



MONTGOMERY COUNTY PLANNING DEPARTMENT
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB
ITEM #9
03/27/08

MEMORANDUM

TO: Montgomery County Planning Board

VIA: Gwen Wright, Chief, Countywide Planning Division
Jorge Valladares, P.E., Chief, Environmental Planning
Mary Dolan, Supervisor, Environmental Planning

FROM: Marion Clark, Planner Coordinator, 301.495.1328
Environmental Planning, Countywide Planning Division

PURPOSE: Roundtable Discussion: Briefing on the Energy and Environment Plan/Environmental Policy Framework

RECOMMENDATION: Discussion and Endorse Staff Direction

Background

An Environment and Energy Plan was first proposed by Chairman Hanson when the FY08 budget was being prepared in August 2006. It was envisioned as a comprehensive plan for environmental sustainability to examine how Montgomery County will be able to meet our ongoing needs – environmental, economic and social – without compromising the ability of future generations to do the same. This plan was especially important because of the degraded quality of our air and water and the specter of climate change in a time of continued growth.

But since its conception, several plans have intervened that represent large pieces of what the Environment and Energy Plan intended to include. The Green Infrastructure Functional Master Plan, the Water Resources Functional Master Plan, and the proposed Climate Protection Plan separately address environmental issues that should be connected at a policy level. The FY08 adopted budget began to revise the original proposal for a comprehensive plan into a policy framework that envisioned linking recommended actions resulting from these plans to insure that there are no gaps or conflicts.

Staff is recommending that we continue to pursue this project as development of a policy framework that may result in an amendment to the General Plan, rather than undertaking a larger functional master plan.

Framework Concept

This policy framework will comprehensively examine how Montgomery County can adopt policies that will foster a sustainable quality of life. It will engage the residents of Montgomery County in exploring how to address climate change and growth while protecting our food and water supplies, as well as the ecological processes which assure our quality of life. It will also identify specific actions that will improve sustainability and focus on ways to effectively align our environmental goals with our land use plans and growth policies – both countywide and regional.

This framework will unify other environmental plans, such as the *Water Resources Functional Master Plan*, *Legacy Open Space*, the *Green Infrastructure Plan* and the *Climate Protection Plan*. The Environmental Policy Framework will also identify topics that may not be fully addressed by other plans, and will provide a blueprint for future project proposals.

Some topics that the framework may identify for future analysis are:

- Deconstruction and building materials recycling
- Food sheds and food systems
- Risk and reward of sustainability actions, such as congestion pricing
- Uncovering buried streams
- Predicting long term land use impacts of climate change to Montgomery County such as changes to timing and magnitude of stream flows or increased urban “heat island effects” due to average annual temperature change
- Looking comprehensively at open space in the county and in particular the multi-functional nature open space must adopt to fulfill environmental and social needs in urban areas

The Environmental Policy Framework will establish policies and actions that give direction to master and sector plans. Many environmental and sustainability issues are alike in urban areas across the county. The framework will make recommendations for approaching similar environmental issues comprehensively, thus increasing the efficiency and speed of the master planning process.

Sustainable Quality of Life indicators that concern creating healthy and sustainable communities will also flow from the framework and creation of the framework will advance the effort to create usable, important indicators. Each of the indicators will have a direct connection with policies identified in the framework, and will reflect the community input given during the framework development process. These indicators will be folded into the effort to identify county indicators that M-NCPPC is currently engaged in with the County Executive.

Benefits to the County

The Environmental Policy Framework project will benefit the County by:

- Consolidating county environmental policies and illustrating how those policies are interrelated
- Identifying gaps in knowledge needed for planned growth which sustains environmental functions
- Facilitating the master plan process by providing a uniform, updated, countywide approach for future master plan revisions
- Identifying overlaps and making connections between separate functional plans master plans, policies, guidelines, ordinances and programs currently existing across the county
- Identifying actions that have multiple benefits for sustainable communities
- Determining if changes to regulatory requirements or programs will be needed to facilitate sustainability goals.

Influences from Other Plans

Water Resources Functional Master Plan

At the time the work program for the Environmental Policy Framework was under Council discussion, state HB 1141 was passed requiring the preparation of a Water Resources Plan for the County. Work years intended to be used for the Environment and Energy Plan in FY08 were transferred to the Water Resources Plan and only a small effort allocated to scope the Environmental Policy Framework effort.

