

This report is presented as a resource document for the *Imagine Houston* process. Its contents are the result of almost a year of public discussion and represent the consensus of the focus group volunteers. While the Planning & Development Department provided support to the process, it did not screen, edit or modify anything contained herein.

## **Minding Our Natural Resources**



March, 1995

Dear Fellow Houstonians:

What does every single person in Houston share in common with every other person in the city?

The gift of our *Natural Resources*: the air we breathe, the water we drink, the ground that supports us and the verdant greenery that surrounds us. Our natural resources constitute our physical surroundings; together, they collectively form the “house” that the family of Houston lives in. We can abuse our house and allow it to fall into disrepair or we can decide to maintain, improve, and respect our house.

The *Minding Our Natural Resources* Focus Group brought together hundreds of interested and committed Houstonians. Some of us were old friends who had shared our visions of more beautiful bayous, cleaner water, clearer air, and tree-lined parkway boulevards before. But many of us were entirely new to the discussion. Together, we listened to each other and to experts, shared feelings and wisdom in friendly interchange and in argument, and came to consensus around a vision for Houston built on its natural resources.

The focus group decided in its first meeting that it would stay together as one large group to shape a vision statement. Because of the depth of the material to be discussed, the group voted to meet every other week in meetings that were often long and very technical. However, our hard work paid off. We were extraordinarily gratified to learn that other Houstonians from all parts of town shared our vision -- two of the *Natural Resources* Focus Group goals were among the highest ranked goals at the September Town Hall meetings.

We would like to thank all the participants for their unflagging enthusiasm over many long nights. In addition, we would like to thank the agencies for sharing their expertise, for their willingness to come and patiently explain detailed materials with a group of citizens. And finally, we especially want to thank the Planning & Development Department staff members who worked so hard to pull a huge volume of ideas into one coherent package.

The *Natural Resources* Focus Group feels very strongly that we can and should work urgently together to assure ourselves and our children an adequate “house” for the

fulfillment of all our dreams. The quality of our future will be shaped by the quality of our natural resources.

Respectfully,

The *Minding Our Natural Resources* Focus Group



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In March of 1994, Houstonians seized an opportunity created by Mayor Bob Lanier to help determine the future of our community. Over one thousand people participated in a three-day **Imagine Houston** forum, during which they identified the issues facing Houston and set the agenda for future discussions.

**Imagine Houston** is a community-wide visioning process designed to bring people together to share information, learn about each other's viewpoints and to develop a consensus on the issues, goals and opportunities that will shape Houston's future. It will result in a plan that public, private and not-for-profit organizations can use as guidance on how to structure programs, services and financing to the betterment of our community.

After the March forum, working groups called focus groups, were formed to deal with specific topics:

*Community Safety*  
*Fostering Our Cultural Resources*  
*In Service to the Public*  
*Learning For Life*  
*Minding Our Natural Resources*  
*Taking Care of Ourselves*  
*Where We Live*  
*Where We Meet*  
*Where We Work*

An additional group, the *Youth Focus Group*, was subsequently created to obtain ideas from Houston's young people on the issues facing them.

Membership in the focus groups was open at all times to anyone; nearly one thousand Houstonians participated in discussions from March to December. The work completed by the focus groups is the result of those public discussions. Each group developed a vision statement and a list of goals and actions that can be taken to achieve the goals.

While each focus group concentrated on its respective topic, certain themes emerged as constants throughout the reports. They include:

*economic competitiveness...* with other cities throughout the world, internationalism, job growth and training, economic opportunity for all residents;  
*education...* youth, education, preparing the leaders to lead, ensuring our future by ensuring theirs;  
*community building...* self-defined "urban villages", the idea of belonging to a community, personal responsibility;  
*urban and natural resources...* space and place, physical elements blending with the natural environment, a livable community;  
*celebrating diversity...* through public art, cultural and educational training, and through equal access for all.

**Imagine Houston** does not stop here. These ten reports form the foundation for the work of the **Imagine Houston**

# Preface

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Steering Committee in creating a vision plan for Houston. The Steering Committee consists of members appointed by Mayor Lanier, a representative of each Council Member and a representative from each focus group. The Committee recognizes the importance of continued public dialogue. When complete in Spring 1995, this Plan should serve for the next 20 to 30 years as the basis for actions by every segment of our community including individuals and public and private-sector organizations.

***Imagine Houston*** is an extraordinary exercise in grass roots democracy. The committed citizens who participated have given our community insightful ideas to lead Houston into the next century. We are grateful for their efforts. We are hopeful about our future.

