The MUM Biodiesel collective is designed to provide students with hands on opportunities to learn all aspects of harvesting locally available resources and upcycling it to provide environmentally correct transportation fuel. This program is unique in that we strive to reduce if not eliminate fossil fuel inputs and integrate renewable energy resources into the production of that fuel. A complex well to wheel life cycle environmental impact assessment has led to several very innovative measures.

* Used Fryer Oil is collected by bicycle cart from the cafeteria
* Methanol is sources from wood waste feedstock rather than Natural Gas derived product
* Solar Thermal panels generate process heat
* Photovoltaic panels provide most of the electricity to power pumps
* Rainwater is harvested from roofs to wash the raw fuel

The project is also concerned with methodologies that embed it into the community providing a sustainable source of fuel for all stakeholders. The benefits of localization are further realized by actually using student produced fuel to power the department diesel bus that transports them on field trips, not in a diluted blend but at 100%. The realization that they have harvested locally available waste resources and used renewable energy to produce the most energy efficient and environmentally correct transportation fuel on the planet is a powerful message.

SteveFugate

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