Ann Arbor Asset Management

Managing Built and Natural Assets
Efficient Delivery of City Services
Managing Risk

2011
Recent Awards

- 2010 Project of the Year - Plymouth Road Park & Ride Lot - Metro Detroit Branch of the American Public Works Association (APWA)
- Top 20 On-site Green Power Generation, #13, (2010), EPA
- Silver Level Bicycle Friendly Community (2009), League of American Bicyclists
- Smarter City, #12 in medium-size category (2009), Natural Resources Defense Council
- Outstanding Compost Operation Award (2008), Michigan Recycling Coalition
- America’s 50 Greenest Cities, (2008), Popular Science
- Best Walking Cities, #3, (2008), Prevention Magazine and the American Podiatric Medical Association
Integrating Asset Management into the Organization
Terms

Asset Management ≈ Sustainability
Managing Risk ≈ Climate Adaptation
Systems Planning Unit

- Multi-disciplinary unit with responsibility for asset management planning for the city
- Committed to long-range and strategic planning and coordination of constructed and natural infrastructure systems
- Achieved through customer engagement and the development of environmentally sustainable practices
Systems Planning Unit

- Environment
- Energy
  - Community Energy Coordinator
- Water Quality
- Stormwater/Floodplains
- Urban Forestry
- GIS
- Capital Improvements/Asset Management
- Solid Waste/Recycling/Composting
- Infrastructure Modeling
- Transportation
- Systems Planner/UM Coordination
- Senior Engineers – Development Infrastructure Review
- Interns
Systems Planning
$2.3 million - $1.2 billion in assets

2010 Budget Sources

- Stormwater Utility: 23.24
- Water Utility: 21.87
- Wastewater Utility: 19.42
- Solid Waste Millage: 11.09
- Energy Projects: 6.96
- General Fund: 6.07
- Transportations: 4.14
- Major Grant Programs Fund: 0.22

Legend:
- Blue: Stormwater Utility
- Red: Water Utility
- Green: Wastewater Utility
- Purple: Solid Waste Millage
- Teal: Energy Projects
- Orange: General Fund
- Light Blue: Transportation
- Pink: Major Grant Programs Fund
Capital Improvements Plan Metrics 2010

