MEMORANDUM

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From: Gilbert R. Ward

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The attached document has been submitted to satisfy contract requirements of the above referenced contract between the Texas Water Development Board and North Central Texas Council of Governments.

95-483-073

A COMMON VISION FOR THE TRINITY RIVER

ABSTRACT

The Dallas/Fort Worth Metroplex is the nation's largest inland metropolitan area. Its population of 4.5 million is greater than 30 states. To assure an adequate long-term drinking water supply, each of the major branches in the upper watershed has been impounded. Thus the Trinity River as it flows through the urban core faces great extremes, with low flows composed almost totally of treated wastewater to massive floods with the potential for billions of dollars in damages and untold loss of life.

For most of the past 150 years, the dream was that of a navigation canal with barges transporting goods more than 300 miles to and from the Gulf. When the dream died in 1981, the canal was replaced by unrelated requests for federal Section 404 permits to reclaim portions of the Trinity flood plain for commercial and residential development. Because of concern that potential cumulative impacts could not be adequately assessed through individual permit reviews, the Fort Worth District of the U. S. Army Corps of Engineers, NCTCOG and its member local governments launched a regional initiative that is still going strong a decade later, and that has stimulated excitement and galvanized support for a new Trinity River **COMMON VISION** --

- ***SAFE*** Trinity River, with stabilization and reduction of flooding risks
- ***CLEAN*** Trinity River, with fishable and swimmable waters
- ***ENJOYABLE*** Trinity River, with recreational opportunities linked by a trails system within a world-class greenway
- ***NATURAL*** Trinity River, with preservation and restoration of riparian and cultural resources
- ***DIVERSE*** Trinity River, with local and regional economic, transportation and other public needs addressed

INTRODUCTION

"The river a little narrow deep stinking affair."

This was the first impression of A.W. Moore in 1846 upon seeing the Trinity River near present-day Dallas. For most of the next 150 years, it was believed by many civic leaders that the economic future of the region depended upon navigation of the "little narrow deep stinking" Trinity River, from Fort Worth and Dallas southward more than 300 miles to the Gulf. Thus the ultimate use of the river in the urban area was envisioned to be barge traffic with heavy industry along its banks.

If some raw sewage found its way downstream towards Houston, what was wrong with that? Indeed, in 1925 the Trinity River was characterized by the State Health Department as a "mythological river of death" because Dallas led the state in deaths associated with typhoid.

In 1981, the U.S. Army Corps of Engineers officially killed the dream of navigation by determining that a federally-sponsored project was no longer feasible. With the Metroplex in the middle of a development boom, the Corps received numerous unrelated requests for federal Section 404 permits to reclaim portions of the Trinity flood plain for commercial and residential development.

Because of concern that potential cumulative impacts could not be adequately assessed through individual permit reviews, the Fort Worth District of the Corps and NCTCOG launched a regional initiative that is still going strong a decade later.

PREVIEW TO THE COMMON VISION

The Dallas/Fort Worth Metroplex is the nation's largest inland metropolitan area. Its population of 4.5 million is greater than 30 states. To assure an adequate long-term drinking water supply, each of the major branches in the upper watershed has been impounded with manmade reservoirs. Thus the Trinity River as it flows through the urban core faces great extremes, with low flows composed almost totally of treated wastewater to massive floods with the potential for billions of dollars in damages and untold loss of life across its 240 square mile floodplain.

The H.A Harvey - intended to show that river navigation to the Gulf was possible.

The North Central Texas Council of Governments (NCTCOG) is the voluntary association of more than 200 cities, counties and special districts in a 16-county region. NCTCOG is an association of, by and for local governments. NCTCOG assists its members in planning for common needs, cooperating for mutual benefit, and recognizing regional opportunities for improving the quality of life.

NCTCOG is the designated regional planning agency for comprehensive planning as well as functional programs such as solid waste, mobile source air quality, and water quality management. NCTCOG has actively addressed key water resources issues since developing the first areawide water quality plan approved by the U.S. Environmental Protection Agency in the nation. Besides sustaining the areawide water quality planning process, NCTCOG coordinates one of the largest urban storm water programs in the country. Most particularly, NCTCOG serves as local sponsor for the U.S. Army Corps of Engineers' largest floodplain feasibility study. This process has evolved through three major steps:

- *Regional EIS* which demonstrated need for common approach to flood plain management
- *Reconnaissance Study* which identified potential flood damage reduction alternatives
- *Feasibility Study* addressing flood damage reduction, recreation, water quality, environmental enhancement and coordination of other regional issues in the corridor

