



## SECTION E. NATURAL RESOURCES

Lee County is rich in Natural Resources.

Natural Resources identified by this committee include but are not limited to:

1. Land
2. Adequate water supply
3. Wildlife and wildlife habitat
4. Air quality
5. Trees and woodlands
6. Geology

Sustainable use of Natural Resources can be achieved by maintaining open space, preserving and conserving agriculture land, and providing for conservation and protection of those Natural Resources available for use.

### LAND

Lee County's land must be preserved, conserved and promoted to enhance quality of life issues. Erosion has been identified as a major threat to Lee County's land. Erosion causes loss of topsoil and sub-soil which impairs waterways, water and air qualities.

Lee County should promote and support continued cost-share programs, technical assistance and education to decrease erosion loss through programs such as:

1. Conservation Reserve Program
2. Emergency Conservation Program
3. Wetlands Reserve Program
4. Watershed Protection Program
5. Environmental Quality Incentive Program
6. County Road Ditch Protection Program
7. Iowa Financial Incentive Program [terrace, water and sediment control basins]

Along with these specific governmental and county conservation programs, landowners and operators need to be educated and encouraged on basic conservation practices including but not limited to:

1. Cropping practices
2. Minimum tillage and crop residues
3. No-till
4. Terraces and water diversions
5. Contouring and strip cropping

Lee County's office of the Natural Resource Conservation Service is a valuable resource for education about conservation practices and support programs to landowners and operators.

Federal, state and county conservation programs need to be supported and expanded to remain available to land owners and operators.

Iowa 2010 The New Face of Iowa report identifies that Iowa has enormous opportunity in the next decade as the nation's leader in the production of soy-diesel, ethanol and



bio-mass power. The Iowa Department of Natural Resources has identified ethanol as Iowa's most highly consumed renewable energy resource. Accounting for more than \$1.7 million in economic activity, approximately \$730 million added value of corn crops, 15,800 jobs directly or indirectly related to the ethanol industry, and \$11 million in tax revenue collected from the production and sale of ethanol.

Lee County has the resources to pursue ethanol and soy-diesel processing facilities. Both manpower and grain availability are abundant to this area. Lee County is strategically positioned in the state to accept grains grown in border states that expands the resources available. Lee County can accomplish this goal by:

1. Developing networks and incentives for energy efficient technologies.
2. Encourage the private sector, farmers and cooperatives to invest in ethanol and soy-diesel processing facilities through tax relief, abatements and financial support.
3. Work with utility companies in opening markets for "green energy".
4. Encourage private and public schools and colleges to increase educational programming and increase research and development of fuel-efficient technologies.

Farming is the most important economic activity in the unincorporated areas of Lee County. Industrial, commercial, or residential development should be discouraged on highly productive soils and areas that would cause conflict for efficient and effective farming practice. Development should be promoted on marginal land and those lands on which development will not have a negative environmental effect. Development as it occurs should be promoted in close proximity to developed roads, energy sources and where infrastructure is available to reduce costs for county residents as well as developers. Ultimately the decision is up to each individual landowner.

Environmental sensitive land (forest, steep slopes, flood plain, stream banks, and wildlife habitat) should be protected. Urban growth should conform to present county policies to protect Lee County's productive agriculture land, recreational areas, and wildlife habitat.

Utility construction should conform to county use policies and not be allowed to interfere with existing agriculture activities or impact developed rural residential areas. New or additional utilities shall use existing utility corridors, highway corridors, or existing active railroad right-of-ways of the state.

#### **ADEQUATE WATER SUPPLY**

The county has an abundance of water. There is abundant groundwater in most areas of the county, although in some areas the water contains minerals that make it undesirable for consumption. There are three rivers that form the borders of the county: the Mississippi, the Des Moines, and the Skunk. In addition there is abundant surface water in the form of streams, creeks, sloughs and man-made lakes and ponds.

The Mississippi River is navigable and provides barge transport as well as passenger travel. It is a ready source of water for industry, transportation, and provides recreation for area residents and tourists. The other two rivers are navigable only by small craft, but are important for recreation and wildlife.

Smaller streams, lakes and ponds serve important recreation and wildlife needs, and also may help control soil erosion and pollution.



Water resources of the county should be available for industrial or agricultural development, but it is important to protect them from pollution, make sure they continue to provide wildlife habitat, limit soil erosion, and provide access to the public for recreational use including hunting, fishing, and boating.

Clean, safe water is vital to Lee County's infrastructure, important to health, economy and the living environment. Lakes and rivers have proven to be the number one vacation choice for Americans. Lee County is fortunate to have three rivers border its boundaries. Canalization and drainage have damaged these rivers, as well as livestock waste, urban run-off, pesticides, sewage facilities and pollution. Lee County must protect our rivers and streams by promoting watershed programs.