- Environmental Goals
- Safety/Compliance/Emergency Management
- Funding
- Coordination with other plans
- Master Plan Objectives
- User Experience (Level of Service)
- Innovation
- Economic Development/Retention
- Partnerships
- System Influence/Capacity
- O&M
- Energy
<table>
<thead>
<tr>
<th>SCORING</th>
<th>Low</th>
<th>3</th>
<th>7</th>
<th>10</th>
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</thead>
<tbody>
<tr>
<td>1 Environmental Goals</td>
<td>0 Does not contribute to meeting any of the City's environmental goals</td>
<td>3 Modestly contributes to meeting one of the City's environmental goals</td>
<td>7 Significantly contributes to meeting one of the City's environmental goals OR modestly contributes to meeting several of the City's environmental goals</td>
<td>10 Significantly contributes to meeting several of the City's environmental goals</td>
</tr>
<tr>
<td>2 Safety/Compliance/Emergency Preparedness</td>
<td>0 Does not address safety or emergency preparedness considerations</td>
<td>2 Contributes to meeting public safety, but is not required for compliance</td>
<td>5 Will assist in ability to continue governmental services during emergencies</td>
<td>8 Necessary to meet recommended compliance OR will maximize public safety opportunities</td>
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<tr>
<td>3 Funding</td>
<td>0 Has no potential funding</td>
<td>2 Has uncertain funding source(s) (e.g., Special Assessment, General Fund)</td>
<td>6 Funding available from standard City funding sources (e.g., utility rates, road millage, etc.)</td>
<td>8 Has high probability of funding from low-interest loan source (e.g., DWRF, SRF, Energy Fund, etc.) OR partial project funding (&lt;80%) from outside source(s)</td>
</tr>
<tr>
<td>4 Coordination with Other Projects</td>
<td>0 There are no other planned projects that should be coordinated with this Project</td>
<td>5 Costs can be modestly reduced by performing project with another project</td>
<td>8 Schedule is driven by other improvements (e.g., street reconstruction, adjacent utility replacement) resulting in significant (&gt;33%) opportunity cost if project is not completed concurrently with adjacent work</td>
<td>10 Schedule is driven by other high-priority improvements that must be completed within the next two fiscal years</td>
</tr>
<tr>
<td>5 Master Plan Objectives</td>
<td>0 Does not contribute to meeting any of the City's master plan or other strategic planning document goals</td>
<td>3 Modestly contributes to meeting one of the City's master plan or other strategic planning document goals</td>
<td>6 Significantly contributes to meeting one of the City's master plan or other strategic planning document goals OR modestly contributes to meeting two or more of the City's master plan or other strategic planning document goals</td>
<td>10 Significantly contributes to meeting two or more of the City's master plan or other strategic planning document goals</td>
</tr>
<tr>
<td></td>
<td>User Experience (Level of Service)</td>
<td>0</td>
<td>Will reduce the quality of the User Experience (Level of Service)</td>
<td>2</td>
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<tr>
<td>----------------</td>
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<td>---------------------------------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>7</td>
<td>Innovation</td>
<td>0</td>
<td>Does not include any innovative measures or items</td>
<td>3</td>
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<tr>
<td>8</td>
<td>Economic Development/Retention</td>
<td>0</td>
<td>Will not have any effect on economic development/retention</td>
<td>5</td>
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<tr>
<td>9</td>
<td>Partnerships</td>
<td>0</td>
<td>Does not provide opportunity for partnerships</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>System Influence/Capacity</td>
<td>0</td>
<td>Does not contribute to larger system network or user demand</td>
<td>3</td>
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<tr>
<td>11</td>
<td>O&amp;M (Operations &amp; Maintenance)</td>
<td>0</td>
<td>Will cause increase in O&amp;M costs</td>
<td>2</td>
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<tr>
<td>12</td>
<td>Energy</td>
<td>0</td>
<td>Will cause increase in energy costs</td>
<td>2</td>
</tr>
</tbody>
</table>
Sustainability Framework
Existing Plans

1. Parks, Recreation, and Open Space Plan (2006-2011)
5. Consolidated Master Plan (2009)
6. Transportation Master Plan Update (2009)
Existing Plans

Measures of Success

- Expand the current set of ten environmental goals to include goals related to the economy and social equity
- Reflect the goals of the city, community, and community partners
- Create one document that integrates all planning efforts into this framework that is web-based and publicly accessible
- Guide and educate the decision-making process through a institutionalized review process, like a checklist
- Integrate these planning goals into city decision-making (e.g., Capital Improvement Plan Metrics)
- Serve as the core of a sustainability action plan that supports the city’s two-year budgeting process
- Produce metrics to communicate the progress of sustainability goals to both city staff and the community (e.g., release a State of Our Sustainability Report)
State of Our Environment Report

• Developed by the Environmental Commission
• Organized around 10 environmental goals set by City council in 2007
• 60 indicators
Goals

- **CLEAN AIR** - Eliminate air toxics, criteria pollutants, and persistent bioaccumulative toxins (PBT)
- **CLEAN WATER** - Ensure safe water for drinking, recreation, other uses, and other species
- **EFFICIENT MOBILITY** - Provide infrastructure and policies for efficient modes of transportation
- **HEALTH-PROMOTING URBAN ENVIRONMENT** - Ensure that the built environment promotes public health and improvements to the natural environment
- **LOCAL FOOD SUFFICIENCY** - Conserve, protect, and restore local agriculture and aquaculture resources
- **RESPONSIBLE RESOURCE USE** - Produce zero waste
- **SAFE COMMUNITY** - Eliminate damage to public health and property from natural and other hazards
- **STABLE CLIMATE** - Eliminate net greenhouse gas emissions and other destabilizing climate impacts
- **SUSTAINABLE ENERGY** - Use 100% renewable energy
- **VIABLE ECOSYSTEMS** - Conserve, protect, and restore aquatic and terrestrial ecosystems
# Indicators

