

RAQPC Sub-committee Multi-Pollutant Plan Ideas

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The RAQPC Sub-committee was recently tasked with the goal of developing “a new, voluntary, multi-pollutant air quality plan for the Houston-Galveston-Brazoria (HGB) region.” The goals of this group include the following:

- Maintain focus on human health effects
- Develop voluntary programs to reduce emissions
- Identify potential reduction partners
- Explore methods that can be used in the region to control emissions
- Develop recommendations on an outreach program for H-GAC

The group has identified ozone precursors (VOCs and NOx), greenhouse gases, particulate matter, air toxics, and urban heat as the pollutants to be targeted for reductions.

Presently, the committee is in a research, assessment, and brainstorming mode to work towards the development of a strategy which will achieve these goals. Accordingly, I would submit the following framework (which I’ve dubbed “Healthy Skies, Healthy Communities”) for consideration:

A four-pronged strategy consisting of 1) Education/Outreach 2) Incentive Programs 3) Recommended Ordinances and 4) Research Support. Each category would have subordinate related programs, such as:

Education/Outreach:

1. Texas Watch Air Quality Monitoring Program
2. It All Adds Up to Cleaner Air Outreach Program
3. Community Partnership for Air Quality Awareness & Action (CPAQAA)

Incentive Programs:

4. Green Government Solutions
5. Green Mountain Energy Partnership
6. Smart Investment Initiative
7. EnergyStar Microloans
8. Random Rewards Program

Recommended Ordinances:

9. Tree Preservation

Research Support:

10. Air Quality Permit Tracking & Participation Program

It should be noted that these suggestions are nothing more or less than that—suggestions—and constructive criticism is of course expected and welcomed. Moreover, the suggestions are not fully developed in terms of funding sources/estimates, timeframes, sponsoring agencies/entities etc. They are, at this point, intended to foster discussion and research as to their feasibility and possible implementation mechanisms rather than being a plan for action.

Strategy Philosophical Basis

The concept underlying the Healthy Skies, Healthy Communities strategy is to conform to the goals set forth for the initiative while complimenting existing ozone and other pollutant reduction efforts in the Houston-Galveston Area (HGA).

The current primary thrust of pollutant reduction in the HGA is centered around the State Implementation Plan (SIP), a federally mandated document requiring a quantitative, enforceable approach to attain the Clean Air Act ozone criteria by the year 2010. Numerous existing pollutant reduction methods for ozone's precursor chemicals are in place, and are largely a combination of targeted short- to intermediate-term subsidy programs and state regulations dictating pollutant emission limits enforced through a permitting program.

As existing efforts focus on ozone precursors, a short- to intermediate-term timeframe, and the use of subsidy and mandatory programs for solution types, it makes sense that such solutions should be deemphasized as part of the Healthy Skies, Healthy Communities plan. While solutions which fit this description should not be ignored under the plan, such solutions should be forwarded to and administered by the existing entities already involved in the SIP process in order to avoid duplication of efforts.

Rather, it is suggested that the Healthy Skies, Healthy Communities plan focus on non-ozone precursor pollutants, should take a long-term approach, and should include a greater number of education/outreach oriented solutions.

Education/Outreach:

Goal: The goal of Healthy Skies, Healthy Communities education/outreach efforts would be to increase the public's general understanding of air quality issues and in that way encourage and empower them to take action in their own lives to reduce their contribution to air pollution problems and/or assist in air pollution reduction efforts.

Standards of Measurement: Progress towards this goal would be primarily measured through surveys and focus groups designed to identify the relative change in the public level of knowledge before, during, and after program implementation and to correlate this new knowledge with what, if any, actions were taken in their own lives to reduce their contribution to air pollution and/or assist in air pollution reduction efforts.

