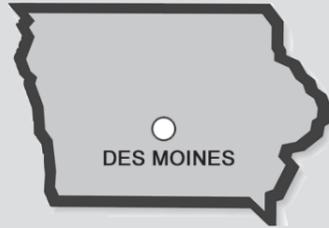


Iowa Department of Natural Resources

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The Conservation and Recreation Division of the Iowa Department of Natural Resources (DNR) is made up of five bureaus: wildlife, fisheries, parks, forestry and law enforcement. These segments link together to provide a natural and healthy surrounding for human and wildlife coexistence. The DNR manages 425,000 acres of public land, including 84 state parks, 450 wildlife areas, 275 lakes and 10 state forests. The Conservation and Recreation Division employs roughly 570 full-time personnel.

Project Background

The pollution prevention project was introduced to assess wastewater issues, vehicle use, and environmental impacts within state facilities. Wastewater issues were evaluated to provide a list of priority systems that need to be upgraded. Vehicle use was evaluated in the areas of energy consumption and air emissions. Environmental impacts such as chemical storage and solid waste in our state facilities, as well as energy demands, were observed during a series of site visits.

Incentives to Change

The Department of Natural Resources is a leader in the conservation and protection of Iowa lands. To better the reputation of already outstanding practices within state facilities, there is a consistent effort to decrease environmental impacts and energy use.

Results

Wastewater
Specific septic and lagoon systems within state facilities need attention. A priority list of septic system improvements was devised for future budget planning. Age, amount of use, and system costs all play

a factor in lessening the possible contamination of soil and ground water around the areas.

Vehicle Use

The DNR is a large consumer of fuel and a recommendation was made to purchase hybrid vehicles in the future. Replacing only one Ford Explorer with a Ford Escape Hybrid will save thousands of dollars in costs and several tons of emissions in a five year period. Recommendations such as matching vehicle selection appropriately to the task are also suggested.

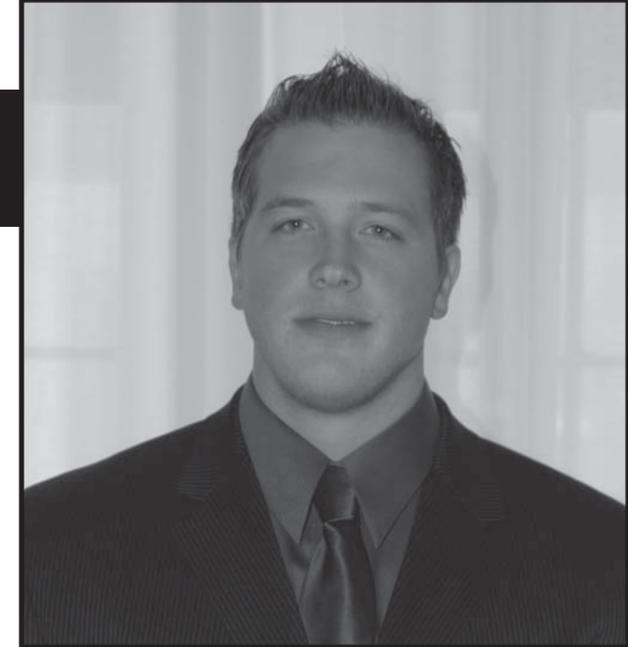
Environmental Impacts

Chemical storage and solid waste within state facilities are issues that need to be recognized and improved. A simple management plan containing information on disposal and storage techniques such as secondary containment and chemical separation, along with proper labeling, fireproof containment, and supplying up-to-date MSDS sheets will greatly improve waste management practices.

Energy

Several energy-conserving ideas are recommended in different facilities, including the replacement of older water pumps with more efficient models, limiting the amount of actual use of light fixtures, and installing lighting upgrades.

Project	Annual Cost Savings	Environmental Results	Status
WASTEWATER TREATMENT	N/A	N/A	Recommended
HYBRID VEHICLE USE SAVINGS PER VEHICLE	\$2,909 per vehicle	800 gallons of fuel per vehicle	Recommended
VEHICLE USE SUBSTITUTION SAVINGS PER VEHICLE	\$997 per vehicle	344 gallons of fuel per vehicle	Recommended
CHEMICAL MANAGEMENT	N/A	N/A	Recommended
RATHBUN HATCHERY WATER PUMP UPGRADE	\$606	12,120 kWh	Recommended
RATHBUN HATCHERY LIGHTING UPGRADE	\$431	8,628 kWh	Recommended
DECORAH HATCHERY WATER PUMP UPGRADE	\$4,342	73,736 kWh	Recommended
SPIRIT LAKE HATCHERY LIGHTING REDUCTION	\$154	4416 kWh	Recommended
SPIRIT LAKE HATCHERY RACEWAY LIGHTING UPGRADE	\$668	19,112 kWh	Recommended



Air Pollutants Diverted in Tons

	Total for all sectors
SO2	0.3
CO	0.0
NOX	0.2
VOC	0.0
LEAD	0.0
PM	0.0

Green House Gases Diverted in Tons (CO2 Equivalent)

	Total for all sectors
CO2	66.4
CH4	2.0
N2O	0.7
CFCS	0.8