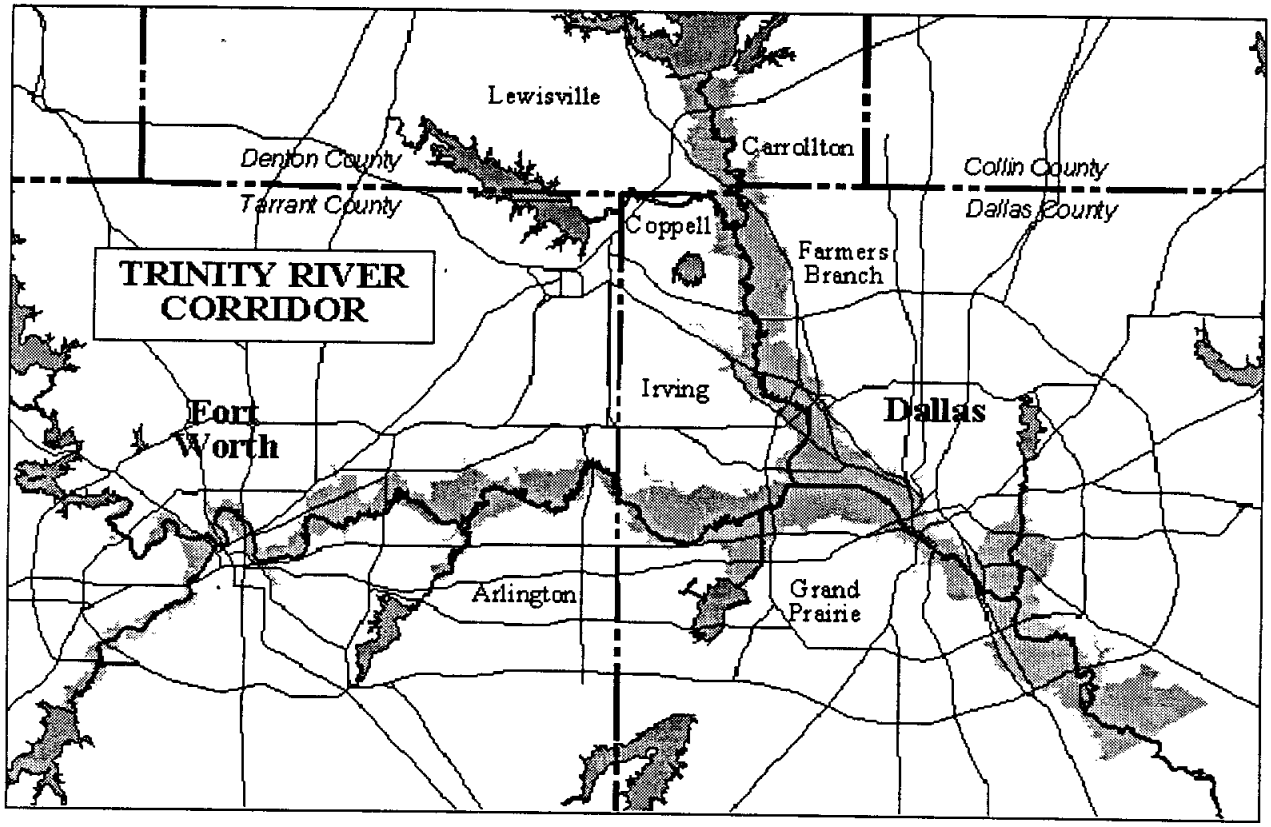
Regional Environmental Impact Statement -- This cooperative effort began in the early 1980's with the preparation by the Corps of a *Regional Environmental Impact Statement* to address the cumulative impacts of its individual permitting decisions. A working group of staff professionals from the affected local governments and NCTCOG provided input. *The Draft Regional EIS* first compared the cumulative impacts of two opposite philosophical approaches for utilizing the 100-mile river corridor -- maximum environmental quality vs. maximum development -- and found that maximum development would result in flood flows that would overtop existing levees in Dallas and Irving. Given the seriousness of these preliminary findings, a special Strategy Committee of elected officials was formed and each local participant provided funding support on a pro-rata basis to NCTCOG as convenor and facilitator.

As expected, local involvement in the Corps' preparation of the *Final Regional EIS* was much more intense, with many meetings and several new development scenarios crafted between the two extremes. The *Final Regional EIS* found that these more moderate development scenarios would not only result in the Dallas Floodway levees still being overtopped with catastrophic results, but that properties in upstream cities would also sustain considerable flood damages. Thus no city could assure adequate flood protection for itself by itself -- only a common approach could be successful.

Mother Nature Makes Her Point -- Although no proof was required, Mother Nature stepped in anyway. Major floods occurred in May/June 1989, April/May 1990 and December/January 1992 in the upper Trinity River. Over a dozen lives were lost during the 1989 flood events within the Metroplex, and hundreds of millions of dollars of damages were sustained.

