

## **Analysis Report**



## Landcover 1 1991 Hines Park Land Cover



### Air Quality Results Pounds Removed per Year

<u>Pollutant</u>	Landcover 1	Landcover 2	
Carbon Monoxide:	2,484	2,670	
Nitrogen Dioxide:	13,665	14,684	
Ozone:	38,510	41,381	
Particulate Matter:	42,236	45,386	
Sulfer Dioxide:	11,180	12,014	
Total:	108,076	116,134	

By absorbing and filtering out nitrogen dioxide (NO2), sulfur dioxide (SO2), ozone (O3), carbon monoxide (CO), and particulate matter less than 10 microns (PM10) in their leaves, urban trees perform a vital air cleaning service that directly affects the well-being of urban dwellers. This model, UFORE, developed the the US Forest Service, estimates the annual air pollution removal rate of trees within a defined study area for the pollutants listed below. To calculate the dollar value of these pollutants, economists use "externality" costs, or indirect costs borne by society such as rising health care expenditures and reduced tourism revenue. The actual externality costs used in the model is set by the each state, Public Services Commission.

#### **Stormwater Results**

#### Stormwater Volume Change Summary

2-yr, 24-hr Rainfall: 2.25 in.		
*Curve Number reflecting Landcover 1:	78	
*Curve Number reflecting Landcover 2:	79	
Change in stormwater volume due to landcover change:	454,685 cu. ft.	
Construction cost, per cu. ft.of stormwater, to build retention facility :	\$2.00	
Cost of stormwater retention resulting		
from landcover change:	\$909.371	

Landcover 2 2002 Hines Park Land Cover



#### **Benefits Summary**

Landcover Change (acres)				
Landcover	Landcover 1	Landcover 2	Change	
Tree Canopy:	1,394	1,497	7%	
Air Pollution Benefits				
Pollutants Removed (lbs):	108,076	116,134	8,059	
\$ Amount:	\$256,376	\$275,493	\$19,117	
Carbon Stored (tons):	59,968	64,439	4,472	
Carbon Sequestered (lbs):	467	502	35	

#### Water Quality (Contaminant Loading)

# Percent Change in Contaminant Loadings from Landcover 1 to Landcover 2



Notes: \*The stormwater calculations are based on curve number which is an index developed by the NRCS, to represent the potential for storm water runoff within a drainage area. Curve numbers range from 30 to 100. The higher the curve number the more runoff will occur. The change in curve number reflects the increase/decrease in the volume of stormwater runoff.