# ENVISION

A newsletter from TxDOT's Environmental Affairs Division

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# Compost to the rescue!

## *'Black gold' fights erosion, helps re-establish ROW vegetation*

**By BARRIE COGBURN**
**Design Division**

Did you ever think that compost, valuable "black gold" to gardeners, would someday help establish vegetation and control erosion on highway roadsides? A recently approved specification offers TxDOT designers the opportunity to do just that.

Timely vegetation establishment after roadway construction is critical. If grass fails to grow, soil washes away and erosion can threaten the roadway pavement. This topsoil washes downstream, degrading water quality and fish habitat. Preventing this erosion helps TxDOT comply with National Pollutant Discharge Elimination System (NPDES) regulations. Although establishing proper vegetation depends on many factors, one of the biggest problems is the lack of quality topsoil. Whether the topsoil is stockpiled on site or obtained from other sources, in many instances it lacks the organic matter needed to grow grass.

Photo by Rebecca Davio/GSD

**Compost is spread at South Lamar and Ben White in Austin in April 1997 where seeding the ROW failed twice to produce adequate vegetation. The use of compost produced thick grass within weeks.**

Every year in Texas nearly four million tons of yard trimmings in the form of leaves, grass, tree limbs, weeds and other organic debris are dumped in Texas landfills. This amounts to about 20 percent of all trash in municipal landfills. Many municipalities and private enterprises have chosen to divert this material from the landfill by composting the organic waste. Legislation such as Texas Recycling Law HB 1340 and environmental campaigns like Clean Texas 2000, sponsored by the

**See COMPOST, Page 8**

# Waco District saves vintage 1899 bridge

## *City of Temple reuses on hike/bike trail*

**By RICHARD GOLDSMITH**
**Environmental Affairs Div.**

Reuse of a century-old iron bridge in Bell County, moved last fall, is a tribute both to its original designers and to TxDOT engineering.

The 160-foot parallel-chord Pratt truss bridge was erected in 1889 over the Lampasas River at Dice Grove Road (County Road 361) in Bell County. It was abandoned in 1982 after an overweight gravel truck damaged the structure and it was bypassed by a new concrete bridge.

And there it sat for more than a decade until 1994 when Jim Cowan, area engineer for the Waco District's Belton Area Office, took an interest in the bridge's fate.

The City of Temple had ISTEA (Intermodal Surface Transportation Efficiency Act) funds for an enhancement project to build a hike and bike trail, including a bridge over Pepper Creek adjacent to where TxDOT was

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## In this issue



# Wichita Falls first to finish 'Pursuit' class

**By JIM DOBBINS**
**Environmental Affairs Div.**

A new phenomenon recently blew through the Wichita Falls District, and this time it was NOT a tornado!

The phenomenon is a four-hour class, "Environmental Pursuit," that teaches TxDOT employees about environmental issues and TxDOT's related programs. Wichita Falls became the first district to complete this mandatory training for its staff.

Wichita Falls District's Norma Sharp, Carole Mayo, Raquel Hardesty and Julie Lowack

***See PURSUIT, Page 12***

# Austin District's Newnam enjoys near perfect job for a biologist

**By JIM DOBBINS**
**Environmental Affairs Division**

As an outdoors enthusiast, Austin District's Cal Newnam may have what is close to the perfect job as a biologist in the district's environmental section.

A seven-year veteran of TxDOT, Newnam was hired in 1991 to deal with endangered species issues related to the widening of Ranch Road 2222. Since that time, Newnam has dealt with a wide variety of issues to ensure that transportation projects in the Austin District comply with applicable laws and do not adversely impact threatened and endangered species.

A graduate of Texas A&M University with a B.S. and M.S. in Wildlife and Fisheries Science, Newnam is currently pursuing a Ph.D. in the same discipline, also at A&M.

Prior to joining TxDOT, Newnam was employed by the YO Ranch near Kerrville, where he was the director of the outdoor awareness program for 8 1/2 years. He designed and conducted nature programs for visitors, ages 10 and up, at the exotic animal ranch. Before that, he spent 5 1/2 years as a biologist at the museum of natural history in Memphis, Tennessee (known locally as the "Memphis Pink Palace Museum") where he set up exhibits and conducted nature programs and public education for all ages.

Since joining TxDOT, Newnam has found an evolution in attitudes towards environmental issues among both department staff and contractors.

"Initially, the people that I dealt with in the field were very reserved with me," Newnam said. "Once I helped them resolve endangered species issues, they became more open about calling me and became more proactive about dealing with issues. I think that I earned their trust."

What project has presented the greatest challenge to Newnam?

"It had to be the Ranch Road 2222 and Ranch-to-Market Road 620 projects. The U.S. Fish and Wildlife Service asked TxDOT to perform a number of studies related to the endangered golden-cheeked warbler and black-capped vireo. One study was a three-year look at the relationship between golden-cheeked warblers and avian predators (birds that eat golden-cheeked warblers and are oblivious to the bird's protected status!). A two-year study surveyed the insect species in the area that are potential food for golden-cheeked warblers. Another three-year study had teams tracking golden-cheeked warblers and recording what the birds ate. A five-year effort recorded the vegetation found throughout the range of the golden-cheeked warbler, and a nest survey begun in 1992 is on-going." Newnam said

**The Austin District's Cal Newnam.**

**Photo by Richard Goldsmith**

A five-year program was aimed at removing and controlling brown-headed cowbirds in the area, as they lay their eggs in the nests of golden-cheeked warblers and black-capped vireos after removing the original eggs. Another five-year study monitored the black-capped vireo population in Travis County, and a similar two-year study monitored the golden-cheeked warbler population in the areas around Bull and Cypress Creeks.

"Fortunately, all these studies were conducted simultaneously but as you can imagine it was a lot of work to coordinate! We came in and played catch-up with the project and collected an enormous amount of information. In the end, we discovered that the RR 2222 and RM 620 projects would have very little impact on the endangered birds." Newnam said.

