

City of Bowie  
Performance Measurement System for the  
Environmental Infrastructure Action Strategy Plan

**City of Bowie**  
**Performance Measure Indicator for the Five Year Strategy for Environmental Infrastructure**

Goals	Objectives	Outcomes	Outcome Indicators	Funding Source	Responsible Entity	Status	FY to be Completed					Data Source for Measuring Performance
							08	09	10	11	12	
<b>Waste Management</b>	<b>Recycling Objectives</b>											
	Increase the tonnage of recyclables from the current 24% to 35% by 2012	(1) Improves air quality in Bowie; (2) Saves the City money on the cost of land filling,	Change in tonnage of land filled material.	City of Bowie	City of Bowie: Public Works, IT	1. Tonnage of material land filled in 2007 was 28,400 tons.	√					Tonnage of material land filled
		(1) Improves air quality in Bowie; (2) Increases revenue received for recycled waste.	Change in tonnage of recyclable materials.	City of Bowie	City of Bowie: Public Works, IT, Front Desk	1. Tonnage of material recycled in 2007 was 9,400 tons.	√					Tonnage of material recycled annually
					City of Bowie: Front Desk, IT					Number of recycling containers distributed		
					City of Bowie: City Manager's Public Information Office					Progress of Poster Campaign  Number of brochures distributed  Hits to City Recycling Website		

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	Increase the tonnage of grass recycling by 10% by 2012.	(1) Improves air quality in Bowie; (2) Saves the City money on the cost of land filling.	Change in tonnage of yard waste recycled	City of Bowie		City of Bowie: Public Works, IT	1. Current tonnage of yard waste recycled in 2006 was 3,407 tons.	√					Tonnage of yard waste collected.
	Increase the number of rebates given by the City to residents using mulching lawnmowers from 30 to 60 per year or more by 2012.		Number of rebates for mulching mowers.	City of Bowie City of Bowie	\$25 rebates	City of Bowie: Finance	1. Number of rebates distributed by Finance in 2007 was 18. 2. Number of rebates distributed by Finance in 2006 was 60.						Number of rebates distributed by Finance
						City of Bowie: City Manager's Public Information Office	1. Advertised in City Newsletter in 2006, but not in 2007.						Number of times rebates advertised annually

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<b>Surface Water Protection</b>	<b>Stream Team Objectives</b>											
	Establish a minimum of 5 active stream teams in Bowie by 2012.	(1) Improves water quality and habitat conditions in City streams; (2) Engages City residents, businesses and institutions in restoring and protecting City sub-watersheds.	1. Number of volunteers participating in stream teams. 2. Number of stream teams formed.	City of Bowie	City of Bowie: Community Outreach Committee, Planning and Public Works	1. 1. City of Bowie staff created sub-watershed forms with inventory and maps based on Consultant project list.	√					Number of sub-watershed forms distributed or downloaded from website,  Number of registered volunteers,  Number of times advertised annually,  Number of public presentations,  Hits to City Stream Team website

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	Have at least 6 trained volunteers in each sub-watershed by 2012.		1. Number of volunteers with formal training in stream team restoration 2. Number of stream teams with trained volunteers.	City of Bowie; MDNR		City of Bowie: Planning, Public Works						Number of volunteers attending MDNR training workshops
	Complete investigations of 27 trash dumping sites by March 2008.		Tonnage of trash removed from streams.	City of Bowie	\$6,000	City of Bowie: Public Works						Number of gloves and bags distributed annually,  Tonnage of trash removed from streams

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	<b>Rain Barrel Objectives</b>											
	Install 150 rain barrels by 2012.	(1) Improves water quality and habitat conditions in streams; (2) Restores flow patterns in streams to mimic natural flows to the extent possible.	Number of lots with rain barrels installed.	City of Bowie	\$40 a barrel	City of Bowie: Planning, IT, Public Works, Community Services						Number of rain barrels distributed,  Number of attendees at public workshops  Hits to City Rain Barrel website info.

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	<b>Alternative Means of Stormwater Management Objectives</b>												
	Encourage three (3) stormwater management retrofits by 2012.	Restores flow patterns in streams to mimic natural flows to the extent possible.	Reduction in flow patterns in streams measured by stream gage.	City of Bowie	City of Bowie: Planning, IT							Square footage of eco-roofs, green parking lots, and rain gardens created annually,	
	Encourage installation of five (5) green roofs by 2012.			City of Bowie	City of Bowie: Planning, IT								Square footage of impervious surface area removed annually,
	Install a stream gage in at least 1 stream to measure water flow by 2012.			Grant Funding	City of Bowie: Planning, Public Works								Number of pipe outfalls retrofitted with infiltration devices,  Number of attendees on rain garden tours