Subordinate Programs:

Suggestion #1: Community Partnership for Air Quality Awareness & Action

This would entail a broad-based public education campaign using various forms of media to convey knowledge about air quality issues and to present a number of simple ways the public can change their habits to better promote air quality. Specifically, the campaign might include:

- Website-based education: hosted on the H-GAC RAQPC? website, this would be a cornerstone feature of the overall effort, and could include:
 - a general overview of air pollution covering what it is (components, sources, etc.), how it affects members of human and ecological communities (health, etc.), a brief history of how air quality problems were first identified (killer London fogs, Los Angeles, etc.), how air quality is currently regulated (Clean Air Act, attainment/criteria pollutants, etc.), and the current status of air pollution in the HGA (problems, non-attainment, our status relative to other U.S. cities, programs currently in place to address the issues, etc.)
 - Simple ways that the public can get involved to help clean air—this would include individual means (reduce lawn equipment usage, reduce energy usage, etc.) and it would also link to established emission reduction programs (Commute Solutions, etc.)
 - Interactive forums—moderated question/answer postings, surveys/quizzes, maps depicting air quality data/information, email news sign-ups, and other ways to explore air quality topics
- Scholarship Contest: H-GAC could hold an annual or semi-annual scholarship contest for high school and college students which could require the submittal of any essay relating to an air quality topic. This would be a means to support educational goals as well as allow H-GAC staff to perhaps learn about topics/hear ideas they may not normally have an opportunity to explore.
- Newspaper Submittals: H-GAC could submit on a regular basis a full page or half page educational section which would highlight recent air quality news/facts/events, include games (cross-word puzzles, etc.) for kids, and then reference the website for more information.
- Billboards: H-GAC could rent some number of billboards which provide air quality insights via a “Did you know?” style, and then references our website for more information.
- Integrate/Participate with On-going Events: This would include getting involved to a greater extent with activities/organizations such as Teaching Environmental Science, the Texas Master Naturalist programs, parades/festivals, etc.

Always as part of the Community Partnership program, the connectiveness of environmental issues with other pertinent contemporary issues should be emphasized to avoid the stigma that sometimes accompanies “green” efforts. This connectiveness may include references to health issues (lung problems, obesity, etc.), education (enhanced science education, donating used goods to schools, etc.), economic benefits (cost savings, tourism, business growth, property values, etc.), and national security (energy production issues).

Suggestion #2: Texas Watch Air Quality Monitoring Program

This program would be modeled after the Texas Watch Water Quality Monitoring Program which is presently administered in this region by H-GAC. Similar to the water monitoring program, air quality data would be collected by volunteers on a monthly (or other appropriate) basis and utilized for research purposes and problem identification (which may require professional staff follow-up); the data would not be used for legal or other official purposes. Volunteers would receive training and be certified prior to participating in the program; what

type of training and equipment this program would entail would need to be further explored. The program would also incorporate a public outreach and education component regarding the importance of healthy air, air pollution sources, and means by which the public can help reduce their air pollution contributions; this public outreach/education component would tie into and support the main thrust of the Community Partnership program.

Suggestion #3: It All Adds Up to Cleaner Air Program

This is an EPA voluntary public outreach and education program pertaining to mobile source air pollution. The program provides material support and guidance for government organizations to utilize to compliment their existing air quality efforts. It is likely that both H-GAC and each H-GAC government member would benefit from participating in the program; particularly, if H-GAC were to implement the Community Partnership program and/or a Texas Watch Air Quality Monitoring Program, this program could inform and enhance our understanding of ways to connect with the public.

Incentive Programs:

Goal: Incentive programs would be designed to enable and encourage individuals, businesses, government entities, and other interested parties to participate in established and structured programs that will result in voluntary emission reductions.

Standards of Measurement: Progress towards this goal would be measured through an accounting and reporting of the types and quantities of emission reductions achieved over a given timeframe, as well as program participation statistics. Initially, emissions would be measured in appropriate scientific metrics for professional evaluation/research uses, but this should be translated into metrics which the public more easily identifies with, such as gallons of gas saved, number of asthma cases reduced, etc. so that the public will understand the progress and benefits of these programs when such measurements are publicized.

