

International Inland Port of Dallas Environmental Working Group

The City of Dallas has been working with other area communities to develop the International Inland Port of Dallas (IIPOD) in the Southern section of Dallas County. The project capitalizes on transportation assets in the region and is envisioned to provide the following benefits: employment for a historically under-employed region; new warehousing and distribution industry in the region; and time and cost savings for shippers. As a result of the work accomplished thus far, a coalition of local communities focused on the development of an inland port has been formed. In addition to the City of Dallas, the municipalities involved in the coalition are Balch Springs, Cedar Hill, Duncanville, DeSoto, Hutchins, Lancaster, Mesquite, Seagoville, and Dallas County.

To date, a number of private and public sector initiatives have occurred to advance the project, with the most notable being the acquisition of 6,000 acres by the Allen Group. In addition, there are a number of other developers including Duke, ProLogis, and First Industrial moving forward with plans to create logistics facilities.

In June 2006, the Urban Land Institute (ULI) held a five-day advisory services panel in Dallas looking at the inland port. One of the ULI's recommendations was to engage environmental stakeholders and work on environmental issues including wetlands and water quality, environmental justice, air quality, and green building standards.

As a result of the ULI panel, the City of Dallas convened an Environmental Working Group (EWG) to identify and discuss environmental issues related to the IIPOD. The group focused on three topics: wetlands and water quality, environmental justice, and air quality.

The group met multiple times between June and October and was comprised of representatives from City staffs, Dallas County, North Central Texas Council of Governments, Texas Commission on Environmental Quality, community representatives, and environmental groups. A complete list of those who participated in one or more meetings is available in Appendix A.

Each of the topic meetings was structured to allow for an overview presentation by a subject expert (from the City of Dallas, U.S. EPA, and TCEQ respectively) followed by brainstorming sessions to identify which issues would impact the Southern Dallas County area and the IIPOD development. The group then devised a list of recommendations to address the identified issues. None of the recommendations is binding; however, it is hoped that some of the suggestions can be incorporated into a master plan and used by developers to establish IIPOD as a "green" development.

This document is structured to provide an overview of the topics and findings of the EWG. Each topic contains a background section, providing an overview of the topic, as well as issues and recommendations as determined by the group.

Water and Wetlands

July 12, 2007

Background

New development can cause changes to the quantity and quality of water in an area. Development can cause significant increases in the quantity and decreases in the quality of rain water that flows across the land into water bodies in the new development area. It may also cause considerable increases in the amount of drinking water used and waste water produced. Undeveloped areas, such as open fields, wooded areas, etc., absorb a high quantity of rain water, so that only a small amount of this water flows into water bodies. However, developed areas (pavement, buildings, etc.) made of non-permeable surfaces absorb a small quantity of rain water, thus much more rain water flows to water bodies.

This could occur in southern Dallas County due to the development of the International Inland Port of Dallas (IIPOD). Currently, the IIPOD project area is mostly comprised of undeveloped open fields and wooded areas. Development of the IIPOD will transform a significant portion of this undeveloped land into paved land with buildings.

The IIPOD project area consists of creeks, flood plains, undeveloped and developed land, and several Dallas County Preserves. The major creeks in the area are Ten Mile Creek, Five Mile Creek, and Hutchins Creek. There are also several minor creeks, including Cottonwood Creek. In the project area, water flows south and east toward the Trinity River. The Dallas County Preserves in the area include Cotton Wood Creek and Ten Mile Creek.

Issues Identified

The EWG identified many potential impacts on water quantity and quality in the IIPOD project area. The issues were grouped into categories: 1) rain water runoff, 2) waste water treatment, and 3) water supply.

The impact from rain water runoff at the facilities in the IIPOD project area and downstream could be significant. Specifically, the EWG was concerned about the effect that construction of non-permeable surfaces (paved surfaces, roofs, etc.) could have on rain water runoff to local storm drain systems and creeks. New construction would likely increase the amount of rain water runoff, potentially causing erosion of creek banks, destabilization of trees on the banks, negative changes to the storm water infrastructure (pipes, manholes, culverts, etc.) of cities such as Wilmer, Hutchins, etc., negative impacts to creek habitats, increased sediment in the water bodies, and an increased potential for flooding. As a result, creeks in the project area and downstream could be affected. Private property and County Preserves could also be affected.