Green Infrastructure Functional Master Plan

This plan was initiated before the Environmental Policy Framework and will result in a green network that identifies areas already protected and areas where additional protection is needed. It will help focus protection associated with development proposals and simplify the preparation of master and sector plans.

Climate Protection Bills

In November 2007 members of the County Council introduced seven new Climate Protection bills, two of which influenced the direction of this plan. These bills have been reported favorably out of committee and are scheduled for approval at the County Council meeting on Earth Day, April 22. The bills set a goal of reducing greenhouse gas emissions 80% in the County by 2050 and require all master and sector plans to consider ways to reduce our carbon footprint. The bills require development of a Climate Protection Plan led by the Department of Environmental Protection (DEP) and the inclusion of a carbon footprint analysis in master and sector plans.

Bill No. 32-07 Environmental Sustainability - Climate Protection Plan requires the Director of DEP to prepare a Climate Protection Plan that:

- Identifies a strategy with short-, mid-, and long-term goals to achieve countywide goals for greenhouse gas
- Prepares a plan for increasing the County's tree canopy
- Prepares a plan to educate County residents and businesses about global climate change and reducing greenhouse gas emissions.

Amendments proposed to the original bill include formation of a Sustainability Working Group, with representatives from a cross section of county agencies including M-NCPPC, and with private sector participation to help in developing this Climate Protection Plan. This group would also be helpful as a sounding board for the Environmental Policy Framework and Sustainable Quality of Life Indicators.

The Climate Protection Plan required by county Bill No. 32-07 will house all the environmental information relating to reducing greenhouse gas emissions. Although the Environmental Policy Framework will not set climate protection goals or actions, it will establish policies and make connections with land use and environmental plans that will help to achieve greenhouse gas reduction goals or responses to the effects of global warming.

Bill No. 34-07 Planning Procedures – Greenhouse Gas Emissions requires the Montgomery County Planning Board to assess the potential impact of development on carbon footprint in the County and consider options that would minimize those emissions when preparing master and sector plans. Since the bill was introduced, we have begun to include brief assessments in the latest sector plans for Twinbrook, Germantown, Gaithersburg, and White Flint.

Growth Policy

Work on sustainability in the Growth Policy this year is well positioned to dovetail with work in the Environmental Policy Framework. In the Growth Policy Resolution passed by the County Council, issue F10 *Sustainability Quality of Life Indicators Program* requires the Planning Board to develop a set of sustainable quality of life indicators addressing issues of environment, social equity, and economy. The indicators must be suitable to guide land use and other public policy decision-making. Although there is no directive for the Environmental Policy Framework goals to match the sustainability indicators or for the indicators to be derived from sustainability goals, the two are linked and should be considered in relation to each other. Indicators chosen should measure the success of the policies and goals established for the Environmental Policy Framework as well as the Growth Policy.

Planning Progress

Over the past year (FY08), we have conducted research to identify the potential conceptual reach of the plan. We looked at a wide range of plans and found efforts in

other large jurisdictions that can serve as precedents to help us form the plan, such as the King County 2007 Climate Plan, Seattle Green Future, and Plan NYC. (Appendix A) We have gathered examples of useful methods and models, and identified sources of assistance. Statistical models are available for quantifying environmental functions such as air and water quality benefits of tree cover and green roofs, the viability of mitigation strategies on urban heat island effect, and planning for clean air and climate change. (Appendix B). Work has also begun on isolating appropriate grants, consultants and partners to aid in crafting the plan.

Next steps

Since the Sustainability Indicators Program and the Environmental Policy Framework are closely linked, we propose that the planning process for the Environmental Policy Framework work in tandem with the Sustainability Indicators Program. Since the resolution for the Sustainability Indicators Program dictates that an initial set of indicators are submitted by October 1, 2008 to County Council, we propose to amend the Work Program Schedule to have a draft Environmental Policy Framework to the Planning Board prior to that date.