Also alarming was that the 1990 flood nearly reached the design elevation of the Dallas Floodway levee (approximately four feet below the top of the levee) for an event much less powerful than even the mis-named "100-year" flood. Upstream reservoirs designed to capture runoff actually prevented more serious flooding.

During the 1980's, the Trinity River also experienced several major fish kills associated with depressions in dissolved oxygen during rise events. Extensive followup studies by the state determined that ambient dissolved oxygen concentrations in the river have improved and rise-associated dissolved oxygen effects have waned. Reduced effluent ammonia levels have resulted from implementation of in-plant nitrification requirements. Thus, toxicity became the main factor impacting the system by the late 1980's.



Reconnaissance Study -- In the late 1980's NCTCOG adopted a *Regional Policy Position on Trinity River Corridor* which affirmed, among other key points, that local governments must be the stewards of the Trinity River Corridor, that individual local goals can only be achieved through cooperative management, and that a comprehensive approach addressing flood damage reduction, recreation, and

environmental quality must be pursued. An innovative Corridor Development Certificate process was begun (as discussed below) to stabilize the flooding risks.

Upon the request of the affected local governments, Congress authorized the Corps to undertake a *Reconnaissance Study* to determine if feasible flood protection plan(s) could be identified to reduce the risk of flooding, as well as address water quality, recreation, environmental enhancements and other allied purposes. The Corps studied a variety of flood control options in particular, and found at least a dozen with positive benefit-cost ratios that merited further attention in the *Feasibility Study* phase.

Feasibility Study Initiated -- It was now time for local governments to act. Each of the nine cities, three counties and two special districts with development and regulatory authority for the Trinity River Corridor executed interlocal agreements with NCTCOG establishing a formal structure for cooperative planning. A Steering Committee of elected officials was formally appointed to provide policy guidance, along with a staff task force for technical support.

NCTCOG was identified as the administrative agent to coordinate the efforts and to enter into a cost-sharing agreement with the Corps for the *Upper Trinity River Feasibility Study*. Even at this stage it was recognized that a more comprehensive COMMON VISION was needed and would be pursued not only with the Corps but other local, state and federal partners. Thus, the interlocal agreements were written very broadly to allow a wide range of cooperative activities.

The first phase of the *Upper Trinity River Feasibility Study* was scoped as an $8 million six-year effort through the fall of 1996, with NCTCOG responsible for providing the $4 million non-federal match. In turn, NCTCOG negotiated and administered a $2 million grant from the Texas Water Development Board, and obtained the $2 million of local funds on a pro-rata annual formula based on the jurisdiction's land area within the corridor. NCTCOG's funding support came from a portion of the local share. The *Feasibility Study* began in the fall of 1990 to address flood damage reduction, water quality improvement, environmental restoration, recreation and other allied purposes such as transportation. Phase II extends the study to the Year 2000 with an additional $6.85 million for local and regional implementation planning.

COMMON VISION FOR THE TRINITY RIVER CORRIDOR

Since 1990 there have been hundreds of meetings, discussions, public forums, newsletter articles, newspaper columns, radio talk shows and TV news bites about the Trinity River. In the early 1990's they continued to pound on the problems of the Trinity -- dead bodies found along the river banks, water pollution from an industry, and so forth.

Over the last year or two, the focus has changed. While there are still problems, now much of the attention is on the future of the Trinity River -- and most of it is presented as positive. Successful bond elections. River festivals. New funding for the next trails segment. New education programs and facilities. Editorials lauding citizen efforts. Statements by the Mayor of Dallas stressing the importance of the Trinity to the city. A new vision of the Trinity River has emerged -- a **COMMON VISION** --

- ***SAFE*** Trinity River, with stabilization and reduction of flooding risks
- ***CLEAN*** Trinity River, with fishable and swimmable waters
- ***ENJOYABLE*** Trinity River, with recreational opportunities linked by a trails system within a world-class greenway
- ***NATURAL*** Trinity River, with preservation and restoration of riparian and cultural resources
- ***DIVERSE*** Trinity River, with local & regional economic, transportation and other public needs addressed

A *SAFE* TRINITY RIVER, WITH STABILIZATION AND REDUCTION OF FLOODING RISKS

If the "big flood" (Standard Project Flood) were to occur today, more than 12,000 homes and more than 140 million square feet of commercial property would be damaged, resulting in over $4 billion in flood damages and untold loss of life. And we can tell you the specific location and depth of water for each and every structure!