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# Section 1: Introduction

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## ***Vision***

*Houston will be a beautiful and prosperous city with healthy and beautiful neighborhoods, workplaces, bayous, parks, freeways, thoroughfares, city streets, and commercial developments. To achieve this, our city must take actions that utilize, respect and reclaim our natural resources: the air, land, water and living resources; and preserve and enhance the visual environment: trees, landscaping, and appropriate signage. Our Natural Resources form our common ground and are our responsibility.*

## **Executive Summary**

The *Minding Our Natural Resources* Focus Group met every two weeks from April to December, 1994, in order to develop a vision, goals and actions on various topics affecting Houston's natural resources. From these discussions, several recurring themes and a few topics of debate emerged.

## **Themes**

**Defining and inventorying our natural resources**

What exactly are our natural resources? The focus group defined "natural resources" as systems which were present when man arrived in Houston such as the Galveston Bay system, our bayous, prairies, forests, air, etc. (See Appendix B). After defining the natural resources, the next step was to formally document these resources. A subcommittee of volunteers, known as the Environmental Resources Inventory Committee, undertook this task. The subcommittee identified "map layers" documenting the information available from the City's Metrocom mapping system and the Houston-Galveston Area Council. This subcommittee also made recommendations for additional information to be sought by these agencies. The subcommittee listed the natural, man-made, and political features that should be portrayed in a series of map layers which would support our planning, protection and natural resource management efforts (See Appendix C). Keeping up-to-date inventories of natural resources are important to the region and continuing efforts to disseminate this information will create a greater awareness and understanding of how each of these features are interrelated.

## **A natural resources protection plan**

A plan which protects the natural resources on a regional level is essential for the balanced growth of the city which will allow Houstonians to live in neighborhoods accented by natural elements such as trees, birds, and bayous as well as provide habitats for other living creatures. Because natural resources are not limited to political

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boundaries, it is important that many local, State and Federal government agencies be involved in this process. Citizens and technical advisors will also bring an added insight into the creation and support of this plan. Once the natural resources have been defined and inventoried, a plan should be designed to protect existing resources from further degradation and to prioritize the restoration of those resources which can reasonably, efficiently, and economically be restored and protected.

**Bayous are the defining natural resource of Houston**

If you look at an aerial photograph, a map of the city, or out the window of an airplane as you fly over the Houston region, the defining and most obvious feature would be the winding lines of Houston's bayous. On the ground, you cannot drive more than just a few miles without crossing a bayou. Eight major bayous (over 3,000 miles) dissect the region and empty into the Gulf of Mexico through Galveston Bay. These bayous are the natural drainage ways for the region's waterfall. Indeed, the bayous were the principal draw for the first settlers in the region. Today, many neighborhoods reflect the names of bayous, as in Spring Branch, Cypress Creek, etc. The goal of protecting and enhancing the bayous was a favorite among the goals presented at town hall meetings in September, indicating a city-wide, neighborhood familiarity and sensitivity to the bayous.

Recognizing the importance of the bayous, the focus group made two key recommendations: to manage the bayous for multiple uses, including

transportation/recreational activities in and along the bayous, habitat preservation, etc.; and to address the problem of storm drainage. Storm drainage is a serious issue as it causes loss to human life and personal property when the bayous' capacities are exceeded. Specific recommendations address the need for watershed based run-off management to aid in the reduction of water levels, floodplain management, habitat protection and others. Similar to the natural resources protection plan, this issue needs to be addressed on a regional basis and involve many agencies coordinating drainage activities and cooperating with each other.

**“An uncommonly beautiful city”**

The visual appearance of the city is one of its most important features. This focus group, as well as several others, expressed their desire to seek a city that looks and feels better. While neighborhood protection, contributes to a beautiful city, the appearance of the built environment is also significant. This means, good urban design of streets, bridges, and public infrastructure; proper sign/billboard use; sidewalks or trails; and the landscaping of our neighborhoods, public buildings, parks, and street (thoroughfare and freeway) right-of-ways. Specific actions for this theme include an improved landscape ordinance, a tree protection ordinance, sound construction techniques including site clearance standards, and strengthened and enforced signage and billboard regulations. Land set aside for “green areas” or open space, tree plantings, and the use of native plants

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will be the most effective way to recapture Houston's natural beauty.

#### **Government coordination**

In order to achieve the goals and accomplish the actions set forth by this Focus Group, our government agencies need to work together to communicate, cooperate and coordinate. Natural resources protection is dependent upon governmental agencies working together on a regional basis to solve problems, since our natural resources know no governmental boundary lines.