Conservation of our rivers, lakes and streams can be accomplished by:

1. Restoring wetlands.
2. Capping agriculture drainage wells.
3. Controlling and monitoring industrial discharges.
4. Erosion control practices.
5. Monitoring canalization practices.
6. Provide technical assistance and financial incentives to landowners and operators to monitor water quality and soil testing.

Lee County should actively promote watershed management projects on the watershed areas within the county. Proper watershed management improves water quality, conserves soil, and provides improved and increased wildlife habitat and recreational areas as well as providing for sustainable agriculture. Development that covers large areas with buildings or paved hard surface areas, such as parking lots, should be required to control rapid run-off to promote soil and water conservation. Lee County shall actively promote programs that encourage buffer strips, filter strips, parks, open space, wildlife habitat, etc.

## **WILDLIFE and WILDLIFE HABITAT**

Lee County is fortunate to have abundant wildlife habitat. There are both public and private woodland as well as the rivers, streams, lakes and ponds. The agricultural land within the county provides excellent habitat for many species. Abundant habitat provides recreational hunting and fishing for the residents of the county, and for tourists who come to fish and hunt. The habitat also provides excellent scenery provides for viewing wildlife such as migratory birds, eagles, deer, etc. Lee County lies on a major waterfowl migratory flyway, which attracts both hunters and sightseers.

Development of land within the county for industrial, commercial, and residential use should be done wisely so the wildlife habitat is maintained. Efforts should be made to provide both protected habitat for wildlife and more public access to areas for recreational use.

Conservation and preservation of Lee County's habitat is dependent on reproduction of the county's wildlife. Lee County can create, improve and maintain wildlife habitat by promotional and educational programs.

1. Landowner [public & private] planting appropriate vegetation.



2. Maintaining existing plant cover.
3. Planting or restoring woodland or prairie communities.
4. Wetland restoration with associated open, marshy or shallow water areas.

Promotion and education of land owners [public & private] on federal, state, and local technical and financial programs available now and in the future, such as:

1. Stewardship Incentive Program
2. Forest Legacy Program
3. Forest Stewardship Program
4. Forestry Incentives Program
5. Wetlands Reserve Program
6. Wildlife Habitat Incentive Program
7. Lee County should continue to insure future financial support for the Lee County Conservation Board, which plays an active role in Lee County by managing and restoring natural areas and offering educational and technical guidance for the public.
8. Support and promote local and Iowa Department of Transportation roadside programs.

## AIR QUALITY

Air quality is important to the health and well being of Lee County's citizens.

Lee County should:

1. Encourage air quality monitoring through reporting of apparent polluters.
2. Encourage alternative energy sources rather than the use of fossil fuels.
3. Encourage the production and use within the county of non-polluting alternative energy sources by industries, private individuals, and governments.

To promote wind energy usage, Lee County should encourage:

1. Wind energy turbines to produce electrical power.
2. Encourage landowners to lease parcels of land for turbines.
3. Support "net billing" for installation and usage to Utility Companies.
4. Provide incentives for energy efficient technologies.

## TREES AND WOODLANDS

One fourth of Lee County remains in timber and woodlands. Most woodland has survived because trees will grow on land unsuited for other crops. Woodland and trees provide necessary wildlife habitat, shade, windbreaks, aesthetics, recreation, and wood products. Trees can boost residential property values as much as 15% and can reduce heating and cooling costs by nearly 30%. Wood industries support jobs and economics. Lee County can promote conservation of woodland areas through educating landowners of the value of trees.

Landowners should be made aware of U.S. Department of Agriculture's Natural Resource cost-share programs, such as:

1. Forest Legacy Program
2. Forest Stewardship Program
3. Forest Incentives Program



4. Stewardship Incentive Program
5. Wildlife Habitat Incentive Program.

Landowners should be encouraged to establish woodland to protect livestock, buildings, crops, soil and habitat for wildlife.

## **GEOLOGY**

Lee County possesses limestone, sand, gravel, clay and gypsum, and is diverse in soil solubility. Many soils have limitations for agriculture, buildings, and septic disposal that require recognition of these limitations.

While we use and extract needed resources from the ground, we bury others we consider waste. Eventually, we must live with or reuse millions of tons of garbage. With recycling, waste production can cut landfill use by one-third. Recycling and less use of landfills can help to eliminate soil and ground water contamination and save energy by recycling. Lee County needs to support and enhance current practices of recycling such as:

1. Curbside recycling programs in rural areas and urban areas.
2. Mandatory deposit on beverage containers.

Quarry areas should be identified for use for future extraction purposes.

## **SUMMARY**

Use of Lee County's Natural Resources should be allowed that works effectively with conservation. To accomplish this, we must assess the health of our land and realize that the diagnosis reflects our attitudes and actions. We must act responsibly so that Natural Resources of Lee County can be preserved, protected, conserved, and enhanced for future generations.