Primary attention of the *Feasibility Study* has been directed at improving methods used to quantify the risk of flooding along the corridor, and determining the specific projects for which more detailed planning and implementation will be pursued. The five major initiatives to stabilize and reduce the flooding risk are:

- stabilize the flood risk with the innovative Corridor Development Certificate process
- restore levee protection in downtown Dallas and elsewhere
- reduce flood risks through specific projects identified in Phase I of the *Feasibility Study*
- minimize property damage and loss of life by improved flood warning and emergency response
- protect financial security and investments with greater participation in flood insurance

Stabilize the Flood Risk -- *The Regional EIS and Regional Policy Position* called for stricter regulation of development within the Trinity River Corridor to stabilize the flood risks. After several years of detailed discussions, an innovative Corridor Development Certificate (CDC) process emerged. Local governments still issue the development permit under the National Flood Insurance Program, but regional requirements have been added (and adopted by each city in its floodplain ordinance):

- applies consistent and specific regionwide criteria, such as no rise in the 100-year flood elevation, and maximum allowable loss of valley storage for 100-year and Standard Project Flood discharges of 0% and 5% respectively
- the Corps reviews <u>every</u> CDC request for its flood impact, not just Section 404 applications
- every other local government along the corridor is given 30 days to review and comment upon the development request
- NCTCOG tracks the process through its Trinity River Information Network (TRIN), using its GIS capabilities (and soon to be added to NCTCOG's Internet pages)

While the individual city still makes the final call, it is well understood that a bad decision will land them in court with the other cities. So far the process is working, and even consulting firms who openly opposed the process now support it.

Restore Levee Protection -- One of the most terrifying findings is that the levees in downtown Dallas and other locations would not be able to withstand a Standard Project Flood, which is the level of flood protection for which they were originally designed. Almost half of the residences and half of the commercial property that would be damaged in the corridor by an SPF event lie behind these levees.

The City of Dallas has recognized this serious problem, and through its Trinity River Corridor Citizens Committee (as discussed below) has mobilized support to address its needs through a Multiple Objective Management approach. A bond issue passed in May 1995 provides the funds for the city's cost-share of a $3.2 million implementation study in Phase 2 of the *Feasibility Study*.

Reduce Flood Risks -- An *Information Paper* released in early 1995 identified other potential projects with a positive benefit-cost ratio. NCTCOG is working with affected local governments to determine what needs to occur next. In some cases there is not a feasible federal cost-share project, yet the *Feasibility Study* has shown considerable damages. Thus some local governments are pursuing their own solutions, such as a joint flood plain study by Grand Prairie and Irving just upstream from Dallas.

Any cooperative effort this massive is bound to find controversy, and the *Feasibility Study* is no exception. One "feasible" alternative from the *Information Paper* was a very large dry-detention structure in Wise County, more than 30 miles upstream of the corridor, to impound water during a flood. The

citizens of the area vehemently protested this project, since it would remove whole towns and school districts, and formed an organized opposition group. It isn't pleasant when you testify to a Congressional committee for your overall program, and then are followed by a citizens group opposing one of the potential projects.

Through all the meetings more and more information was obtained and exchanged, and it became clear that the levee improvements in Dallas and the upstream dry-detention basin were both claiming the same flood reduction benefits. When Dallas decided that the Multiple Objective Management approach downtown was much preferred, the "feasibility" of the upstream structure evaporated.

Minimize Property Damage & Loss of Life -- Even when all the proposed projects are accomplished, there will still be thousands of citizens and businesses who will be flooded. The *Feasibility Study* has determined that improved coordination and communication, with some supplemental gaging, could significantly improve the region's flood warning capabilities and hopefully reduce loss of life.

Working with interested local, state and federal agencies such as the National Weather Service and their River Forecast Center, various options are currently being explored, such as a *Memorandum of Understanding* for cooperative integration/sharing of all gage information, making more data accessible via the Internet, using back-up observers in case gages fail, and expanding the media's role in broadcasting Trinity River flow information. Opportunities to better coordinate emergency response activities during a flood itself are being pursued with the affected agencies such as the Federal Emergency Management Agency.

Protect Financial Security & Investments -- Unfortunately, most folks in the corridor do not have flood insurance. The sophisticated Corps computer model is being aligned to meet the requirements of the National Flood Insurance Program. New mapping of the corridor is underway to produce updated Flood Insurance Rate Maps (FIRM's) in digital form. The FIRM's will undergo FEMA's technical review process and then be released

It was recognized in the *Reconnaissance Report* that much more accurate mapping of the river corridor was needed to assure improved accuracy of the resulting computer models. The first two years of the *Feasibility Study* focused on new aerial mapping and computer modeling. The development of the models began with the creation of extremely accurate (1 inch = 200 feet) basemapping, featuring 2-foot contours, extensive identification of structures, transportation facilities, hydrology, utilities, cross sections, and various cultural, environmental, and recreational resources. Thus all building footprints are already available on the Geographic Information System, so NCTCOG will work with the private insurance industry to promote flood insurance opportunities to those in the highest risk areas.