A project under development to replace bridges on I-35 over the San Marcos River in San Marcos that Newnam had a hand in developing earned rave reviews from all concerned parties.

Newnam said, "The San Marcos River has a number of endangered species in it, such as Texas wild-rice and the San Marcos gambusia, that need special protection from highway run-off. The existing bridges will be demolished in a manner in which very little debris will end up in the river. The new bridges have been designed to be curbed and guttered, so that water running off the road will be channeled into a filtering system before ending up in the river. This way, the impact by the project on this sensitive waterway will be minimal."

What does Newnam enjoy most about his job?

"I enjoy keeping up with new information about endangered species and talking with experts in various fields. In the course of my work, I learn a lot of species information before it is published and readily available. Dealing with biological issues can be a very inexact science – birds and animals don't read field guides. We are always learning something new" Newnam said.

Newnam and his wife, Gayle, a medical technologist at Round Rock Hospital, have two boys, Eric, 15, and Brett, 12 1/2. Newnam and his sons are all actively involved in the Boy Scouts and enjoy hunting, fishing and birding. Newnam also enjoys gardening with Gayle.

# Century-old Pratt truss resurrected

*(Continued from Page 1)*

simultaneously building a new bridge for FM 2305. Initially, Cowan said, the plan was for Temple to reimburse TxDOT from the city's ISTEA funds for the cost of widening the vehicle bridge to accommodate pedestrian and bike traffic from the trail.

"I convinced them (Temple officials) that I could find a historic, stand-alone structure that would serve the same purpose," Cowan said.

Earlier Cowan had reused another historic iron bridge, one of only eight lenticular bridges west of the Mississippi, in the town of Salado. That bridge is now considered a great asset to downtown Historic Salado, but initially Cowan said opposition was "tremendous" because the lenticular bridge looked "atrocious" where it sat rusting in the local TxDOT maintenance yard. "It looked like shaped scrap iron," he said. Cowan overcame opposition by holding a public meeting and displaying a computer-generated visualization put together by the Design Division of what the bridge would look like finished.

While it isn't the easiest option, Cowan said, "If we don't preserve some of these historic bridges, they'll get to be the last of their kind. The community has really accepted these things. They are being used."

For the Temple project, Cowan found the Dice Grove Road bridge. The contractor, Gary Construction of Austin, agreed to a change order and to subcontract moving and reinstalling the bridge if TxDOT engineers worked out the details. Moving the 60,000-pound, 160-foot bridge would require unusual engineering feats.

***From abandoned...*** ***To a new life...***

**The 1889 160-foot iron bridge over the Lampasas River at County Road 361 in Bell County (left), abandoned in 1982, now crosses Pepper Creek on FM 2305.**

"We were told by a historic bridge expert out of New York that we couldn't move it, that it would crash into the Lampasas River if we tried," Cowan said.

Cowan again turned to the Design Division, to Supervising Bridge Design Engineer Mark Bloschock and Senior Bridge Design Engineer Charles Walker.

Bloschock said that TxDOT first had to come up with a plan "to reduce the risk that the contractor would feel" in undertaking the task. The details of that successful plan were handled by Walker. Despite the dire prediction by the East Coast expert Bloschock said, "We were convinced it would not fall apart."

The bridge was still sound with only minimal corrosion and some bent cross ties and floor beam hangers from the accident that closed it. A patina of oxidation had protected the bridge, built by the Milwaukee Bridge and Iron Works, from deeper corrosion. Fortunately, the bridge's wooden deck had been removed. Had it remained in place, the engineers said it would have corroded the bridge by holding dirt and moisture against the metal.

Walker said the first step was to lift the bridge in one piece and move it to a work area where it could be dismantled. The initial impulse might have been to lift the bridge from the top. While that would reduce the tendency for the structure to overturn, Walker said that also would create compresion in some members that were only designed for tension. The key to designing the lift, he said, was to duplicate the stresses the bridge was normally under and avoid creating new stresses.

Walker solved the lift problem by designing special connection brackets. The special brackets were bolted on just above the bridge's four bearings, on which the structure rested.

By lifting from the same points that had always held the weight of the structure, Walker said, "How would the bridge ever know its not a bridge?"

Walker also designed temporary diagonal ties and compression struts to stabilize sidesway motion, or torsion. Two cranes, one at either end, lifted the bridge off its bearings and set it on the deck of the newer concrete bridge, built to bypass its predecessor. TxDOT first had to make sure the new bridge would hold the weight of the old bridge and one of the two cranes. Special permission was obtained from the Bell County to close the new bridge for several days. The lift took place Sept. 10, 1997, by subcontractor Ellis-McGinness, who took it so seriously, Bloschock said, that all of its officials were there for the first lift.

To move the 17-feet-wide, 26-feet tall bridge, Walker had planned for the contractor to remove the pins that held the bridge's steel eye-bar tension members together. In advance of the move, engineers tested to see if the nuts on the bolts that held the eye-bars on the

***See BRIDGE, Page 5***

# A new traffic noise model...finally

## *...or is this just another rumor?*

**NOISE NOTES**

**By Mike Shearer**
**Environmental Quality Specialist**

By the time you read this, the Federal Highway Administration's (FHWA) new Traffic Noise Model (TNM) "should" be on its way to a state highway agency near you. I know, you're thinking, "Come on Mike, we've heard that tune before...and nothing has happened. So why should we believe you this time?" Good point! However, you can believe me this time because a representative of an organization of the federal government says so...let me rephrase that...because a little birdie told me so. The little birdie says that TNM will be released to all state highway agencies by the end of March...yes, this year!

Don't panic! FHWA has promised a generous phase-in period before TNM will be required and the existing noise model, STAMINA, becomes a distant memory.

I first mentioned this new traffic noise modeling software in the Summer 1995 ENVision newsletter and again in the Summer 1996 edition. The following briefly outlines the important aspects of the TNM software **program** and the **plan** to distribute the TNM "Package" to all TxDOT Districts.