<table>
<thead>
<tr>
<th>Clean Air</th>
<th>Clean Water</th>
<th>Efficient Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Monoxide (CO) Emissions</td>
<td>Lead Emissions</td>
<td>AATA (Bus) Ridership</td>
</tr>
<tr>
<td>Days of Unhealthy Air Quality</td>
<td>Ground Level Ozone</td>
<td>go/Pass Participation</td>
</tr>
<tr>
<td>Sulfur Oxide (SOx) Emissions</td>
<td>Nitrogen Oxide (NOx) Emissions</td>
<td>Park &amp; Ride Lot Use</td>
</tr>
<tr>
<td>Particulate Levels</td>
<td>WWTP Total Suspended Solids (TSS)</td>
<td>Bicycling Commutes</td>
</tr>
<tr>
<td></td>
<td>Drinking Water Quality</td>
<td>Walking Commutes</td>
</tr>
<tr>
<td></td>
<td>WWTP Phosphorus Loadings</td>
<td>Single Occupancy Vehicle Trips</td>
</tr>
<tr>
<td></td>
<td>Wastewater Treated</td>
<td>Car Pool Commute Trips</td>
</tr>
</tbody>
</table>

- Phosphorus Reductions in the Huron River
## Indicators

### Health - Promoting Urban Environment
- Parkland Acreage
- Downtown Bike Parking Facilities
- Miles of Bike Lanes
- Density

### Local Food Sufficiency
- Greenbelt Land Preserved
- Farmers Market Vendor Diversity
- Public Garden Sites - Project Grow

### Responsible Resource Use
- Total Tons Composted
- Percentage of Waste Diverted
- Total Tons Recycled
- Total Waste Per Capita
- Total Tons Landfilled
<table>
<thead>
<tr>
<th>Safe Community</th>
<th>Inspected Detention Ponds</th>
<th>Approved Brownfield Projects</th>
<th>Remediated Sites</th>
<th>Lead Poisoning</th>
<th>Structures in the Floodplain</th>
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</thead>
<tbody>
<tr>
<td>Stable Climate</td>
<td>Greenhouse Gas Emissions</td>
<td>Vehicle Miles Traveled</td>
<td>Electricity Use</td>
<td>Natural Gas Use</td>
<td>Natural Gas Use</td>
</tr>
<tr>
<td>Sustainable Energy</td>
<td>Alternative Fuel Use</td>
<td>Renewable Electricity Generation</td>
<td></td>
<td></td>
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<tr>
<td>Viable Ecosystems</td>
<td>Total Natural Area Acreage</td>
<td>Urban Forest Age Structure</td>
<td>Ecological Diversity</td>
<td>Conservation of Rare Species</td>
<td>Creekshed Health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Invasive Species Management</td>
<td>Urban Tree Canopy</td>
<td>Urban Forest Diversit</td>
<td></td>
</tr>
</tbody>
</table>
Clean Air

Eliminate air toxics, criteria pollutants, and persistent bioaccumulative toxins (PBT)
New Policies

• Draft Idling Ordinance
Clean Water

Ensure safe water for drinking, recreation, other uses, and other species
Stormwater

- Stormwater Utility
  - Near IR flyover data
  - Impervious surface measurements
  - Stormwater credits

- Phosphorus Ordinance

- Watershed-based stormwater permit
Dreseitl Stormwater Design - City Hall and Police Courts Courtyard
Stormwater

• The stormwater drainage system in Ann Arbor includes:
  – 66 miles of creeks and open channels
  – 155 stream crossings
  – 359 miles of underground pipe
  – Over 11,000 inlets and catch basins.
The Huron River is the central natural feature of the City. More than ten miles of this river are located within the City limits, traversing the City from northwest to southeast.

