and offset costs associated with the purchase and maintenance of the 89-acre park. Using King County assessor data, I build a hedonic regression model to predict the impact of the Wayne Park conversion project on surrounding property values. I then conduct a case-study analysis of urban and peri-urban parks using private/public partnerships to fund ongoing park maintenance and capital improvement projects. The city’s purchase of Wayne draws attention to a greater question of how we fund urban conservation. It is my intention to use this research to build a fiscally responsible funding model that can be applied more broadly to support urban conservation and expand greenspace in rapidly developing cities.
Shelby Guidry  
*Mediating Residents’ Trust in Police through Collective Efficacy Processes*

Urban area neighborhoods are no stranger to the vastly changing economic and social structures that persist in their communities. In principle and in practice in the United States, a residents’ place matters. The purpose of this study is to understand the ways in which social disorganization theory influences community level outcomes through two social processes of collective efficacy: social cohesion, and informal social control. I focus particularly on the process by which cohesion activates a form of control through the residents’ perceived social experiences within their neighborhoods, specifically with trust in police. Data utilized for this study derives from the Annie E. Casey Foundation's Making Connections Survey, as well as census tract data, both at the neighborhood level. Using mediation modeling and a path analysis, I found that informal social control acts as a mediator between social cohesion and trust in police. As such, members of the community contribute to a socially cohesive system when they can ascribe to shared characteristics and perceive the ability to individually alter or influence the conditions of their neighborhood through social control mechanisms.

Shibuki Hanai  
*A GIS-Based Multi-Criteria Evaluation of Disaster Vulnerability in an Urban Space*

This case study focuses on the City of Bothell and adopts a multi-criteria evaluation (MCE) approach within a geographic information system framework to measure and visualize disaster vulnerability and vulnerable (at-risk) populations in an urban space. To complement the information used to determine the level of vulnerability to natural disasters as assessed in the Disaster Mitigation Plan (published by the City of Bothell in 2010), this research incorporates variables including social status (sex, ethnicity, education attainment, age), economic status (household income, unemployment rate, average number of vehicle per household), and existing conditions of the city (building age, CDBG eligibility, rental occupation rate) at the census block level. Along with MCE, a scenario planning method was also applied in uncovering better information about the city’s future conditions to help the communities and local government officials make decisions. Firstly, all the variables were given alternative values to simulate the conditions set in the hypothetical scenarios. Then, a new set of maps depicting the various hypothetical conditions were compared to the disaster vulnerability map of Bothell to identify which evaluation factors’ weight needs to be adjusted. Results suggest that vulnerable areas are concentrated on the county borders where King and Snohomish county meet, which indicates the higher possibility of natural hazard turning into a widespread disaster along the border. Natural disaster response plans should prioritize these areas in order to improving community resilience.
Cathleen MacCaul

Case Study: Legislative and Procedural Interventions to Address Elder Financial Exploitation and Self-Neglect Case

Elder financial exploitation and self-neglect are the two most reported incidences of abuse reported to Washington State's Adult Protective Services. This capstone focuses on the evolving procedural and legislative interventions to respond and address these forms of elder abuse. Financial exploitation and self-neglect cases are increasing and reflect changes in society and the economy. There is also a correlating effect between the two forms of abuse. Key to preventing and decreasing these forms of abuse are strategic and targeted changes to the current Washington State Adult Protective Services and statutes governing the Department of Social and Health Services (DSHS) and the enforcement and penalties for these crimes, reflecting societal shifts and changes. An analysis of DSHS staff’s attitudes toward programmatic changes show the complexity of responding to these issues and their responses are validated by national data and research. The capstone uses the case study detailing the passage of financial exploitation legislation to create a new elder abuse crime and storytelling to personalize and humanize the issue.

William Orr

Voluntary Use of Shore Power by Container Ships in The Port of Seattle

The Port of Seattle, and container shipping are vital agents of the world-wide economic engine, but are also large contributors to air pollution, global warming, and human health outcomes. The Ports of Los Angeles, CA and Shanghai, China have entered into a partnership requiring all container ships to utilize electric shore power while in port. The Port of Seattle policy for container ships is voluntary use of shore power. The purpose of this study is to explore the trade-off between emission reductions and the potential economic losses resulting from a shore power mandate in the Port of Seattle. Quantitative data will be gathered from air quality monitoring stations surrounding the Port of Seattle and container vessel traffic data. The methodology will attempt to quantify both environmental and economic impacts from a shore power policy mandate. The results of this study are inconclusive due to the variables of other emission sources, geography, and weather factors, but evidence indicates more exhaustive research would be beneficial for policy makers in Seattle. I discuss the implications of a mandatory shore power policy on the Port of Seattle.
Sabrina Sadler  
*Addressing “Child Grooming” Behaviors by Child Sex Offenders*

Washington State law struggles to recognize the widely understood behaviors of “child grooming” by child sex offenders as a direct crime. Some laws may be used to address child grooming indirectly, but face challenge, as child grooming behaviors are often identified only after sexual abuse has occurred. This study examines the effectiveness of Washington State law in addressing “child grooming” behaviors by child sex offenders. Specifically, I consider how RCW 9.68A.090 “communication with a minor for immoral purposes” in conjunction with additional “aggravating circumstances” enhancements pursuant to RCW 9.94A.535 “departures from the guidelines,” and RCW 9A.28.020, “Criminal attempt,” are used to convict offenders who use child grooming techniques to target and engage in sexual relationships with children. I do this by examining which Washington State laws can be used to indirectly address child grooming behaviors. Next, I use aggregate conviction data collected from the Administrative Office of the Courts to perform crosstabulation and time-series analysis to understand patterns for how these laws have been used to address child grooming behaviors over the last five years.

Anthony Thatcher  
*Battles for School Choice*

This study examines the conditions under which school choice laws across the United States are passed in order to better equip policy makers and activists to assess pending battles for education policy. This is done by collecting examples of successful school choice laws and a snapshot of corresponding data for each of them describing the “political economy” that they were passed in. Laws are categorized based on whether they relate to charter schools or school voucher programs. Analysis of averages and distribution of these factors of political economy reveals the strength and direction of relationships between school choice law success and factors like governors, legislatures, population, teachers unions, and chief education officers. This study also attempts to capture the influence of theoretical effects such as Tiebout Choice, Policy Windows and Diffusion Theory Knowing the nature of these relationships will allow actors in the education policy arena to make better informed strategic decisions about when, where and how to fight for or against school choice.