### The Program:

- Graphical User Interface
- Updated noise emission data
- Unlimited number of roadways and receivers
- Contour computation
- Multiple graphical views
- Interface with MicroStation...and much, much more!

Sound too good to be true? Well, all those goodies do come at a price, and the price is your time.

It is difficult to say what the exact run-times will be, but it would be safe to say that calculations that now take from seconds to minutes with STAMINA will take from a few to several **hours** with TNM. However, like the software developers say, "The notable improvements in accuracy, flexibility, and ease of use should more than compensate."

Also, before anyone panics again, FHWA is working on pre-calculated TNM look-up tables to be used as a quick screening tool for "simple" highway projects.

**System configuration:**

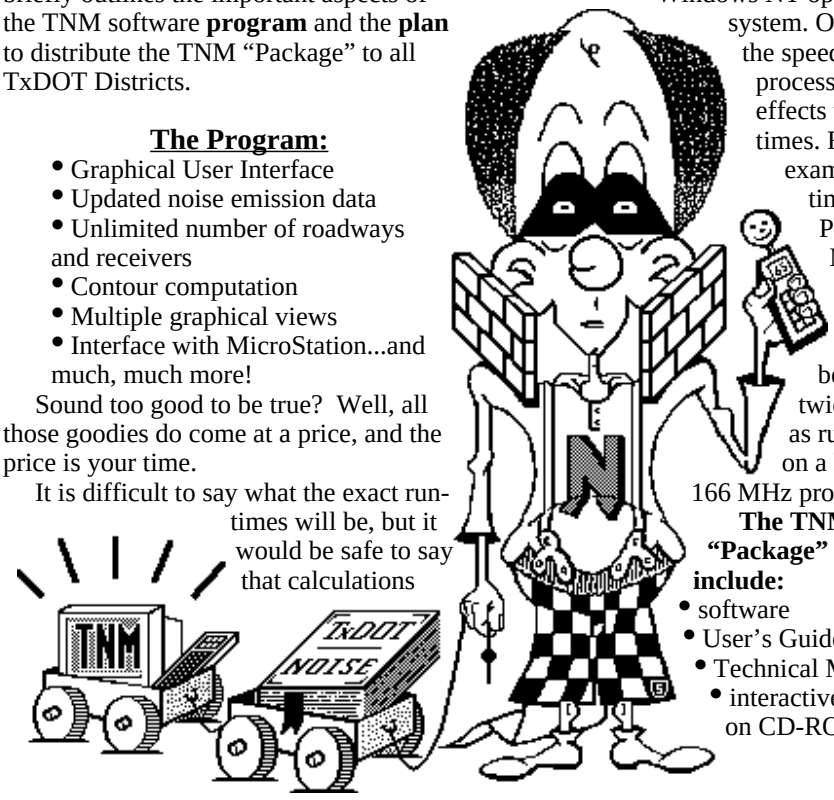
**Required**

- IBM compatible computer
- Windows Operating System (3.1 or 95 or NT)

**Preferred**

- Pentium processor (166 MHz)
- Super VGA (1024 x 768) monitor
- 16 MB RAM
- 300 MB hard drive
- CD-ROM drive

Although TNM will run under all of the operating systems listed above, it's most efficient (shortest run-times) under the Windows NT operating system. Obviously, the speed of the processor also effects the run-times. For example, run-times on a Pentium 90 MHz processor would typically be nearly twice as long as run-times on a Pentium 166 MHz processor.




**The TNM "Package" will include:**

- software
- User's Guide
- Technical Manual
- interactive tutorial on CD-ROM

### The Plan

**Distribution:**

- TNM will initially be distributed only to members of the TxDOT Noise Working Group for a 3-month trial period. The Noise Working Group is comprised of representatives from ENV and the Austin, Dallas, Houston and San Antonio districts.
- Depending on the lessons learned and problems and difficulties encountered, the trial may be extended for an additional 3-month period.
- TNM will not be distributed to the remaining TxDOT districts until any and all problems are satisfactorily addressed and effective guidance is developed.

**Training:**

- TNM will include a tutorial on CD-ROM.
- The value and scope of the tutorial will be evaluated during the 3-month trial period, as well as the need for additional and supplemental guidance and training.

**Schedule (tentative) following release/receipt of TNM:**

- 3 months: distribute TNM to Noise Working Group (trial period)
- 3-6 months: distribute TNM to all remaining TxDOT Districts
- 12 months: all TxDOT Districts using TNM
- 24 months: TNM required by FHWA (approximate)

### Attention Consultants and Researchers (and any TNM user outside of TxDOT)

TxDOT may only make copies of the TNM "Package" **for internal use by TxDOT employees.** For all other users, including consultants and researchers under contract to TxDOT, the TNM "Package" must be purchased from the McTrans Center at the University of Florida at an anticipated cost of $700.

# Two-year contracts in place for statewide environmental services

**By ERIN TRUJILLO**
**Environmental Affairs Division**

Recently, the Environmental Affairs Division's Hazardous Materials Branch completed the selection and executed contracts with 15 firms for the Statewide Environmental Engineering Services Contract Program. Each consultant has been awarded a two-year work-authorization contract.

These statewide consultants are available to perform a wide range of environmental services related to hazardous materials for facilities management and transportation projects. Services that can be provided include, but are not limited to: environmental site assessments; site investigations and/or subsurface investigations (drilling, sampling, testing and analysis); asbestos surveys and assessments; industrial hygiene; remedial action plans; construction monitoring; and developing hazardous material related specifications.

In addition, ENV Hazardous Materials Branch provides technical oversight regarding the administration of the statewide contract and also provides technical assistance to districts and divisions requesting the environmental engineering services. In coordination with ENV, the General Services Division Contract Services Section (GSD Contract Services) administers the statewide environmental engineering services contracts and individual work authorization for projects. Because the contracts have a maximum amount payable, GSD Contract Services assigns the statewide consultants and monitors the contract amounts for each project.

