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Marching Forth to March 2003

Municipal exemptions for “industrial” activities will expire next Spring, on March 10, 2003. Will your road department be ready? The good news is, for most municipalities, getting ready takes very little time.

In our Summer 2000 issue, we described changes to permitting rules passed by the Environmental Protection Agency for the National Pollutant Discharge Elimination System (NPDES). Phase II of these rules changes the size of new-construction projects that need runoff permits from five acres or more to one acre or more. The deadline for submitting a Notice of Intent form (NOI) to comply with construction runoff permits for these projects is January 9, 2003. The deadline for actually obtaining a construction runoff permit is March 10, 2003.

In Kansas, the permitting authority for the NPDES program is the Kansas Department of Health and Environment (KDHE). But something else happens on March 10, and this applies to all municipalities, not just those with new construction in the works. Each municipal agency in Kansas will be required to file a general, one-time NOI form for their day-to-day “industrial” activities. This is a different form than the construction-related NOI above.

Which road departments in Kansas are affected by the expiring municipal exemption for industrial activity?

All them, said Alan Brooks, Professional Environmental Engineer for KDHE. “Municipal exemptions for industrial activities will vanish on March 10,” he said. This applies to all public entities—cities, counties, townships and other entities such as school districts.

What municipal activities are considered industrial?

Applicable activities include vehicle maintenance shops, equipment cleaning operations, and airport deicing operations.

It’s easy to comply

For most cities and counties in Kansas with one public works or highway facility, submitting an industrial activity NOI is easy. It should take no more than 10 minutes. But the form is confusing. To assist you in filling out the form, we have created a sample that you can order on page 15 or download from our web site at www.kutc.ksltap.ku.edu. The sample shows which sections to fill out and which to leave blank, what to put where, and how to sign it.

Brooks suggests that the highest ranking unelected responsible official (principal exec-
March 10, continued from page 1

utive) of your municipality sign the form, such as city or county administrator, public works director, county engineer or road supervisor—whoever has the most administrative oversight and responsibility for funds affecting the municipality’s industrial activities.

Brooks also advises highway departments to check to see if someone else is already submitting an industrial NOI for their county or city, because in larger municipalities, several departments have industrial activities. One form will usually suffice for the entire county if it’s filled out in a general way to include all of the applicable departments.

What’s the purpose of the industrial activity NOI?
“We’re starting a process of communication with these forms,” said Brooks. “The main use for KDHE is having a contact person identified for each municipality,” he said. “This provides us with a person to call if KDHE receives questions or complaints about a municipal activity. We can also inform that individual about any changes in regulations affecting municipal industrial activities.”

What should road departments do differently after filing the industrial activity NOI?
Nothing. It’s business as usual. However, if you are constructing a brand-new road-related facility and the construction area is an acre or more, the construction runoff portion of Phase II kicks into gear and you must submit a different kind of form—a separate construction NOI for that particular project. This would apply, for example, if you are putting in a brand-new street or culvert or sidewalk that did not exist before, and the project covers one acre or more,

On the other hand, if the work is maintenance—i.e., repairing or refurbishing an existing facility, you do not need to fill out a separate form. That’s true even for maintenance activities that churn up gravel and soil and cause a lot of dust. Activities that are considered maintenance include road grading, milling and re-laying an asphalt road, ditch pulling, culvert repair and shoulder repair.

How do you know what is new construction or maintenance?
“You’ve got to use some judgement,” said Brooks. And that judgement requires some reasonable assessment of how much disruption will take place during the project.

The vast majority of projects undertaken by a road department are considered maintenance. However, for example, widening an existing one-lane existing dirt road to a four-lane road would be considered new construction by KDHE.

What might be coming down the road from EPA?
Brooks said it’s likely that there will be more industrial regulations that would apply to municipalities in the future—maybe far in the future.

“We expect that the EPA is going to be looking more closely at activities that allow soil, sand, and contaminants to get into streams, and we may see more regulations to mitigate those activities,” said Brooks. “But we haven’t heard about anything specific yet.”

An example is road salt and sand storage. While there are no regulations to date for these activities, at some point EPA may require municipalities to cover or berm their stockpiles. But right now that’s just speculation.

Where can I get NOI forms?
Call Alan Brooks at (785) 296-5549 for a hard copy of the industrial form or the construction form, or visit the KDHE web site to download PDFs.