#### **Education**

Many of our problems related to natural resources, are a result of lack of public knowledge. *The Minding Our Natural Resources* Focus Group recommends that programs on education be included into our school curriculum and become an integral part of our community's education throughout all ages of life.

#### **Topics of Debate**

While the focus group reached broad consensus with nearly all of their proposals, the discussions were not without some debate. The most recurring topics were the growing concern over the growth of the city and the balance between incentives and regulations to encourage changes.

#### **Houston, a growing city**

The focus group recognizes the importance of a strong, vital economy to the city. However, the group questions whether urban sprawl is necessary to economic vitality. Urban sprawl is the rapid growth of the metropolitan areas onto farmland and open spaces. Inner-city neighborhoods are negatively impacted by sprawl as they lose

residents to outlying planned communities featuring extensive open spaces, recreational amenities, newer schools and private security. Spreading growth to the ETJ or unincorporated areas, rather than recycling land within the inner-city may use up valuable agricultural areas, wildlife habitat, or natural scenic amenities. The group emphasized that encouraging inner-city infill not only conserves natural systems but also reduces the commuting distance, thereby reducing traffic congestion and pollution. However, the group also acknowledges that inner-city infill has the potential to further increase land values in such high density areas, which may impact open space preservation.

#### **Incentives and regulations**

The focus group was very conscious of a resistance in Houston to regulation and sought to identify incentives which should seek to further the common good of all Houstonians. Consider, for example, development in the floodplains: developing a property in the floodplain not only increases the flow of runoff from the property, but may also decrease the natural carrying capacity of the bayous, which may result in flooding that damages homes and property. Consequently, all residents of the city pay higher property taxes since the cost of providing services in flood-prone areas is elevated. The increase in cost is due to the need for specialized emergency services, like boats and helicopters, for locations which cannot be reached by land, the increased need for city police and fire services, and the damage to public infrastructure such as

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bridges and roads. The replacement and/or repair of damaged personal property through insurance claims is paid by everyone who purchases flood and automobile insurance. This example can be applied to many natural resources and the focus group urges the development community, city leaders, and other citizens to recognize the importance of considering public good - ultimately this type of disregard becomes a public cost.

## **Background**

The *Minding Our Natural Resource* Focus Group worked diligently over the past ten months to develop a strategic plan of actions that would define, protect, restore and reclaim the region's natural resources. The group first developed goals for Houston's future and then carefully developed actions to ascertain these goals.

Meeting twice a month from April to December, the group had detailed discussions about many important environmental issues. The focus group considered different sides of issues as presentations were made by local government agencies' representatives and experts in the field. Great care was taken by the focus group members to keep an unbiased view, learn about new topics, share different perspectives and consider the economic impacts (good and bad). The focus group felt they could best achieve their task by working together as one group rather than by subcommittees. A special effort was made to invite members of the

community, such as homebuilders and engineers, who may directly be affected by these actions in order to consider and discuss their viewpoints.

The focus group members represented a wide array of citizens, non-profit organizations and government agencies including representatives from the Federal, State, and local levels. While there was large representation from bayou organizations, the members were equally concerned with other environmental issues such as air pollution, habitat loss, litter and trash, etc. All members of the focus group felt it was important to address each issue in an equal manner, so a workplan that allowed an equal amount of discussion on each of these issues was followed.

In order to facilitate the discussion, the focus group members initially developed goals under the topics of air, land, water and life. However, during these discussions, the focus group emphasized that natural resources are all interrelated and impact one another; therefore, natural resources must be thought of as an ecosystem which encompasses all of these things. Mother Nature reminded all of us of how important it is to consider natural resources in an urban environment when torrential rains flooded many parts of the city in October of 1994.

Once the group had developed goals and learned about each of these topics, the work on the actions began. The focus group members discussed their actions in detail and reached consensus on the actions as they are presented in this plan. These actions have been

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prioritized under each goal by identifying whether the action “must, should, or could” take place. The goals are not prioritized.



## Section 2: Goals and Actions

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### **Goal:**

*Our City will create a working inventory (a list) of its natural resources: the inventory will become a basis of understanding for neighborhood, city and regional development, as well as environmental stewardship. In addition, the inventory will give the city and the community information needed to protect, reclaim, and manage our natural resources.*

### **Action 1.1: Define Natural Resources**

Define the natural resource systems of land, life, water, and air

**Who:** Focus Group

**Start:** n/a

**Time frame:** completed\*

**Funding:** n/a

**Priority:** must

**Remarks:** \*The *Minding Our Natural Resources* Focus Group defined natural resources during their May 10th meeting. Appendix B depicts their definition.

