



Landscape Change Over Time

The map on this page shows how the landscape has changed over time, with an emphasis on vegetation and drainageways. It is helpful for understanding how landscapes change and for considering how these changes might affect how well the landscape works to support human and ecological needs.

Trees are invaluable. They clean the air, create shade, and cool the atmosphere. They intercept rainfall and consume groundwater, which helps mitigate stormwater runoff. Carefully chosen and placed trees provide communities identity and residents with a sense of home. In Iowa, a prairie state, we increased tree cover to create shade and a sense of enclosure within rural towns. Lack of natural fires and burning has also generally increased tree cover along rivers and floodplains. Other areas of trees have diminished due to clearing for roads or agriculture, or other purposes.

What changes do you see to the tree canopy surrounding your community? Where has the tree canopy decreased? Where might the tree canopy have increased? Consider what changes to the landscape might have led to the increase or decrease of trees in the region (e.g., farming practices, community development, establishing homesteads and windbreaks, preservation of natural resources).

This map also shows current and historical stream and river corridors. Alterations to waterways such as channelization have been made to increase drainage, but can lead to increased erosion, sediment movement, and flooding where the straightened portion ends. Storm sewers also affect streams and waterways where outfalls drop urban runoff into the corridor, which can dramatically decrease water quality. How have streams and rivers changed? Do these changes appear to be man-made or natural?

The following map shows the difference between the present day tree canopy gathered from the DNR's Land Cover data and past landscape cover, as defined in the General Land Office (GLO) surveys from 1836 through 1859 and the A.T. Andreas' Illustrated Historical Atlas of the State of Iowa from 1875.

Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," <http://www.igsb.uiowa.edu/nrgislib/>.

Emmetsburg

Landscape Change Over Time: Trees and Streams

Bioregional Context

Julia Badenhope, Chad Hunter, Giannis Koutsou, Parmiss Sazgar, Paola Monllor-Torres, Alisa Courey, Zach Rupprecht

Iowa State University | Trees Forever | Iowa Department of Transportation

