

KUTC Newsletter

Summer 2000

A Local Technical Assistance Program (LTAP) of The University of Kansas Transportation Center
In cooperation with Kansas Department of Transportation and Federal Highway Administration

An issue dedicated to legislation and regulations affecting roads

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Here's Some Cool News About Winter Road Weather Data

Project to share RWIS data is moving ahead.



... by Lisa Harris

Last year, Peter Carttar was in the hot seat. He spoke at the fall meeting of the Kansas County Highway Association (KCHA) about pavement and weather data collected and used by KDOT, but not shared with cities and counties. Carttar talked about some of the technical and legal barriers to sharing the data, but didn't feel he could talk about the KDOT push to make the data public. Since the plans weren't very far along, the data couldn't be promised yet. KCHA members were frustrated not to have access to data they could use to provide safer county roads.

This year Carttar is breathing easier. After negotiating a tangled web of issues concerning copyright, weather service use restrictions, and liability concerns, KDOT stands poised to share the pavement tem-

perature information—free of charge—soon. Maybe even by the time you read this.

Project Going Forward

"It's gratifying to see this project move ahead," Carttar said. "Since last year, the project has gone to the top of our agency's administration, and they

support sharing the pavement data with everyone—including the general public."

The pavement data are collected by 41 stations in the Kansas Road Weather Information System (RWIS). The RWIS data are currently available to KDOT employees on the Web via a password-protected site. A few counties—those that have purchased their own RWIS stations—also have access to the KDOT site. Other counties have access to the data through a private company, Surface Systems, Inc. (SSI)—for a service fee. The new initiative will provide the pavement data directly through KDOT, free of charge.

Features of the Public Site

The current KDOT site has radar information, forecasts, and pavement data from the
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KDOT's RWIS data, continued from page 1

RWIS stations. The pending public site will contain just the RWIS data because the radar and forecast data are purchased by KDOT from other sources, and have restrictions on their distribution outside the agency.

The other information can be obtained, free, from alternative sources (see Craig Damlo's article in this issue). Or all the information can still be purchased from SSI, for agencies that can afford to pay a fee. For

Knowing pavement temperatures will help crews apply appropriate strategies while they are still effective.

more information about SSI, visit their web site at www.ssiweather.com.

The proposed KDOT site will contain a simple tabular representation of KDOT's weather data. It will be in a different format than currently presented by SSI, to avoid copyright concerns.

Pavement Data Helps With Anti-Icing Strategies

KDOT's RWIS stations transmit information about weather conditions on roadways and bridge decks using sensors both mounted in the road surface as well as mounted away from the road. The sensors determine pavement temperature, subsurface temperature, ambient temperature, wind speed, wind direction, pavement wet/dry, precipitation, and relative humidity.

RWIS pavement data provide an effective tool for highway agencies in determining anti-icing strategies. "Local governments will be able to use these tools to provide a coordin-

RWIS Weather Stations in Kansas

<i>Name</i>	<i>Route</i>	<i>Location</i>	<i>County</i>
Anthony	K-2	.7 miles W of Anthony	Harper
Atwood	US-36	bridge over Little Beaver Creek	Rawlins
Blue Rapids	US-77	bridge over Blue River	Marshall
Bonner Springs	K-7	bridge over Kansas River	Wyandotte
Bow Creek	US-183	bridge over Bow Creek	Rooks
Bull Creek	I-35	bridge over Bull Creek	Johnson
Caney	US-75	Port of Entry	Montgomery
Chanute	K-57	bridge over Neosho River	Neosho
Chetopa	US-166	bridge over Neosho River	Cherokee
Condordia	US-81	bridge over Republican River	Cloud
Edson	I-70	east of Edson Interchange	Sherman
Elkhart	K-27	bridge over Cimarron River	Morton
Ellsworth	I-70	Lincoln Hill (MP 229)	Lincoln
Emporia	I-35	bridge over Neosho River	Lyon
Eureka	US-54	bridge over Burnt Creek	Greenwood
Ford	K-154	bridge over Arkansas River	Ford
Garnett	US-59	Manner Bridge	Anderson
Great Bend	US-56	bridge 3 miles W of Great Bend	Barton
Jennings	K-383	bridge over Prairie Dog Creek	Decatur
Junction City	I-70	bridge over Smokey Hill River	Geary
Lawrence	K-10	bridge over Wakarusa River	Douglas
Leavenworth	US-73	bridge over Salt Creek	Leavenworth
Lebanon	US-36	US 36/K-181/K-281 Interchange	Smith
Liberal	US-54	bridge over Cimarron River	Seward
Manhattan	K-177	bridge over Kansas River	Riley
McPherson	K-61	K-61/K-153 Interchange	McPherson
Ness	US-283	bridge over Pawnee River	Ness
Oakley	I-70	I-70/US-40 Interchange	Gove
Peabody	US-50	bridge over railroad	Marion
Pratt	US-54	bridge at S Fork of Ninnescah River	Pratt
Sabetha	US-36	bridge over Delaware River	Brown
Salina	I-70	I-70/I-35 Interchange	Sherman
Scott	US-83	S Jct US-83/K-95, Ladders Creek	Scott
Syracuse	US-50	bridge over West Bridge Creek	Hamilton
Troy	US-36	bridge over Wolf River	Doniphan
Wakeeney	I-70	I-70/US-40 Bus. Interchange	Trego
Walker	I-70	I-70/K-255 Interchange	Ellis
Wallace	US-40	bridge .5 miles W of Wallace	Wallace
Westgate	US-75	bridge over Kansas River	Shawnee
Wichita	K-96	bridge over Webb Road	Sedgwick
Wichita	I-135	bridge over 17th Street	Sedgwick

ated approach to snow and ice control," said Carttar. "The data will help them anticipate storm events and minimize the storm's impact on the

travelling public."

Knowing pavement temperatures will help road crews apply appropriate strategies while they are still effective.