In our next issue we’ll tell you what’s happening with Phase II compliance for storm sewer systems for MS4 cities—those with populations of 100,000 or more. Discharge from these systems is treated separately from construction runoff.
What are the DOTs Using to Control Erosion?

With the advent of the EPA’s National Pollutant Discharge Elimination System (NPDES) Phase II, there is increasing emphasis across the country on erosion control at construction sites. Some states are implementing a variety of new control methods. We’ll describe a few of them here.

Geotextile filter bags
The Georgia Department of Transportation (DOT), for example, has started using geotextile filter bags to trap silt when pumping water from sediment basins and bridge footings. The bags are usually placed on a stone or gravel bed that has been sloped to ensure the filtered water will exit at the desired location.

“We have used the filter bags on four bridge projects so far and they have worked out well,” says David Graham of the Georgia DOT.

For more information, contact Graham at (404) 656-5306, email: david.graham@dot.state.ga.us.

Skimmer dewatering device
Delaware DOT is using what is known as a skimmer dewatering device to better trap soil in sediment basins. The device is a floating riser that attaches to the outlet by way of a flexible pipe. Compared to the perforated riser used previously, the floating riser better traps sediment at the surface of the basin.

“It works really well,” says Vince Davis of the Delaware DOT. “It is a walk-away device and relatively maintenance free.”

For more information, contact Salvador Palalay at Delaware DOT, (302) 760-2188 (email: spalalay@mail.dot.state.de.us).

Articulated concrete block mats
The Illinois DOT has found success using articulated block mats, which are concrete blocks held together with cables. The blocks can be used for a number of erosion control applications, such as stabilizing slopes or as channel or ditch liners. Illinois has used them to control high velocity runoff in river bottom wetlands and as work pads at bridge construction sites. The block mats are laid on the river bed, so machines can run across them without kicking up too much silt.

“The skimmer] really works well. It is a walk-away device and relatively maintenance free.

Triangular silt barriers
Richard Nowack of the Illinois DOT also reports success in using triangular silt barriers employed to remove suspended particles from drainage water. The barrier consists of a permeable urethane foam core surrounded by a woven geotextile fabric and fixed to the ground with wire staples.

For more information, contact Nowack at (217) 785-2943 (email: nowackrj@nt.dot.state.il.us) or John L. Rowley at (217) 785-2834 (email: rowleyjl@nt.dot.state.il.us).

Polyacrylamide (PAM)
Several States, including Georgia and North Carolina, are experimenting with using the substance polyacrylamide (PAM) to accelerate the settlement of sediments. PAM, which comes in powder, emulsion, and gel-block form, binds small soil particles together so as to accelerate the settlement of suspended particles in sediment traps and ponds.

For more information on PAM test projects in Georgia, contact James Magnus at the Georgia DOT, (404) 656-5306 (email: james.magnus@dot.state.ga.us). For more information on North Carolina’s PAM study, contact Byron Moore at North Carolina DOT, (919) 733-2920 (email: bjmoore@dot.state.nc.us).

Through using the range of new erosion control methods outlined above, States are minimizing the impact of construction and maintenance operations and mitigating sediments and erosion concerns, resulting in not only better roads but a better environment.

Adapted from “States Focus on Erosion Control in Construction and Maintenance Activities,” FOCUS, April/May 2001, FHWA.
Safety and mobility are of primary importance when designing and building a road. Today a growing number of highway agencies are preserving community resources at the same time (environmental, community, scenic, and historic) through an approach called Context Sensitive Design (CSD). The goal of CSD is to involve all stakeholders in developing a transportation facility that fits its physical setting and considers the total context within which a transportation project will exist.

This approach initially came from ISTEA (the 1991 Intermodal Surface Transportation Efficiency Act). The concept was further encouraged by a 1994 American Association of State Highway and Transportation Officials (AASHTO) National Highway System Design Standards policy statement, as well as the 1995 National Highway System Designation Act. This legislation called for designs that take into account “the constructed and natural environment of the area; the environmental, scenic, aesthetic, historic, community, and preservation impacts of the activity; and access for other modes of transportation.”