The following creeks are tributaries of the Huron River within the City of Ann Arbor:

- Allen Creek
- Fleming Creek
- Honey Creek
- Mallets Creek
- Millers Creek
- Swift Run Creek
- Traver Creek
Impervious Surface

![Bar chart showing impervious surface percentages for different creeks and rivers over the years 2006 and 2009.]
Stormwater Utility

• Near IR Leaf Off Flyover data 2006 and 2009

• Credits for
  – RiverSafe Home partner ($1.26/quarter)
  – Install 1-5 rain barrels ($1.82/quarter)
  – Rain garden, cistern, or drywell - one per property ($2.85/quarter).

• Quarterly charge based on impervious surfaces
Stormwater Credits for BMPs

- Rain Garden/Cistern
- Riversafe Homes
- Rain Barrels

[Bar chart showing credits for each category over the years 2007 to 2011]
Single Family Residential

- 40% zoned 1 or 2 family
- @21,000 parcels
- >200 ft\(^2\) – First Flush
  - Building permit required
  - 85% of all rain events
- Typically less than 1% of project cost
Phosphorus

• Federal mandate to reduce phosphorus loading to the Huron River
• City ordinance limits P fertilizer application went into effect in 2007
  – Dr. John Lehman, University of Michigan
Phosphorus

After three years of post-fertilizer ordinance data collection (2008-2010), concentrations of DP and TP in the Huron River measured at stations within the jurisdiction of the ordinance are from **11% to 35% lower** than expected from pre-ordinance (2003-2005) reference levels.

Capture Area
A = 29km²
B = 94km²
F = Ford Lake
Stormwater Projects

- Mary Beth Doyle Park
- Pioneer
- West Park
Mary Beth Doyle Park

- 2010 award “for innovation and excellence” at this Winter’s Michigan Association of County Drain Commissioners conference
- Expected to reduce 980 lbs/yr of phosphorus from Malletts Creek to the Huron River
- Frisbee Golf Course
Pioneer High School

• Intercepts and treats water runoff from 309 acres in Allen Creek
• 4 swirl units and two basins will treat 80% of the “first flush”
• Infiltrate 20% of the treated water
• Basins measure 255,000 cubic ft and store a little less than 6 acre-ft
  – reduce pollutants in the water, recharge groundwater, and temper peak flows during storms
• $3.1 million
  – 40% federal stimulus/60% 20-year low-interest loan
West Park Recreation & Stormwater Master Plan

Ann Arbor, Michigan

A - Wet Meadow Stormwater Treatment Wetland
B - Amphitheater
C - Picnic Area
D - Existing Baseball Field
E - Basketball Court
F - Community Garden
G - Proposed Parking
H - Sports Field
I - Emergent Stormwater Treatment Wetland
J - Existing Tennis Court
K - Native American Trail
L - Playground
Total pollutant loads by event were reduced 20-90% for all constituents.

Total phosphorus (TP) and orthophosphate (OP) substantially reduced post construction.
Sylvan Avenue
porous asphalt
Miller’s Creek - 2009

bank stabilization
Briarcliff Street Stub

Briarcliff Raing

6/6/09 4 pm

5/20/09

7/22/10
BMP Study – same size storm

2004

2010
DDA

porous pavement parking lot

This is a parking lot with a difference: it has a porous paved surface that allows stormwater from the site to infiltrate into the earth.
Drinking Water

• Average day demand = 14 million gallons per day for 125,000 people
• 85% from the Huron River
• 15% from multiple wells
• 490 miles of water mains
• 3,589 fire hydrants
• 7,476 water main valves
Water Use by Municipal Facilities

![Water Use by Municipal Facilities Graph](image-url)
Wellhead Protection Areas
Footing Drain Disconnections

• Since 2001, about 2,000 homes disconnected
  – 66% of the highest priority homes
• Work is planned to continue in these five neighborhoods through 2015
• Local requirement to remove 120% of new peak flows added
Efficient Mobility