Additionally, the construction and operations of facilities could have a negative effect on the water quality in the creeks in the project area and downstream. Construction involves moving and piling dirt, and exposing bare dirt. When rain water flows across this dirt, it picks it up and deposits into downstream water bodies, decreasing water quality. Also, the cleanup of construction materials such as paint, concrete, and other products can produce polluted waste water discharges. These waste water discharges can flow to storm drains then into water bodies, further decreasing water quality. Finally, in facility operations, spills or leaks of petroleum hydrocarbons, trash, and other pollutants can occur outside. If the spills are not properly cleaned, when it rains, the rain water can wash these pollutants into water bodies, again reducing water quality.

The EWG noted that there may be few, if any, regulations that could help control increases in the *quantity* of rain water runoff from the IIPOD facilities. Group participants did not know of any current regulations that could provide regulatory assistance to minimize the negative impacts of increased rainwater runoff.

However, there are several federal and state permits and local ordinances that can help control the *quality* of rain water runoff. Permits and ordinances control the quality of rain water runoff in two ways: 1) These may require the property owner or operator to do certain things that will minimize or eliminate pollutants in the rain water runoff from their property; and 2) These may state the maximum amount of pollutants that are allowed in the rain water runoff from their property. If the property owner or operator complies with their permit or an ordinance, then the quality of the rain water runoff from their property will improve.

The following permits and ordinances were identified:

- The TCEQ requires property owners that are disturbing one acre or larger of land, to obtain a Construction Texas Pollutant Discharge Elimination System (TPDES) storm water discharge permit to control sediment and other pollutants from flowing into storm drains and creeks during construction involving an area of one acre or larger. This would apply to IIPOD facilities one acre or larger, or to several smaller facilities considered one development of one acre or larger.
- If the construction of a facility is on the banks of or in a creek or another water body, the Army Corps of Engineers 404 permit provisions may control construction in these areas. This could impact IIPOD facilities on or near creeks or other water bodies.
- Facilities in the IIPOD may need to obtain an Industrial TPDES storm water discharge permit to control the quality of the rain water runoff flowing from their facilities during normal operations.
- Dallas has a Municipal Separate Storm Sewer System (MS4) TPDES storm water discharge permit from the TCEQ that requires the City to implement

appropriate measures to control the quality of storm water discharged from the storm drain system into area creeks, lakes, and the Trinity River. One of the City's MS4 permit requirements is to monitor construction sites and industrial facilities to ensure that they are compliant with their state-issued storm water permits, which require site/facility operators to employ controls to minimize the discharge of polluted water (as defined in the permit) to storm drains and waterways. If any IIPOD facilities located in the City of Dallas have a construction or an industrial TPDES permit, the quality of the rain water runoff from the IIPOD facility could be controlled by this permit requirement.

- Some of the cities in the project area may have ordinances that regulate construction activities in order to minimize polluted rain water runoff from construction sites.
- In the near future, more cities in the IIPOD project area may be required to obtain a MS4 TPDES storm water discharge permit, which would control the quality of rain water runoff flowing from IIPOD facilities during construction and operation.

Potential concerns identified about waste water treatment include the following: the need for construction of more waste water infrastructure (treatment plants, sewage pipes, manholes, pumping stations, etc) due to increased population and facilities in the IIPOD project area; the increased waste water flow from waste water treatment plants to local water bodies; the change in flow in local creeks and the Trinity River and the potential negative impact on the habitats of these water bodies; and, the potential negative impacts due to construction of new or expanded waste water infrastructure on the water quality of the creeks in the project area and downstream, and the Trinity River.

The EWG also identified water supply issues. The issues discussed were: the increase in consumption of drinking water in the project area because of increased population and employment; the potential for a decrease in ground water quality (and thus, drinking water supplies) due to contaminated rain water runoff; the impact on the amount of water available for drinking water in downstream creeks or the Trinity River due to increased demand.

