# **Projects, Partners, Facilities - OWU Department of Environment & Sustainability**

The projects on this map - proposed and completed - originated with student efforts in OWU Environment & Sustainability courses. OWU ENVS Faculty and staff, as well as community members and OWU alumni, have participated in these efforts.

### **Chimney Swift Tower** (construction 2022)

Funded with alumni donations, this "artificial chimney" should attract chimney swifts while serving as a highly visible hub for environmental engagement on the residential side of campus. Collaboration with alumni, Biological Sciences, Art, and E&S.

#### **Campus Habitats** (2018 onward)

Campus bird, animal and insect habitats, including bird nesting boxes, bird feeders, bat houses, plantings for native pollinators, solitary bee and insect houses, etc.

#### **Green Roofs and Bike Shelters**

Proposals for a green roof on the Delaware Entrepreneurial Center and for a series of green roofed bicycle shelters on campus and in Delaware.

#### **OWU Nature Preserves**

Includes Kraus and Bohannon Nature preserves, used for student research off campus.

# Bahia Ballena, Costa Rica Collaboration (2016-date)

Travel learning and student research with NGO Geoporter in Bahia Ballena uses geospatial instruments to: 1) monitor landscape change, 2) map local vulnerability to hazards (e.g., flooding), 3) monitor changes in animal behavior (e.g., whale spotting location using GPS) due to changes in the natural system (e.g., warming oceans), and 4) estimate changes to carbon storage from area flora.

# **Campus Solar Field & Solar Devices**

Big Belly solar powered waste receptacles and a proposal for a solar-covered parking between Corns and Beeghly. Generate energy for a backup of OWU's network and servers in Corns. Designed to promote and assess and analyze solar energy potential on campus.

# **Campus Perennial & Mobile Gardens**

Proposal for low-visibility location perennial plantings of raspberry, mint, asparagus and related low-maintenance crops. Can be harvested and used or left alone. Mobile garden options: modular box gardening (move with forklift to SLUs or residential buildings) and a construction dumpster garden (parked on the street). Available when students are interested, can be stored out of sight when interest wanes.

#### **Entrepreneurial Center, AVI, and ABM Collabo-**

ration: Ongoing collaborations with the Delaware Entrepreneurial Center, AVI (food service) and ABM (housekeeping). DEC: sustainability entrepreneurial efforts. AVI: local food network, gardens, composting, waste reduction, Food Recovery Network. ABM: recycling and composting.

## **Delaware Run Stream Net** (installed, 2020)

Co-funded by an OWU TPG grant and the City of Delaware, the stream net captures larger pollutants washed down the Run. Student data collection and analysis of pollutants, with emphasis on solutions to minimize such pollutants. Projects on waste reduction, effects of nicotine in urban water. etc.



**Campus Water Diversion** (installed 2019-20) Three bioretention cells (rain gardens) have been installed in collaboration with the City of Delaware. More cells proposed, along with permeable pavement and other water diversion and retention methods to reduce campus runoff.

#### Richard B. Alexander '82 GIS Lab (2022) State-of-the-art geospatial (GIS, Remote Sensing) computer lab with 20 seats and collaborative work space. The computers are next gen high performance desktop computers suitable for environmental image

processing and geospatial data analysis.

# Greenland Glacier Research (2016-date)

This study area includes the Sermeq Kujalleq Glacier and is extremely dynamic. We use satellite, weather station, and climate model data to monitor interactions between the ice surface and atmospheric circulation, paying particular attention to the formation, distribution, and discharge of supraglacial lakes (melt lakes that form on top of the ice sheet). In a warming climate, this area will continue to be important in better understanding the interconnectedness between the earth and human systems.

# **Remote Sensing Laboratory (RSL)**

Uses satellite data, UAVs (drones), and other geospatial instruments to monitor earth processes, such as urban heat islands, land use land cover change, and generation of high-resolution 3D maps. Local projects include:

• Using UAVs to assess environmental impact of housing development in Ohio • Using UAVs to generate solar power potential of campus buildings at OWU • Using satellite and UAVs to monitor vegetation health of local forests and farms • Using satellite and UAVs to map Columbus' urban heat island

# The "46" Environment & Sustainability Complex

- Environment & Sustainability Center
- Composting & Up-cycling Facility
- Dumpster Garden
- Organic Garden & Hoop-house
- Nature/Culture Habitat
- Spare University Parts & Native Plantings
- Forest & Wetland Restoration

# **OWU ENVS Collaborators: Projects, Internships**

- Stratford Ecological Center and Farm
- Methodist Theological School in Ohio / Seminary Hill Farm
- City of Delaware
- Preservation Parks of Delaware
- Delco Water Company
- Regional Ohio Action for Resilience (ROAR)
- Olentangy Watershed Alliance (OWA)
- Phoenix Environmental Consultants
- Goodwill