We propose that the framework be shaped at a two day workshop held in June. Experts in sustainability and the environment will be assembled to form a panel to do the following:

- 1) Review an outline of what such an amendment/framework should contain
- 2) Assess current initiatives, their connections, and gaps in policy that should be addressed
- 3) Advise on the priority and feasibility of various elements appropriate for a local jurisdiction to undertake
- 4) Recommend goals and/or interim targets for improvements
- 5) Suggest key indicators for monitoring outcomes

Community, interest groups and institutions would be encouraged to attend the workshop. Technology could be used to link remote locations such as community centers and institutions to allow groups to gather in familiar places and stimulate their own action plans that can expand the efforts beyond what the County or the Planning Board can do. Community comments will be integrated into the workshop results to form a draft of an amendment to General Plan for review by the Planning Board. The resulting Planning Board Draft will be forwarded to County Council in October 2008. See Appendix C for a more detailed schedule of milestones. Appendix D is the approved Program Element and Master Plan Schedule.

Appendix A

Plan comparisons

	toxic material	housing/green buildings	waste	economics	open space	natural resource	social justice	educated public	trans- portation	energy	land use	water network	water quality	air quality	climate change
Washington State Sustainability Plan	x	x	x	x	x	x	x	x	x	x					x
King County, WA Climate Action Plan	x	x	x						x	x	x				x
City of Seattle Green Open Space	x	x	x	x	x	x	x	x	x		x				
Denver Greenprint Climate Action Plan			x					x	x	x	x				x
Plan NYC Comprehensive Plan with Green Focus	x	x			x				x	x		x	x	x	x

State of Washington

Action Plan for a Sustainable Washington

Achieving Long-term Economic, Social, and Environmental Vitality

Strategic Outcomes

Reliance on Renewable Energy
dramatically increase energy efficiency and conservation.
all energy needs met through renewable sources

Engaged Communities
citizens vested with responsibility, authority accountability

No Waste
waste used as resources for new goods
toxic materials eliminated

Costs paid in full
Taxes, regulations, incentives revised to reflect wise
natural, social resource policy

Educated Public
provide foundation for involved, well-informed public

Economic Vitality through Natural Resource Innovation
improve resource productivity

Social Justice
protect vulnerable members of society

Enduring Natural Resources
Understand and live withing carrying capacity

Priority Action Recommendations

Increase Economic Vitality
Invest in clean energy as economic opportunity
Create Institute for Innovation and Sustainable Dev.

Take Action on Critical Resource Issues
Commit to greenhouse gas reduction targets
Sustain Washington's natural resources

Lead by Example
Adopt industry sponsored "green building" standards
Establish goals for state procurement of sustainable goods
Align state capital spending with policies encouraging
efficient development

Provide Incentives
Shift tax burden to promote sustainable outcomes
Provide local government with autonomy to implement
sustainable approaches

Build Awareness and Measure Progress
Engage and inform citizens about sustainability
Produce a set of sustainability performance measures

King County Climate Action Plan*

green buildings	waste	transportation	energy	climate change	land use
renew green building law	maximize waste-to-energy technology	benefits to employees	implement Energy Plan	meet Chicago Climate Exchange goal of 6% of 2000 emissions by 2110	promote growth in transit-oriented areas
green building guidelines	research & report on waste reduction trends	maximize use of clean technology in fleet	promote energy conservation	update ege inventory on regular basis	promote import of ag lands
green building concept paper		use clean fuels in fleets	demonstration projects	assess emissions for major capital projects	promote import of healthy forests
higher % cement subs		demonstration projects for clean fuels and technologies	support cap and trade legislation	regional consensus to stop ege growth	support climate friendly land use practices
develop toolkit of green building resources		seek support to expand use of alternative fuels and clean energy	support standards and incentives for energy efficiency and renewable energy	blueprint to reduce ege	support protection for adversely impacted communities
foster partners to increase green building market share		report on innovation in fuels and technology that reduces operational ege		take lead in standardizing regional ege calculations	
		increase transit service		establish statewide climate stabilization target	
		promote bike/ped trails		establish statewide standard for ege inventory	
		commute trip reduction ridesharing, carpooling, car-sharing		promote sequestration of ege	
		account for ege in land use and trans infrastructure		create climate change technical advisory group	
		establish congestion pricing		continue work of interdepartmental climate change adaptation team	
		establish "pay-as-you-drive" demo project		invest in education about climate change	

*incomplete listing of strategic focus actions

Seattle Green Future: Visions and Strategies for Seattle's Green

This was a two day charrette with professionals, citizen activists, and students.
The purpose was to provide a template for developing an integrated green infrastructure for all of Seattle.