Contractor delays or downtime due to encountering unanticipated contaminated soil or groundwater during construction is one reason why the statewide consultant program was established. Emergency procedures are in place to get a statewide consultant at the site, possibly even the same day based on past experience, to perform sampling and analysis. If a district anticipates the need for a statewide consultant during construction, they should have one assigned to the project to develop a proposal well in advanced of finalizing the PS&E.

Districts or divisions which identify a need for statewide environmental engineering consultants can contact Bill Curra of ENV at (512) 416-3008 for more information. For program administration questions, contact GSD's Anna Isbell at (512) 416-2417, or Richard Halweg at (512) 416-2437.

# **Bridge:** TxDOT engineers design move

*(Continued from Page 3)*

pins could be turned. The nuts turned, but Ellis-McGinnis found during the move that the pins were frozen in the pin plates. Instead of completely dismantling the bridge as planned, it was broken into larger, but still manageable sections, for the 14-mile ride to its new home. All the bridge parts were match marked for reassembly at the new site.

"The contractor had to solve a lot of problems on their own," Walker said.

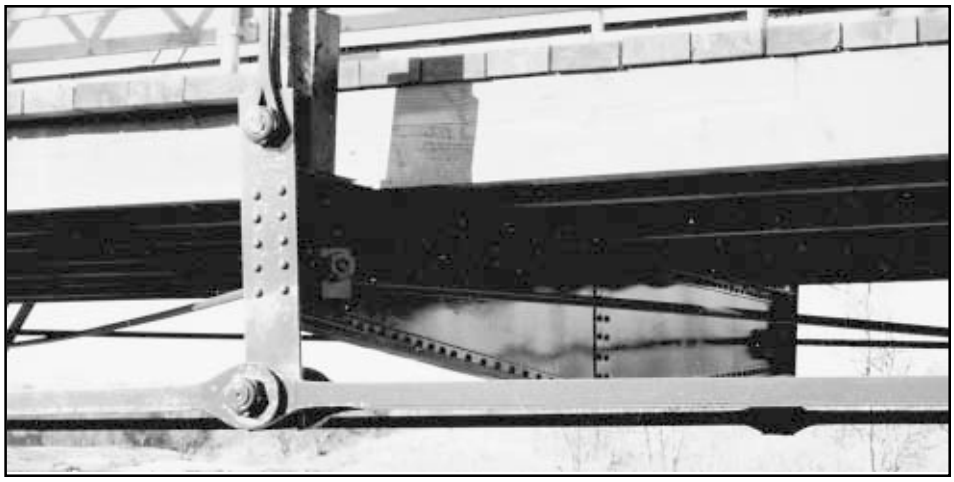
The bridge was reassembled at Pepper Creek and again lifted as a unit onto its new foundations. "We lifted it not once, but twice," Cowan said.

The original roller bearings -- that allow the bridge to expand and contract under load and with changing temperature -- were cleaned and reused. Used steel drilling casings were used to mimic the original steel columns that were the bridge's foundation. Painting, railings and the new bridge deck were completed in February. The cost of the move and refurbishing totaled $254,000. Cowan said using a change order to an existing contract saved money and made the project possible.

Barbara Stocklin, head of ENV's Historical Studies Branch, said, "Everytime we relocate one of these bridges it provides the community a link to the past, something they can be proud of."

Cowan also believes such bridges are important to TxDOT. "The monetary value is not what's important: it's the engineering heritage of them," he said. The Dice Grove Road bridge represents a type of bridge "that is not so rare now, but is probably going to be as more of the older structures are continually being replaced," he said.

Bloschock said the unornamented Pratt truss and its pin-connected steel eye-bars was an extremely efficient design for the materials of the day when "a pound of steel could be worth a man's life."



**A closeup shows the steel eye-bar tension members below the bridge's wooden deck. The eye-bars, held together by pins, form the bottom chord of the bridge.**

# Dallas District first to obtain permit to manage own stormwater runoff

**By MICHELLE RELEFORD**
**Dallas District**

It's a perfect day for a water test.

The sky is pouring and a river of runoff is raging through the concrete network of tunnels that is the storm water drainage system buried beneath the I-635/Dallas North Tollway interchange.

A $25,000 box with a few computer chips and some mason jars controlled remotely by U.S. Geological Survey (USGS) water quality specialists will tell what pollutants are found in typical rainwater runoff.

But will all this be enough to make our national waters safer to drink, swim in and fish from?

After the Federal Water Pollution Control Act was passed in the early '70s, governing agencies began to paddle in the direction of discovering the identity of pollutants. It has to be determined what is in runoff before cleanup efforts can be enforced or even designed. The latest updates, amendments to the Clean Water Act were passed in 1987, making further provisions to improve water quality.

Dallas is the first TxDOT district to obtain an individual permit for its storm water drainage facilities, or National Pollutant Discharge Elimination Systems, located within the cities of Dallas, Mesquite, Irving and Plano. The Dallas District has another permit jointly with the City of Garland for its facilities there.

"The data obtained from water testing required through this permitting process will be used to understand the quality of storm water runoff and will be used to evaluate the effectiveness of the storm water management plan," said Harry McWreath, USGS Fort Worth sub-district chief.

Because TxDOT builds and maintains roadways in an area that encompasses several cities with populations of more than 100,000, TxDOT has been designated an operator of the Municipal Separate Storm Sewer System or MS4. The goal is to minimize the water quality impact of the department's operations, such as pollution runoff from construction and maintenance sites.

A permit is needed to discharge storm water into the waters of the U.S., which is considered anything from a neighborhood creek, tributary, natural spring or other natural water body. The Clean Water Act, explained by Dallas District permit coordinator Jay McCurley, has a goal of making all U.S. waters fishable and swimable.

Once only sewage treatment plants were targeted by the act. Now storm water has been identified as a major pollution source. When it rains, storm water carries roadway pollutants over land to the nearest body of water.

In 1993, cities with a population of more than 100,000 were required to apply for a storm water permit ensuring that measures would be taken to test, identify and control the pollutants in runoff water.Soon smaller cities are expected to come into the program.

