2007 Annual Report Card

The Annual Reporting Process

The annual watershed restoration reporting process was developed by the AWMC's Anacostia Restoration Potential Workgroup (ARPW). It is based on the Anacostia Watershed Restoration Indicators and Targets adopted by the Anacostia member jurisdictions on December 3, 2001 and ensures that annual progress toward the 2010 goals is monitored, and that related information is compiled and disseminated to all interested Anacostia stakeholders. It also calls for the biennial convening of signatories (i.e., Leadership Council).

To facilitate systematic and consistent reporting from year to year, the ARPW developed a numerically-based scoring system. The adjacent figure graphically depicts the maximum number of points possible for each of the six restoration goals, as well as the overall restoration progress level, which is measured on a scale of 0-108 points.

The responsibility for generating the annual restoration progress report and report card rests with the ARPW, which solicits and receives input from key environmental, business, citizen groups, and organizations active in the watershed restoration effort. The progress report card while necessarily limited to the restoration highlights, reflect this input and summarize restoration progress made during Calendar Year 2007.

For Calendar Year 2007, the overall Anacostia effort received a total score of 58.7 points, placing restoration progress within the 'Good' range.

	Restoration Goal	Maximum Points
	1. Reduce Pollutant Load	29
	2. Restore Ecological Integrity	29
	3. Improve Fish Passage	9
	4. Increase Wetland Acreage	9
	5. Expand Forest Cover	10
	6. Increase Public and Private Participation	22

Progress Level		Point Total	Interpretation
	Excellent	81.1-108.0	Exceeding restoration target and schedule
	Good	54.1 - 81.0	Meeting restoration target and schedule
	Fair	27.1 - 54.0	Partially meeting restoration target and schedule
	Poor	0.0 - 27.0	Not meeting restoration target and schedule

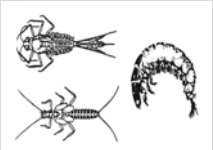
Key ARPW recommendations to the Anacostia Partnership through 2010 are as follows:

- **C**ontinue annual funding support towards the operation of both USGS Northwest and Northeast Branch water quality monitoring stations;
- **I**nstall an additional automated water quality multi-probe for the tidal river portions at New York Avenue Bridge.
- **C**ommit additional funding and resources to better meet the 'stormwater area controlled' annual target;
- **C**omplete the Goose Management Plan;
- **C**ommit to annual Amphibian Monitoring at two permanent stations per jurisdiction
- **C**ontinue to annual Bacterial Monitoring per subwatershed
- **E**xpand biomonitoring sampling program to include Clam monitoring bioassay for EPA priority pollutants and
- **P**erform tidal river game fish tissue analysis once every five years.