“You can’t do anti-icing when it’s too cold, or you’ll end up with an ice-skating rink,” said Carttar.

A Few Loose Ends

“Almost everything’s squared away,” said Carttar. We just need to collect a few signatures and the last hurdle will be gone.”

When all the i’s are dotted and t’s are crossed, the RWIS information will be available on-line at: www.roadweather.com. The KUTC will have a link to that site through our home page: www.kutc.ku.edu. Or you might just hear Peter Carttar shouting it from the rooftops.

Peter has another reason to celebrate this year. He and his wife, Rosalea, have a new baby boy, Ted. Congratulations!

For more information about KDOT’s RWIS data, contact: Peter Carttar, Staff Engineer, KDOT Bureau of Construction and Maintenance, 785/296-3576 (phone) 785/296-6944 (fax). ■

Lisa Harris is editor of the KUTC Newsletter.

❁ Did You Know? ❁

... that staff from local highway departments are welcome to attend KDOT’s Snow Expo? The Expo is held once a year and is especially geared toward equipment operators. This is a different event than (and a good complement to) the APWA Snow Rodeo. For more information, contact Peter Carttar at the phone number listed above.

Have Overhead, Will Travel

... by Rose Lichtenberg

Planning for our LTAP workshop calendar for 2001 has begun. We need your help! Kansas LTAP will present several sessions of “Successful Supervision” and “Motor Grader Operator Training” in the Spring and we need to choose where to hold the workshops. We



would be happy to accept your invitation to present a workshop in your neighborhood. Or if you have another idea for a workshop topic we might offer, give me a call at 785/864-2594. ■

Rose Lichtenberg is training coordinator for the Kansas Local Technical Assistance Program.

Retroreflectivity: Good and Bad

... by Tom Mulinazzi

In the last issue of the *KUTC Newsletter*, Kathryn Jensen wrote an article entitled “Research Sheds Light on Conditions Affecting Retroreflectometer Performance.” I became scared as I read this article.

The *Manual of Uniform Traffic Control Devices* (MUTCD) will soon contain minimum standards for retroreflectivity for all public roads. These retroreflectivity standards will cover all pavement markings and traffic signs. Ms. Jensen’s article stresses the variability in readings that can occur using the same retroreflectometer, between different units of the same model, and among different models. This variability could become a nightmare for a governmental agency.

One might rationalize that it is best to check the retroreflectivity of a sign or pavement markings when there is a higher probability of getting a higher reading (e.g., better retroreflectivity). However, someone else could take readings under different weather conditions or in the shade or at night, all of which could result in different readings for the same sign or markings.

Here is the problem: The MUTCD will contain minimum retroreflectivity values for different colors, different sign sheetings and different kinds of pavement markings. Minimum values tend to become standards below which a governmental agency is liable. I can just see the lawyers rushing to buy retroreflectometers, especially those that tend to give lower readings.

Don’t get me wrong. Retroreflectivity is important—very important. But why do we make it so easy for ourselves to be sued? We (the highway industry) are our own worst enemy.

I believe it should be left to the highway professional to inspect signs and pavement markings on a regular (annual) basis and plan for their replacement. But because some of us have been lax in our responsibility to inspect and replace our signs and pavement markings, the federal government has stepped in to mandate minimum retroreflectivity levels for them. If we had been doing our jobs, they never would have done this. ■

Tom Mulinazzi is associate dean of the School of Engineering at the University of Kansas and is a frequent expert witness on highway safety issues.

Phase II Storm Water Regulations Will Affect Smaller Road Construction Projects

... by Lisa Harris

Do you have any construction projects planned for 2002 or later that will disturb one acre or more? If yes, they will likely be subject to storm water runoff permitting under a new rule passed by the Environmental Protection Agency. The purpose of the permitting process is to encourage the use of best management practices in controlling erosion from construction sites—and to ensure protection of sensitive or natural areas.

Construction areas covering five acres or more are already subject to a similar storm water runoff permit process called NPDES—National Pollutant Discharge Elimination System. Phase II, adopted in the Fall of 1999, will require permits for smaller construction projects.

KDHE handles permits for KS

Each state has a NPDES permitting authority authorized by the EPA. In Kansas, the permitting authority is the Bureau of Water of the Kansas Department of Health and Environment (KDHE). The KDHE staff person responsible for handling construction storm water permits is Shawn Howell.

Phase II permits will be required sometime in 2002 or 2003. The exact start-date is at the discretion of each state's permitting authority. Howell expects that Phase II permits will be required in Kansas starting sometime in 2002. Permits will only be required for new construction (not maintenance activities like grading or shoulder maintenance).

Will any projects less than one acre need permits?

There are two instances when permits

will be required for construction activity disturbing less than one acre:

1) when the activity is part of a larger common plan of development or sale disturbing a total of one acre or greater, or 2) if the area is individually designated for permit coverage by KDHE. Howell said that he expects individual designation to be rare in Kansas, but might be given for areas that are especially environmentally sensitive or are generating unusual public concern.

What will construction managers need to do?

First, obtain a Notice of Intent (NOI) form, a Notice of Termination (NOT) form, and a copy of the NPDES permit, all from KDHE. These will come with instructions to help you fill out the forms.

The NOI includes general operator and site information and requires your certification that the activity will not impact:

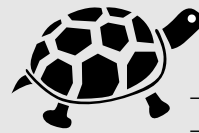
- endangered or threatened species,
- registered historical sites,
- public drinking water wells, or
- “outstanding national resource waters” (see box above).

If the activity will impact any of these, Howell suggests that you call him to discuss further steps to take.

Assuming no impact, read the general permit carefully and sign the NOI if you agree to conditions in the permit.

Outstanding National Resources in Kansas

These areas receive special protection under NPDES permitting:



- Flinthills Wildlife Refuge
- Cimarron National Grasslands
- Quivera Wildlife Area
- Kirwin Wildlife Refuge

—All waters contained within the Nature Conservancy Wildlife Preserve and Cheyenne Bottom Wildlife Area, in addition to all waters contained within particular Wildlife and Park, Wildlife Refuge, State Park Wetland or Wildlife Areas.