Create integrated green infrastructure

- Aggregate open space to create connections and urban greenways
- Create multi-functional open space
- Redefine transportation corridors to include more green spaces and ecosystem functions in row, lid freeways
- Recreate natural drainage to restore waters

Promote ecological open space

- Understand the city as watersheds
- Respect underlying natural conditions
- Reestablish historic streams
- Restore shorelines for habitat
- Establish and protect greenbelts and habitat networks to extend urban forests

Balance density and community

- Focus development in the urban core
- Create new urban villages with civic hearts
- Employ green roofs and walls
- Encourage decentralized self-sufficiency with localized power generation.

Provide democratic access and use

- Provide equality in accessibility to open space
- Give increased access to water from every neighborhood
- Use open space for education/schools
- Provide a hierarchy and variety of open spaces

Green print Denver: Climate Action Plan - goal: eliminate need for the equivalent of one coal-fired power plant by 2012

- Corporate and Residential climate challenges
 - Develop major business and residential outreach campaigns supporting adoption of best practices
- Incentivize energy conservation
 - Introduce proposal to apply tiered rate structure to electrical and natural gas usage.
 - Premium charge for excessive usage
 - Funds generated used to support energy conservation programs esp. for low income
- Voluntary travel offset program
 - Provide opportunity to pay small voluntary fee at time of air travel or motor vehicle registration to offset emissions
 - Funds used for carbon absorbing or reducing activities
 - Explore potential with Governor's Energy office
- City leading by example
 - Aggressively pursue opportunities for energy efficiency and renewable energy at Denver International Airport
 - Work to develop "carbon neutral" city buildings
 - Make city fleet improvements
- Enhance recycling program
 - Double present recycling rate
 - Support new and expanded recycling initiatives including green waste recycling
 - Solid waste master plan
- Energy efficiency standards for new buildings and remodels
 - Adopt set of mandatory standards
- Increase energy efficiency in existing homes
 - Promote basic energy efficiency measures at residential properties
 - Plant shade trees and install in-home energy display systems
- Community wide high-performing green concrete policy
 - Require use of "green concrete" containing low to moderate % fly-ash and recycled aggregates
- Compact growth boundary with incentives for density in urban areas
 - Support maintenance of existing growth boundary and population growth around transit
- City support for alternative transportation strategies
 - Develop city policies that promote transition to use of alternative transportation sources.

Plan NYC: A Greener Greater New York

Challenges: Growth, Aging Infrastructure and Precarious Environment

Land

Housing

- Create homes for a million more - affordable/sustainable
 - Expand supply potential by 300-500,000 units
 - Direct toward transit
 - Maximize efficiency of government-owned sites
 - Create new land by decking over highways
 - Creative financing, inclusionary zoning and homeownership programs for affordability

Open space

- Ensure that all New Yorkers live within a 10-minute walk of park
 - Invest in new recreational facilities
 - Open hundreds of schoolyards as local playgrounds
 - Reclaim underdeveloped sites
 - Expand usable hours at existing fields by installing additional lights and turf fields

Brownfields

- Clean up all contaminated land in NYC

Water

Water network

- Open 90% of waterways for recreation by reducing water pollution and preserving natural areas
 - Build new filtration plant
 - Institute water conservation measures
 - Evaluate new potential water sources like groundwater
 - Repair and modernize in-city distribution

Water quality

- Develop critical backup systems for aging water network to insure long-term reliability
 - Upgrade waste-water treatment infrastructure
 - Green streets, plant trees and expand blue-belt network
 - Explore other natural solutions for clean water
 - Form new interagency best management practices task force
 - Begin assessment of wetlands

Transportation

Improve travel times by adding transit capacity for millions more residents, visitors and workers

- Reach a full "state of good repair" on NYC roads, subways, and rails
 - Sweeping transportation plan
 - Improve transit network through major infrastructure expansions
 - Improve bus service
 - Expand ferry system
 - Complete bike master plan
 - Reduce gridlock with better road management and congestion pricing
 - New regional financing entity - the "SMART financing Authority
 - Revenues streams: congestion pricing, NYC and state
 - Fill existing funding gap for critical transit expansions
 - Provide grants to achieve state of good repair

Energy

Provide cleaner more reliable power for every New Yorker by upgrading energy infrastructure

Increase clean energy supply

Encourage addition of new, clean power plants through contracts, promote re-powerings