Anacostia Watershed Restoration Report Card for Calendar Year 2007

Indicator and Maximum Point Value (pts)		Significance	2007 Condition/ Progress	2010 Target	2007 Point Score
Goal 1 – Reduce Pollution Loads (29 pts total)					
1a. Total Suspended Solids (annual load to the river) (TSS) ☞ 3		Indicative of levels of eroded soil particles and organic material present in the water column. Cuts down on light penetration; can damage gills of fish and other aquatic organisms.	• Tidal River average TSS level = 16.4 mg/l. • SWM area controlled = 140.3 acres • Stream Length Restored = 0.1 miles.	TMDL = 85% reduction of the baseline load (Note: 80 mg/L was an interim target for 2000-2005).	**1.0 (Low)**
1b. Combined Sewer Overflows (CSO) ☞ 3		Indicative of water pollution including human sewage, chemicals, bacteria and soil.	• CSO events discharged approximately 0.4 million gallons into the Anacostia (source = DCWASA 2007) • LTCP implementation continues.	40% reduction in overflow by 2008 98% reduction in overflow by 2025	**3.0 (High)**
1c. Total Phosphorus and Total Nitrogen (annual load to the river) 3		Two main nutrients contributing to algal blooms.	Tidal River average nutrient levels: • Total P = not reported • Total N < 1.0 mg/l • See Goal 1a	40% reduction per Chesapeake Bay Agreement.	**1.0 (Low)**
1d. Fecal Coliform Concentration/ Bacterial Contamination ☞ 3		Indicative of presence of animal or human waste and water contact safety level.	• Tidal River average fecal coliform level = 751 MPN. • LTCP implementation continues. • WSSC Consent Decree line repair and monitoring continues	• Per DC-WASA's LTCP 98% reduction for tidal river. • Tributary compliance w/ water quality standards 75% of time.	**1.5 (Medium)**
1e. Dissolved Oxygen (DO) May – Oct. levels. ☞ 3		Levels > 5 mg/l generally needed to maintain healthy aquatic communities.	• Percent of time < 2.0 mg/L = 0 %. • No major fish kills.	• < 2 mg/l 0% of the time. • No major fish kills.	**2.1 (High)**
1f. Biochemical Oxygen Demand (BOD) (annual load to the river) 3		Measure of amount of oxygen consumed by decomposition of organic matter.	Tidal River average BOD_5 < 3.0 mg/L (Note – currently no tidal river BOD loading data).	Approx. 75% loadings reduction.	**1.5 (Medium)**
1g. Secchi Depth 3		Measure of water clarity and nutrient enrichment levels.	Tidal River average secchi depth = 0.45 m.	> 1.0 m	**0.8 (Low)**
1h. Trash Index and Quantity of Trash Removed ☞ 2		Indirect indicator of environmental stewardship level and watershed quality. Direct indicator of aesthetic quality and potential recreational use.	• Approx. 390 tons removed by DCWASA (2006 approx. = 610.) • AWS removed 54 tons of trash	• Watershed trash levels in the 'light' range; • Decreasing trend level(s) in annual river tonnages removed.	**1.0 (Medium)**
1i. Toxics and Metals (annual load to the river) 3		A major stressor on aquatic life. Can bioaccumulate in tissue of fish and other aquatic organisms.	• DC and MD fish consumption advisory still in effect.	Elimination of all fish consumption advisories.	**1.2 (Medium)**

☞ = 'Leading Indicator' for general public.

Indicator and Maximum Point Value (pts)		Significance	2007 Condition/ Progress	2010 Target	2007 Point Score
1j. Chlorophyll 'a' 3		Measure of algal population densities.	Tidal River average Chlorophyll "a" ~ No Data.	Mesotrophic levels. <7.0 ug/L	**1.5 (Medium)**
Sub Total Score: 14.6 Verbal Ranking: Fair					
Goal 2 – Restore Ecological Integrity (29 pts total)					
2a. Temperature 3		Controls the metabolic rate in fish and other aquatic life.	Summer monitoring shows violations only in the Good Hope Tributary (Maryland Use III waters; Violation occurs at stream temperatures ≥ 68 degrees F)	Meet W. Q. standards (100%).	**1.8 (Medium)**
2b. Turbidity 3		Measure of amount of light scattering particles in water.	Tidal River average turbidity = 42 NTU.	< 50 NTU average (Note: 50 NTU will be revised to reflect DC TMDL target).	**1.4 (Medium)**
2c. Deformities, Erosions, Lesions, Tumors (DELTS) ☞ 3		Indicative of chronic water pollution conditions associated with the presence of hydrocarbons, metals, pesticides, etc.	Tributary DELTs – range 0% – 2.7% in Anacostia watershed. Tidal river DELTs – range 22.2% to 47.2%	≤ 2-3 % of fish community.	**1.6 (Medium)**
2d. pH 3		Measure of a waterbody's acidity or alkalinity level.	• Tidal River average pH = 7.5 (meets DC Class "C" standard). • Average Tributary pH ~ 7.4	Meet W. Q. standards (100%)	**2.5 (High)**
2e. Macroinvertebrate Community Health ☞ 3		Leading indicator of overall stream quality. Aquatic 'bugs' provide insight into a stream's physical, chemical, and biological condition.	• Highly variable; generally in the poor to fair range; with sections of the Paint Branch in the good range. • No Tidal River IBI data for 2007.	• > 'fair' for all subwatersheds; • Decrease in % dominant taxon for tidal river.	**1.4 (Medium)**
2f. Resident Fish Community Health ☞ 3		Leading indicator of general stream quality, particularly for larger streams and rivers.	Highly variable.	Increasing numerical IBI scores throughout.	**1.3 (Medium)**
2g. Stream Miles Restored ☞ 3		Measure of restoration progress. Improves both physical aquatic habitat and can reduce downstream sediment and pollutant loads.	Total stream length restored = 0.1 miles (Note: Annual target is 2.2 miles).	15 – 20 additional miles.	**0.7 (Low)**
2h. Submerged Aquatic Vegetation (SAV) 3		Indicative of improving water quality and habitat in the tidal river.	• 2007 SAV acreage = 0 (2006 SAV acreage = 0).	Approx. 15 – 20 acres total. (Note: annual target is an increase in 2.2 acres)	**0.0 (Low)**