Recommendations

To compensate for the lack of regulations that could control increases in the quantity of rain water runoff from the IIPOD facilities, the EWG identified several proactive measures that could be implemented to address this issue.

It was suggested that developers need to be encouraged to utilize storm water collection systems (aboveground or underground) in order to retain/detain runoff water. This step could decrease the negative impacts on the water quality of creeks, reduce the destabilization of creek banks, and alleviate pressure on storm water infrastructure.

In addition, the water retained/detained could be used for on-site irrigation, which would reduce the amount of drinking water used at IIPOD facilities. If the retention/detention structures were placed aboveground (and especially if they were natural water bodies), they could help with wildlife re-habitation and the overall quality of life of the region. In addition, these structures/natural water bodies could be linked to other natural features and preserves to add to the recreation and natural beauty of the area.

The EWG also recommended the use of Best Management Practices (BMPs) during the development, construction, and operation of the IIPOD facilities, such as: BMPs in the integrated Storm Water Management (iSWM) principles developed by NCTCOG; permeable pavement; green roofs; Green Building standards or the LEED (Leadership in Energy and Environmental Design) Green Building Rating System and certification; landscape buffers between the facilities and the creeks; or BMPs recognized by government agencies or organizations.

To increase the cohesiveness of the rain water runoff control features in the project area, a drainage master plan for the project area was suggested. This master plan together with the above stated BMPs, could improve the location and types of potential BMPs utilized in the project area, help reduce impacts of increased rain water runoff, and lessen the probability that construction and operation activities would negatively affect the quality of rain water runoff.

To address the potential decrease in rain water runoff quality and of water quality in creeks and ground water, the EWG recommended that the developers and operators take the following steps: adhere to local, state, and federal construction and storm water ordinances and permit requirements; utilize the BMPs suggested above and including retention/detention structures, especially aboveground vegetated structures; use erosion/sediment controls; watershed initiatives, and landscape buffers between the facilities and the creeks; and use Green Building standards or the LEED rating system and obtain LEED certifications.

Finally, the EWG saw an opportunity for IIPOD construction to help restore habitats in creeks or the sections of creeks with eroded banks or beds and enhance the natural hydrology of the creeks. This opportunity could prevent the potential negative impacts of increased storm water runoff, and could enhance the recreational opportunities and quality of life in the project area. Also, opportunities for funding that could be used as incentives for developers to implement the EWG recommendations should be researched.

Environmental Justice

September 6, 2007

Background

Environmental justice (EJ) is the pursuit of equal justice and equal protection under the law for all environmental statutes and regulations without discrimination based on race, ethnicity, and/or socio-economic status. Presidential Executive Order No. 12898 (issued February 11, 1994) requires Federal agencies to respond to the issue of environmental justice by “identify[ing] and address[ing] disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low income populations.”

The U.S. EPA is the lead agency for environmental justice issues and has focused its efforts on guaranteeing the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income by identifying and addressing the effects of public projects on the public, especially high or adverse impacts to minority or low-income populations.

Historically there has tended to be an inequitable distribution of environmental burdens (pollution, industrial facilities, crime, etc.) placed on low income and racial minority populations. Environmental justice strives to ensure that these groups are not overlooked in the planning process and that they are treated fairly.

Issues Identified

Many potential EJ issues surrounding the International Inland Port of Dallas project have been identified. These issues have been categorized as safety concerns, health issues, environmental impacts, accountability, and nuisances.

Health and safety issues have been labeled as priorities. These concerns focus on increased air emissions and its impact on respiratory illness, the possible displacement of the elderly population, and the lack of adequate health care facilities in the area. Safety concerns include the potentially dangerous effects of more trucks and trains carrying hazardous materials, the increase of regional and local traffic, and the potentially destabilizing effects of a transient population on the surrounding communities.

Increased environmental impact is also a concern. It is important to ensure that the historical and natural assets in the area are protected and preserved. Also, it is necessary to require the development of green space/buffer zones to soften the environmental impact of the project.