Provide infrastructure and policies for efficient modes of transportation
Fuller Road Station
Fuller Road Station
AATA

- 91% within 1/4 mile of an AATA bus stop
- 99% are within 1/2 mile.
- 31 diesel hybrid electric buses (31%)
- B-10 ultra low sulfur biodiesel
Bicycling

• 9 miles of bicycle lanes added in 2010 = 60 miles
• 100 bike hoops and 32 secured bike lockers
• Bicycle parking is required in new developments
• 14th most bike-friendly city in America
  – Bicycling Magazine in 2010
• Silver-level Bicycle Friendly City
  – League of American Bicyclists
Walking

• 400 miles of sidewalks and 100 miles of multi-use paths
• HAWK (High-intensity Activated crossWalk)
• Prevention Magazine named Ann Arbor the 3rd Best City for Walking in United States in 2008
• Vehicle Miles Traveled (VMT) for the City of Ann Arbor increased from 8,338,000 miles in 2003, to 8,677,000 miles in 2005
• AATA Ridership increased from 5,559,141 in 2006 to 6,129,831 in 2008
Health-Promoting Urban Environment

Ensure that the built environment promotes public health and improvements to the natural environment
Parkland

• 157 parks

• 3,672 acres of parkland
  – City of Ann Arbor – 2,088 acres
  – University of Michigan – 585 acres
  – Ann Arbor Public Schools – 730 acres
  – Other – 310 acres

• @43 acres of parkland per 1,000 residents
Parks & Recreation Scholarship Fund

• Awards over 800 scholarships a year to income eligible Ann Arbor resident families
• Provides access to free swimming, skating, lessons, and reduced day camps fees
Leslie Park Golf Course

• Designated as Michigan’s #1 Municipal Golf Course by *Golf Digest*

• In the process of achieving Audubon Certification
Argo Dam

Whitewater Recreation Improvements
Argo Dam Area
Ann Arbor, Michigan

September, 2010
Local Food Sufficiency

Conserve, protect, and restore local agriculture and aquaculture resources
Farmers Market

• Year round, producer-only market
• Bridge card for income eligible patrons
Greenbelt

• Innovative land preservation program funded by voter-approved millage
  – 30-year, 0.5 mil tax levy
• Funds are used to purchase new City parkland and to protect agricultural land and open space outside of the City
• Major goals include protecting active farmland, natural areas, and land along the Huron River.
Greenbelt - 2010

• Protected 13 working farms through the purchase of development rights
• 3 open space parks, in collaboration with Washtenaw Natural Area Preservation Program
• Combined total of 1,863 acres protected
• $6 million in grants to offset the City’s costs for purchase of development rights on 11 farms.
Community Gardens

Project Grow opened 2 new sites in 2010 and is working on opening a third.

Source: Project Grow  Updated: 05/26/2010

<table>
<thead>
<tr>
<th>Project Grow Sites</th>
<th>Sites</th>
<th>Plots/Beds</th>
<th>Square Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>25x30 plots</td>
<td>17</td>
<td>253</td>
<td>189,750</td>
</tr>
<tr>
<td>24 ft2 raised beds for children, elderly, and handicapped</td>
<td>2</td>
<td>63</td>
<td>1,512</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
<td><strong>316</strong></td>
<td><strong>191,262</strong></td>
</tr>
</tbody>
</table>
Responsible Resource Use

Produce zero waste
Recycling

• Single Stream Recycling
  – Program savings will pay back this investment in less than 7 years.
  – $3.25 million to upgrade the MRF
  – $1.4 million for new recycling carts
  – Expanded collection of materials
  – #1, #2, #4, #5, #6, #7
  – RecycleBank

• Automated lift arms on the new recycle trucks
41% Waste Diversion
54% Residential Waste Diversion
Solid Waste