The movement took a leap forward in 1998, when the Maryland State Highway Administration, in cooperation with AASHTO and the Federal Highway Administration (FHWA), hosted a national workshop of on context sensitive design. The workshop presented several principles of CSD, including the importance of establishing a multi-disciplinary team to plan projects; maintaining open and continuous communication with all stakeholders; and understanding the landscape involved, the neighboring community, and the area’s valued resources before starting the engineering design.

After the Maryland workshop, Connecticut, Kentucky, Maryland, Minnesota, and Utah agreed to serve as pilot States for implementing the CSD principles. FHWA’s Federal Lands Highway Office is also participating in the pilot program.

Each State is incorporating the CSD approach through new policies on such things as project development, staff training, and community outreach. For example, the Connecticut DOT has held CSD training courses for its managers and helps provide CSD training to transportation engineering students.

The Kentucky Transportation Cabinet has held workshops geared towards all participants in the project development phases. Kentucky has presented its CSD workshop in several other states, as well. The workshops include discussion of Kentucky’s Paris Pike project. Reconstruction of this section of US 27 became possible, ending a 20-year court injunction, after the Kentucky Transportation Cabinet committed to involving landscape architects, historic preservationists, and environmental specialists in all aspects of project development so as to minimize disruption to the surrounding areas.

Maryland holds community involvement skills training for staff and consultants and establishing teams to review and implement strategies for improving road projects. The Utah DOT focuses on community outreach during the project development and has held CSD interactive training sessions at its annual Transportation Engineers Conference.

The Minnesota DOT uses a number of visualization tools, such as 3D conceptual model building, animation, and interactive CDs, to study preliminary design alternatives and impacts and better present this information to stakeholders during the decision-making process.

Although the pilot States have led the way, “we’re now seeing other States with interest in context sensitive design,” says Marvin Bell of FHWA. Kansas is one of those states. Specific CSD projects of KDOT include rerouting a road to avoid an historic barn and adding pedestrian and bike facilities to freeways in rural areas. KDOT also conducts polls of households in the community to assess their priorities among safety, mobility, the environment, and business activity.

Reconstruction of a section of highway became possible, ending a 20-year court injunction, after landscape architects, historic preservationists, and environmental specialists were invited to participate in all aspects of project development so as to minimize disruption to the surrounding areas.

continued on page 6 ➤
New Alkyd Paints With Reduced VOCs Have Greater Need for Careful Storage

Alkyd paint has undergone a transformation. New rules by the Environmental Protection Agency have changed the formula used to make the alkyd paint that is sold in quantities over five gallons. (The old formula is still being sold, but only in containers five gallons or less.)

Alkyds are still solvent-based paints; however, they no longer contain high levels of volatile organic compounds. Because it’s a new product, information on this paint is limited. But here is what we know so far.

Attributes
The new alkyd is still low in cost and has a quick drying time. It can be used on both concrete and bituminous surfaces, although it adheres better to the bituminous surfaces.

Cost
The new alkyd is similar to latex in that it typically costs between $0.03 and $0.05 per linear foot to apply.

Retroreflectivity
Alkyd is not as retroreflective as some of the durable pavement marking materials, but it has similar retroreflectivity to latex. When applied, alkyd paints should have initial readings of at least 250 mcd/m²/lux for white and at least 150 mcd/m²/lux for yellow.

Durability
Durability information on the new formula is not yet available; however, paint experts suggest that the expected life of the new material should be comparable to the old alkyd material. Studies of the old formula conducted by the Minnesota Department of Transportation indicate a life expectancy similar to that of a latex paint. The alkyd paint is generally good for no more than a year, and probably should be replaced after nine months in high-volume areas. Areas that have lower traffic volumes will get more use from the alkyd paints. In these areas markings may last as long as three years.

Paint application
The application process for alkyds is the same as it is for latex, but the alkyds have one major advantage—they can be used at colder temperatures. The pavement temperature must be at least 50 degrees for latex application or the material will not adhere to the pavement. Application for alkyds simply requires the air temperature to be above freezing so that the spray nozzle and air lines do not freeze.

Environmental pros and cons
Like their latex counterpart, the new alkyds are VOC-compliant. Alkyds contain no heavy metals and contain only low amounts of the volatile organic compounds that are harmful to the environment. Unfortunately, the new formula contains acetone, a highly flammable chemical. This makes storage of the material difficult and dangerous. The new formula also has a smell that may be offensive to those who apply the material.