The focus group has defined natural resources as the physical features, systems, and life which made-up the environment at the arrival of man in the Houston area.

The group decided that natural resources should be categorized into four main elements: 1)air, 2)water, 3)land and 4) life. The focus group concluded that each of these categories affect each other and that the topic “life” should be located at the center of the diagram illustrating that life affects the other elements, especially human life (See Appendix B).

### **Action 1.2: Create an Inventory**

Map, maintain, and update a natural resources inventory

**Who:** City of Houston, Houston-Galveston Area Council

**Start:** now

**Time Frame:** long-term

**Funding:** existing funding

**Priority:** must

**Remarks:** The purpose of mapping natural resources is to identify important nodes and corridors that would be essential to the restoration and protection of natural resource systems. Mapping should include natural and man-made features, and political divisions (See Appendix C for details).

**Existing Programs:** The City of Houston, Planning & Development Department, Data Systems Division has much of this information available through their Metrocom Mapping System. The Environmental Resources Inventory Committee has identified information to be mapped and which information is currently available from the Planning &

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Development Department. (See Appendix C for this information)

The Houston Advanced Research Center's (HARC) Environmental Foresight Program and the Houston-Galveston Area Council have some of this information in their current database for mapping.

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## **Goal :**

*Our city will create and update public policies for each natural resource listed in the inventory; the policies will become the basis to guide the development and growth of the city. The policies will be directed to balance long-term growth and quality of life with natural resources protection and restoration.*

### **Action 2.1: Establish a Plan**

Create a regional natural resources protection plan which describes how to protect natural resources

**Who:** An Action Task Force comprised of representatives from the City of Houston, Harris County (Community Development and Flood Control District), Houston-Galveston Area Council(H-GAC), Texas Natural Resource Conservation Commission(TNRCC), Texas Parks & Wildlife Department(TPWD), Texas Department of Transportation(TXDOT), Metropolitan Transit Authority (METRO), and citizens

**Start:** now

**Time Frame:** long-term

1st phase: Establish the Action Task Force

2nd phase: Based on the working inventory from goal from Action 1.2,

prioritize the following existing resources for protection: wildlife habitat; wetlands; groundwater recharge zones; water supply resources; bayous and streams; watersheds; greenways; and nodes & corridors to enhance habitat and the urban forest

3rd phase: Create regulations that encourage development and are sensitive to the working inventory

4th phase: Identify natural resources that can be reasonably, efficiently, and economically restored

5th phase: Evaluate best/worst case growth scenarios based on projections of population, land area, and resource availability

6th phase: Consider long-range economic benefits

7th phase: Adopt resource-based land planning principles or guidelines for the design and protection of environmentally sensitive areas. For example, Ian McHarg's theory described in his book "Design with Nature" was used as the basis for development of the Woodlands.

8th phase: Develop strategies to implement the regional natural resources protection plan

**Funding:** through involved agencies

**Priority:** must

### **Action 2.2: Recycling**

Encourage, develop, promote, and expand recycling and recycling programs in order to conserve natural resources, including: developing markets for recycled products (paper, petrochemicals, etc.), curb-side

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recycling programs, reuse and recycling of building materials, investigate methods of reusing gray water on a local and regional basis, and advertise recycling locations

**Who:** Houston Advanced Research Center, Paper reprocessors, petrochemical companies, the Chemical Society, Houston Engineering & Scientific Society, City of Houston, private waste disposal companies, Engineer's Council, American Institute of Architects, Houston Homebuilders Association, Association of General Contractors, Association of Consulting and Municipal Engineers, Greater Houston Preservation Alliance

**Start:** now

**Time Frame:** long-term

**Funding:** private/public

**Priority:** should

**Remarks:** Information on recycling within the region is available through the H-GAC "Regional Recycling Resource Center". The City of Houston provides information on on-going city-wide recycling programs.

**Existing Programs:** Corporate Recycling Council, City of Houston, Curb-side Recycling Program

### **Action 2.3: Discourage Urban Sprawl**

Discourage urban sprawl onto outlying agricultural and natural areas by encouraging development of the inner-city that includes: open space and a combination of new, historic and restored residential, commercial and industrial properties

**Who:** City of Houston, Harris County, private developers

**Start:** now

**Time frame:** long-term

**Funding:** private/public funding, tax increment financing districts

**Priority:** should

**Remarks:** Investigate tax incentives to encourage inner-city development

### **Action 2.4: Conservation Easements**

Encourage and inform the public about conservation easements for natural resources protection

**Who:** Non-profit organizations, private builders, tax accountants, stock brokers, American Planning Association, American Institute of Architects

**Start:** now

**Time frame:** long-term

**Funding:** private

**Priority:** should

**Existing Programs:** The Trust for Public Land, Texas Nature Conservancy, Bayou Preservation Association, Katy Prairie Land Conservancy, and the Lower Colorado River Authority are organizations who seek land for conservation easements.