The other effected cities in the Dallas District -- Mesquite, Irving, and Plano -- contested permit requirements for their own storm water facilities. McCurley worked on an individual permit for TxDOT's facilities in Plano, Dallas, Irving and Mesquite to keep TxDOT in compliance. The district's one co-permit is with Garland. Dallas was the first district to receive an individual permit for its facilities. The Corpus Christi District was the first to receive a co-permit with a major city.

"TxDOT can co-permit with a city or go for an individual permit. TxDOT wanted to co-permit as much as possible in the spirit of partnering," McCurley said.

"Unfortunately, the City of Dallas and TxDOT couldn't agree on how to handle the issue, so Dallas has an individual permit," he said.

More often, this is not the case, according to McWreath.

"The USGS district that Dallas is in, District 6, is different in that we have lots of permitters who work together using a regional strategy to share costs and data. It's saving money and pooling resources, " McWreath said. "The unique aspect is the regional strategy. Seven major cities and two TxDOT districts are working together," he said.

Permit requirements include dry and wet weather screening, screening for litter and other floating debris, monitoring construction and maintenance sites for erosion control, evaluating potential pollutants such as de-icing and sanding materials, spill prevention and response, herbicide application, structural controls, storm water collection systems operations and even public education regarding pollution prevention.

"Salt (used as a de-icer) has really hurt streams up North. We're using Meltdown 20 and we'll do a study on that in the next couple of years. Pesticides, herbicides and fertilizer application…we license our applicators and are using pretty benign herbicides," McCurley said.

McCurley says it takes time and money to remain in compliance with the permit.

"It's expensive. There are a lot of regulations that require enforcement. Contractors have to be brought into compliance also," he said.

On average, it costs about $23,000 a year to maintain the monitoring boxes at I-635/Tollway and I-20/Mountain Creek. Although Dallas District purchased the boxes, USGS maintains them and conducts lab analysis. Another $24,000 is spent yearly by TxDOT on dry and wet weather screening.

It's also expensive to fall out of compliance with the permit. Fines of up to $25,000 can be assessed daily for non-compliance with permit requirements.

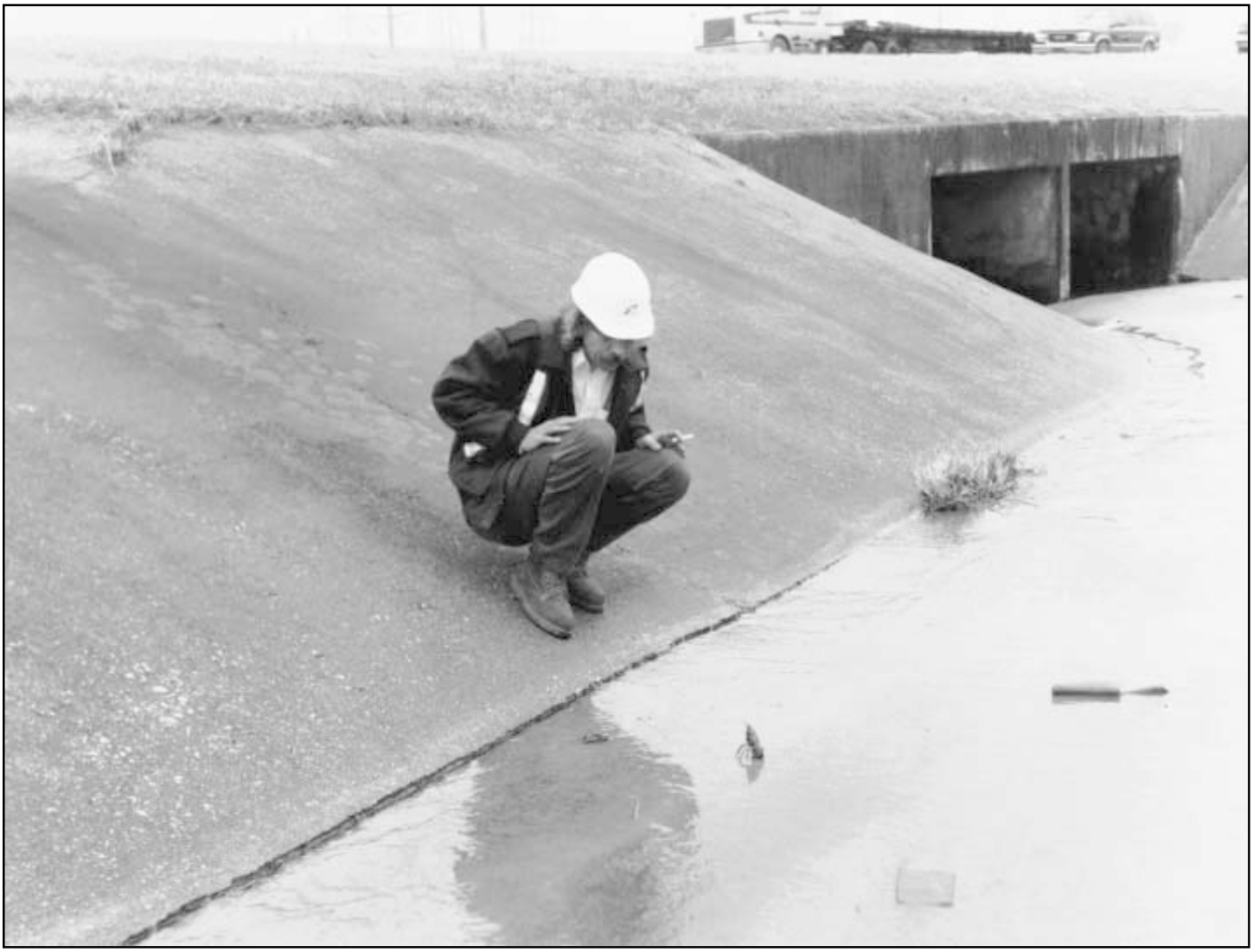
The grey metal box that collects rain and monitors runoff is a wet weather monitoring station. After significant rain, a representative from USGS collects samples gathered automatically using a flume and a bubbler to measure flow and volume in the storm drain tunnels. Two of these monitoring stations are located in Dallas and one in Fort Worth. More than 1,200 feet of storm sewer collects runoff from the cloverleaf interchange of I-635 and the Dallas North Tollway. Eventually, this water flows into Bachman Lake.