Build market for renewable energies

Retire oldest, most polluting power plants

Lower consumption

Target largest energy consumers

Accelerate efficiency upgrades through system of incentives, mandates and challenges

Create New York City Energy Planning Board

Air Quality

Achieve the cleanest air quality of any big city in America

Pressure state and feds to require reductions in harmful emissions

Aggressively target local sources under control

Encourage New Yorkers to shift to mass transit

Mandate, promote or incentivize fuel efficiency, cleaner fuels, cleaner or upgraded engines, installation of anti-idling technology

Launch one of the largest local air quality studies in US

Climate Change

Reduce global warming emissions by 30%

Climate change strategy is sum of all initiatives in plan

Long-term effort to develop comprehensive climate change adaptation strategy to prepare unavoidable climate shifts

Environmental Models

itree - The Urban Forest Effects (UFORE) Model was developed by the U.S. Forest Service to quantify variables such as total pollution removed by the urban forest, volatile organic compound (VOC) emissions from the forest, annual carbon sequestration, and the effects of trees on building energy use and consequent effects on carbon dioxide emissions from power plants. The model produces the following data:

- Urban forest structure by land use type (e.g., species composition, number of trees, DBH distribution, tree density, tree health, leaf area, leaf and tree biomass, species diversity, etc.).
- Hourly amount of pollution removed by the urban forest, and associated percent air quality improvement throughout a year. Pollution removal is calculated for ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide and particulate matter (<10 microns).
- Hourly urban forest volatile organic compound emissions and the relative impact of tree species on net ozone and carbon monoxide formation throughout the year.
- Total carbon stored and net carbon annually sequestered by the urban forest.
- Effects of trees on building energy use and consequent effects on carbon dioxide emissions from power plants.
- Compensatory value of the forest, as well as the value of air pollution removal and carbon storage and sequestration.
- Tree pollen allergenicity index.
- Potential impact of pests such as Gypsy moth, emerald ash borer, or Asian longhorned beetle.

MIST is a software tool that estimates the impacts of urban heat island mitigation strategies on urban air temperatures, ozone, and energy consumption. The cooling strategies assessed include increasing urban albedo (reflectance), increasing urban vegetative cover, or a combination of both. Alternatively, users can evaluate how a particular temperature change will impact ozone concentrations and energy use.

A web-based software tool has been developed to assist urban planners and air quality management officials in assessing the potential of urban heat island mitigation strategies to affect the urban climate, air quality, and energy consumption within their cities. The user of the tool can select from over 170 US cities for which to conduct the analysis, and can specify city-wide changes in surface reflectivity and/or vegetative cover. The Mitigation Impact Screening Tool (MIST) then extrapolates results from a suite of simulations for 20 cities to estimate air temperature changes associated with the specified changes in surface characteristics for the selected city. Alternatively the user can simply define a nominal air temperature reduction that they hope to achieve with an unspecified mitigation scenario. These air temperature changes are then input to energy and ozone models to estimate the impact that the mitigation action may have on the selected city. The results presented by MIST include a high degree of uncertainty and are intended only as a first-order estimate that urban planners can use to assess the viability of heat island mitigation strategies for their cities. As appropriate, MIST analyses should be supplemented by more detailed modeling.

Clean Air-Climate Protection Software

The State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO), in partnership with the International Council for Local Environmental Initiatives (ICLEI), prepared this tool to help state and local governments develop harmonized strategies to reduce both greenhouse gas and air pollution emissions. This software provides states and local governments with the ability to analyze different air pollution control scenarios and select and implement those that address air pollutants, such as ozone precursors like nitrogen oxides (NO_x), volatile organic compounds (VOCs), carbon monoxide (CO), sulfur oxides (SO_x), and particulate matter (PM), in addition to greenhouse gases (GHGs).

This one-stop emissions management tool tracks emissions and reductions of greenhouse gases (carbon dioxide, methane, nitrous oxide) and criteria air pollutants (NO_x, SO_x, carbon monoxide, volatile organic compounds, PM₁₀) associated with electricity and fuel use and waste disposal. This tool can help you:

- Create emissions inventories for the community as a whole or for the government's internal operations.
- Quantify the effect of existing and proposed emissions reduction measures.
- Predict future emissions levels.
- Set reduction targets and track progress towards meeting those goals.