• Commercial Franchise
  – Reduces fuel usage and greenhouse gas emissions by reducing number of trucks on the road
  – Reduces wear and tear on roads
  – Saves businesses money
Safe Community

Eliminate damage to public health and property from natural and other hazards
Flood Planning and Projects

- Flood Mitigation Plan - 2007
- FEMA grant to remove structures from the floodway
- Regulate floodplains as natural features
- Developing Floodplain ordinance
Stable Climate

Eliminate net greenhouse gas emissions and other destabilizing climate impacts
Climate Change

- ISC Climate Leadership Academy - 2010
- MDNRE Climate Plan Update - $50,000
- 922,619 MTCO2e in cumulative emission reductions from 1991-2002
  - Landfill Gas-to-Energy Project: 50,000 MTCO2e annually
  - getDowntown Program: 10,000 MTCO2e annually
  - Biodiesel in City Vehicles: 390 MTCO2e annually
% below 2000
11% reduction in Community CO$_2$e  
2000 to 2009

<table>
<thead>
<tr>
<th></th>
<th>2000 TCO$_2$e</th>
<th>2009 TCO$_2$e</th>
<th>% Change</th>
<th>Annual Growth</th>
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</thead>
<tbody>
<tr>
<td>Community Electricity</td>
<td>1,342,235</td>
<td>1,108,543</td>
<td>-17.4%</td>
<td>-2.4%</td>
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<tr>
<td>Community Transportation</td>
<td>289,370</td>
<td>329,991</td>
<td>14.0%</td>
<td>1.7%</td>
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<tr>
<td>Community Natural Gas</td>
<td>455,858</td>
<td>424,273</td>
<td>-6.9%</td>
<td>-0.9%</td>
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<tr>
<td>Community Waste</td>
<td>17,788</td>
<td>16,216</td>
<td>-8.8%</td>
<td>-1.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,105,251</strong></td>
<td><strong>1,879,023</strong></td>
<td><strong>-10.7%</strong></td>
<td><strong>-1.4%</strong></td>
</tr>
</tbody>
</table>

(7% per capita decrease)
Sustainable Energy

Use 100% renewable energy
Community Energy Costs

Total = $430 million/yr

- Natural Gas
  - $88,000,000
  - 80 million ccf/yr

- Electricity
  - $150,000,000
  - 1,500 million kWh/yr

- Transportation
  - $192,500,000
  - 55 million gal/yr

Natural Gas and Electricity = $238 million/yr
Municipal Gov’t Energy Costs

Total = $6.2 million/yr

- Natural Gas
  - $672,000
  - 742,000 ccf/yr

- Electricity
  - $4,291,000
  - 44.4 million kWh/yr

- Transportation
  - $1,195,000
  - 428,000 gal/yr
Green Energy Challenge

• 2005 - Mayor Hieftje issues Green Energy Challenge
  – 30% green energy by 2010 for municipal operations
  – 20% by 2015 for the whole city

• 2010 - 20% renewable energy in municipal operations
  – landfill gas capture
  – two hydro-electric dams
  – "green fleets" program
Energy

- DOE Solar City
  - Solar Plan 2010
- EECBG $1.2 million
  - LED street lights – 1,400 installed of 1,900
  - Community Energy Coordinator
  - PACE revolving loan fund ($400,000)
- PACE legislation passed in Michigan
  - Property Assessed Clean Energy
  - Commercial only
  - Ann Arbor PACE Program in development
Energy

- Community Energy Challenge – February 2011
- LEED Gold Police/Courts Building
- Energy meter check-out at the local library
- Solar hot water at pools, fire stations, new city hall
Hydraulic Hybrid Recycling Trucks
Plug-in Electric Hybrid Lift Trucks
2001-2010 Fuel Use (mmBTU)
Viable Ecosystems

Conserve, protect, and restore aquatic and terrestrial ecosystems
Urban Forestry

Tree Diversity (by Genus)