Subordinate Programs:

Suggestion #4: Green Government Solutions

As the leaders of the community, we have the greatest obligation to minimize our contribution to air quality problems. In doing so, we make ourselves more credible and we show others by example how to reduce their own emissions. I would propose that each H-GAC governing entity commit to take the following steps:

- All newly built or remodeled govt. buildings should follow the green building guidelines set forth by the U.S. Green Building Council
- If not already, all electricity power should be purchased from green power producers. According to the City of Houston's Consumer Choice guide for electricity companies, there is absolutely no difference in the monthly electricity rates between Reliant Energy and Green Mountain Energy, so cost should not be an issue in this regard
- Govt. entities should commit to making all roads under their jurisdiction bike and pedestrian friendly by a certain year, say 2015, with milestone steps along the way to ensure progress. Likewise, all new roads constructed should be made bike and pedestrian friendly. From my point of view, "bike and pedestrian friendly" includes the following:
 - wide, clearly marked bicycle lanes

- bike rack parking available at all public facilities, with businesses encouraged likewise with appropriate incentives
 - Functioning and clear "Walk/Don't Walk" signals at all major intersections, in each direction
 - wide, uninterrupted, and smooth sidewalks lined as appropriate with trees, benches, area maps, and trash/recycling bins
 - increased enforcement of laws pertaining to car vs. bike/pedestrian right-of-way
- Govt. entities should commit to better, more consistent signage and visibility to make roads safer and easier to navigate.
 - Govt. entities, if not already doing so, should implement an environmental accounting system. Such a system tracks material resources and their costs throughout the time they enter a facility/organization until the time they leave. It allows management to easily identify wasted materials and their associated, specific costs which could be easily eliminated, saving a specific amount of money and natural resources. A similar system is a life cycle assessment, in which an organization looks at the materials they use from a cradle-to-grave (raw material to disposal) perspective, identifies alternative materials, and then chooses the resources which best fit their priorities (priorities which include everything from functionality and cost to environmental and other societal goals).

H-GAC government entities which commit to and take concrete steps towards implementing Green Government Solutions should be publicly recognized and/or rewarded for their efforts in some manner to encourage participation and affirm the importance of their voluntary efforts.

Suggestion #5: Green Mountain Energy Partnership

Green Mountain Energy has a Texas Sun Club supported by their customers which helps to develop new solar production facilities; they often highlight school and community projects as recipients of their program. We should partner with them, maybe with matching funds or other leveraging capabilities to help this program to develop new projects, particularly as it relates to schools and other community projects.

Suggestion #6: Smart Investment Initiative

There is a segment of investing termed “socially responsible investments”. Investors and their investment managers in this segment use not only financial criteria to determine which companies to invest in, but also social criteria. Social criteria often include companies which have solid environmental records, produce environmentally friendly products, and/or are making great strides towards becoming more environmental in their practices.

H-GAC government entities should support and promote socially responsible investing as a means to foster economic development in conjunction with sound environmental practices (including air quality measures). Promotion efforts could include hosting seminars for businesses interested in obtaining socially responsible investment monies, including socially responsible fund options within government employee benefit packages, doing outreach to the public to make them more aware of socially responsible investing options, preferentially choosing to work with companies who are funded through socially responsible investments, and other incentives to encourage the formation of these mutually beneficial partnerships.

Suggestion #7: EnergyStar Microloans

Upgrading energy-guzzling appliances and A/C units are often a low priority for low-income families and for non-profit groups because the large capital investment is simply not as urgent a priority as other needs. A targeted low-interest or no-interest microloan program for these families and organizations would allow them to replace energy-guzzling equipment with EnergyStar products that will reduce the demand for power. Such a microloan program could be made possible through a public-private partnership.