Cleaning equipment that has been used to apply alkyd paints requires the use of solvents that pose some environmental concerns. Because of these risks, it is likely that the use of the new alkyd paints will be limited to cold weather applications.

Source: Cost of Pavement Marking Materials, Minnesota Local Road Research Board (MN/RC-2000-11).
New Guide Clears the Dust...

on dust suppressants and their cost-effectiveness

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e’ve just learned of a great resource about dust suppression on roads. It’s called Dust Palliative Selection and Application Guide, and is published by the U.S. Forest Service.

This 20-page guide is full of information road departments can use. It starts by describing how dust suppressants work and outlining the various types and methods available. It includes advice on application for water, chlorides, petroleum, electrochemical, polymer, and clay additives.

One of the strengths of this publication is its tables and figures.

One table lists the various road suppressants, their attributes, limitations, application tips, origin of the product, and environmental impact.

Another lists manufacturers of dust suppressants by category, and gives their phone numbers and web site addresses.

A third table provides a product selection chart (reprinted here).

There is also a decision-making flow chart for selection and use of dust suppressants, and two worksheets—one for figuring costs and the other for benefits—for determining the economic feasibility of dust control for your roads.

We weren’t able to order multiple copies for distribution, but you can order a single copy from: USDA Forest Service, San Dimas Technology and Development Center, Publications Department, 444 E. Bonita Avenue, San Dimas, CA 91773, phone (909) 599-1267.

A PDF of this report is available at the LTAP link on our web site: www.kutc.ku.edu.

MUTCD Rev. 2

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roposed Revision No. 2 of the Manual on Uniform Traffic Control Devices (MUTCD) has been published in the May 21, 2002 Federal Register (page 35850). This revision contains changes and corrections for the recently-published Millennium version of the MUTCD.

The text of the entire MUTCD with the proposed Revision No. 2 changes, and a 179-page change list describing each proposed change in detail, can be found on the MUTCD web page at: http://mutcd.fhwa.dot.gov.

Comments are being sought by the MUTCD Team, headed by Ernie Huckaby at FHWA. For more information, call (202) 366-9064. Comments will be taken until August 19, 2002.

Context sensitive design,
continued from page 4

KDOT defines “community” differently than some other States, though; they include frequent users of the road with the local population. For example, households were polled in two adjacent counties in addition to Douglas County for a K-10 project.

Look for an article in our next issue for a more detailed discussion of context sensitive design in Kansas.

Be sure to visit the national context sensitive design web site, sponsored by FHWA and AASHTO, at: www.fhwa.dot.gov/csd/index.htm.

Dust From Heavy Trucks: How to Handle a Big Problem for a Small Project

by Ken Skorseth, SD LTAP

How can we treat a few blocks of gravel road for dust control? This question often comes to our office. Often there are no easy answers. In a few areas of the state there are contractors who store dust control products such as liquid magnesium chloride and have small trucks available to treat short sections of roads or streets. However, in many areas that service is not available. Dust control products are available in transport-load quantities only and projects of one mile in length or more are needed to make the work feasible.

To help prove that almost any street or road department could do dust control treatment on very small projects, with basic equipment, the South Dakota LTAP recently assisted with a project. The length of the project was only 400 feet.

The town of Clear Lake, SD, recently opened a new rubble site just over a mile from town. Access to the site is on a gravel township road. The road had a low traffic count prior to the rubble site opening. Now the road carried up to 100 vehicles on Saturdays, the most active day for the rubble site.

One rural resident lives adjacent to the road and the dust became a real nuisance. The town asked how they might treat a short section of the gravel road immediately adjacent to the farmer's home.

We worked out these basic methods. The town used their own dump truck to haul fresh gravel to the site. The material is reasonably good surface gravel with enough plastic fines to give a natural binding characteristic. The gravel was placed one week prior to treatment.

On the day of the treatment, the town used their grader to loosen approximately one inch of the gravel surface and spread it evenly across the roadway. They had obtained 15 bags of flake calcium chloride (50-lb. bags) from the local SD DOT maintenance shed on the previous day. They used a small water truck with a spray bar inserted in the back of a dump truck to pre-wet the surface.

The flake calcium chloride was then spread at the rate of one and three-quarters pounds per square yard on the pre-wetted surface. A borrowed utility tractor and an old borrowed fertilizer spreader were used to make a nice, even application. Afterward, three quick passes were made with the water truck to help dissolve the chloride flakes and assure that the brine would be absorbed into the gravel. This was done carefully to assure the flakes dissolved, but not to excess so that the brine would wash off the road.