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Indicator and Maximum Point Value (pts)		Significance	2007 Condition/ Progress	2010 Target	2007 Point Score
2i. Percent Impervious Surface in the Watershed 1		Indicative of local stream and subwatershed quality and general pollutant loads.	• Database needed for tracking imperviousness changes at subwatershed level in development.	Increase in watershed acreage featuring Low Impact Development Techniques (LID).	**0.4 (Medium)**
2j. Percent of Developed Land w/SWM Controls ☞ 3		Measure of restoration progress and ability to reduce downstream water quantity and quality problems.	Total stormwater management area controlled = 140.3 acres (Note: annual target = 1,088 aces (1.7 mi^2).	Approx. 25 – 30% of older watershed areas controlled. (Approx. 15 additional mi^2)	**1.1 (Medium)**
2k. Recreational Use 1		Indirect indicator of both improving watershed quality of life conditions and public perception.	• Variable, but generally increasing trends in park visitations • No data on fishing and boating trends	Increase in multiple categories (e.g., fishing, boating, etc.).	**1.0 (High)**
Sub Total Score: 13.2 Verbal Ranking: Fair					
Goal 3 – Improve Fish Passage (9 pts total)					
3a. Percent Historical Anadromous Fish Spawning Range Open ☞ 3		Reflects progress made in restoring river herring and other migratory fish species to the historical ranges.	Number of stream miles opened in 2007 = 2.1 (Note: annual target = 2.2 miles)	Approx. 20 additional stream miles.	**2.8 (High)**
3b. Percent Anadromous Fish Habitat Utilization 3		Indicative of quality of habitat present and strength of herring runs.	• 17.6 miles opened since 2000 • Limited monitoring data • Generally weaker runs than 1999-2004 period	100% utilization of available habitat (approx. 30 miles).	**0.5 (Low)**
3c. Percent Tributary Mainstems and Major Feeder Streams Open to Resident Fishes 3		Indicative of return to a more natural open stream system.	Number of stream miles opened in 2007 = 2.1	• 100% of all mainstem areas. • 100% of all 'priority' tributaries.	**1.5 (Medium)**
Sub Total Score: 4.8 Verbal Ranking: Fair					
Goal 4 – Increase Wetland Acreage (9 pts total)					
4a. Created/Restored Tidal Wetland Acreage ☞ 3		Reflects progress made toward regaining lost tidal emergent wetland. Indicator of improving fish and wildlife habitat conditions and rivers' 'filtering' abilities.	• Anacostia Site 11 (22 acres) completed. • AWS planted over 2,800 plants (Heritage Island and Kingman Lake wetland areas)	Approx. 50 – 60 additional acres of emergent wetland.	**2.5 (High)**