A *CLEAN* TRINITY RIVER, WITH FISHABLE AND SWIMMABLE WATERS

As an urban river, the Trinity is directly impacted by both point and nonpoint sources of pollution. Over the last three decades, the focus of pollution control has been the phase-out of many smaller, inefficient sewage plants through consolidation into several major "joint system" treatment facilities with high-quality effluent. NCTCOG's *Upper Trinity River Basin Comprehensive Sewerage Plan* was the first regional plan approved by the U.S. Environmental Protection Agency in the early 1970's. Current levels of wastewater treatment for conventional pollutants are the best ever recorded by NCTCOG, despite the fact that the joint systems are now treating more than twice the volume of flow of the 1970's. Attention to discharges which can impact river dissolved oxygen have resulted in no fish kills since the mid 1980's.

According to the state, the national goals for "fishable and swimmable" waters are attainable for the Trinity River, and are a part of the COMMON VISION. The state has assigned contact recreation as a designated use and upgraded the river's aquatic life uses and numerical criterion for dissolved oxygen. In order to attain the fishable/swimmable goals, the Trinity River must meet selected criteria and display water quality characteristics that will allow the river to meet these goals.

The region's attention in the 1990's has shifted from river dissolved oxygen impacts from wastewater treatment plants, to nonpoint sources of pollution across a full range of parameters. In 1990, the USEPA established the National Pollutant Discharge Elimination System (NPDES) storm water permitting program for separate storm drainage systems for selected industries and municipalities greater than 100,000 in population. There are seven cities greater than 100,000 population in the region, and they obviously are NCTCOG's seven largest members.

Under a multi-million dollar *Regional Strategy for Managing Urban Storm Water Quality*, NCTCOG coordinated the application process of these seven largest cities which had to apply for Municipal Separate Storm Sewer System (MS4) permits. The application activities involved descriptions of the city storm drain systems, characterization of the storm water quality in those systems, and the quantity of storm water entering waters of the United States. Municipalities were also required to develop management programs utilizing Best Management Practices to improve the quality of the storm water to the maximum extent practicable. All of the information compiled during the application phases was to be used in designing five-year MS4 permits.

A Regional Task Force of the local governments guides the efforts by NCTCOG, a professional consultant and other partners. The regional program has been truly comprehensive, including but not limited to:

- a regionwide pollution prevention and public awareness campaign themed ***Our Water - Take It Personally***, with articles and flyers, exhibits at city festivals, poster and essay contest, etc.
- a storm drain stenciling program that reimburses volunteer groups as a fund-raiser
- consistent scoring and evaluation system from field screening of storm drains to detect illicit connections
- development of a set of three comprehensive Best Management Practices manuals (with additional funding from 50 other local governments and entities)
- consistent regionwide definition of "Maximum Extent Practicable" requirements for construction activities
- common watershed modeling tools
- a model storm water ordinance
- a united voice during negotiation of the local permits
- perhaps the most extensive storm monitoring program in the nation.

Because of the close proximity of the seven cities within the Dallas/Fort Worth Metroplex, the Regional Task Force sought to coordinate the storm water quality monitoring effort. A network of 30 sites was selected for the seven Metroplex cities as a whole, with each sampled for 7 storm events. This provided a firmer statistical base to evaluate storm water quality, an opportunity to improve the number of samples on a seasonal basis., and the combining storm event data, particularly by land use, to obtain a stronger characterization of typical runoff within the Metroplex. The final set of monitoring sites included 11 residential, 6 commercial, 9 industrial basins and 4 highway sites.

Of the 186 constituents which were sampled, 86 were not detected in any of the storm water samples. Of the remaining 100 constituents, only 48 were detected in 10 percent or more of the samples. As part of the regional program an extensive effort has been made to determine what water quality parameters have been reported to cause "problems" or "concerns" in streams in the Dallas-Fort Worth area. The results of these investigations have been reported in three technical reports and a final analysis document.

Based on whether the parameter is included by the state in the numerical criteria for surface water (<u>not</u> storm water) and actual instream monitoring data, the constituents were rated as being of high, medium or low priority concern. The high priority constituents of local concern in the Dallas-Fort Worth region are:

STORM WATER CONSTITUENTS OF LOCAL CONCERN

HIGH Priority	
Metals	**Others**
Cadmium (R)	Chlordane
Chromium	Diazinon
Copper (R)	Fecal coliforms
Lead (R)	Fecal streptococcus
Zinc (R)	TSS (R)
(R) = Annual Loading estimates required by EPA	

Concerns regarding pesticides and excessive nutrients may best be approached initially through education and training. For example, NCTCOG has pioneered an "At Home With Hazardous Wastes" outreach effort, and seed funding for an ongoing household hazardous waste collection program for the two urban counties is being provided through NCTCOG's solid waste grants program. Suspended solids and sediments can be controlled to some extent by improved construction site management and erosion prevention practices as reflected in the regional BMP manual.

