

# 3G UPLAND NATURAL RESOURCES

## 1. ISSUE

Upland natural resources are essential to maintaining the function and quality of surface water resources.

## 2. BACKGROUND

### 2.1. Ecological Impacts of Urban Development and Agricultural Practices

With the turnover of land in the county from natural landscape to urban or agricultural use natural areas have been lost or fragmented, and water resources have been degraded.

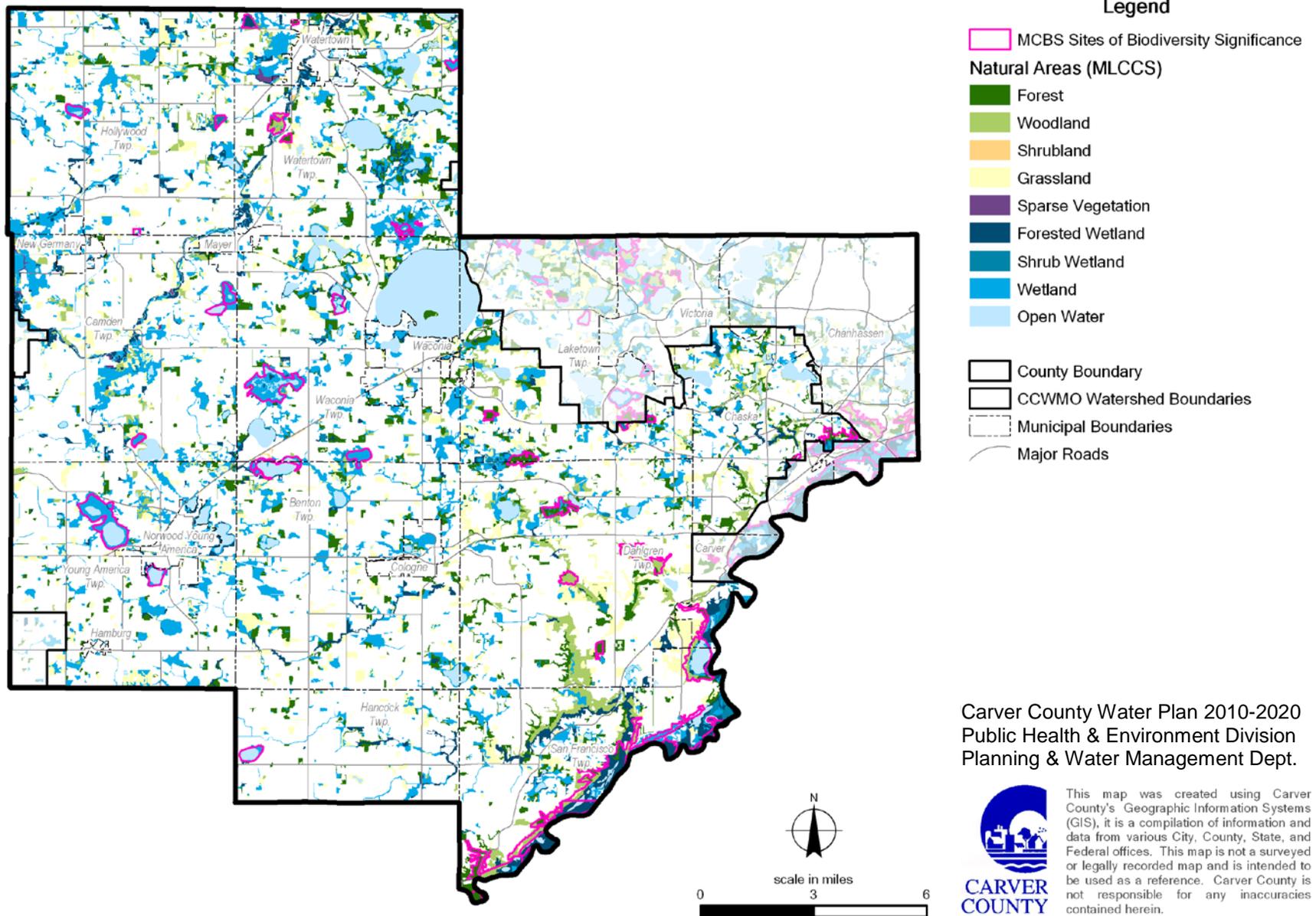
Loss of natural areas leads to a decrease in the diversity in plant and wildlife habitat. In addition, as land was developed, natural areas have been fragmented. Species have been isolated within the patches of native habitat left and they are unable to travel within a corridor that provides the types of habitats necessary to survive. Natural ecosystems can be negatively affected by the practices used to maintain developed areas (e.g. the use of fertilizers and pesticides).