"We're sampling at the pipe before it gets to the Trinity," McCurley said. "The idea is to see what's in the storm water so we can clean it up."

Where TxDOT is most immediately concerned is gauging the road wash-off.

Materials most would never suspect,

*See DALLAS, Page 7*



**Jay McCurley, water quality specialist in the Dallas District, examines a crawfish found at the Mountain Creek storm water facility. The facility, at Interstate 20 and Mountain Creek, is one of two storm water collection stations monitored by the Dallas District and the U.S. Geological Survey for storm water pollutants.**

**Dallas District Photo**

# **Dallas:** Managing NPDS permit

***(Continued from Page 6)***

such as tire rubber, compose the major source of pollution washed off roadways into storm water drains. Texans replace 5,500 tires a day according to figures supplied by the Texas Natural Resource Conservation Commission. All that rubber is deposited on the road surface where it breaks down. Its components, zinc and phenol, eventually wash off into creeks.

Roadway design can actually alleviate the threat of road wash-off polluting public waters. By allowing space for grassy swales, pollutants can be removed by creating a natural filter to catch suspended solids. Structural control devices such as stormwater collection ponds also can be used to catch and filter pollutants.

"The idea is to find out what is in highway runoff and, if we can, control it," McCurley said.

However, he said that the program doesn't go into specifics about what the governing agency is required to do with findings of water tests. Permits instruct TxDOT what components to measure and advise the use of the "best management practices" to control pollutants.

"Concrete makes more water flow through the storm sewer system. As we cover up more of the world in concrete, we'll be increasing the load of pollutants. We have to do something," McCurley said.

For now, TxDOT is working to keep up with the demands of the permit. The future design of roadways, quality of our water, and how much of a role TxDOT will play, hang in the balance.

# ENV's Old San Antonio Road report leads to Hays County historical markers

**By JIM DOBBINS**
**Environmental Affairs Division**

An important archeological report published by TxDOT in 1991 was the basis for seven historical markers recently dedicated along the path of the Old San Antonio Road in Hays and Caldwell counties. The markers note several historic events that occurred on the Spanish colonial trail.

Al McGraw, John Clark and Elizabeth Robbins wrote a 491-page report "A Texas Legacy - The Old San Antonio Road and the Caminos Reales" at the completion of a study authorized by the Texas Legislature. The report traced the history of the five separate Spanish roads that once connected Louisiana with Mexico via San Antonio.

Clark, an historical archeologist in ENV's Archeological Studies Branch, authored the text of two of the markers.

Clark said "Al Lowman from the Hays County Historical Commission called me a while back and asked if I could write the text for the two markers dealing with El Camino de Nacogdoches, which I was happy to do."

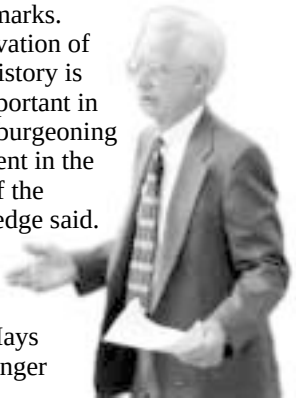
The historical markers were sponsored and paid for by Preservation Associates, Inc., an umbrella organization that includes the Heritage Association of San Marcos, San Marcos Convention and Visitors Bureau, Hays County Historical Commission, Tanger Outlet Mall, Terry Gilmore, Al Lowman, Don Leggitt and Hill Rylander. The markers are located along Hays County Road 266, between I-35 and SH 80, and on SH 21 between SH 80 and U.S. 183.

Photo by Jim Dobbins

**San Marcos city councilman Rick Hernandez unveils one of seven new historical markers.**

About 50 citizens and local officials attended the March 4 marker dedications. Hays County Judge Eddy Etheredge made the opening remarks.

"The preservation of Hays County history is particularly important in the face of the burgeoning land development in the northern part of the county," Etheredge said. "Many rural areas are being replaced with subdivisions. Hays County is in danger of losing its historical heritage. The placement of these markers is a positive step."



**Hays County Judge Eddy Etheredge**

At various spots the original road, used most heavily in the late 18th century, is still visible. Indentations in the earth called "swales" are visible, the remnants of 200 years of use by mule trains where the soil has compacted and sunk below the level of the surrounding ground.

In addition to the two markers telling the story of El Camino de Nacogdoches, others address the story of Mexican General Gaona's 1836 Texas Revolution campaign, Zebulon M. Pike (for whom Colorado's Pike's Peak is named), Colonel Elizondo's 1813 Mexican War of Independence Campaign, a Comanche Raid that occurred in 1840, and infamous stagecoach robber Ham White, who all used the Old San Antonio Road in Hays and Caldwell counties.

# **Compost:** New spec

***(Continued from Page 1)***

Governor and the Texas Natural Resource Conservation Commission (TNRCC), combined with a nationwide expansion of waste reduction mandates prompted TxDOT to investigate the use of compost to help establish vegetation. The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 encourages the environmentally safe use of compost and other products derived from municipal sewage sludge by state and local governments along the rights of way of federally funded highways.

Research conducted at A&M's Texas Transportation Institute (TTI) found that adding compost to soil is useful not only for establishing vegetation, but also for controlling erosion. In sandy soils, compost acts as a sponge to help retain water in soil that would otherwise drain below the reach of plant roots. In clay soils, compost helps to add porosity to the soil, making it drain more quickly so that it maintains a more even moisture content and helps prevent quick drying. Compost also inoculates the soil with many beneficial microbes. These microbes are able to extract nutrients from the mineral part of the soil and eventually pass the nutrients on to plants.