Source: KDHE, 2000.

Before sending the completed NOI back to KDHE, the construction manager must develop a Storm Water Pollution Prevention plan. The plan must describe appropriate best management practices that will be used at the site to minimize the discharge of pollutants and sediment from the site. The NOI outlines some best practices to consider. A topographic map must be included with the plan showing the legal boundaries of the construction site and other relevant data.

After the pollution prevention plan is complete, and the construction manager has sent a copy of the completed NOI to KDHE, construction can begin immediately. The pollution prevention plan does not need to be filed with KDHE; instead, it needs to be accessible at the construction site.

No formal approval by KDHE is required at this time, although one may be implemented in the future. It would be a good idea to send the NOI using certified mail or in such a way that you have documentation

that it has been received by KDHE.

After the project is complete, the construction manager must complete a Notice of Termination (NOT) to KDHE when the site has been stabilized as defined in the permit, or when storm water runoff is no longer being discharged, or when another operator has assumed control of the site.

Who is responsible for compliance with the permit?

Howell says that that owner of the land is ultimately responsible for complying with the permit. If you let a project in your jurisdiction, the contractor can submit the NOI and prepare a prevention plan for the site, but you are still responsible for compliance. Be sure you understand the conditions of the general permit for projects you let to contractors.

How will projects be enforced?

“Most of our inspections are in response to complaints—either by local governments or neighbors,” said Howell. “In addressing complaints we try to emphasize education about best management practices rather than legal action. We prefer to work with the construction manager to remedy the situation.”

Are waivers possible?

There are two instances when permitting authorities have the option to provide a waiver from the requirements to operators of Phase II construction activity: 1) when the activity occurs during a negligible rainfall period (a formula is used to determine this); or if the level of pollutants of concern would be within a reasonable margin of safety.

How long will the permit application process take?

A goal of KDHE is to keep the permitting process easy and streamlined. The length of time it takes to com-

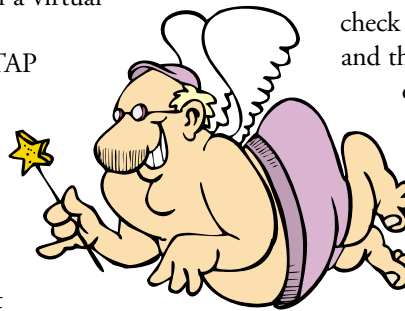
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E-Mail Discussion List Aims to Grant Your Wish for Good Advice

... by Lisa Harris

Have you ever struggled with a problem at work and wished that someone with expertise in that area would materialize in your office to talk about it? Now that can happen, in a virtual way.

The Kansas LTAP has launched an e-mail discussion list for local road departments to share advice. This is the only such list in Kansas specifically geared toward local roads. Here are some questions and answers about this new e-mail service.



message for the benefit of those reading it. If another subscriber can help, he or she can send a reply directly to you or to the entire list.

How long does it take to get feedback?

That depends on the other subscribers. If subscribers check their e-mail regularly and they can answer your question, you should hear back from them within a few days, sometimes sooner. The more people who subscribe, the better this service will be, so please pass the word to your colleagues and encourage them to sign on.

What if I can provide advice to someone else?

If you can answer someone’s question, press reply to answer the message. You will have a choice to reply directly to the person asking the question or to the entire list. Choose the entire list if you think the whole group will benefit from your answer or if you want to stimulate further discussion.

How long does a subscription last?

As long as you want. If you wish to be removed from the list, just send an e-mail message to me at the address above and let me know.

Many thanks to Pat Weaver of the Kansas LTAP who did the groundwork to initiate this service. If you have further questions, contact Pat at (785) 864-2595 or e-mail her at weaver@ku.edu ■

How do I use the service? When you have a question for the group, send an e-mail message to the list’s e-mail address. The message will be automatically forwarded to all subscribers. The message does not have to be lengthy or formal. Include your name and title at the end of your

The Whys and Wherefores of Wetlands and Kansas Roads

... by Kathryn Jensen

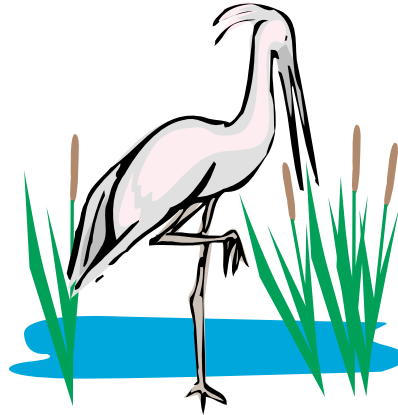
In recent years, wetlands have become a hot topic in transportation and in the media. Wetlands, where land and water meet, offer many benefits to society, including providing habitat for migrating and endangered species and cleaning water before it reaches a river or lake. According to a US DOT publication,¹ wetlands can “reduce flooding, control erosion, and improve water quality. They provide habitat for about one-third of all federally listed endangered plant and animal species and nesting spots for more than half of the Nation’s migratory birds. They offer recreation, beauty, and visual ‘space.’”

But wetlands also pose challenges to highway planners when they are located adjacent to or in the path of a proposed road project. A careful assessment and planning process must take place, involving highway and environmental planners. Issues concerning road safety and construction cost can compete with conditions necessary to maintain plant and animal habitat and scenic beauty.

This article will discuss considerations for road construction near wetlands, based on experiences of the Kansas Department of Transportation (KDOT) with such projects.

A few big projects and lots of little ones

In Kansas, there have been relatively few large-scale road projects in wetland areas, according to Ken Herin, conservation program specialist for KDOT. However, there have been many smaller wetland projects in the state. Project completion times vary,



How do you know a wetland when you see one?

