Summary of Final Report

Organization Name: Humboldt State University Office for Economic & Community Development /HSU Sponsored Programs Foundation
Project Title: Research Applied to the Challenges of Local Industries
Amount of Grant Award: $54,000
Date of Final Report: 9/1/08

1. What were the project goals and were they achieved?

Goal I. Reduce the financial burden caused by the Aleutian Cackling Geese to local dairy and ranching industries with large-scale, sustainable waterfowl habitat management practices. To date we:

- Formalized the current cooperation and mutual problem-solving with the formation of an ongoing task force.
- Produced a summary report on Farm Bill.
- Produced a Coastal Grassland Habitat Management Guide and recommendations.
- Presented three well-attended workshops for dairy and ranch businesses on how to implement recommendations.
- Increased local understanding of the effectiveness of several strategies to shift geese from private to public lands. Solicited extensive media coverage.

Goal II. Improve the abilities of local firms with lean and predictive maintenance technologies to market their services and to serve local industries, thereby reducing operating costs for their manufacturing customers.

- Prepared market research and analysis of current conditions, customer decision-making threshold for investing in changes, perceptions and trends in industry.
- Increased the knowledge of local firms specializing in lean and predictive maintenance technologies about their target customers. The project introduced Cognisense Labs to Sun Valley Floral Group, and through a subsequent National Science Foundation grant, they are pursuing the development of a robotic arm for planting bulbs.
- HSU OECD now works with the North Coast SBDC to provide lean and Six Sigma training to manufacturers.
- Long-term outcomes will be business growth for firms serving local manufacturers and the local manufacturing cluster, creating conditions for more higher-paying jobs.

2. What were the activities undertaken and accomplishments through the completion of this grant?

With regard to Aleutian Cackling Geese (ACG):

- Identified key ACG habitats in coastal Del Norte and Humboldt Counties in California and coastal Curry County in Southern Oregon.
- Quantified physical cues in pastures and soils used by geese in their choice of habitats.
- Assessed of Farm Bill and other incentive programs that may award private landowners for providing high quality ACG habitat.
- Research was conducted concurrently by HSU graduate student, Dominic Bachman. This research assessed grass management strategies that may be used by the refuge in attempts to increase forage quality and quantity.

With regard to Lean Manufacturing Training and Technical Assistance:

- The HSU Office for Economic & Community Development completed a survey of Del Norte and Humboldt county manufacturing businesses in the winter of 2006. This survey helped identify the areas of technological and training assistance most desired, and the relative priorities of local manufacturers within those areas. The HSU Department of Applied Technology and the OECD used the survey results to design a pilot workshop on the HSU campus, and training events in four local businesses.: Kokatat Watersports Wear, Los Bagels, Cypress Grove, and Sun Valley. HSU continues to add more companies to the list for the Lean Manufacturing training program.

- HSU Applied Technology Department developed content for training materials, including production of 100 copies of a DVD and CD-ROM. These materials include video demonstrations of Lean analysis and implementation, power point presentations, scholarly articles, and simulation materials.

- The workshops conducted to date, have been presented as "train-the-trainers" events. From each workshop, a core group of participants has emerged as individuals who plan to develop their leadership and training in their own workplace and with other local firms. Businesses that have already received training last year, are now requesting follow-up consultation or training at the next level.

- Fire & Light is an example of one of the local companies that has benefited from the follow-up technical assistance after the initial training. Under supervision of faculty, Ben Davis, an Applied Technology student, has worked for several months on a follow-up project with Fire & Light, a local manufacturer of glass tableware. The energy saving system he designed has resulted in energy savings of an annual cash value of at least one full time equivalent job for the company. Further savings are projected with full scale application of the system to equate to three full time equivalent jobs.

- Participants in the Lean and Six Sigma manufacturing training are in varying stages of just beginning or just completing the first wave of improvement projects. Data has just begun to be evaluated for those that have been completed. At Cypress Grove a reorganized production process completes all production, including packaging and labeling, for a cheese in one day. This dramatically reduced work in process time, resulting in greatly increased flexibility to add to or change existing orders, and new abilities to take on 'rush' orders. David Estes of Cypress Grove believes these abilities are unique in the company's market segment and will give it further competitive advantage. The process reorganization mentioned above has also resulted in a dramatic reduction in manual transportation within the production facility. David Estes estimates at least 70 labor hours per month have been saved.

3. What are the lasting benefits of the project?

The 40-60 dairy and ranching businesses negatively impacted by ACG have more information about the problem. Understanding the factors that influence the geese's choice of foraging habitat will aid in developing management strategies for private landowners and public agencies.

The research and meetings of the key stakeholders continue. It is hoped that the scientific research will contribute to a coordinated community action plan and local, state, federal policy.

With the manufacturing industry cluster the training and technical assistance will help them to increase their capacity, lower costs, and increase competitiveness. Certain manufacturers have completed value stream mapping projects with their production staff and can quantify the benefits derived from the project. This project has helped HSU to foster a cadre of local manufacturers, production management, and front-line staff who understand and strive for the most efficient, modern, and competitive methods in manufacturing. Continual learning in Lean, green, and Six Sigma principles ultimately benefits the North Coast economy.

4. How will you continue work started by this project?

This Headwaters Fund provided the seed grant that has leveraged other sources of support for ongoing research and work with dairy and ranch owners, including grants from the U.S. Department of Commerce Economic Development Administration and the CSU Agricultural Research Initiative.

The findings and recommendations from the Aleutian Goose research for dairies and ranches include:

- Develop, present and disseminate an ACG Coastal Grassland Habitat Management Guide that will assist farmers and land managers in managing lands for ACG and livestock.
- Work with private landowners and related County, State, and Federal government agencies to implement these recommendations.

Findings & Recommendations from work with the Manufacturing Industry Cluster:

- Humboldt County is replete with small, special-niche manufacturers owned and operated by founders preparing for retirement. Special attention should be paid in the initial assessment of a participating business to its measurement and monitoring system needs. Through its ongoing relationships in the business community, HSU's Office for Economic & Community Development will remain alerted to these opportunities to help businesses build capacity and reduce overhead.

- Nearly all workshop participants expressed a desire for greater customization of the curriculum, and especially examples, to business scenarios applicable to their own. Nearly all participants of on-site trainings expressed the greatest value in the experience was the opportunity to examine an entire process piece by piece with the trainer/consultant using Lean principles and methodology.

- The time from training to development, implementation, and evaluation of improvement projects can be lengthy – up to two years. This timeline should be considered in follow-up and evaluation of the effectiveness of the training program. HSU and College of the Redwoods should develop their capacity to provide e-learning/on-line education programs to provide this type of training for the management teams and front-line production personnel of local manufacturing enterprises.