### **Action 2.5: Analyze Impacts**

Require some appropriate form of an environmental impact analysis for each Capital Improvement Plan (CIP) project which will protect natural resources and identify possible hazards such as the interruption of existing storm drainage routes, the displacement of

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contaminated soils into bayous and streams, etc.

**Who:** City of Houston - Public Works & Engineering Department and Environmental Health Division, Harris County-Engineering Department, Houston-Galveston Area Council (for regional-scale projects)

**Start:** now

**Time frame:** long-term

**Funding:** current CIP funding source

**Priority:** should

**Remarks:** This action would go beyond the existing programs to identify environmental hazards and prevent the negative impact of any CIP project on natural resources.

**Existing Programs:** Public agencies currently comply with Federal laws for Environmental Impact Assessments (EIA) and/or Environmental Impact Statements (EIS).

### **Action 2.6: Air Quality Standards**

Meet, and possibly exceed, all EPA standards for air quality

**Who:** TNRCC, H-GAC, City of Houston

**Start:** now

**Time frame:** long-term

**Priority:** should

**Remarks:** Air quality standards are federally mandated by the Clean Air Act and its amendments of 1992

**Existing Programs:** Employee Trip Reduction Program, Automobile Emissions Testing

### **Action 2.7: Conserve Energy**

Encourage energy conservation and diversity in power generation including alternatives such as solar power, geothermal heat pumps, and wind

**Who:** Utility companies, Department of Energy, Public Utilities Commission

**Start:** now

**Time frame:** long-term

**Funding:** private

**Priority:** should

**Existing Programs:** Houston Lighting & Power's "Energy Partners" program

### **Action 2.8: Develop Green Chemicals**

Encourage universities (and others) to develop green chemicals and products to expand on our current economic base

**Who:** universities and chemical companies

**Start:** now

**Time frame:** long-term

**Funding:** private

**Priority:** should

### ***Goal:***

*Bayous are the defining natural resource of Houston. Bayous will be restored and protected to provide environmental and economic*

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*benefits such as: natural and wildlife habitat; water supply; recreation and transportation; stormwater drainage; and scenic beauty.*

### **Action 3.1: Watershed-based Management Plan for Bayous**

Develop a watershed-based management plan for bayous which includes the following functional elements: identifying resources, mapping the inventory (listed in Action 1.2), prioritizing resources, developing timelines, and devising implementation policies. This plan will also address the following issues: drainage analysis (quantity), runoff analysis (quality), future stormwater impacts, future long-term development impacts, floodplain management, vegetative management (reduction of herbicide use, etc.), and water usage (gray, drinking, recreational use)

**Who:** Harris County Flood Control District, US Army Corps of Engineers, City of Houston

**Start:** now

**Time frame:** long-term

**Funding:** City/County budgets or special levies

**Priority:** must

**Existing Programs:** Comprehensive Storm Drainage Plan is in progress by the City. Harris County Flood Control District's Task Force.

### **Action 3.2: Masterplan for Bayous**

Create a master plan for bayous setting standards for their multi-use design and recognizing that the bayous are and can be used not only for their practical function of storm drainage but as an amenity for the city.

Multi-uses that should be achieved include: contact recreation such as boating and swimming; recreation along bayou front properties such as a "bayou-walk"/downtown riverfront concepts; hike and bikeway trails like those along Buffalo Bayou on Memorial Drive and Alan Parkway; and habitat for wildlife. The plan should establish standards for aesthetic qualities; it should consider design elements including: hydrology; physical characteristics; wildlife habitats; and identify methods for supportive and constructive maintenance. This masterplan should be based on citizen participation/consensus.