Encouraged by the results of the TTI study, a committee was formed to draft a specification for TxDOT. Additional input came from representatives of TNRCC, TTI and the composting industry. Special Specification Item 1009, "Furnishing & Placing Compost," allows for three kinds of compost application: "Compost Manufactured Topsoil," "Erosion Control Compost" and "General Use Compost."

It's hoped that the creation of this specification will offer TxDOT an opportunity to achieve its goal of building an environmentally sensitive transportation system while providing a much needed market to local municipalities for composted waste.

For questions about this specification, call Barrie Cogburn, DES, at (512) 416-3086, or GroupWise to "BCOGBURN."

# Take the TxDOT Ozone Action Days pledge

**By JIM DOBBINS**
**Environmental Affairs Division**

The staff of the Environmental Affairs Division (ENV) has pledged to take a step towards cleaner air with an Ozone Action Day awareness campaign.

The campaign is aimed at TxDOT employees in nine urban districts located in areas that participate in the Ozone Action Day program. Austin-based divisions and offices are also invited to participate in this pledge campaign.

Ozone Action Days are declared when atmospheric conditions are favorable for the accumulation of dangerous levels of ground-level ozone – the main ingredient in smog. Hot, still days from April through October are usually prime candidates for this designation. Air quality standards have recently been tightened by the U.S. Environmental Protection Agency to reflect new medical evidence linking ozone pollution to a variety of respiratory ailments. To ensure corrective actions, a variety of federally-imposed sanctions, including the loss of federal highway funds, can be imposed on states not taking


sufficient action.

"As the transportation leader in Texas, I believe that it is imperative that TxDOT take a leadership role in dealing with the ground-level ozone problem," said Dianna Noble, director of Environmental Affairs.

Employees in participating districts, divisions and offices will receive a pledge form on which they are asked to commit to take a step on Ozone Action Days to limit vehicle emissions – the prime ingredient in ground-level ozone pollution. The top of the form contains a list of 10 beneficial actions you can take on Ozone Action Days. Employees are asked to pledge to do at least one of the 10 items on Ozone Action Days. The pledge sheet will then be returned to an Ozone Action Day coordinator, who will, in return, send a TxDOT-produced magnet bearing the "Curb Ground-Level Ozone" logo to the pledger. All respondents also become eligible for a drawing for caps emblazoned with the same logo.

1997 was a busy year for Ozone Action Days. Austin had 24, Beaumont-Port Arthur 23, Corpus Christi 5, Dallas-Fort Worth 27, El Paso 20, Houston 66, San Antonio 26 and Tyler-Longview-Marshall 31 such days. With a lower tolerance for ozone pollution in place for 1998, look for these numbers to jump.

Are you ready to do your part? Look for your Ozone Action Day pledge form and posters announcing the campaign. Don't delay in pledging, the campaign wraps up Memorial Day weekend. After you pledge, carry through with your commitment by doing your part on Ozone Action Days. Together, we can make a difference.

Show that TxDOT employees care about the air - PLEDGE to make a difference!

## One month left to ENV Achievement award deadline

May 1 is the deadline to enter a project to compete for the 8th annual Environmental Achievement Award. Completed nominations must be received by the Environmental Affairs Division no later than 5 p.m., Friday, May 1.

The award recognizes the best examples of projects and programs that fulfill transportation objectives while protecting and enhancing the natural and human environment. The Environmental Achievement Award will be presented to the district whose employees have contributed most significantly to the natural environmental of Texas highways through the preservation, protection and enhancement of native plants, endangered plant and animal species, natural topography, waterways and wetlands; pollution prevention and abatement efforts; and protection of cultural resources at all stages of project development.

The call for nominations, with the form and rules, was sent to district engineers and district environmental coordinators in January. Contact Jim Dobbins, 512-416-3006, for information, or GroupWise to "JDOBBINS."

**Ken Bohuslav, ENV's deputy division director, presents a tree to Thomas Mangrem, head of El Paso District's Alpine Area Office, for winning the 1997 Environmental Achievement Award. The Alpine Area Office won for its rehabilitation work on RR 170, the "River Road" along the Rio Grande in Presidio County. The tree, along with a plaque, was presented and planted at the Alpine Area Office Jan. 13.**

# ENVision Survey

Dear Readers:

You hold in your hands the 10th ENVision. We'd like to know if it's interesting and useful. Your response can help us improve our work. Complete this short survey by April 30, 1998, and return it Attention: Richard Goldsmith. For those outside of TxDOT, address it to Texas Department of Transportation, Environmental Affairs Division, 125 East 11th Street, Austin, 78701 and sorry, you'll have to use your own stamp. Within TxDOT, just use the office mail: ENV/RA 118/3rd floor. You can either clip the survey out, or photocopy it so your ENVision won't have a hole in it!

1. How many stories do you read in each ENVision?

❑ almost all ❑ more than half ❑ less than half ❑ none

2. Rank the following story subjects as:

A. Very interesting B. Some interest C. Slightly interesting D. No interest

❑ Spotlight on division and district staff
❑ Archeological projects
❑ Project management and how environmental concerns were handled for a specific project
❑ New environmental regulations or changes to existing requirements; pending legislation
❑ Staff and organizational changes at ENV; Updates to ENV phone list, contacts
❑ Historic property surveys and restoration projects
❑ Class and seminar training information
❑ Environmental justice issues
❑ Noise issues
❑ Air quality issues
❑ Hazardous materials regulations and issues
❑ Endangered plant and animal species and their habitat
❑ Awards
❑ Puzzle features (BrainBender; Jamandre's Jumbly Word Jambalaya)

3. Stories are generally:

❑ too long ❑ too short ❑ just right

4. Rate ENVision on the following:

| | Excellent | Good | Fair | Poor |
|---|---|---|---|---|
| Your overall opinion | ❑ | ❑ | ❑ | ❑ |
| Writing style | ❑ | ❑ | ❑ | ❑ |
| Ease of reading | ❑ | ❑ | ❑ | ❑ |
| Appearance | ❑ | ❑ | ❑ | ❑ |

I have a story idea: _____

_____

_____

_____

_____

_____

_____

5. I have a comment: _____

_____

_____

# Staff changes

**Barbara Stocklin**, supervisor of ENV's Historic Studies Section, has gone to work for the City of Austin as its historic preservation officer. Stocklin was with TxDOT for 10 years. Her last day was April 10. Stocklin was responsible for overseeing much of the work to inventory historic properties within TxDOT's right of way, including historic bridges.