First of all, wetlands aren’t always wet, especially in places like Kansas during the dog days of summer. Wetlands will have standing water for most of the growing season, however. Other signs of wetlands include certain species of plants such as cattails, animals such as frogs and turtles, and migrating water birds in spring and autumn.

depending on the size of the project and the extent of impact on the environment and the community.

Review process needed

Whether large or small in scope, in order to start the project, Herin says that maps and aerial photographs are gathered to determine the amount of area that will be affected by the construction of the road. Then the site is visited by KDOT and the dominant plant species characteristic of wetlands are assessed. Hydrologic and soil characteristics are also assessed to make a

wetland determination.

After this process, KDOT may contact organizations such as U.S. Fish and Wildlife and Kansas Wildlife and Parks. “However, the primary agency we deal with concerning wetlands is the US Army Corps of Engineers,” Herin said. “The Clean Water Act provides for the preservation/restoration of wetlands and is administered by the EPA. The EPA relies on the Corps to issue permits. Depending on the permit required, there may be no other agency to deal with regard to the project.”

The goal is to build the road and restore the natural environment so the majority of the species can be preserved. If wetland species will be adversely affected by the building of the road, environmental planners will aim to minimize the harm or seek to replace the habitat.

KDOT is using mitigation banking as a strategy for habit replacement. “We are proactively over-building extra capacity into wetland mitigation areas to compensate for small areas that may be impacted,” said Herin. (See the article on the next page for more information about this strategy.)

Don’t go it alone

Herin says a key to a successful wetlands road project is to keep all stakeholders informed. This includes major agencies with an interest in wetlands, local governments, neighbors of the site, and the general public. “[Most of our projects] have been pretty smooth. We try to get with everybody early in the project,” he said.

The challenge for road designers is to develop solutions that address traffic safety concerns while also pre-

servicing the critical characteristics of the wetland natural environment.

KDOT is currently working on two major road wetland projects (plus several smaller projects)—one in north central Kansas near US-81 and the other in southeast Kansas by Parsons.

For more information on Kansas Department of Transportation road/wetland projects, call Ken Herin at the KDOT Bureau of Design's Environmental Services Section, at (785) 296-0853. ■

When Your Road Project is Near a Wetland . . .

. . . by Lisa Harris

Here are answers to some basic questions about building a road near a wetland:

If your project goes through a wetland, what should you do?

1) The first thing you should do, according to Kelly Kindscher, associate scientist at the Kansas Biological Survey, is to *consider re-routing it*. "The best solution is to avoid wetlands altogether," he said. "It might cost more money to move the project, but wetlands research and mitigation (not to mention project delays) are costly, too."

2) If re-routing the project is absolutely not feasible, *call the Army Corps of Engineers to obtain paperwork for a 401 Wetlands Permit*. The Kansas City office (816) 983-3990 serves most of the state; the Tulsa, Oklahoma office (918) 669-7401 serves southern Kansas.

3) *Hire a consultant to identify plant and animal species and to prepare a plan for mitigation*. The consultant should have experience working in

Success is in the details

An example of a successful wetlands mitigation project is on Highway 89 in Plumas County, California, along the Feather River. Engineers filled a square acre of meadow adjacent to the river as part of a project to improve highway safety. To compensate for the loss, they created 1.9 acres of in-kind "wet meadow habitat" next to the filled area.

The project challenged all those involved because scant published data existed on similar State projects in non-wooded areas near a river.

Careful planning and attention to detail were keys to the project's success. Contractors were required to:

- accomplish each task according to a specific sequence;
- contour-grade the new area to create elevations similar to those in the filled area;
- salvage existing vegetation, *including topsoil*, and store it on site until ready to plant;
- minimize damage to plant roots by removing them in sod blocks no smaller than 3 by 8 feet (1 by 3 meters);
- provide—and pay for—any needed irrigation
- save the topsoil from the new site and spread a six-inch layer of it on the site after excavation;
- plant at the best time of year for plant survival.

More than 10,000 sod plugs were planted, each containing at least one shoot of Nebraska sedge (a plant species characteristic of this kind of wetland). The sedge survived and grew so well that, after two years, it could not be distinguished from the sedge in the undisturbed areas.

"The Highway 89 project is the most successful wetlands mitigation project I've ever worked on," says Craig Martz, a botanist at California's Department of Fish and Game.

Source: *Wetlands and Highways: A Natural Approach*, FHWA/DOT, 1994.

wetlands. Ask the Corps of Engineers for a list of qualified consultants serving your area.

4) *Implement a mitigation strategy*. There are two options: build a new wetland somewhere else (preferably nearby), or buy into an existing wetland "bank." This second option is only available in areas where such a bank has been created. Governments or developers buy acreage in the bank to replace acreage to be lost in the construction project. The State's first wetland bank is currently being built in Johnson County.

What if the road is next to (but not through) a wetland?

One solution is to build structures to contain or drain roadway runoff so that oil, salt, and other chemicals will be kept out of the sensitive wetland environment. Kindscher says that Douglas County was considering such a structure for the South Lawrence Trafficway (SLT).

A word about the SLT: This project now on hold, or dead, depending on who you ask. It has been the single most emotional and contested wet-

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What's GASB 34 and Why Should You Care?



... by Tom Maze, Transportation Sector Leader, Howard R. Green Company; former director of the Center for Transportation Research and Education, Ames, Iowa

Note: News about coming changes in financial reporting requirements is just beginning to hit the radar screens of local governments. These changes will affect how some agencies report major infrastructure assets, including roads and bridges.

If "GASB (say gasbee) 34" is just a mysterious blip on the edge of your awareness, this article will help you understand what the buzz is about—and why you should take notice.

How do you report infrastructure investments?

Traditionally, state and local governmental agencies have used cash accounting methods to report infrastructure assets like roads, bridges, water and sewer facilities, dams, etc. With cash accounting, the capital cost of an infrastructure investment appears in an agency's annual financial report during the year in which the cost of construction is incurred. The value of existing physical assets does not appear on subsequent financial reports. In other words, using cash accounting methods, the value of all physical assets is off the books.