**Who:** Harris County Flood Control District, US Army Corps of Engineers, City of Houston

**Start:** now

**Time frame:** short-term

**Funding:** existing agency funding

**Priority:** must

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## ***Goal:***

*Our many government agencies will work together to protect and reclaim our natural resources. They will coordinate, communicate, and cooperate.*

### **Action 4.1: Action Task Force**

Establish an Action Task Force (Same Action Task Force as in Action 2.1) of representatives from various agencies who will: 1) develop methods for improved coordination; 2) enforce intergovernmental coordination; and, 3) when necessary, designate the final authority (a decision maker) in the event that an agreement is too difficult to reach. The representatives will serve as liaisons and be

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responsible for passing on information to their agencies, for example the Mayor's Environmental Policy Advisor

**Who:** The City of Houston, Houston-Galveston Area Council (who may serve as the lead agency due to the regional scope), and Action Task Force (defined in Action 2.1): non-governmental organizations, *the Minding Our Natural Resources* Focus Group, and other citizens. Other agencies should be added dependent upon subject matter (the systems of natural resources are sometimes larger than Houston and Harris County)

**Start:** now

**Time frame:** long-term

**Funding:** Through participating governmental agencies. The largest expense will be allocating existing staff members' time.

**Priority:** must

**Existing Programs:** Houston-Galveston Area Council has several committees on various natural resource topics/issues.

#### **Action 4.2: The "Water God"**

Create an authority which consolidates agencies responsible for all aspects of watershed-based planning, implementation, and enforcement. This consolidation includes stormwater drainage, water supply, water quality, and floodplain management agencies

**Who:** City, County, Harris County Flood Control District, METRO, Texas Department of Transportation, USCOE, Action Task Force (defined in action 2.1)

**Start:** now

**Time frame:** long-term

**Funding:** H-GAC local funds, Texas Natural Resource Conservation Commission funding, and/or innovative funding mechanisms such as the creation of a stormwater utility which levies fees

**Priority:** must

**Existing Programs:** Texas Clean Rivers Program sponsored by H-GAC

#### **Action 4.3: Comprehensive Planning**

Enable and empower regional comprehensive planning to accomplish the goals identified by this focus group

**Who:** City of Houston, Planning & Development (lead) and other City Departments, Harris County - Housing & Community Development, Houston-Galveston Area Council, other applicable local government agencies

**Start:** now

**Time frame:** long-term

**Funding:** City, Harris County, Houston-Galveston Area Council local funds

**Priority:** must

**Existing Programs:** The Harris County Housing & Community Development Agency is currently preparing a Consolidated Plan which analyzes housing, infrastructure, economic development and civic enrichment needs of low and moderate income persons in their service area. The Houston Advanced Research Center's Environmental

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Foresight program is also seeking to accomplish some of these goals.

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## **Goal:**

*Houston will become an uncommonly beautiful city by enhancing the city's natural and man-made environments: bayous; parks and greenbelts; hike & bikeways/trails; freeway and thoroughfare corridors; neighborhoods; and workplaces.*

### **Action 5.1: Standards for the Visual Environment**

Establish standards to be implemented through the City or a separate City-Beautiful Commission ("Appearance Commission"), concerned with the visual environment, dealing with such topics as: sign control/billboards; urban design; forestation along freeways; street trees and other landscaping; bridges; materials used for soundwalls; and oversees the creation and monitoring of an overall landscape plan and vision

**Who:** City of Houston

**Start:** now

**Time frame:** long-term

**Funding:** City budget

**Priority:** must

**Remarks:** The following characteristics should be present in these standards and subsequent policy actions should be taken:

low maintenance vegetation in difficult-to-maintain areas (steep slopes, etc.)

require native plants because they generally require low maintenance and provide native habitats

maintain plant diversity (avoid invasive species)

incorporate "plant rescue systems" which reallocate indigenous flora during construction and/or channelization

**Existing Programs:** The City's Landscape Ordinance, Bayou Preservation Association's Vegetation Committee.

### **Action 5.2: Tree Protection**

Enact a tree protection ordinance to protect existing stands of trees and encourage the planting of new trees

**Who:** City of Houston - Planning Commission, Trees for Houston, American Society of Landscape Architects, Houston Homebuilders Association, Texas Association of Nurserymen, private developers, The Park People, American Institute of Architects

**Start:** already started

**Time frame:** short-term

**Funding:** n/a

**Priority:** must

**Remarks:** The Park People has established a coalition that consists of the above listed parties to draft a tree protection ordinance to present to the City Planning Commission.

### **Action 5.3: Site Clearance**

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Enact a site clearing ordinance which sets guidelines and establishes policies to address environmental degradation(vegetation, habitat, runoff, etc.) during construction

**Who:** City of Houston - Planning Commission, Trees for Houston, American Society of Landscape Architects, Houston Homebuilders Association, Texas Association of Nurserymen, private developers, The Park People, the Harris County Soil Conservation District (now with TNRCC), American Institute of Architects, Association of Consulting and Municipal Engineers, Clean Houston

**Start:** now

**Time frame:** short-term

**Funding:** n/a

**Priority:** must

**Existing Programs:** Clean Houston - Clean Builder's Program, the Stormwater Management Program of the National Pollutant Discharge Elimination System (NPDES) permit application has been submitted by the City, Harris County, and Harris County Flood Control District to the EPA for review and approval.

