

SWATeam Recommendation

Name of SWATeam: Agriculture, Land Use, Food, Sequestration

SWATeam Chair: Reid Christianson

Date Submitted to iSEE: 1 May 2019

Specific Actions/Policy Recommended (a few sentences):

Obtain more agroforestry by increasing trees campus-wide. Initial focus can be along the Embarras river between 1st street and Airport Road (CR 1100 N), where approximately 32 acres of riparian forest buffer could be planted. Additionally, general addition of trees to campus proper, including on parking lots.

Rationale for Recommendation (a few sentences):

A section of the Embarras River (approximately 4.3 km) is open (having few trees as a buffer along the stream), making a good opportunity for planting a 15-meter-wide forest buffer. Some of the campus parking lots also have room for tree planting, which would reduce heat island effect. All tree planting would result in additional, long term carbon sequestration for university lands.

This section of land along the Embarras would help us to meet the iCAP goal for additional agroforestry with the added benefit of not having to remove agricultural lands out of production for any of the adjacent crop production fields.

Connection to iCAP Goals (a few sentences):

Chapter 7, Objective 5: Increase carbon sequestration in campus soils by determining the sequestration value of existing plantings and identifying locations for additional plantings, with a specific objective of converting at least 50 acres of U of I farmland to agroforestry by FY20.

Chapter 7, Objective 2: Design and maintain campus landscapes in a more sustainable manner.

Chapter 7, Objective 6: Reduce nitrates in agricultural runoff and subsurface drainage by 50% from the FY15 baseline by FY22.

Perceived Challenges (a few sentences):

Coordination between land-owning/operating departments might take time.

Maintenance of this strip of newly planted trees will be more time intensive as the trees are establishing.

Suggested unit/department to address implementation: College of ACES, primarily Crop Science and Animal Sciences, as well as other landholders within South farms (NRES, Agricultural and Biological Engineering, etc.).

Anticipated level of budget and/or policy impact (low, medium, high): Cost for trees would be relatively low, although time would be needed for planting. Some work could be procured with local volunteer organizations, such as Red Bison, or through Illinois Extension (Master Gardeners/Master Naturalists), and the project could also be phased.

Individual comments are required from each SWATeam member (can be brief, if member fully agrees):

Team Member Name	Team Member's Comments
Reid Christianson	Riparian forest buffers have been shown to reduce nitrates interacting with the root zone by approximately 90%, which directly aligns the iCAP goal to increase carbon sequestration and the goal to reduce nitrates.
Bruce Branham	This is a win-win approach to reducing nitrate leaching, increasing carbon sequestration, and other environmental benefits. This should also be a relatively low-cost approach to managing this area.
Joseph Edwards	This solution represents an integrative, wholistic approach to improve campus landscapes, decrease erosion and nitrogen loss, increase carbon storage, and practice the sustainability values we hope to exemplify.

Thurman Etchison	I completely agree with this recommendation. I see no downside to increasing our sequestration by using these otherwise unused areas.
Brent Lewis	Utilizing this stretch of land provides multiple environmental goals and iCAP benefits, with minimal disruption to ongoing UI activities.
Ella Liskiewicz	I agree with this recommendation; the costs would be relatively low compared to the benefits of implementing the tree planting program.

Comments from Consultation Group (if any; these can be anonymous):

Explanation and Background (can be supplied in an attachment):

Plans of a redesign currently exist, and changes may be made to increase stormwater capture.