The sources of fecal coliform and fecal streptococcus bacteria need to be determined through specifically designed monitoring programs. Sources may be sanitary sewer overflows, illicit connections, or animal wastes. Insight could be gained by starting with sampling a very small, "clean" portion of a watershed and then sampling increasingly larger portions of this watershed. Through this stepwise approach, it could be determined where the bacteria tend to increase substantially.

A water quality assessment of the entire Trinity River Basin is being conducted by the Trinity River Authority and its consultants. In spite of differences in methods of collection, coupled with the fact that river and stream data can be quite different from storm water data, the list of constituents of concern generated by this study compares quite favorably with the storm water constituents of high local concern. Both lists identify trace metals as being a potential problem. Of the 5 storm water priority metals, only chromium was not included in the river basin list. Fecal bacteria was identified as a common problem as well as the large category of nutrient parameters which includes all forms of nitrogen and phosphorus. The last common category included indicators of low dissolved oxygen levels. The prevalent pesticide, diazinon was not included in the river basin study; no pesticides were. However, other studies have shown that it is a common problem in Texas waterways.

Regional monitoring activities will continue during the initial five-year permit term, with some changes in monitoring sites to eliminate redundancy and add mixed land use and instream sites which are expected to better characterize the urban fabric. An undeveloped site is also being installed to provide baseline data with which to compare. The final permit term network includes 21 sites. NCTCOG continues to serve as facilitator and convenor for the local governments as they enter the initial five-year permit phase.

AN *ENJOYABLE* TRINITY RIVER, WITH RECREATIONAL OPPORTUNITIES LINKED BY A TRAILS SYSTEM WITHIN A WORLD-CLASS GREENWAY

The mission of the Trinity Trails Advisory Committee is "to cause to be built a continuous public-access recreation corridor with a multi-use trail along the Trinity River Corridor in North Central Texas and northward to the Red River." A decade ago even the idea of a regional committee of elected officials taking seriously the concept of a multi-county river trails system would have seemed absurd to many citizens. My how times have changed!

After almost two years of detailed effort, the Trinity Trails Advisory Committee in early 1996 adopted a proposed alignment for most of the 250-mile "spine" of the regional system. It begins at the confluence of the three major forks -- West Fork, Elm Fork and the main stem -- near downtown Dallas. The

northward spine, referred to as *Dalhoma*, is planned to extend along the Elm Fork to Lakes Lewisville and Ray Roberts, then along major highway and rail corridors to Lake Texoma at the Oklahoma border. The southeastern spine initially extends to the Dallas/Ellis County line, but could eventually reach the Gulf of Mexico along the Trinity. And the western spine extends to Lakes Benbrook and Eagle Mountain, then?

The Trinity Trails Advisory Committee consists of representatives appointed by each participating local government along the Trinity in North Central Texas, and by the Texoma COG for the northern arm of *Dalhoma*. Most are elected officials or park board members. It is chaired by the prior Mayor of Dallas, who is also a former Congressman. Lead staff support is provided by NCTCOG, with the Corps responsible for the technical study efforts as part of the COMMON VISION process and funding.

The corridor will be a continuous strip of land that can accommodate hike, bike, equestrian and/or nature trails, and serve as the primary link of recreational opportunities within a Trinity River Greenway. Trails within the corridor spine, and connecting spurs, would provide alternate transportation routes to parks, schools, shopping areas, and works. As part of its *Mobility 2010* regional transportation plan, NCTCOG has established a goal of 8 %mode-share for walking or biking, up from 2% actual in 1990.

Trail segments along the spine are designated into one of four categories:

- completed and designated (on the ground, in use and officially designated by the advisory committee)
- programmed (under construction or funded with a construction schedule)
- sponsored (formal council resolution accepting sponsorship, meeting criteria established by the advisory committee)
- endorsed (recommended by the advisory committee with assent of local jurisdiction)

A set of criteria for acceptance of local sponsorship has been developed. These criteria are:

- within the alignment of the corridor
- appropriate agency to accept sponsorship
- formal action taken by governing body
- connections at both ends and willingness to work with other jurisdictions for river crossings or linkages
- provides public access
- prohibits motorized use (except to meet Americans with Disabilities Act)
- intention to meet multi-use needs as a continuous recreation trail within its segment during the programming stage

Much has already been accomplished. Major trail segments in Fort Worth and Arlington along the West Fork are already in place, and several others have received state transportation enhancements project funding. A greenway linking Lakes Lewisville and Ray Roberts has been preserved by the Corps

with local city partners, and a groundbreaking ceremony for the trails segment was dedicated on June 1, 1996 -- National Trails Day -- with the unveiling of the official logo for the Trinity Trails System.