### **Action 5.4: Maintain the Bayous**

Increase bayou maintenance and clean-up programs for both small and large-scale projects

**Who:** Small scale - citizen groups, volunteers, criminal justice system (probationers & County Attorney's office), and various agencies. Large scale - Harris County Flood Control District, City of Houston

**Start:** now

**Time frame:** long-term

**Funding:** small scale - bayou organizations, private funding: large scale - reallocation of maintenance budgets

**Priority:** must

**Existing Programs:** A volunteer-initiated project on Greens Bayou, locally known as the "Greens Bayou Posse", has been successful and should be replicated in other parts of the City. The program was coordinated by a citizen activist, Precinct 2 County Commissioner, and the Harris County Attorney's Office. The program utilizes probationers in canoes to clean-up trash along the sides and within the bayou. The probationers are taught water safety, life saving including CPR, and reptile and hazard identification by the Houston Zoo. The probationers have reported that the program makes them feel good about themselves for being able to help the community. The program will also include local high schools in water monitoring and the reporting of illegal discharges into the bayou. The result has been a cleaner bayou.

### **Action 5.5: Greenbelts/Open Spaces**

Create a Greenbelt and Open Space Master Plan

**Who:** City of Houston - Planning & Development and Parks & Recreation Departments, Harris County - Parks Department

**Start:** now

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**Time frame:** mid-term

**Funding:** Intermodal Surface Transportation Efficiency Act (ISTEA) funding, Land Trust Organizations (Conservation Easement Committee of the Bayou Preservation Association, Trust for Public Land, etc.) Possible grant sources: Texas Parks & Wildlife Department, National Park Service, US Forestry Service, Rails-to-Trails Conservancy

**Priority:** must

**Remarks:** H-GAC has recently started a regional greenbelt master plan and will be coordinating with the local municipalities.

**Existing Programs:** The Comprehensive Bikeway Plan and sequential ISTEA funding for bike trails are one component of this plan.

### **Action 5.6: Neighborhoods**

Continue the Neighborhoods-to-Standards Program

**Who:** City of Houston

**Start:** already started

**Time frame:** long-term

**Funding:** City's general fund, capital improvement bonds

**Priority:** must

**Existing Programs:** Neighborhoods-to-Standards Program

### **Action 5.7: Freeway landscaping**

Require Texas Department of Transportation (TXDOT) to spend its 1% set aside money on

beautification and forestation along urban freeways

**Who:** Civic Associations, TXDOT, State elected officials, Trees for Houston, City of Houston

**Start:** now

**Time frame:** mid-term

**Funding:** TXDOT, ISTEA and Congestion/Mitigation/Air Quality (CMAQ) funding, and Statewide Transportation Enhancement Funds

**Priority:** must

**Remarks:** TXDOT has a policy to spend 1 % of highway construction funds on freeway landscaping. Statewide Transportation Enhancement Funds are currently sought by the City's Parks & Recreation Department for this purpose.

### **Action 5.8: Urban Forestry**

Establish a separate division of urban forestry within the City, with its own allocated budget, to foster the planting and maintenance of street trees and other plantings

**Who:** City of Houston

**Start:** now

**Time frame:** long-term

**Funding:** City's general fund

**Priority:** should

### **Action 5.9: No Billboards**

Maintain, enforce, and enhance programs to eliminate billboards and appropriately restrict on-premise signs

**Who:** City of Houston, Harris County

**Start:** now

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**Time frame:** long-term

**Funding:**

**Priority:** must

**Remarks:** The existing ordinance exempts too many billboards or delays action on the removal of billboards

**Existing Programs:** The City has an ordinance which restricts billboards and signs.

### **Action 5.10: Park Acquisition**

Acquire more land for all types of parks (man-made/developed, natural, and restored), especially more metro (200 or more acres) and regional parks (50-200 acres)

**Who:** Houston Parks Board, City of Houston - Parks & Recreation, Harris County - Parks Department, private developers

**Start:** intermediate

**Time frame:** long-term

**Funding:** Designated tax on specific items, Texas Parks & Wildlife Department grant program, National Park Service-Urban Park & Recreation Recovery Action grant program, ISTEA funding, private donations