### 2.2. Remaining Upland Natural Resources in Carver County

A county-wide land cover inventory shows that about 3 percent of the county's presettlement natural areas remain. In 2007, all land within the county was mapped using the Minnesota Land Cover Classification System (MLCCS). The MLCCS, developed by the Minnesota Department of Natural Resources (MN DNR), categorizes all areas, including urban and built up areas, in terms of land cover, rather than land use. Land cover is divided into either natural/semi-natural cover types (forests, wetlands, etc.) or cultural cover types (built-up areas, agricultural areas) and subdivided on the basis of specific plant community types (oak forest, cattail marsh, etc.) Information on the amount of impervious surface and the quality of natural areas is also recorded. Figure 3G.1 shows the remaining upland and wetland natural areas in the county.

The quality of remaining natural areas also varies. The Minnesota County Biological Survey (MCBS) has identified high quality native plant communities and plant communities with biodiversity significance (Figure 3G.1).

**Figure 3G.1. Existing Natural Areas and Sites of Biodiversity Significance.**



### **2.3. Natural Resource Assessment**

In 2007, Carver County completed an assessment of its remaining natural areas. Remaining natural areas in the county form a sort of “green infrastructure”, or a network of connected, high quality, multi-functional natural areas and open spaces that provide benefits to water resources, people, and wildlife. Preserving natural hydrologic pathways and associated upland areas can be one of the most efficient ways to maintain and improve water resources.

Using the county-wide land cover inventory data as the base, the county developed a GIS-based tool to prioritize its natural areas and identify areas where natural functions and systems should be preserved or restored (see section 3.3 of the Land and Water Resource Inventory for a map). The tool includes:

1. *Natural Resource Assessment* - analyzes existing green infrastructure and establishes a natural area ranking system from which land use decisions can be made.
2. *Restoration Assessment* - evaluates and prioritizes restoration opportunities.

### **3. UPLAND NATURAL RESOURCES GOAL**

Goal NR-1 Preserve and restore aquatic, wetland and associated upland habitats in a watershed context.

### **4. UPLAND NATURAL RESOURCES POLICIES**

- Policy NR-1 Increase the quantity, quality, and biological diversity of existing natural areas in the CCWMO through competent enforcement of existing laws and regulations (Wetland Conservation Act, Shoreland Management Act, Local Surface Water Management Plans, Total Maximum Daily Load Studies and Implementation Plans, and other relevant laws and regulations) and through the participation of willing landowners in existing preservation and restoration programs.
- Policy NR-2 Promote natural area restoration, as a way to mitigate the degradation and fragmentation of natural resources and increase the quantity and quality of natural areas in the CCWMO.
- Policy NR-3 Educate land owners about the functions and benefits of upland natural resources.
- Policy NR-4 Provide landowners with opportunities to protect, preserve, enhance or restore natural resources on their property.
- Policy NR-5 Focus funding and staff resources towards higher priority resources while factoring in other planning efforts and landowner willingness.

## 5. UPLAND NATURAL RESOURCES IMPLEMENTATION

- Imp Strategy NR-1 Maintain and update the Minnesota Land Cover Classification System (MLCCS), Natural Resource Assessment, Restoration Assessment, and Corridor Assessment data.
- Imp Strategy NR-2 The County may invest in studies or acquire new data to better evaluate natural resource within the county. County staff may periodically update the NRA to incorporate better data as it becomes available.
- Imp Strategy NR-3 Implement conservation and restoration projects on county-owned land including parks and road rights-of-way, as feasible.
- Imp Strategy NR-4 Explore options for creating County funding to protect or restore natural areas including trading or offsets for implementing TMDLs and/or CCWMO Levy funding for capital projects.
- Imp Strategy NR-5 Seek and allocate funds through the Capital Improvement Program, the Cost Share Program, and outside sources to accomplish restoration and conservation projects.
- Imp Strategy NR-6 Coordinate with Carver County Land Management on the implementation of the Conservation Incentive Zoning option.
- Imp Strategy NR-7 Develop a natural area protection and restoration program for interested landowners with the following elements:
- a. Collect, synthesize and distribute resource protection and restoration strategies for landowners incorporated into an educational plan.
  - b. Assist landowners in the creation of management plans for priority natural resources on their property.
  - c. Partner with agencies such as the Carver County Soil and Water Conservation District, the Minnesota Department of Natural Resources, the Natural Resources Conservation Service, and the University of Minnesota Extension Service in developing and delivering programs.
  - d. Evaluate and identify sources of funding for education and cost-share programs, possibly including: grants from agencies and foundations; county general fund; and watershed district funding.
- Imp Strategy NR-8 Evaluate upland natural resource policy and implementation effectiveness as part of the CCWMO annual report.