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Indicator and Maximum Point Value (pts)		Significance	2007 Condition/ Progress	2010 Target	2007 Point Score
4b. Created/Restored Non-Tidal Wetlands ☞ 3		Reflects progress made toward restoring lost non-tidal wetlands, wildlife habitat and, ecosystem filter indicator.	• No projects completed or in design • One vernal pool group meeting	• 15 – 20 new projects; • Approx. 10 – 15 additional acres.	**0.3 (Low)**
4c. Wildlife Utilization of Wetlands 3		Indicator of habitat quality and ability to support amphibians, reptiles, birds, and other wildlife.	• Goose management Plan continues • USGS wetland monitoring study report finalized	Develop Anacostia-specific IBI by end of 2002.	**2.0 (Medium)**
Sub Total Score: 4.8 Verbal Ranking: Good					
Goal 5 – Expand Forest Cover (10 pts total)					
5a. Miles of Created Riparian Forest ☞ 3		Riparian or streamside forests help protect rivers and streams from sediment, fertilizers, and other pollutants washing off the land, while also regulating water temperature and providing optimum habitat for both plant and animal communities.	Miles of created riparian forest = 0.36 miles (1.51 acres) Note: annual target = 2.0 miles (4.6 acres).	10 – 12 additional miles and approx. 40 – 45 more acres.	**1.1 (Medium)**
5b. Percent Adequate Riparian Buffer 2		Indicative of buffer widths present and general ability to provide water quality and wildlife habitat benefits.	Anacostia Forest Management and Protection Strategy Completed 2005	Develop watershed-wide buffer criteria by 2002.	**2.0 (High)**
5c. Acres of Mature Hardwood Forest 2		Measure of both remaining High quality wildlife habitat and ecologically critical areas.	Anacostia Forest Management and Protection Strategy Completed 2005	Develop watershed Forest Management Protection Strategy by 2002.	**2.0 (High)**
5d. Acres of Created Upland Forest 1		Indicative of both wildlife habitat and potential watershed quantity and quality benefits.	Anacostia Forest Management and Protection Strategy Completed 2005	• Inventory by 2002 • Ditto 5c	**0.2 (Low)**
5e. No. of Upland, Riparian and Total Forest as Percent of Watershed Area 2		Represents total forested area remaining in watershed as a % of area.	Forest cover ~ 29.6 % Upland Forest cover ~ 23.5%	Ditto 5a – d	**1.5 (High)**
Sub Total Score: 6.8 Verbal Ranking: Good					
Goal 6 – Increase Public and Private Participation (26 pts total)					
6-1 Usage					
6-1a. No. of Anglers 1		Recreational use and public perception indicator. Indirect measure of improving watershed conditions.	No DATA	Watershed-wide increase.	**0.6 (Medium)**

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Indicator and Maximum Point Value (pts)		Significance	2007 Condition/ Progress	2010 Target	2007 Point Score
6-1b. No. of Fishing Piers and Use 1		Recreational use indicator.	• No new Pier • Bladensburg Waterfront Park and Lake Artemesia piers receiving moderate to high use	Construction of 2 – 3 piers.	**0.3 (Low)**
6-1c. D.C. Anacostia Hiker-Biker Trail and Use 1		Recreational use and watershed 'connectivity' indicator.	Anacostia Waterfront Initiative hiker biker trail in planning stage. Planned improvements to hiker biker trail opposite Dueling Creek. Anacostia Site 11 under construction	Complete linkage w/M-NCPPC system.	**1.0 (High)**
6-1d. Colmar Manor/ Bladensburg Footbridge 1		Hiker-biker trail system and recreation facilities 'connectivity' indicator.	Completed	Construct footbridge.	**1.0 (High)**
6-1e. No. Public Boat Ramps 1		Measure of river water sport accessibility.	• No new boat ramps • Arboretum boat ramp discussion planned	3 – 4 additional small-boat ramps.	**0.6 (Medium)**
6-1f. No. of Boat Houses 1		Indicator of river usage.	No new boat houses.	3 – 4 additional.	**0 (Low)**
6-1g. No. of Annual Regattas 1		Tidal river public participation indicator.	Four regattas held	2 – 3 additional/yr.	**1.0 (High)**
6-1h. Annual Park Visitation 1		Measure of recreational use and visitation in the watershed.	Annual park visitation generally increasing from 2006.	Increase throughout.	**0.8 (High)**
6-2 Stewardship Indicators					
6-2a. School Activities ☞ 2		Direct measure of effectiveness of Anacostia outreach and stewardship initiatives.	M-NCPPC (PG) programs reached ~6,000 students. AWS reached ~3,886 students	Increase in all subwatersheds.	**1.5 (High)**
6-2b. ARBC Membership 1		Increase business participation throughout watershed.	No Activities	Expand into P.G. and Mont. Co.	**0 (Low)**
6-2c. AWRC-University Partnerships 1		Direct measure of the level of engagement of institutions of higher learning in restoration effort.	UMD LSU UDC GMU	Expand opportunities in all 3 jurisdictions.	**1.0 (High)**
6-2d. Anacostia School Web Linkages 1		Direct measure of accessibility to Anacostia restoration information.	DCDOE continues with school education and outreach programs.	• Link all public schools; • Create 'partner' school program	**0.5 (Medium)**