Accountability is a major issue and there are concerns that the absence of a master plan and lack of community involvement could lead to the exacerbation of EJ issues. Also, it is not clear what impact this project would have on property values in the targeted area. Another question is how to ensure that expected benefits from the project

will be gained by those directly affected by it. It is hoped that the communities most affected should receive job preferences or specific training related to jobs at the port.

There are various potential nuisances that would affect the communities surrounding the IIPOD. Steps should be taken to minimize noise and light pollution and to provide alternate roads for local traffic.

Recommendations

The group identified several proactive measures that can be taken to address some of these potential issues. First, it is crucial to identify the demographics of the population that will be impacted by the project and their vulnerabilities (respiratory illness, heart disease, etc). Second, it is important to develop a robust public participation early in the planning process and to involve *all* community leaders, not solely elected leaders. It is also recommended that the IIPOD project be publicized via churches, schools and other local organizations. Finally, the project developers should consider construction alternatives in order to decrease the environmental and social impacts and keep in mind the existing environmental conditions in the area.

Several other recommendations have been made to address potential EJ issues. There will need to be an investigation to determine if the National Environmental Policy Act (NEPA) will apply to this project. (NEPA requires federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. To meet this requirement, federal agencies prepare a detailed statement known as an Environmental Impact Statement.)

Also, there should be cooperation on the part of the various municipalities as well as the county to create a comprehensive development plan. Other things to research include the possible creation of an oversight or advisory board, similar to the board overseeing the Trinity Railway Express or TRE; alternatives to lessen truck impacts on surrounding communities, including increased rail access between Houston and Dallas; and a day use fee for some of the highways and roads in the port area, with proceeds to be used by communities to address Environmental Justice issues.

To ensure maximum benefit for the communities involved, there should be more accessibility to workforce training and hiring preference for the local population.

It is also important to look to other successful projects nationwide for guidance in alleviating similar potential environmental justice concerns. For instance, in attempting to deal with EJ issues surrounding the Detroit Intermodal Freight Terminal Project (DIFT) EPA reported that Detroit's city government took steps to encourage truck owners to meet at least the 2007 truck standards, restrict trucks that don't meet the proper air quality standards, promote the use of alternative fuel vehicles, and ensure that trucks are driven by drivers that earn at least the prevailing wage.

In another example, far more aggressive standards were imposed at the ports of Los Angeles and Long Beach. In the 2006 Clean Air Action Plan, the ports pledged to reduce pollution from all port sources by 44 percent. They plan to do this by achieving aggressive milestones with measurable goals for air quality improvements, developing a technology advancement program to reduce green house gases, exploring the use of pollution-based fees, such as gate fees assessed on “dirty” trucks, and implementing a truck replacement program to phase out all “dirty” diesel trucks from the ports in five years, replaced with a newer generation of clean or retrofitted vehicles to be driven by people who earn at least the prevailing wage.

Since the Clean Air Action Plan was approved in 2006 its policies have become contentious and highly discussed. In November 2007 the ports decided to scale back controversial policies regarding labor standards and fees on air-polluting trucks in order to prevent further delays in the implementation of the clean-truck program. The final version of the plan, as it stands now, is limited to a phased retirement of old trucks over the next five to seven years, until diesel pollution from harbor trucking is reduced by at least 80 percent. The phased elimination of dirty trucks was supposed to begin on Jan. 1, but the date has now been pushed back to Oct. 1, 2008.

Air Quality

October 4, 2007

Background

The DFW area is in nonattainment for ground-level ozone under the Clean Air Act Amendments (CAAA) (ozone is one of six criteria pollutants that are regulated under the CAA). Ground-level ozone forms when nitrogen oxides (NO_x, caused from the combustion of fossil fuels) and volatile organic compounds (VOCs, caused by evaporation and incomplete combustion) mix in the presence of sunlight.

As a means to achieve compliance, the state (TCEQ), working with local communities, has to develop a State Implementation Plan (SIP) which is submitted to the Environmental Protection Agency (EPA) for approval. The SIP is a set of regulations that details how a state will reach attainment of the CAAA standards. It sets control strategies for reducing emissions and sets the technical and regulatory process for demonstrating attainment. The TCEQ is currently working with the DFW area and the EPA to revise the SIP to show attainment by 2010. Typical components of a SIP can include monitoring data, emissions inventory, photochemical modeling, and control strategies. Development of these components generally takes 3-4 years.