Because the town owns a small rubber-tired roller, they rolled the surface to provide a smoother finished surface. This is not essential, but advisable. The dump truck could have been used, or even traffic can provide ordinary compaction, but the roller certainly did improve this job.

The job has performed very well and the farmer is very grateful. But more importantly, we proved you can do this work with very basic equipment. The cost of the bagged calcium chloride was just under $100 and the project took only four hours to complete. The total cost of the project including the material was approximately $300. (Note that these are 1998 figures.)

Lyme Disease Quiz

Road crews are at risk for Lyme disease, because of their work mowing and clearing brush. Do you know the facts about Lyme disease? Take this quiz and find out.

1. Lyme disease is:
   a—a viral infection caused by a cattle tick
   b—a bacterial infection caused by a deer tick
   c—a disease caused by treating gravel roads with lime

2. A symptom of Lyme disease is:
   a—a large, circular rash
   b—fever
   c—stiff neck
   d—fatigue
   e—meningitis
   f—all of the above

3. What is the treatment for Lyme disease?
   a—surgery
   b—common antibiotics
   c—fasting
   d—acupuncture

4. How many people were diagnosed with Lyme disease in Kansas in 2000?
   a—2
   b—10
   c—17
   d—55

5. How many Kansas counties reported cases of Lyme disease in 2000?
   a—2
   b—12
   c—22
   d—32

6. How can you avoid Lyme disease?
   a—use DEET products
   b—don’t sit on stone walls
   c—get vaccinated
   d—do thorough tick checks
   e—wear light-colored clothing to better detect ticks
   f—all of the above

7. How large is an adult deer tick?
   a—the size of a lentil
   b—the size of a sesame seed
   c—the size of a peanut
   d—microscopic

8. How should a tick be removed?
   a—with tweezers
   b—cover with petroleum jelly
   c—douse with rubbing alcohol
   d—touch with a lit cigarette
   e—singe with a welding torch
   f—any of the above

9. When are deer ticks most prevalent in Kansas?
   a—April-June
   b—June-August
   c—November-December

ANSWERS:
1. The correct answer is b. Deer ticks cause the disease in this part of the U.S.; western black-legged ticks also cause the disease but they are found further west, on the Pacific coast.

2. The correct answer is f. All will help. Vaccination is available, but is not recommended for Kansans because of the low incidence of Lyme disease in the state.

3. The correct answer is c; however, national statistics show the most common months to contract Lyme disease are June-August.


Clip Out this Road Scholar Brochure

The new Kansas County Road Scholar Program is rolling! We’ve provided a copy of the brochure for you to read and share with your staff. Just clip it out, fold it twice, and it’s ready to go.

Help us get the word out about this great new program!

If your county would like more copies of the brochure, contact Rod Meredith at Riley County at (785) 539-2981.
Roads Scholar Program Insert
Roads Scholar Program insert, continued
National and State Events Say “Put the Brakes on Fatalities”

An idea that started over a cup of coffee between Larry Emig and a friend has turned into an annual national event, its second year running. Larry is Bureau Chief for Local Projects for the Kansas Department of Transportation.

The idea was simple: to have a day without any traffic fatalities. That idea has spawned programs and events all over the country on October 10 to educate the public about driving safety. A coalition of more than 40 national engineering and safety organizations helps plan and coordinate these efforts.

The Coalition emphasizes three keys elements in reducing traffic deaths:
1) responsible driving
2) safe vehicle design and maintenance
3) safe road and roadway design and maintenance

These elements are also discussed in greater detail on a national web site: www.brakesonfatalities.org.

The web site mentions the following specific roadway improvements that save lives:
—rumble strips
—wider pavement stripes
—wider shoulders
—better lighting
—highly reflective signs and devices
—median barriers where feasible
—hazard removal
—roadway realignment
—intersection improvements such as creating turn lanes and improving traffic channels

Kansas will be hosting a “Celebration of Safety” event on Thursday, October 10, 2002, with the public invited to attend from 10 a.m. to 2 p.m. at the Expo Hall in Wichita. Numerous safety activities and displays will show adults and children the need for safety when driving any vehicle.