- Acer (Maple) 20%
- Gleditsia (Honeylocust) 20%
- Quercus (Oak) 37%
- Malus (Crabapple) 4%
- Tilia (Linden) 4%
- Picea (Spruce) 5%
- Pinus (Pine) 7%
- Platanus (Sycamore) 8%
- Ulmus (Elm) 6%
- Pyrus (Pear) 3%
- Other 2%
Urban Forestry

- $2.88 million in net annual benefit ($97/tree)
- Tree Inventory = 57,055 locations
  - 40,749 Street Trees
  - 6,610 Park Trees (in mowed areas)
  - 8,853 Potential Planting Sites
  - 843 Stumps
- Urban Tree Canopy Analysis = 32.9%
  - Residential Area Urban Tree Canopy: 46%
  - Public Right-of-Way Urban Tree Canopy: 23.7%
  - Recreation Area Urban Tree Canopy: 22%
- Urban Forestry Management Plan Underway
Natural Area Preservation

• Created in 1993 to care for, or steward, Ann Arbor’s 1,200 acres of natural areas.
• Our mission is to protect and restore Ann Arbor’s natural areas and foster an environmental ethic among its citizens.
• Voter-approved Repair and Restoration Millage
• 2010 "Outstanding Local Government Program" award – US Dept. of Interior
Natural Area Preservation

• Half of NAP’s ecological restoration is done by volunteers
  – inventorying plants and animals
  – hands-on ecological restoration including our controlled ecological burn crew
  – management effectiveness evaluation
  – management decision making

• NAP aims to empower the community through the mutually creative process of restoring healthy ecosystems, while creating healthy human interactions
NAP Volunteers

- Stewardship workdays
- Prescribed Burn Crews
- Natural Features Inventory
  - Salamanders, Frogs and Toads, Mud Puppies, and Breeding Birds
- Park Stewardship
- Adopt-a-Park
- Photo Monitoring
NAP Volunteers
1600 volunteers – 8,000 hours – 180 events
Engaging the Community
Facebook and Twitter

Gallup River Camp

Argo Canoe Livery - River Camp for kids
Green Fair
Green Fair – 10 years

- Downtown Main Street is open to pedestrians for free entertainment, food, and over 120 exhibits with environmental information, hands-on activities for youth, food, and music
  - Clean Energy Expo
  - Green Commute Options
  - BikeFest
  - WasteKnot Business Partners
Huron River Day

- Celebrated for over 30 years
- 2,500 attendees annually
- Family activities on the Huron River and in Gallup Park
- Education on water quality and river preservation
Waste Watcher

The City of Ann Arbor Public Services Area presents

WasteWatcher

Single Stream Recycling Comes to Ann Arbor, pages 21-23


RecycleBank Rewards, page 6

New Approaches to Fall Leaf Management, pages 15-18

Fall/Winter 2010-11 Ann Arbor Waste Watcher
Are you covered for basement flooding?

It’s no news to Ann Arbor residents that last summer’s weather was unusually hot and wet. Our town received 16.23 inches of total precipitation—well above the norm of around 10 inches, making 2010 the third wettest summer on record, as tracked by the University of Michigan.

Intense rainstorms like those we experienced last summer can potentially overwhelm the city’s stormwater system. In rare instances, basement flooding can result. Residents are urged to

Your family can save energy and combat global warming in the coming year!

Ann Arbor’s Energy Office is launching a new Web site where you can track your progress in reducing your household carbon footprint by saving energy, conserving water, and more! For instance, did you know that water usage and water heating, combined, are the second largest contributors to energy use and thus greenhouse gas emissions
Green Guide

A² GREEN GUIDE
Your guide to living environmentally friendly in Ann Arbor.

Open the book. Help save the planet.
Networks
Urban Sustainability Directors Network

• Urban Sustainability Directors Network
  – Core member

• USDN Innovation Grant - $20,000
  – Midwest Regional Sustainability Network

• Home Depot Foundation - $95,000
  – Sustainability Framework and Action Plan
Thank You

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