Work regarding the spine during 1996 is concentrating on identifying two remaining linkages along the West Fork, bridge requirements across Lake Lewisville and elsewhere, and rails-with trails opportunities. Another priority is establishing criteria for the "spurs" that will connect the system regionwide. Dallas County has a countywide trails master plan under preparation that will tie into the Trinity Trails System.

It is well documented that trails systems not only provide alternate transportation access, increase pedestrian and bicycle mobility, and serve as the key links between recreational/cultural resources, but they also can serve to encourage economic development and increase nearby property values. Interest in eco-tourism has grown rapidly over the last few years, and examples of successful trails around the nation have been shared with the Trinity Trails Advisory Committee.

A *NATURAL* TRINITY RIVER, WITH PRESERVATION AND RESTORATION OF NATURAL AND CULTURAL RESOURCES

An 1846 placard seeking emigration to the Peters Colony in what is now North Central Texas noted:

"... this country contains, for its territory, the largest body of the richest and most fertile lands of any in North America; and no country is more abundantly watered by rivers, creeks, rivulets, and springs of the purest and most wholesome water."

Certainly Mr. Peters took license in his rhetoric -- he even claimed Dallas was an inland port -- but understand that the region has been recruiting folks to move here for 150 years! And those who put up signs *GTT (Gone To Texas)* did not know what to expect. Yet what they found may have surprised them. While much of the region is gently rolling grassland and prairie, other portions were indeed densely forested as shown on historic maps. Dallas was initially referred to as the Cedars by Native Americans because of its trees (long gone). One of the colonists, John B. Billingsley, recorded in his journal about Dallas:

"About the first of June the buffalo came in from the western plains and the prairies were alive with them. Thousands of them were to be seen. Deer, antelope, wild horses, and wolves were numerous. Bear, wild turkeys, and all kinds of wild varmints ranged the bottoms and thickets along the water courses."

About the only place to see buffalo now in North Central Texas is penned behind fences at the Fort Worth Nature Center. Yet proposals for a **Trinity River Greenway** as part of the COMMON VISION include approximately 12,500 acres of existing parks and preserved open space, and about twice that of other potential greenway areas. With recent efforts to improve the Trinity's water quality, Metroplex citizens are rediscovering the river. There is growing recognition that the Trinity River Corridor holds important community assets such as wetlands, fish and other wildlife habitats, and historic sites.

The National Park Service (NPS) is a key partner in the Trinity River Greenway process. Under a Memorandum of Understanding, NCTCOG provides office space to a professional NPS planner who works directly on this project and others in Texas. A COMMON VISION *Portfolio* was produced by the NPS which describes the benefits of *Investing in a Trinity River Greenway*, outlines specific proposals for each city, and identifies potential funding opportunities.

There are many significant and large natural areas within the Trinity River Corridor either already under local stewardship or in the planning or acquisition phases, including but not limited to:

- The Fort Worth Nature Center is the largest city-owned nature center in the nation. Occupying 3,500 acres around the northern portion of Lake Worth and West Fork, the Center offers 25 miles of nature trails, a large variety of nature programs, and some of the most unique natural features in the region.

- River Legacy Parks is a 600-plus acre forest floodplain park that is Arlington's segment of the Trinity River Greenway, and is considered the "crown jewel" of its parks system. Much of the land is preserved as wild; educational programs reach thousands of students annually; and a $4 million Living Science Center with interpretive displays and a movie about the river opened in the summer of 1996. Arlington will soon be the first city to complete its entire trails segment along the Trinity.

- LLELA, the Lewisville Lake Environmental Learning Area, is a remarkable 2,000 acre tract of land below Lewisville Lake Dam, composed of diverse habitats including wetlands, forest, old field regrowth, river and stream. Much of the area has remained undisturbed for more than 40 years. LLELA is administered by a consortium of six local universities, the Corps of Engineers, and Lewisville Independent School District for environmental education, preservation and restoration of natural habitats, and environmental research.

- The Great Trinity Forest is currently a dream of Dallas that is quickly becoming real. It encompasses about 8,500 acres with bottomland hardwoods in and along the Trinity floodplain in South Dallas, but is so well hidden that few know of the area's existence. As the recent Dallas citizen's committee report noted: *"By giving it a name, the people of Dallas have given it prominence in our civic consciousness that it never had before."* Efforts will concentrate on preservation and public acquisition where needed.

Nearly 4,000 volunteers clustered along more than 200 miles of the Trinity River in September 1995 to celebrate the third annual *Trinity River Awareness Day* by picking up 35 tons of trash. And had fun doing it! This was followed by a free lunch and entertainment at several locations, with exhibits on such topics as reptiles, birds, wildflowers and other environmental displays. Cosponsors included many public and private organizations.