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	<b>NPDES Objectives</b>											
	Investigate 213 pipe outfall sites, 37 unusual conditions, 21 exposed pipes, and 13 DPW/ERM fieldwork 5/07 sites by 2012.	(1) Complies with NPDES permit requirement; (2) Improves water quality; (3) Improves staff awareness	Number of (1) pipe outfalls, (2) unusual conditions, (3) exposed pipes, (4) DPW/ERM fieldwork sites investigated, characterized, and corrected or taken action.	City of Bowie	City of Bowie: Public Works, IT							Number of mitigated illicit discharge sites per sub-watershed,  Results of water quality test kits,  Progress of poster campaign
	Begin water quality sampling at specific locations in each sub-watershed by 2010.		Nitrate concentrations below 0.3 mg/L and orthophosphate concentrations below 0.01 mg/L.									
	By the year 2012, install at least 1 continuous stream monitor in a sub-watershed by 2012.	Improves staff awareness		Grant funding								

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	<b>WRAS Objectives</b>											
	By 2012, make one (1) stream habitable by a fish population.	(1) Improves water quality and habitat conditions in streams, (2) Increases public awareness	1. Number of streams habitable by a fish population. 2. Change in length of stream banks with eroding banks.	City of Bowie	City of Bowie: Stream Teams, Public Works, City Manager's Public Info. Office							Number of (1) inadequate buffers, (2) erosion sites, (3) channel alterations, (4) trash dump sites, (5) fish barriers investigated, characterized, ad corrected or taken action,  Length of stream bank with eroding banks,  Progress of poster campaign
	Complete investigations of 35 inadequate buffer sites by Dec. 2009.											
	Begin testing family-level benthic index of biotic integrity by 2009.											
	Complete investigations of 21 channel alteration sites by Dec. 2009.											

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	<p>Complete investigations of 78 fish barriers by Dec. 2009.</p> <p>Establish new baseline of stream bank length with eroding banks by June 2008.</p>											

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<b>Urban Forest Management</b>	<b>Urban Forest Objectives</b>											
	Strive for 40% canopy coverage in 20 years.	(1) Improves air quality; (2) Improves water quality, (3) Reduces expenditures on cooling costs	1. Increase in the % of tree canopy coverage in the City, 2. Increase in amount of oxygen produced by new trees	City of Bowie	City of Bowie: Community Services, IT, Planning							Satellite imagery of urban canopy coverage in the City  Number of tree vouchers disseminated,  Number of attendees at public workshops,  Number of trees planted and removed on city property,  Progress of poster campaign

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	<b>Street Tree Objectives</b>											
	Plant a minimum of 150 street trees annually through 2012.	(1) Improves air quality; (2) Improves water quality, (3) Reduces the heat island affect	Number of street trees in the City increases	City of Bowie; Grant funding		City of Bowie: Community Services						Number of street trees planted and removed
	<b>Forest Mitigation Sites Objectives</b>											
	Afforest 20 acres by 2012.	(1) Improves air quality; (2) Improves water quality; (3) Generates revenue from off-site afforestation sites; (4) Improves public awareness	1. Increase in the % of tree canopy coverage in the City, 2. Amount of off-site mitigation revenue increases, 3. Increase in amount of oxygen produced by new trees, 4. Public acceptance of afforested areas	City of Bowie; Private developers City of Bowie	Approx. \$16,800 per acre	City of Bowie: Community Services, Planning						Number of acres afforested in each sub-watershed  I-tree calculation of oxygen produced by new trees  Number of Demo. sites in the City  Mitigation revenue

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<b>Environmental Restoration, Preservation, and Conservation</b>	<b>Land Preservation Objectives</b>											
	Complete a Land Preservation Plan by 12/31/09.	Increases the amount of protected open space in the City	Land Preservation Plan completed	City of Bowie		City of Bowie: Planning, Community Services						Land Preservation Plan completed
	<b>Backyard Habitat Objectives</b>											
	Increase the amount of and stewardship of wildlife habitat on private property by having a minimum of 100 lots registered by 2012.	(1) Improves water quality and habitat conditions in the City's streams; (2) Improves wildlife habitat in the City; (3) Increases public awareness	Number of private property owners on a City backyard habitat registry	City of Bowie		City of Bowie: Community Services, Planning						
												Number of attendees at public workshops
												Number of brochures distributed

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												Number of awards disseminated for exemplary backyard habitats
												Hits to Backyard Habitat website info.
	<b>Turf Reduction Objectives</b>											
	Decrease the number of acres mowed Citywide by at least 10% by 2012.	(1) Improves water quality and habitat conditions in the City's streams; (2) Improves wildlife habitat in the City; (3) Increases public awareness, (4) Reduces City expenditure	1. Change in number of acres of grass mowed by the City, 2. Approval of a 'no mow' policy	City of Bowie	City of Bowie, Planning, Community Services, Public Works	Number of acres of grass mowed in 2006 is 198 acres.						Number of acres converted from turf to native shrubs, trees, or grasses,  Number of acres of grass mowed,  Number of stakeholder meetings held
	Reduce turf at 7 sites totaling 7 acres by 2010.											