In actuality, of course, physical infrastructure such as roads and bridges continue to have value, or usefulness, long after agencies have incurred the cost of construction. And, just as cars depreciate in value, the value or usefulness of roads, bridges, and other physical assets declines over the course of many years, typically 20–50 years.

A more realistic report of an agency's financial status would therefore show the existing value of the agency's capital assets. Under this accounting method—accrual accounting—the cost, or the loss in value, of an asset is spread across the asset's useful lifetime rather than accounted for in its first year.

Accrual accounting keeps infrastructure assets on the books and is more consistent with the reporting of other costs of doing business.

The Governmental Accounting Standards Board has been carefully

... communities will have to record all of their infrastructure assets, including roads and bridges, and depreciate them, too. That's new. That's going to be a big change.

studying the valuation of government capital investments for many years. In fact, the board issued its first concept statement regarding this issue as long ago as 1987.

Finally, in June 1999, GASB Statement 34 (or GASB 34) was published. GASB 34 requires state and local governments to begin reporting the value of their infrastructure assets*, including roads, bridges, water and sewer facilities, and dams, in their annual financial reports on an accrual

Where does GASB get its authority?

The Governmental Accounting Standards Board (GASB) is a nonprofit entity responsible for establishing accounting standards for state and local governments. Along with its sister organization the Financial Accounting Standards Board (FASB), which sets accounting standards for the private sector, GASB is operated by the nonprofit, privately-funded Financial Accounting Foundation.

You can learn more about GASB at www.rutgers.edu/Accounting/raw/gasb

accounting basis.

Some communities already have accrual accounting for infrastructure tied to customer billings, such as water and sewer systems. These systems are considered assets on financial statements and they are depreciated, because that helps determine the usage rates. But now, communities

will have to record all of their infrastructure assets, including roads and bridges, and depreciate them, too. That's new. That's going to be a big change for local governments.

Why the change?

Accrual accounting methods are generally the standard in the private sec-

*Buildings are generally *not* considered infrastructure assets in GASB 34.

How will GASB 34 affect your agency? It depends.

GASB-34's impact on local governments is neither straightforward nor clear-cut. Its impact will depend on what kind of financial reporting and accounting your government uses and how other entities view those procedures.

Kansas counties and cities have two choices: Some already use generally accepted accounting principles (GAAP) promulgated by GASB. However, state statute allows the use of a different accounting statement called KMAG, specified in the Kansas Municipal Audit Guide. KMAG uses the cash accounting method.

Why use KMAG? One reason is cost. Scot Lloyd of Swindell, Janzen, Hawk and Lloyd, an accounting firm in McPherson, Kansas, said that KMAG audits generally cost less than those using GAAP. Another reason is time. KMAG audits require less information from local governments and therefore less time in collecting that information for the auditors. KMAG audits generally focus on cash and budget compliance and do not record the value of assets or liabilities.

Counties and cities using KMAG must have an annual GAAP waiver from the Kansas Department of Administration's Division of Accounts and Reports. These local governments *will not* need to abide by the standards of GASB-34.

Jerry Fowler, Saline County Engineer, is from a county that uses KMAG. His county won't need to comply with GASB 34, but he is concerned that non-compliance might affect future financing for major county projects. For example, a jurisdiction's bond rating will likely be affected by GASB 34 compliance. According to Tom Maze, "following GAAP will likely reduce the cost of issuing debt through general obligation or revenue bonds. Bonding organizations want to see 1) a government agency's true financial condition and 2) accounting information based on GAAP. Communities that don't follow GAAP may pay more to issue debt in terms of their bond rating."

Steve Seawall, an author of KMAG and now assistant comptroller at the University of Kansas, agrees with Maze. "KMAG audits give an incomplete financial picture," he said. "They don't provide the whole story the bond companies like to see."

Seawall sees several advantages for local governments in using the accrual accounting method under GASB 34, but points out that KMAG may still be the better choice for very small jurisdictions that don't have the resources to maintain the financial records needed to report on a GAAP basis.

tor. When most of us see an annual report, we expect to see an accounting of the remaining useful value of all assets. By bringing public agencies in line with accounting norms, GASB 34 has the potential to make agencies' overall financial condition more comprehensible to the public, investors,

creditors, and the agencies themselves.

The principal purpose of Statement 34, then, is to "improve the accountability of governments to their citizens by providing better, more accessible information about the condition and costs of capital assets."¹

Ultimately, the new standards may

encourage better stewardship of public resources. By reporting the value of public assets over time, governmental agencies will make their improvements in public assets—or lack of such improvements—more apparent.

Who's affected and how soon?

First of all, not all agencies in Kansas need to comply with GASB 34 (see box on next page). For those that do, the new requirements for reporting physical assets will be phased in, beginning with the largest governmental agencies. In the first year that agencies are required to report the value of capital assets, they need only report the value of newly-acquired or built capital assets. That is, they need only comply with GASB 34's *prospective reporting requirements, as follows:*

- Agencies with \$100 million or more per year in revenue must meet prospective reporting requirements for the fiscal year beginning after June 15, 2001.
- Those with annual revenues of \$10 million to less than \$100 million have until the fiscal year beginning after June 15, 2002, to meet prospective reporting requirements.
- Smaller agencies with less than \$10 million in annual revenue have until the fiscal year beginning after June 15, 2003, to comply with prospective reporting requirements.

Agencies will then have four more years to comply with GASB 34's *retroactive reporting requirements*; that is, they have four more years to determine and report values for their existing major general governmental infrastructure assets.