The Clean Air and Climate Protection Software is designed to:

- Track emissions on either a supply or demand side basis.
- Build emissions scenarios for use in the planning process.
- Create a full emissions reduction plan.

MIKE URBAN combines DHI's 20-year tradition for leadership in simulation engines with ESRI's world leading GIS technology. The result is a software product that defines a new industry standard in modeling water distribution and urban drainage networks.

- A GIS-based model data management package for collection system networks and water distribution networks.
- A complete stormwater and wastewater-modeling package powered by SWMM5.
- A complete water distribution network-modeling package powered by EPANET.
- Modular system, tailored to fit your needs.

MIKE URBAN is a unique tool that combines and fully integrates all three areas of stormwater modelling, wastewater modelling and water distribution network modelling with ESRI's world leading GIS technology.

MIKE URBAN includes the reliable and stable drainage network modelling engine MOUSE, while the water distribution tools are based on DHI extensions to the worldwide standard EPANET engine coupled with DHI's powerful simulation engine for transient flows.

Environmental Policy Framework

Preparation Timeline

Date	Milestone/Event
April 2007	<ul style="list-style-type: none"> • Identify consultant and issue contract <ul style="list-style-type: none"> ○ Set event date ○ Find location to hold workshop event ○ Identify stakeholders and participants ○ Issue invitation to participate ○ Contact possible partners • Put together staff team, coordinate with County staff • Devise public outreach <ul style="list-style-type: none"> ○ Craft logo and advertising materials ○ Build website
May 2008	<ul style="list-style-type: none"> • Advertise event • Meet with county agency staff, Sustainability Work Group • Prepare materials for workshop
June 2008	<ul style="list-style-type: none"> • Hold two day workshop • Compile workshop results • Brief Planning Board on workshop findings • Release draft results for public comment
July /August 2008	<ul style="list-style-type: none"> • Compile community comments • Integrate public comments into workshop results • Circulate to workshop participants • Present Staff Draft Framework to Planning Board/Authorization to print and distribute for comment
Aug 2008	<ul style="list-style-type: none"> • Refine graphics and print document
September 2008	<ul style="list-style-type: none"> • Present final document to Planning Board in Public Hearing
October 2008	<ul style="list-style-type: none"> • Hold Planning Board Worksessions
2008 - 2009	<p>County Executive Review County Council Review Public Hearing Work Sessions Approval (June 2009) and Adoption (July 2009)</p>

Appendix D

FY09 PROGRAM ELEMENT

ENVIRONMENT AND ENERGY POLICY FRAMEWORK: GROWING WISE, GROWING GREEN

DESCRIPTION/SCOPE

Comprehensively examine how Montgomery County will be able to meet our ongoing environmental, economic and social needs without compromising the ability of future generations to do the same. Engage the residents of Montgomery County in addressing climate change and growth while protecting our food and water supplies, and the ecological processes which assure our quality of life. Identify concrete actions that will improve sustainability and focus on ways to effectively align our environmental goals with our land use plans and growth policies – both countywide and regional.

Lead Division: Countywide Planning

BENEFITS TO THE COUNTY

- Clearly state the changes to county plans and policies needed to achieve selected goals for sustainability
- Provide a framework policy of county policies that address the environment and energy and how the policies can be coordinated for optimum benefit.
- Bolster efforts and provide leadership to promote sustainability in the Chesapeake Bay Watershed.
- Facilitate the master plan update process by providing a uniform, updated, countywide environmental and energy approach for future master plan revisions
- Allow the master plan analyses to be timelier, focusing on more detailed environmental analyses and concerns in neighborhoods and communities
- Provide a structure to make recommendations for standards, guidelines, ordinances, or zoning that incorporates multiple environmental concerns and promotes greater sustainability.