**Priority:** should

**Remarks:** Acquisition should be guided and informed by the Greenbelt and Open Space Masterplan

### **Action 5.11: Incentives for Greenspace**

Provide incentives for developers to give additional land for greenspace use

**Who:** Land Trusts: Conservation Easement Committee (Bayou Preservation Association), Texas Nature Conservancy, Katy Prairie Land Conservancy, Trust for Public Land, City, County, Houston Parks Board

**Start:** intermediate

**Time frame:**

**Funding:**

**Priority:** should

### **Action 5.12: Designated Open Spaces**

Designate open spaces restricted to passive recreation within City and County parks to provide more natural areas for nature watching, walking, and green space

**Who:** City of Houston, Harris County

**Start:** now

**Time frame:** long-term

**Funding:** n/a

**Priority:** should

### **Action 5.13: Parks for Neighborhoods**

Support and assist neighborhoods who want to acquire land for parks(to be owned by the neighborhood associations)

**Who:** City of Houston, Harris County

**Start:** now

**Time frame:** long-term

**Funding:** n/a

**Priority:** should

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**Existing Programs:** Neighborhood Initiatives Program - City of Houston, Parks & Recreation Department

**Action 5.14: Landscape “Vision” Plans**

Encourage neighborhoods to develop a landscape “vision” plan which defines how the neighborhoods should look

**Who:** Neighborhood groups with assistance as needed from City of Houston, Planning & Development Department

**Start:** now

**Time frame:** long-term

**Funding:** existing City funds

**Priority:** should

**Remarks:** If the neighborhoods have difficulty organizing, then the City can take a more directive role in implementing a landscape vision for neighborhoods.

**Action 5.15: Landscape Standards for Public Property**

Establish landscape standards for public right-of-ways and publicly-owned properties

**Who:** City of Houston, METRO, Harris County

**Start:** now

**Time frame:** long-term

**Funding:** Increase city allocation for landscaping of public lands from 1 percent to 3 or 5 percent

**Priority:** should

**Remarks:** City currently allocates one percent of construction costs for landscaping

**Action 5.16: Urban Wildlife Corridors**

Create urban wildlife habitat corridors to support a diverse cross section of the Gulf Coast flora & fauna

**Who:** Texas Parks & Wildlife Department

**Start:** intermediate

**Time frame:** long-term

**Funding:**

**Priority:** should

**Action 5.17: Masterplan for Eliminating Litter and Trash**

Implement a litter control master plan for eliminating litter in all areas (including natural areas in parks) of the City and County which will include: signage indicating fines for littering/dumping; enforcement of penalties for illegal dumping and littering; educating the public on littering; and taking advantage of volunteer labor (organizations, probationers) for clean-up days, adopt-a-bayou programs, etc.

**Who:** City of Houston - Public Works & Engineering, Solid Waste, Right-of-Way Division, Planning & Development, Parks Department; Harris County - Parks Department, Flood Control District

**Start:** intermediate

**Time frame:** long-term

**Funding:** City/County funding

**Priority:** should

**Action 5.18: Reduce Non-point Source Pollution**

Research cost-effective ways to screen storm sewer inlets and entrap floatables

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**Who:** City of Houston, Engineer's Council

**Start:** now

**Time frame:** intermediate

**Funding:** research grants

**Priority:** should

**Remarks:** The Stormwater Management Program of the NPDES permit application provides guidelines to reduce non-point source pollution

### **Action 5.19: Bicycle Recreation and Transportation**

Provide appropriate and safe places for bicycle transportation and recreation, establish a process to update the Comprehensive Bikeway Plan, and provide methods for long-term maintenance for bikeways and trails

**Who:** City of Houston, Harris County, Houston-Galveston Area Council

**Start:** has already been started

**Time frame:** long-term

**Funding:** ISTEA

**Priority:** should

**Existing Programs:** Comprehensive Bikeway Plan, local efforts by non-profit bayou organizations

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## **Goal:**

*Natural resources awareness and appreciation will become an integral part of our community's education.*

### **Action 6.1: Education**

Involve children and adults in on-going education programs about natural resources/the environment: at schools, in neighborhoods, and through governmental agencies' programs

**Who:** Formal and informal educational/training methods: formal - school districts, community colleges, colleges and universities; and informal - City water bill flyers, community forums, citizen watch and Texas Watch programs, TNRCC, City Departments (i.e. Urban Forestry Division of the Parks & Recreation Department could teach citizens about tree preservation, etc.), museums, and nature centers

**Start:** now

**Time frame:** long-term

**Funding:** City, County, school districts, and private sources

**Priority:** must

**Remarks:** Programs should include: water conservation, xeriscaping, composting, tree preservation, hydrology/local geology, recycling, subsidence, and habitat.

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## Section 3: Appendices

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