A DIVERSE TRINITY RIVER, WITH LOCAL & REGIONAL ECONOMIC, TRANSPORTATION AND OTHER PUBLIC NEEDS ADDRESSED

An underlying principle of the COMMON VISION is Multiple Objective Management, often simply called MOM. It can be defined as the pursuit of actions that can satisfy a multitude of needs. A MOM approach maximizes the ability to produce "win-win" situations. This technique required a thorough self-examination of prior decisions, priorities, and needs for the corridor. Through these efforts, problems and opportunities were identified in a systematic way. Reasonable alternatives to address these issues were developed and published in February 1995 in a detailed *Information Paper.*

The City of Dallas' application of the MOM approach through an extensive Trinity River Corridor Citizens Committee was recognized by American Rivers, a leading river conservation organization, with its 1996 Urban River Restoration Award for Grassroots Activism. It started in the summer of 1994 when the City Council challenged the people of Dallas to come up with a new vision for the entire Trinity River Corridor within the city limits -- one that would provide flood protection, improve transportation, preserve and restore the beauty of the natural open space, create new opportunities for economic development and create a "front yard" that would raise Dallas to the level of a "worldclass" city.

The citizens took up the challenge and an open-membership Trinity River Corridor Citizens Committee (TRCCC) was formed with two councilmembers as co-chairs, more than 400 citizens participating, and many city staff and other agencies such as NCTCOG, NPS and the Corps providing support. The TRCCC was divided into five functional and three area subcommittees. A Coordinating Committee with representation from each subcommittee helped resolve details and reconcile the differences and inconsistencies among the subcommittees. Close coordination and involvement in the regional COMMON VISION process occurred, and vice versa.

A truly visionary plan evolved. It asks you to imagine Dallas twenty years from now after implementing the recommendations. New York Central Park, a mere 1,000 acres, "pales by comparison to the Trinity River

Greenway and the urban forest that the TRCCC sees for Dallas' future." Dallas "is linked throughout the region by a 2000 mile integrated system of off-road trails and a 2000 mile integrated on-road system of bikeways," including the Dalhoma segment of the Trinity Trails System from Dallas north to the Oklahoma border at Lake Texoma.

One proposed solution to the transportation problems of downtown is the innovative design of a "Levee Couplet" concept which depresses "high-speed one-way roadways into the river-sides of the pre-existing Dallas Floodway levees, leaving the outside faces of the levees (facing adjacent neighborhoods and businesses) almost unchanged in appearance." A "flood wall would rise above the top of the existing levee to an elevation reinstating the Standard Project Flood plus four feet of protection to some 10,000 acres," including half of the Central Business District. Residential and office buildings "could be built near the Levee Couplet concept, with raised pedestrian plazas linking the buildings through the levee top to the park beyond."

In May of 1995 the citizens of Dallas passed a $175 million bond package that included over $7 million for the first phase of the comprehensive program. The Texas Department of Transportation (TxDOT) has launched a "Major Investment Study" for a potential Trinity Parkway, with the Levee Couplet as the starting design point. An important component of the Trinity Trails System in Dallas has received funding under TxDOT's Statewide Transportation Enhancements Program. And the detailed studies of the integration of all components with the floodway improvements are being funded with $3.2 million of federal and city funds in Phase 2 of the *Upper Trinity River Feasibility Study.*

As the Mayor of Dallas has stated many times over the past year, his 5 top priorities for the City of Dallas are the: Trinity River, Trinity River, Trinity River, Trinity River and Trinity River. And he says he is "not interested in a dinky little river walk" like San Antonio, but something that is "big, bold and magnificent" that "could be the greatest legacy we leave for our children."

CONCLUSIONS

At the turn of the century a hundred years ago, the 43,000 residents of Dallas were entering their new millennium with a single dream of a navigation canal for the Trinity River. This would allow Dallas to become, as one promotional button proclaimed, "the inland seaport of Texas" and take its rightful place with the great coastal cities of America.

We are quickly approaching our own new millennium, and a trip to those coastal cities now takes less than four hours from Dallas/Fort Worth International Airport, an aviation showplace of the nation. Yet some dreamers among the 4.5 million residents of the Dallas/Fort Worth Metroplex are still focused on the Trinity River. The new vision -- the COMMON VISION -- is for a safe, clean, enjoyable, natural and diverse Trinity River.

What lessons have we learned from our Trinity River COMMON VISION activities and how will we apply those lessons in the next century say about us?

***NOTE**: This paper was prepared for WEFTEC '96, Water Environment Federation, Dallas, Texas, October 1996. For easy access to up-to-date information, a comprehensive Trinity River Information Network (TRIN) is maintained on the Internet at http://www.nctcog.dst.tx.us/envir/trin/trinity.html*

The COMMON VISION program was awarded the 1995 Local Award of Excellence in Flood Hazard Management by the Association of State Floodplain Managers, and the 1996 Achievement Award for Major-Metro's from the National Association of Regional Councils.

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