SPECIFIC TASKS/PRODUCTS FOR FY09

- Coordinate and determine roles with Montgomery County's Department of Environmental Protection and establish an interagency working group (Summer 2008)
- Prepare analytical approach and select appropriate models for measuring carbon impacts and carbon sequestration (Summer 2008)
- Collect appropriate data (Summer-Fall 2008)
- Establish citizen outreach efforts (Fall 2008)
- Prepare staff draft and recommendations (Summer-Fall 2009)

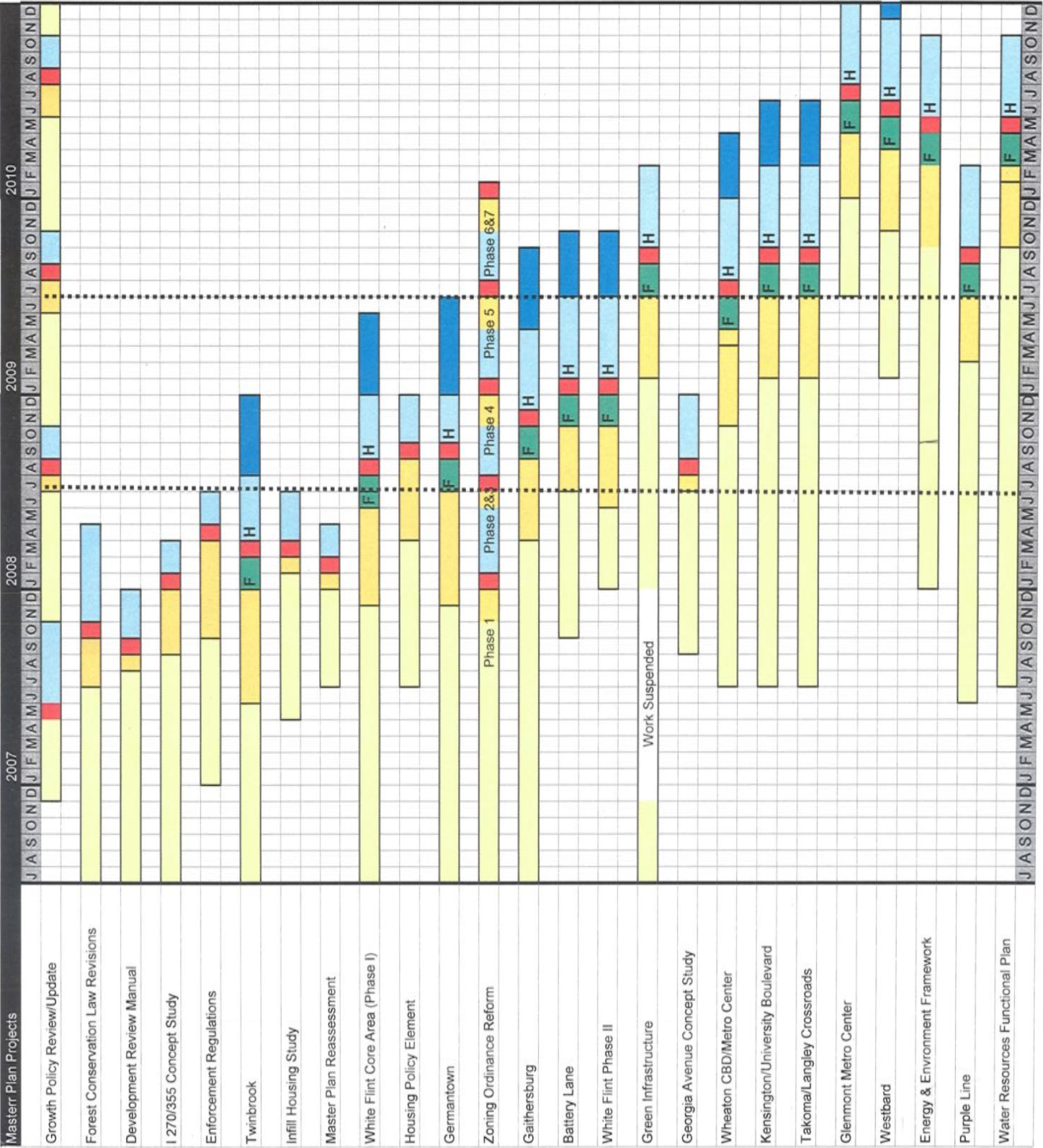
PERFORMANCE OUTPUTS AND BASELINE INDICATORS

% of milestones completed within target timeframes.

Number of outreach sessions conducted on Plan.

Budgeted Resources:	FY08		FY09	
	WY	\$	WY	\$
Personnel	0.15	\$13,977	1.70	\$180,400
Professional Services		\$50,000		\$150,000
Publications				
Other Operating Expenses		\$1,949		\$23,200
Chargebacks				
Total		\$65,926		\$353,600
Revenue Source: Administration Fund				

Schedule: Master Plans and Major Projects



1/11/2008