The Wichita event will include displays and booths such as: the KHP roll-over display, “Buster,” No Zone truck, semi simulator, red light running display, Motorists Assist Van, Federal Motor Carriers Safety Administration truck, Safe Kids Van, Sedgwick County Sheriff, Wichita Police, Kansas Motor Carriers Association, AAA, Kansas Safety Belt Office, Drunk Driving office, Kansas DOT, Federal Highway Administration, Kansas Society of Professional Engineers, Safe Not Sorry, and Operation Lifesaver. Promotional items and safety brochures will be distributed to those attending.

Many of these safety-related displays will give visitors the opportunity to actually participate and see how critical it is to always be alert, wear safety belts, use child safety restraints, and follow the speed limit.

A poster-drawing contest for children will be conducted before the event. Entries from around the state will be on display at the Expo Hall.

If you can’t attend the event in Wichita, Emig suggests:
—organizing your own local event on October 10;
—having your city council or county commission proclaim October 10 as "Put the Brakes on Fatalities Day.” For a sample proclamation, see the national web site: www.brakesonfatalities.org; and
—reminding your friends, family, and neighbors that they are the key to a fatality-free day. Ask them to drive extra carefully on October 10, and every day of the year.

For more information, contact Marty Matthews or Kim Stich, Kansas Department of Transportation, at (785) 296-3585.

Tips for Creating a Local “Put the Brakes on Fatalities” Event:

—Determine local interest in sponsoring an individual or coordinated event. You could offer to publicize local sponsors on a brochure or in other ways.
—Review the national web site, www.brakesonfatalities.org, and national brochure for ideas.
—Use the web site material to develop plan to coordinate or sponsor event.
—Download and/or order material from the national web site.
—Develop a plan and hold your event on October 10, 2002.


Sources: Traffic Safety Partner Plan for Involvement, KDOT, 2002; national brochure of the “Put the Brakes on Fatalities” Coalition; national web site: www.brakesonfatalities.org.
Community assets like parks, museums, nature trails, and historic sites add value to a community. If these assets are linked together in a greenway, their value increases even more. Read on to learn more about greenways in general and about a specific, major greenway project in Kansas City.

What is a greenway?
A greenway is a corridor of protected open space managed for conservation and/or recreation. A common characteristic of greenways is that they all go somewhere. They follow natural land or water features, like ridges or rivers, or manmade features like abandoned railroad corridors or canals. They link natural areas with cultural and historic sites, and, in some cases, with populated areas. Greenways not only protect environmentally-sensitive areas and wildlife, but also provide people with access to outdoor recreation and enjoyment close to their homes.

Connectivity is key
What sets the greenways concept apart from other conservation initiatives is its emphasis on connections. But a greenways system is not a “connect-the-dots” concept applied without justifiable ecological or human need. Nor does it mean that the focus on conservation land acquisition should shift away from protecting large areas of land. However, connecting large protected natural areas to other kinds of assets can result in a system that is greater than the sum of its parts.

Greenway components
A greenways system is composed of large hubs, linear links and smaller sites (see box at right). Greenways often contain natural landscape features, such as rivers, floodplains, and wetlands. They can also include human landscape features, such as historic and archaeological sites, utility and abandoned railroad rights-of-way, levees, and roadside corridors.

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Hubs, Links and Sites . . . .

—Hubs anchor a greenway system and provide an origin or destination for people and wildlife moving to or through it. Hubs come in many different sizes, from large protected reserves to smaller regional parks and preserves.
—Links are the connections that enable the system to work. They range in size and function from large landscape linkages to smaller conservation and recreational corridors.
—Sites are smaller features that serve as points of origin or destination but are not always linked with hubs or with each other.

Community and economic impacts of greenways
Many areas of the country have found that a system of greenways offers opportunities to support economic growth without sacrificing environmental assets.

Greenways have been shown to stimulate a local economy by attracting businesses interested in quality of life for their employees. Greenways also attract tourists.

The economic impact by taking land off the tax rolls for greenway conservation often is more than offset by other economic returns. One reason is that lands conserved for greenways (such as abandoned rail lines and riparian corridors) generally are assessed at low values. Conserving riparian areas and floodplains as greenways rather than allowing development may pre-
Greenways are gaining ground around the United States. See the box at right to read what’s happening with MetroGreen—a major greenways system, part of which is in Kansas.