- Agencies with \$100 million or more per year in revenue must meet retroactive reporting requirements for the fiscal year beginning after June 15, 2005.
- Those with annual revenues of \$10 million to less than \$100 million have until the fiscal year beginning

continued on page 13 ►

Wetlands and Roads, *continued from page 7*

lands/road project in Kansas. A few years ago advocates for preserving the wetlands took KDOT, FHWA and Douglas County to federal court to require completion of a full Supplemental Environmental Impact Statement for the project. The court agreed with them.

The reasons why this project has had so many setbacks are as varied as the individuals and groups on either side of the issue.

Officials at Haskell Indian Nations University, adjacent to the site, claim they were not invited to participate in the dialogue about the project since its inception. This is a matter of some dispute, but it points out that clear, ample and open communication from the beginning of a project is appreciated by stake-holders, and perceived lack of communication can create unforeseen problems.

Resources

¹*Wetlands and Highways: A Natural Approach*, FHWA/DOT, 1994.

Restoring and Creating Wetlands: A Planning Guide for the Central States Region: Iowa, Kansas, Missouri and Nebraska, EPA, September 1992.

Kansas Department of Transportation Wetland Mitigation Sites—Analysis and Opportunity for Improving Success, Kansas Biological Survey Report No. 82, 1997.

Several good resources can also be found at www.wetlands.com ■

New Plat-Recording Statute Discussed at KCHA Fall Meeting

Earlier this year K.S.A. 58-2005 was passed by the state legislature. This regulation states that all plats must be certified that they

liable if the certifying surveyor makes an error in following the guidelines of the KSLS's minimum standards. Murray Rhodes, a Kansas State Board

. . . In the absence of the county surveyor, the county engineer may contract with a land surveyor who shall review such subdivision plat or plat of survey and certify the same if in compliance with the requirements of this act. —K.S.A. 58-2005

have been reviewed by a licensed surveyor—whether a county surveyor or one who is contracted as a deputy county surveyor. This was a revision to a statute passed in 1967.

Several concerns about the new statute were expressed at the fall meeting of the Kansas County Highway Association (KCHA). For example, some register of deeds offices are having to carry the unanticipated burden of paying surveyor fees for plat reviews. The Kansas Society of Land Surveyors (KSLS) is recommending initiating a fee billable to developers to help pay for these services.

Another concern was whether local governments would be held

of Technical Professions board member, said that he did not think governments would be liable.

Saline County is taking a proactive approach to address this concern. They have developed a simple checklist given to surveyors when reviewing county plats. The checklist includes items required by the minimum standards for review adopted by the KSLS to address state statutes. This way the county can tell at a glance whether the surveyor has considered all of the requirements in accordance with K.S.A. 58-2005.

If you would like a copy of this checklist and KSLS's minimum standards, see page 15. ■

Phase II Storm Water Runoff, *continued from page 5*

plete an application depends on the sensitive characteristics of the site and how long it takes the construction manager to complete the NOI and prepare a pollution prevention plan. Since there is no approval process, there is no waiting period after submitting the completed NOI and completing the plan.

Will there be a permit fee?

Yes. Howell expects that the \$60 permit fee currently charged for projects five or more acres will be the same for projects covering one or more acres. This is because the process—and the amount of work required by KDHE—is essentially the same.

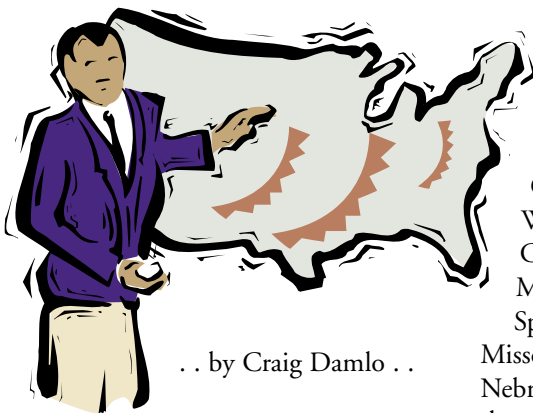
For more information about Phase II NPDES (storm water) permits, contact Shawn Howell at KDHE's Bureau of Water at 785/296-5549.

Note: Discharge from municipal separate storm sewer systems (for populations 100,000 or more) is treated separately from construction runoff under Phase II regulations. For information about these permits, contact Rance Walker at KDHE at 875/296-5537. ■

KDOT Korner

Be Your Own Weather Reporter

KDOT's list of weather web sites is useful for local agencies



.. by Craig Damlo ..

Kansas broken down into regions centered around: Topeka, Goodland, Wichita, Dodge City, Pleasant Hill Missouri, Springfield

Missouri, and Hastings Nebraska. Most of these sites are easy to reach, and moderately easy to navigate. You can reach all of them by going to www.crh.noaa.gov/ and choosing the location nearest you.

All of the NOAA sites contain data on: current temperature, wind, visibility, sky conditions, dew point, relative humidity, and barometric pressure. While they supply abundant information on current conditions, their forecasts for upcoming days are limited. These sites also have very few graphics, so their pages are more difficult to navigate.

Your other choice in weather sources comes from commercial weather sites. Because they are commercial sites, they have advertisements on them, but this is a small price to

Last night the TV weatherman said, "No chance of snow tomorrow; it is gonna be a beauuuutiful day outside!" But he has been wrong before, and you need to know what to expect so you can plan your crew's work day accordingly. Once again you are stuck trying to out-guess the weatherman. Now there's help.

With weather data now available on the Internet, anyone can become their own personal meteorologist. The question then becomes which web-sites to use to get the weather information you need in an easy-to-use format. There are two main types of weather sites on the Internet, government sponsored pages and commercial sites. A list of these sites was distributed at KDOT's Snow Expo.

All of the government-sponsored sources get their data from the same organization, the National Oceanic and Atmospheric Administration (NOAA). They all have the same types of weather data, but for different regions of the state. NOAA has

How do the Sites Rate?

My ratings are based upon ease of use, data available, and overall appeal. Five stars indicate the highest rating and one star is the lowest rating.