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Indicator and Maximum Point Value (pts)		Significance	2007 Condition/ Progress	2010 Target	2007 Point Score
6-2e. Stewardship Events 2		Direct measure of physical participation in restoration activities such as tree plantings, stream cleanups, storm drain stenciling, invasive plant control, kiosk building, etc.	• AWS river cleanup • FOSC Sweep the Creek events • LBC cleanup • Pope Branch stream cleanup	Increase throughout.	**1.8 (High)**
6-2f. Revitalization Expenditures 2		Direct measure of commitment by both government and private interests.	• US Route One Corridor - $115M Anacostia • Nationals Stadium completed • Southeast DC Redevelopment Plan	Increase throughout.	**2.0 (High)**
6-3 Advocacy					
6-3a. Active "Friends of" Groups ☞ 1		Measure of community involvement in the restoration effort and environmental advocacy.	Active subwatershed groups present in Sligo, Northwest Branch, Paint Branch, Little Paint Branch, Indian Creek, Upper Beaverdam Creek, Still Creek, Lower Beaverdam Creek, Watts Branch and Pope Branch	Establish in every major subwatershed.	**0.7 (Medium)**
6-3b. Media Coverage 1		Indirect measure of interest in Anacostia restoration-related activities.	General positive press of restoration efforts. Train derailment into the river produced substantial negative image.	Increase and promote more positive image	**0.7 (Medium)**
6-3c. Herring Festival 1		Indirect measure of community involvement.	No progress.	Annual event.	**0 (Low)**
6-3d. Government by Example 1		Direct measure of government's willingness to lead and become 'greener.'	LID demonstration projects, stream restoration, curbside recycling, nutrient management, mass transit, and "green" streets.	Expand current efforts.	**0.7 (Medium)**
6-3e. Restoration Expenditures 1		Direct measure of the 'bottom line.'		Increase in all 3 jurisdictions.	**0.3 (Low)**
Sub Total Score: 14.5 Verbal Ranking: Good					

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Summary 'Report Card' for Calendar Year 2007

Summary: Anacostia Restoration Report Card, 2001-2010										
Goal No.	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1. Reduce Pollution Loads	18.0	12.8	13.4	14.3	14.1	13.9	**14.6**			
2. Restore Ecological Integrity	18.3	14.3	13.6	14.7	14.5	12.5	**13.2**			
3. Improve Fish Passage	4.8	7.5	2.3	3.1	3.8	4.5	**4.8**			
4. Increase Wetland Acreage	5.9	5.2	6.2	3.0	3.4	4.3	**4.8**			
5. Expand Forest Cover	6.4	5.4	4.5	4.8	6.8	6.8	**6.8**			
6. Increase Public and Private Participation	9.3	11.2	14.1	12.2	13.8	14.1	**14.5**			
Total Points	**62.7 Good**	**56.4 Good**	**54.1 Good**	**52.1 Fair**	**56.4 Good**	**56.1 Good**	**58.7 Good**			

Total Point Interpretation:

≥ 81.0 = Excellent (i.e., exceeding restoration target and schedule)
54.1 – 81.0 = Good (i.e., meeting restoration target and schedule)
27.1 – 54.0 = Fair (i.e., partially meeting restoration target and schedule)
0 – 27.0 = Poor (i.e., not meeting restoration target and schedule)