This article was adapted from information produced by the Florida Department of Environmental Protection’s Office of Greenways and Trails, phone phone (850) 488-3701. They have an excellent web site: www.geoplan.ufl.edu/projects/greenways.

KC Area Plans Major Greenways System

What’s 1,000 miles long, links seven counties in two states, and green? Well, green most of the year. The answer is MetroGreen, a major greenways system proposed for the Kansas City metropolitan area. The plan identifies more than 75 separate corridors to form a regional network of greenways to connect many of the areas most valuable natural assets. It will connect public and private open spaces, greenways and trails. Plans for MetroGreen include Leavenworth, Johnson and Wyandotte counties in Kansas, and Cass, Clay, Jackson and Platte counties in Missouri.

MetroGreen is one of the “10 Giant Steps” identified as part of the Kansas City Sesquicentennial Celebration. The project continues a tradition of valuing green space in the Kansas City area by extending the parkways and boulevards concept of the 1894 Kessler Plan for Kansas City, Mo.

Mid-America Regional Council (MARC), working with Greenways, Inc., Patti Banks Associates, ETC Institute and the Trust for the Public Land, developed a MetroGreen action plan. The plan, introduced in February 2002, is available in PDF format (see below).

Residents participated in the three rounds of MetroGreen public workshops held in 2001 at locations around the region. Participants were encouraged to examine regional and county maps and to write their comments and sketch their ideas for a regional trails system on the maps. Workshop attendees identified areas that they felt needed bicycle and/or pedestrian connections.

In the second round of meetings, participants were asked to react to a draft metropolitan system of greenways and trails and help refine the locations of specific corridors. In the final round of meetings, participants were invited to view a final draft of the MetroGreen system and offer additional suggestions and advice.

MARC also commissioned a survey of metro residents to gain a better understanding of public attitudes and identify funding preferences. Preserving water quality and safety from crime in neighborhoods were the most important issues to survey respondents out of 14 potential choices. Other important issues were quality of K-12 education, quality of life for children and families, and maintaining property values. More than 80 percent of respondents were supportive of using the 1,000 mile MetroGreen greenway system for projects such as walking and biking trails, creating transportation linkages between neighborhoods, and habitats for animals, when they were informed that three-fourths of the Metro Green system was in a flood plain that could not be used for permanent developments.

The work of the MARC staff and the consultants was supported with technical advice from an advisory committee. These local planners and public works officials met six times during the planning process and provided valuable advice and direction for the project.

For more information and/or updates on MetroGreen, or to download a PDF of the MetroGreen plan, call the Mid-America Regional Council at (816) 474-4240 or visit www.marc.org/metrotrails.htm.

Source: www.marc.org/metrotrails.htm.
Editor’s note: We are making the following publications available for loan:

**Best Practices Handbook on Asphalt Pavement Maintenance**
Minnesota LTAP, MnDOT, and the Minnesota Local Road Research Board, 2000. This 50-page handbook provides background information on the importance of pavement preservation and preventive maintenance. It also describes maintenance techniques for a variety of distresses and conditions. Tables show the most common flexible pavement distresses, along with best practices for rehabilitation. Specifications, technical memos and special provisions are described for all treatment methods recommended in the handbook.

The major focus of the handbook is on preventive maintenance performed while the roadway is still in good condition with only minimal distress, before the pavement falls into a condition where structural overlay, major milling or reclaiming, or replacement is necessary.

The handbook is well laid out and is easy to follow. Its only weakness is lack of illustrations or photographs, but that is addressed in the following companion piece printed a year later. —by Lisa Harris

**Asphalt Maintenance Field Handbook**
Minnesota LTAP, MnDOT, Minnesota Local Road Research Board and the FHWA, April 2001. This laminated field book is condensed from the Best Practices Handbook on Asphalt Pavement Maintenance, described above. It also provides guidelines for preventive maintenance techniques for a variety of distresses and conditions. It covers crack treatments (clean and seal, rout and seal, full-depth crack repair), surface treatments (fog seal, seal coat, thin hot-mix overlays), and pothole patching and repair (cold-mix asphalt, spray-injection patching, hot-mix asphalt, slurry or microsurfacing material). Each technique is described along with its appropriate use, and the procedure is illustrated using color photographs.