Free Government Sites

http://www.crh.noaa.gov/top/	Topeka	**
http://www.crh.noaa.gov/gld/	Goodland	**
http://www.crh.noaa.gov/eax/	Pleasant Hill	***
http://www.crh.noaa.gov/ict/	Wichita	***
http://www.crh.noaa.gov/gid/	Hastings	*
http://dodgecity.net/nws/	Dodge City	***
http://www.crh.noaa.gov/sgf/	Springfield	****

Free Commercial Sites

KSN Weatherlab		
http://www.ksn.com/weather/		**
AccuWeather		
http://www.accuweather.com		***
The Weather Channel		
http://www.weather.com		****
Intellicast		
http://www.intellicast.com		**
The Weather Experts		
http://www.wx.com		*****
The Weather Underground		
http://www.wunderground.com		****

This list of sites was provided by KDOT.

pay for better graphics and a more user-friendly design. All commercial weather sites have: current temperature, wind, visibility, sky conditions, dew point, relative humidity, and barometric pressure. Commercial sites

continued on page 13 ►

A Leg Up

MUTCD Gives Green Light to Yellow-Green Pedestrian and Bicycle Signs



Photo by Lisa Harris, KUTC, 2000.

While you can't see its color in this photograph, this yellow-green sign really stands out at a pedestrian crossing in downtown Lawrence, Ks. The arrow make it clear the crossing is RIGHT HERE.

... by Cherie Kittle, FHWA

The Federal Highway Administration's (FHWA) Office of Transportation Operations continues to optimize the performance of the transportation system by ensuring consistency on our roadways. In 1992, the FHWA initiated a pilot study in conjunction with the National Park Service which examined the effects of the new color signs on motorist behavior at five pedestrian and bicycle crossings in the Washington, D.C. area. Results indicated an increase in motorists slowing and stopping for pedestrians and bicyclists, and conflicts decreased.

In 1993, FHWA conducted a two-year study nationwide to evaluate this color on pedestrian, school, and

bicycle crossing signs. A total of 57 jurisdictions were given permission to experiment in this study; 24 jurisdictions completed the experimentation and provided final reports. Our

FHWA believed a unique, unassigned color would be most effective in altering motorist behavior and reducing conflicts with pedestrians and bicyclists.

review of the studies and data indicate that fluorescent yellow green (FYG) warning signs improved the conspicuity of the sign message and motorists were able to recognize the sign from greater distances than the standard yellow warning sign. Many studies did not find significant changes in

speed data, but motorists frequently commented that the signs caught the attention of the driver from a greater distance and were more aware of what was going on around them.

On June 7, 1996, a Notice of Proposed Rulemaking was published proposing the adoption of FYG as an optional color for pedestrian, school, and bicycle crossing signs. A total of 141 comments were received with 100 favorable comments received from local governments, including police departments and public school systems, in addition to special interest groups and the general public.

On June 19, 1998, a Notice of Amendment to the *Manual on Uniform Traffic Control Devices* (MUTCD) was published in the *Federal Register* which adopted FYG for optional use for warning signs related to pedestrian, bicycle, and school applications.

Fluorescent yellow green was one of four unassigned colors that the FHWA had reserved for future appli-

cations. Studies indicate that fluorescent retroreflective materials are detected with higher frequency, and recognized with greater accuracy at further distances, than the corresponding standard highway colors. This is due to its greater luminance contrast with its surroundings.

Pedestrian/bicycle-motor vehicle crashes continue to be a safety problem on our roads. FHWA believed a unique, unassigned color would be most effective in altering motorist behavior and reducing conflicts with pedestrians and bicyclists.

The use of FYG for pedestrian, bicycle, and school applications supports the Department of Transportation's Strategic Safety Goal to promote public health and safety by working toward elimination of transport-related deaths, injuries, and property damage. FYG also supports the FHWA strategic goal that targets pedestrian/bicycle incidents as a national priority because this type of crash accounts for 15 percent of all fatalities. The plan calls for an improvement (reduction in number, rate, and severity) in this area.

Weather Reporter, *continued from page 11*

also have both radar and satellite images that will alert you to approaching storms. Along with these features commercial sites provide extended forecasts from professional meteorologists that will help you plan your work week.

The major down-side to commercial sites is they are slower to load if you have a typical modem connection to the Internet—because the sites are graphic intensive.

So which is the best for you to use—the NOAA sites or one of the many commercial sites? It depends on your computer equipment. For the user with a slower connection to the Internet and without the time to wait for the commercial sites to load, the NOAA sites might be a better choice. The government-sponsored sites also give you the data in its unrefined form, allowing you to draw all your own conclusions about today's and tomorrow's weather.

A commercial site would be better

Recent physical fitness trends promote walking and bicycling. Emphasis must be placed on using state-of-the-art retroreflective sign materials to better communicate with motorists who share the roadway with pedestrians and bicyclists.

Pedestrian and bicyclist safety represents a significant area of concern in transportation that would be well served by a unique color for traffic control devices. This is not a stand-alone effort, but part of FHWA's overall goal of optimizing performance through innovation, technology, communications, and partnering with local communities. ■

Reprinted with permission from the Wyoming T2 Newsletter, Summer 2000, Volume 16, No. 2, page 6.

suited for the user with a high-speed connection or the time to wait for the data to come across the phone line.

Commercial weather sites are generally more user-friendly.

Commercial sites give you data in easy to handle processed packages they also have FAQs (frequently asked questions) on how to analyze the data.

With government and commercial weather sites now available on the Internet, you can be your department's personal weather reporter. And it remains to be seen if your accuracy is better than the guy on TV! ■

Craig Damlo is a junior in physics and astronomy at The University of Kansas and KUTC's resident computer whiz.

GASB 34, *continued from page 9*

after June 15, 2006, to meet retroactive reporting requirements.

- Smaller agencies with less than \$10 million in annual revenue are encouraged but not required to report infrastructure values retroactively.

What to do now?