Suggestion #8: Random Rewards Program

This program would seek to reward those using alternative methods of transportation while encouraging others to do likewise. It would entail the distribution of small prizes (\$2500 cash for the winner OR \$5000 cash donation to the winner's HGA school of choice, for example) on a regular (monthly?) basis to individuals in three categories: METRO transit (vanpool, bus, rail), alternative vehicles (hybrids, LEV/ULEV, natural gas, biofuel, etc.), and bicycle/pedestrian. The stories of the winning individuals (why they switched to these alternative methods, benefits of doing so, etc.) would then be profiled in some type of media (newspaper, website, e-newsletter, etc?) as part of the Community Partnership campaign to publicize both the possibilities/practical methodologies of using alternative travel modes and to stir interest in the random rewards giveaway "contest".

Recommended Ordinances:

Goal: This component of "Healthy Skies, Healthy Communities" would seek to identify air quality improvement ideas that would be best implemented in the form of city/county ordinances or other mandatory means, and would evaluate various means of structuring such measures to ensure their effectiveness upon implementation. It would also entail the on-going evaluation of existing and implemented measures to suggest ways of improving such measures.

Standards of Measurement: Progress towards this goal would be measured using emission accounting techniques as well as program compliance and enforcement statistics. Emission reductions stemming from recommended ordinances would also be translated into more public-friendly metrics in the same way as those from the incentive programs.

Subordinate Programs:

Suggestion #9: Tree Preservation

Tree planting, landscaping, and other greening methodologies have been suggested as a potential means of improving the environment as well as community aesthetics. While this may be appropriate for areas which have already been developed, an efficient means of circumventing similar future problems would be to enact tree preservation ordinances within outlying areas still undergoing development. Such an ordinance may specify that a certain number, type, or age of tree must be preserved in the course of development, and/or that mitigation of tree/greenery removal be performed by developers in another portion of the county/city, similar to mitigation requirements of wetlands.

Research Support:

Goal: The goal of Healthy Skies, Healthy Communities Research Support would be to engage in on-going efforts to support and update the efforts of the program with the performance of sound scientific research, analysis, inventories, and other tasks designed to better track and understand the evolution of air quality in the HGA.

Standards of Measurement: Progress towards this goal would be measured quantitatively in terms of number of studies completed, the number of times a reference was utilized, etc. It may also be measured by surveys and other more qualitative feedback regarding the level of helpfulness and quality of the information, where knowledge gaps exist that require improvement, etc.

Subordinate Programs:

Suggestion #10: Air Quality Permit Tracking & Participatory System

H-GAC does not (to my knowledge) presently have a means to comprehensively track and participate in the air permitting process for facilities within its 8-county region. I would propose the creation of such a system. The system would consist of an H-GAC staff member involved with RAQPC being tasked with the responsibility of becoming the air permitting liaison with the TCEQ. This person would create a database of all the existing air permits in the H-GAC region, which would include facility information, company information, company & TCEQ contact information, permit numbers, emission data/limits, permit expirations, permit violations, etc. This person would work with the H-GAC GIS staff to integrate the database with GIS maps, both of which would be accessible to the public as a central clearinghouse of regional air permit information. This individual would also be automatically notified by the TCEQ of any new permit applications, permit amendments, and permit renewals in the region. This information could also be made available on the H-GAC website to facilitate public knowledge of and participation in the air permitting process. This person would also review a select number of permits as they are processed by the TCEQ to provide comments on behalf of H-GAC.

Such a system would aid in all aspects of RAQPC's mission by assisting regional air quality research efforts, making citizens more aware of air pollutant sources in the region, encouraging citizens to become more active in the air permitting process, and by providing a check on the TCEQ to ensure that they are consistently tracking and enforcing permits in the region.

Weblinks of interest:

Energy-related

www.greenmountain.com

<https://www.greenmountain.com/pollutionfree/btsc.jsp>

<http://www.houstonconsumerchoice.com/>

US Green Building Council

<http://www.usgbc.org/>

Socially Responsible Investing

<http://www.socialinvest.org/>

<http://www.socialfunds.com/>

Environmental Accounting & Life Cycle Assessment

<http://www.epa.gov/oppt/library/pubs/archive/acct-archive/resources.htm>

<http://www.epa.gov/dfe/tools/lca.htm>

It All Adds Up to Cleaner Air

<http://www.italladdsup.gov/index.html>