This would be a good guide to borrow for your shop as a refresher for staff or a primer for new hires. Copies are limited and will be loaned on a first-come-first-served basis. —by Lisa Harris

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**Calendar**

August 4-7
ITE Annual Meeting in Philadelphia, PA
Contact: Institute of Transportation Engineers at 202/289-0222

August 13-14
Transportation Enhancement Workshop in Hays, KS
Contact: Kaye Jordan-Cain, KDOT at 785/296-0723

September 4-5
Kansas Expo: 2002 Winter Training in Salina
Call Mike McGee at 785/368-3801

*September/October
LTAP Motorgrader Operator Training 5 locations in KS

September 22-25
APWA National Congress in Kansas City, Mo.
Register at www.apwa.net

October 7-11
APWA Kansas City Metro Chapter Snow Plow Rodeo 2002 in Gardner, KS
Call Wes Ludwig at 913/682-0650

*October
LTAP Snow and Ice Control Training 5 locations in KS

October 15-16
MINK2—(FHWA County Engineer’s Meeting) in St. Joseph, MO
Call Gary Rosewicz at 785/562-3349

**October 29
Winter Road Maintenance (Click, Listen & Learn)

*October
LTAP Snow and Ice Control Training 5 locations in KS

November 18
Fall Meeting of the Kansas County Highway Association in Wichita
Call Norman Bowers at 913/782-2640

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For information on calendar items indicated with a * or to suggest a topic for a future LTAP workshop, contact:

Rose Lichtenberg
LTAP Training Coordinator
Kansas University Transportation Center
1530 W. 15th Street, Room 2011
Lawrence, KS 66049-7609
785/864-2594

or visit our web site at www.ksltap.kutc.ku.edu

** To register for the APWA/LTAP “Click Listen & Learn” workshops, call Ashley Gann at (816) 472-6100 ext. 3511. Cost is $125 per site, regardless of the number of participants.
Free Resources

Check off your selections, fill in the bottom portion, and return this form to:
KUTC Materials Request, 1530 W. 15th St., Room 2011, Lawrence, Kansas 66045
or fax to 785/864-3199

New publications for loan ............
Two week lending period.

❑ Best Practices Handbook on Asphalt Pavement Maintenance
❑ Asphalt Maintenance Field Handbook
by Minnesota LTAP, MnDOT, Minnesota Local Road Research Board and the FHWA, April 2001.

Videotapes .................
These videotapes on environmental topics are available are listed in our lending library. Two week lending period.

❑ Creating Meadows Through Road Maintenance and Construction
(8 minutes) New Mexico LTAP, 1994.
❑ Highway Runoff Water Quality
(34 minutes) Washington State DOT. Summarizes a research program to help DOT personnel to determine the impact of pollutants that are washed off highways during storms.
❑ Natural Balance: Restoring Native Habitats
(10 minutes) Monsanto, 1991. Covers the restoration of three ecosystems.
❑ Vegetation Management (Mowing/Side Dozing)

Equipment .................
Available free—for loan to local highway agencies. Call us at (785) 864-5658 to arrange time period needed for loan. There could be a waiting list for these items.

❑ Jamar Technologies, Inc. (DB-400) Turning Movement Counter Board
A basic model for recording turning movements at intersections. The board is is lightweight and comes with its own case.

❑ Jamar Technologies, Inc. (TDC-8) Turning Movement Counter Board
Can be used to do turning movement counts, classification counts, gap studies, stop-delay studies, speed studies, and travel time studies. The board is is lightweight and comes with its own case.

❑ Filled-out sample of KDHE’s Notice of Intent (NOI) for Storm Water Discharges Associated with Industrial Activity Under the NPDES General Permit

Order form

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The Kansas Local Technical Assistance Program (LTAP) is an educational, research and service program of the Kansas University Transportation Center (KUTC), located in the University of Kansas School of Engineering. Its purpose is to provide information to local and county highway agencies and transportation personnel by translating into understandable terms the latest technologies in the areas of roads, highways and bridges.

The KUTC Newsletter is one of the KUTC’s educational activities. Published quarterly, the newsletter is free to counties, cities, towns, tribal governments, road districts and others with transportation responsibilities. Editorial decisions are made by the KUTC. Engineering practices and procedures set forth in this newsletter shall be implemented by or under the supervision of a licensed professional engineer in accordance with Kansas state statutes dealing with the technical professions.

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