

1116-90-2851      **Jesica Bauer\*** (jbauer@carroll.edu). *Mathematics in Service to the Community: Mathematical Modeling for the Helena Food Share.*

The Helena Food Share (HFS) is a non-profit organization in Montana which provides over 5,000 pounds of food to the over 1,500 families in the Helena area each month. Like many non-profits, HFS faces issues keeping needed food stocked, storing it efficiently, and distributing volunteers to keep the system running at peak efficiency. In this talk, we discuss the methods for posing the challenges HFS faces in an optimization framework so that we can apply linear programming techniques to help address their problems. Finally, we will discuss challenges we encounter in adapting our mathematical solutions to fit the needs of the Helena Food Share. (Received September 22, 2015)