**Daniel Harris**, a Texas Historical Commission contract historian working in ENV for the past year, will start new duties May 1 as a new environmental quality historian.

**Douglas Mack** began March 21 in Pollution Prevention and Abatement's (PPA) Hazardous Materials Branch. Mack came to ENV from the City of Austin's Environmental Code Services Division. He also worked in Austin's Environmental Planning Section. Mack will handle Field Area II and a range of issues including asbestos/lead, spill response/midnight dumper, recycling and ecological risk. Mack also worked as a construction inspector in the Austin District during the summers of '90-'91.

**Orlando Jamandre Jr.** moved from the Cultural Resource Management Section to PPA after five months off. Jamandre will still handle socioeconomic issues and will now backup other staff members for air quality and noise issues.

**Donnie Nolte** started March 31 as ENV's new division administrative manager. Nolte came to ENV from the Vehicle Titles and Registration Division where he was Human Resources Manager since 1995. Prior to that, Nolte was with the Human Resources Division as a recruiter for a five-district area. Before TxDOT, Nolte served in the U.S. Army with duties in recruiting and career counseling. He has a bachelor's degree from Columbia College in Columbia, Missouri.

**David Van Gorder**, a water quality specialist in the Natural Resources Management Section, left ENV at the end of March to start his own business. He was with ENV for four years, eight months. VanGorder, who is a landscape architect, started a remodeling and landscape design and installation business.

**Todd Ashby**, who left ENV last September to become a Department of Public Safety highway trooper, graduated March 27 from the Texas Trooper Academy.

## BrainBender

**by CRM's Steve Sadowsky**

### Communications & Computers

Find the names of these common Communications Section and automation terms and of ENV's public information team listed in the column at right in the puzzle below. Names may be horizontal, vertical, diagonal, and in reverse order. Letters may be used more than once. (Answers on Page 12.)

| | | | | | | | | | | | | | | | | |
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| W | E | B | S | I | T | E | N | A | O | U | I | E | F | I | A | A |
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| G | E | N | V | I | S | I | O | N | I | M | W | A | K | A | F | I |
| R | I | R | D | L | C | C | D | S | I | A | M | L | V | M | J | P |
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Jean
Amy
Richard
Greg
Jim
Dee Dee
Courtney
Newsletter
ENVision
Publish
Photographs
Camera
Tripod
Dictionary
Thesaurus
Public Information
Write
Editor
Computer
Email
Automation
Software
Hardware
Help
Monitor
Delete
Copy
Save
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Print

Texas Department of Transportation

**Environmental Affairs Division**
**125 East 11th Street**
**Austin, Texas 78701-2483**

Address correction requested

# **'Pursuit':** Class is a 'blast'

***(Continued from Page 1)***

recently conducted a series of 12 classes district-wide.

Mayo, secretary to District Engineer David Peeples, said "the class took a different approach. The game-type format was a hit, and I enjoyed seeing the expressions on the faces of the students when they discovered it was a game and not a lecture. I think they learned more that way."

Sharp, the district's training coordinator, said "the classes were fun. It held everyone's interest and everybody said that they learned a lot. The videos fueled a number of interesting discussions, and everyone left the class with an increased environmental awareness. Many students told us that it was the best TxDOT class that they have ever attended."

Hardesty, an administrative assistant, also enjoyed teaching the class.

"We had a blast!" said Hardesty. "The students had a good time in a relaxed atmosphere. They enjoyed the participatory aspects of the class, and we even added play money (part of the class kit) fines for 'smart' answers! We did not receive even a single negative comment on the class evaluations."

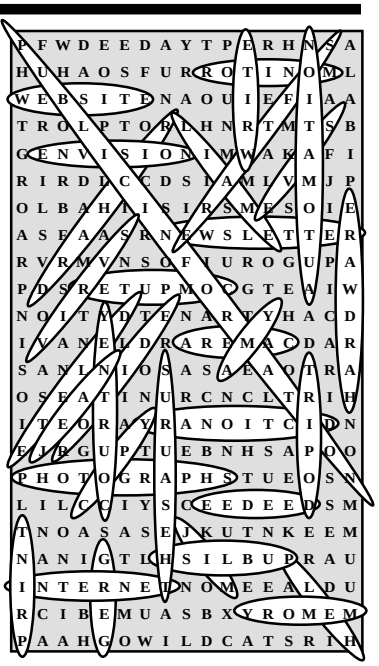
Lowack, a systems support specialist, said "the class did not follow a strict format, which allowed us to put our own spin on the class."

Jeff Warren, the district's environmental coordinator, was among the nearly 300 Wichita Falls District employees to take the class.

"I liked the class – our team won. The class was informative and was definitely better received than a lecture-type class."

If you haven't taken the class yet, look for Environmental Pursuit coming soon to a classroom near you!

*For more on the Environmental Pursuit class, see "'Game' teaches about the environment" in the Fall 1997 ENVision.*



**EN*Vision*** is a publication of the Environmental Affairs Division, Texas Department of Transportation, 125 East 11th Street, Austin, Texas, 78701-2483.

We welcome ideas for stories and standing features. Submit those to the above address, attention Richard Goldsmith, phone 512-416-2743 or via GroupWise to RGOLDSMI.

Is **EN*Vision*** going to the right person in your organization? Please contact us to correct an address or to suggest additions to the mailing list.

RECYCLED PAPER
SOY-BASED INK

**Division Director**
**Dianna F. Noble, P.E.**

**Deputy Division Director**
**Ken Bohuslav, P.E.**

**Communications Director**
**Jean Beeman**

**Editor Richard Goldsmith**