According to the 2005 DFW NO_x emissions inventory, 61% are from on-road mobile sources; 19% from non-road mobile, 10% from point and 10% from area. VOC emissions are primarily from area 54%, on road mobile 27%, non-road mobile 13% and point 6%. Non-road mobile sources include construction equipment, industrial equipment, railroad equipment and air craft. On-road mobile sources include cars, trucks, SUV's, buses, etc. Area sources are non-specific regional sources such as dry-cleaners, etc.

As IIPOD continues to develop, there will be an increase in rail and truck traffic associated with intermodal freight cargo and warehousing and distribution development. This may put additional strains on the air quality in the region where air quality has been a problem.

Issues Identified

The EWG identified numerous issues that could impact air quality in the region. These issues were generally classified into six general categories: Maintenance and Operations, Energy Use, Short Term/Long Term Issues, Traffic (site specific and regional), Construction, and Partner Coordination.

The impact from the growth in traffic was of major concern to the panel, with the number one issue being the impacts associated from an increase in rail and truck traffic. Rail issues included both an increase in long haul traffic as well as the impact of more cars in rail switching yards. Related to the increase in rail and truck traffic were how this growth would impact regional congestion, especially at at-grade (road/rail) crossings, and how the increased truck traffic would impact cars and the potential for increased

idling because of congestion. Other concerns mentioned included an increase of vehicle traffic related to accessing related developments and for commuting purposes. Another important issue was associated with Maintenance and Operations of the facilities related to the inland port, with the primary concerns being the use of ground support equipment (like cranes) at intermodal facilities and emissions from refueling stations. Other concerns included idling while resolving ownership claims or security screening, impacts from industrial warehouses, and small gasoline engine use, especially in regards to landscaping.

Issues identified under Energy Use include the need for increased electric power for the entire IIPOD region, how to keep refrigerator units operating and the use of auxiliary power/plug-in units for truckers during rest periods. Under short term/long term issues, subjects raised included concerns about the impact that the growth in population, amenities, etc. would cause in emissions as well as aircraft and airport issues as the Lancaster airport expands.

Construction issues included making sure that road work considered industrial development, meaning that new construction would include fly-overs and proper truck exits, construction would be phased in, rather than all at one time, and that efforts would be taken to mitigate the creation of an urban heat island as trees and greenspace were replaced by pavement. Finally, the idea of partner coordination was key to the panel, with a desire to address issues related to different energy efficiency “standards” and road standards throughout communities.

The group ranked the issues identified above and named increased rail traffic, increased truck traffic and the resulting increases in congestion and idling as its top concerns. The lack of energy efficiency standards throughout the area communities was also identified as a top issue.

Recommendations

The panel came up with numerous potential recommendations to address some of the concerns identified. The recommendations can be broadly classified into three areas: coordination, standards and conservation, or reduction of non-renewable resources.

Coordination recommendations include coordination between regional, state and federal governments. Primary recommendations include getting all communities’ buy in, early and often and exploring incentive opportunities. Suggestions for coordination with the state include working with TxDOT and NCTCOG to ensure that transportation planning addresses the anticipated local growth in road use; exploring accelerated timelines of projects that would eliminate at-grade crossings (and therefore idling); exploring obtaining SIP credit through the passage of ordinances from the cities and/or counties; carrying out a study to assess the load on railroads and rail line capacity in the future; and, providing more information about the Texas Emissions Reduction Plan (TERP), which provides grant funding for heavy-duty emissions reduction projects.

Recommendations related to the federal government include developing agreements for involvement in voluntary programs, like EPA’s SmartWay, and working with the EPA or

other agencies to get grant funding for energy star programs. Finally, for working with the private sector, suggestions included bringing the railroads in early in the process and determining where partnership opportunities may develop.

