

CALMAR CAMPUS CONSERVATION PLAN



1. Shelterbelt - Campus (2011) • Rockwell-Collins

Vegetative barrier made up of trees, shrubs and/or grasses planted to provide shelter from the wind and to protect against soil erosion. They are planted around the edges of fields or around structures. Properly designed shelterbelts can reduce the cost of energy for homes and support buildings while providing habitat for wildlife.

2. Oak Savanna, Short Grass Native Grasses and Forbs - Campus, 3 locations (2011) • Iowa Living Roadways and Pheasants Forever

Landscaping with native plants is a simple way to obtain multiple benefits while mimicking the native ecosystem of the oak savanna. Native species are low-maintenance once established because they are adapted to Iowa temperatures, wind, and rainfall patterns. Properly-designed native landscaping can improve the value of the site, improve aesthetics, support wildlife, increase soil and water quality, and absorb noise.

3. Native Grass and Forb Seedlings - Campus, 2 locations (2011) • Iowa Living Roadways

Carefully chosen native plants can be used in a wide variety of infiltration and filtration practices to increase water quality. Landscaping with native plants provides color and habitat, and is an important component for engineered practices to capture and treat the water quality volume and the first flush of runoff from larger storms.

4. Butterfly Garden - Campus (2012) • Rockwell-Collins

Native species bloom at a variety of times throughout the growing season and attract butterflies and birds not often seen in non-native landscapes. Native plants attract this variety of beneficial birds, butterflies, insects, and other wildlife by providing diverse habitats and food sources.

5. Native Flowers - Campus (2013) • Iowa Living Roadways

Native species bloom at a variety of times throughout the growing season and attract butterflies and birds often not seen in non-native landscapes. Native plants attract this variety of beneficial birds, butterflies, insects, and other wildlife by providing diverse habitats and food sources. Conversely, closely-mowed lawns are of little benefit to most wildlife.

6. Shelterbelt - Dairy Center (2014) • Rockwell-Collins

Vegetative barrier made up of trees, shrubs and/or grasses planted to provide shelter from the wind and to protect against soil erosion. They are planted around the edges of fields or around structures. Properly designed shelterbelts can reduce the cost of energy for homes and support buildings while providing habitat for wildlife.

7. Bioswale (2015) • Natural Resources Conservation Service (NRCS) and Iowa Living Roadways

A bioswale is a multi-purpose stormwater management practice that provides an alternative to storm sewers. By using a permeable soil bed and perforated subdrain tile, bioswales infiltrate water from frequent, small rains (1.25 inches or less). During heavy rains, bioswales convey runoff in a non-erosive manner.

8. Constructed Wetland (2015) • NRCS

A constructed wetland is an artificial wetland ecosystem with hydrophytic vegetation for biological treatment of water. In this setting, it is used for improving the quality of storm water flows.

9. Grassed Waterway (2015) • NRCS

Waterways are constructed to convey runoff from concentrated-flow areas, terraces, or diversions where erosion control is needed. Waterways can be used to control gullies and/or improve the water quality of downstream water bodies by reducing the sediment carried by runoff water.

10. Wetland Restoration (2014) • NRCS

Wetland restoration is a way to return a former or degraded wetland to a condition that is a close approximation of its original condition. Wetlands are a valuable part of the natural landscape because they provide habitat for wildlife, reduce flooding, improve water quality, and increase groundwater recharge.

11. Water and Sediment Control Basin (2014) • NRCS

A water and sediment control basin is an earth embankment or combination ridge and channel constructed across the slope of minor water courses to form a sediment trap and water detention basin.

12. Pond Restoration (2015) • Northeast Iowa Community College (NICC)

An Iowa pond is the perfect spot for many fun outdoor activities. Iowa's ponds reflect the fertility of its agricultural land, which can create vegetation issues. Proper management of the pond and its surroundings is important to keep the pond healthy.

13. Permeable Pavers (2016) • Winneshiek Soil and Water Conservation District (SWCD), NICC, Dairy Center, Iowa Department of Agriculture and Land Stewardship (IDALS) and NRCS

Permeable pavers are a stormwater management practice used in place of traditional concrete or asphalt to decrease stormwater runoff. Unlike traditional surfaces, permeable pavers allow water to infiltrate into a layer or rock. Water then moves into the soil or to a subsurface drain.

14. Infiltration Trench (2016) • Winneshiek SWCD, NICC, Dairy Center, IDALS and NRCS

An infiltration trench is a long, narrow, rock-filled trench with no outlet that receives stormwater runoff. By diverting runoff into the soil, an infiltration trench not only treats the water quality volume, but also helps to preserve the natural water balance on a site and can recharge groundwater and preserve baseflow.

15. Rain Garden (2016) • Winneshiek SWCD, NICC, Dairy Center, IDALS and NRCS

A rain garden is a landscaped depression that captures rainwater runoff from roofs, driveways, streets, or parking lots. Runoff captured in a rain garden is temporarily ponded before infiltrating and percolating down through the natural soils. These soils must have adequate percolation rates that allow water to drain in 12-24 hours. This allows time for plants to use the water and for the pollutants to be filtered out.

16. Water and Sediment Control Basin (2016) • Winneshiek SWCD, NICC, Dairy Center, IDALS and NRCS

A water and sediment control basin is an earth embankment or combination ridge and channel constructed across the slope of minor water courses to form a sediment trap and water detention basin.

17. No-Till and Cover Crop (2014) • Winneshiek SWCD

No-till practice maintains most of the crop residue on the soil surface throughout the year. The only tillage performed is a very narrow strip prepared by coulters, sweeps, or similar devices attached to the front of the planter. Benefits to soil include increasing organic matter, improving soil tilth, and increasing productivity as the constant supply of organic material left on the soil surface is decomposed by a healthy population of earthworms and other organisms.

Cover crop is growing a crop of grass, small grain, or legumes primarily for seasonal protection and soil improvement. This practice is used to control erosion, add fertility and organic material to the soil, improve soil tilth, increase infiltration and aeration of the soil, and improve overall soil health.

18. Soil Health Project (2016) • National Corn Growers Association

Using the practices of no-till and cover crops to improve soil health, these areas of the campus will be used to educate producers and students in soil health best practices. This is being completed as part of the USDA's Community College Alliance for Agriculture Advancement (C2A3) project which involves nine community colleges across the midwest.

Sources: nrcs.usda.gov, iowadnr.gov • Imagery © 2017 DigitalGlobe, USDA Farm Service Agency.