Recommendations in the standards section include using uniform construction standards such as Quality Assurance/Quality Control (QAQC) for roads, as well as using Texas Low-Emission Diesel (TxLED) fuel and clean construction equipment, including fuel and tier II/III engines. Other ideas included encouraging developments which use photovoltaic and geothermal energy sources, xeriscaping and environmental reconstruction (trees, light roofs, etc), and are LEED compliant or use energy-star products.

Finally, recommendations for the reduction of the use of non-renewable resources include the creation of “live, work, play” developments; employee ridesharing or shuttle use; increasing electrification for ancillary truck stops and ground support equipment, and the use of electric engines in switch yards. Ideally, all electrification projects would be sourced for renewable electricity sources.

Conclusion

Throughout each of the topic meetings, certain themes appeared consistently. As a result, these general recommendations are listed as a top priority for the IIPOD.

- 1) Partner Coordination: For the IIPOD to be successful, it is recommended that the area communities involved are aware of what the other communities are doing, and would have similar policies (formal or informal) in place. Consistent efforts throughout the region to create a green development are necessary, and if each community works in a vacuum, results are not anticipated to be as positive as if all communities work together. Partner coordination will also be important for outreach to the community for issues related to Environmental Justice.
- 2) Planning and Timing: In addition to a cooperative effort, the group recommended that a master-plan be created and that construction schedules be coordinated. Benefits of this approach would be that infrastructure projects would be prioritized and work on construction projects (either road or water) could be harmonized.
- 3) "Green" Buildings: The group recommends that new facilities be constructed to achieve a LEED silver certification, which requires a score of 33-38 points on the U.S. Green Building Council's 69 point scale. More information on LEED certification can be found at www.usgbc.org/LEED/. In addition, the group recommended the usage of buffer zones (green areas near the industrial development and creeks), and the replacing of trees and green space that were removed for industrial development.
- 4) Identify Grant and Incentive funding: There are a variety of programs at the state, like TERP, and federal levels, like SmartWay, that would provide financial and/or technical support for some of the recommendations identified by the EWG. A comprehensive list of available funding and programs should be drafted and made available to the communities.

In addition, a recommendation was made to identify projects in the IIPOD area for the Supplemental Environmental Projects (SEP) list. The SEP list is maintained by the state and details positive environmental projects that can be executed by environmental offenders to mitigate environmental damages.

Appendix A

Participants

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Facilitator:

Oliver Johnson, City of Dallas, Human Resources

Appendix B

Presentations

Water Issues for Inland Port Development

Presented July 12, 2007 by William Madison, City of Dallas, OEQ

Office of Environmental Justice and Tribal Affairs (OEJTA): “Helping to protect the environment and human health in vulnerable communities and on tribal lands?”

Presented September 6, 2007 by Shirley Augurson, U.S. EPA

Air Quality Overview

Presented October 4, 2007 by Brian Foster, TCEQ

Appendix C

Acronyms found in this document:

BMP	Best Management Practices
CAAA	Clean Air Act Amendments
DFW	Dallas/Fort Worth
DIFT	Detroit Intermodal Freight Terminal Project
EJ	Environmental Justice
EPA	Environmental Protection Agency
EWG	Environmental Working Group
iSWM	Integrated Storm Water Management
IIPD	International Inland Port of Dallas
LEED	Leadership in Energy and Environmental Design
LNG	Liquid Natural Gas
MS4	Municipal Separate Storm Sewer System
NAAQ	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NOx	Nitrogen Oxides
NCTCOG	North Central Texas Council of Governments
OED	Office of Economic Development
OEQ	Office of Environmental Quality
OEJTA	Offices of Environmental Justice and Tribal Affairs
QA/QC	Quality Assurance Quality Control
SIP	State Implementation Plan
SEP	Supplemental Environmental Projects
TECQ	Texas Commission on Environmental Quality
TxDOT	Texas Department of Transportation
TERP	Texas Emissions Reduction Plan
TxLED	Texas Low-emissions Diesel Fuel
TPDES	Texas Pollutant Discharge Elimination System
ULI	Urban Land Institute
VOC	Volatile Organic Compounds