Some managers believe that meeting the new standards will not be difficult because they have a good inventory base and good cost records. Others view GASB 34 as a significant unfunded mandate. Regardless of what shape you think your agency is in with regard to complying with GASB 34, we encourage you to discuss the statement with your agency's financial officer, who should be able to help you develop a strategy for addressing GASB 34.

And stay tuned to this newsletter. In our next issue we will outline some basic things to think about in developing a GASB-34 compliance strategy. We will also discuss the two basic methods allowed by GASB-34 for assessing infrastructure value: the depreciation approach and the modified approach.

The following web sites have useful information on GASB 34:

- www.rutgers.edu/Accounting/raw/gasb
- www.utaht2.usu.edu/Services/gasb.html
- www.apwa.net/reporter/august1999/tally.asp

Source: ¹Terry K. Patton and Penny S. Wardlow, "Why Infrastructure Reporting?" *GASB Action*, Vol. 16, No. 5, May, 1999

This article was adapted with permission from the January–February 2000 issue of *Technology News*, Center for Transportation Research and Education, Iowa State University. ■

Video Reviews

Air Quality Conformity in Transportation Planning

(20 min.) This video emphasizes the importance of being aware of air quality standards in relation to transportation planning. It first outlines the Clean Air Act, which is revised every five years.

Following national air quality standards means making sure a community does not have high levels of ozone, nitrogen dioxide, carbon dioxide, and particulate matter. Ozone usually comes in the form of smog and carbon dioxide comes from gasoline emissions. A large part of this is due to transportation sources. This video shows how transportation planners can incorporate air quality practices into their existing plans by promoting car pooling, bicycle use, and congestion pricing at toll booths. Produced in 1999 by Zapata Engineering.

Anatomy of a Winter Storm

(10 min.) This video shows the progress of a major winter storm affecting Minnesota and dangers and hardships for snow plow drivers and motorists. Not a new production, but new to the Kansas LTAP library. Produced in 1991 by the Minnesota DOT.

ATSSA: Leading the Way to Safer Roads

(10 min.) This is a promotional video of the American Traffic Safety Services Association. ATSSA members discuss the advantages of being part of the organization and how transportation professionals can become members. ATSSA is concerned with roadway and work zone safety. Produced in 1999 by ATSSA.

Chemical Deicer Testing

(11 min.) This video described products tested at different locations in

Washington State. Most of the applications were combined with sand. This is was added to the KUTC library last year but is not a new production. Produced by the Washington DOT.

Danger Signs

(9 min.) This video shows the consequences of vandalizing road signs. It discusses what action to take if a citizen finds a vandalized sign and gives specific court cases dealing with this issue. Produced in 2000 by USDOT/FHWA/ATSSA.

Highway Innovative Technology Evaluation Center

(12 min.) This video provides a good overview of the HITEC product evaluation process, with testimonials. It showcases a few evaluations of new products for roads. Produced in 1997 by the HITEC program of the Civil Engineering Research Foundation. ■

Calendar

... 2000 2001

*December 6
APWA Satellite
Conference—Performance Management
in El Dorado and
Dodge City, Ks.

December 14
APWA Roundtable
Discussion
in Salina, Ks.
Call Mike Fraser at
785/826-7380

January 31
51st Annual
Environmental
Engineering
Conference,
in Lawrence, Ks.
Call Kansas University
Continuing Education,
Mary Heberling, 785/
864-4790 or e-mail
mheberling@ukans.edu

March 15
46th Annual Structural
Engineering Conference,
in Lawrence, Ks.
Call Kansas University
Continuing Education,
Mary Heberling, 785/
864-4790 or e-mail
mheberling@ukans.edu

April 10-11
Kansas Transportation
Engineering Conference
in Manhattan, Ks.
Contact Ellen Stauffer at
Kansas State University
Continuing Education at
785/532-5569.

April 18-20
APWA Mid America
Conference,
in Columbia, Mo.
Contact Tammy Bennett
at 785/832-3133

April 21-25
National Association of
County Engineers
(NACE) Annual Meeting
and Management and
Technical Conference,
in Bloomington, Mn.
Contact NACE at

202/393-5041 or visit
www.naco.org/affils/nace

May 8-9
Kansas Transportation
Safety Conference,
in Hutchinson, Ks.
Call Kansas University
Continuing Education,
Mary Heberling, 785/
864-4790 or e-mail
mheberling@ukans.edu

May 14-16
Kansas County
Highway Association
Spring Meeting
in Hays, Ks.
Call Ron Karn at
785/863-2211

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

Rose Lichtenberg
KUTC
1530 W. 15th Street, Room 2011
Lawrence, KS 66045-7609
785/864-2594

or visit our Web site at www.kutc.ku.edu

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

Videotapes

Two videotapes or one-hour's worth of material per lending request. Two week lending period.

- Air Quality Conformity in Transportation Planning**
20 minutes, by Zapata Engineering, 1999.
- Anatomy of a Winter Storm**
10 minutes, by the Minnesota DOT, 1991.
- ATSSA: Leading the Way to Safer Roads**
10 minutes, by ATSSA, 1999.
- Chemical Deicer Testing**
11 minutes, by the Washington DOT.
- Danger Signs**
9 minutes, by USDOT/FHWA/ATSSA, 2000.
- Highway Innovative Technology Evaluation Center**
12 minutes, by HITEC Program of the Civil Engineering Research Foundation, 1997.

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.

Publications

You are free to keep these unless otherwise noted.

- Insights into Pavement Preservation**
(26 pages) A collection of nine nontechnical articles about pavement preservation geared toward highway officials and the general public.
- Kansas LTAP Winter Operations Packet**
Various materials from Kansas LTAP snow and ice workshops. Includes handouts from a wide variety of sources.
- Plat Survey Review Materials**
Saline County's checklist for plat review and KS Society of Land Surveyors' "Minimum Standards" document.

Order Form

Name Phone number

Position

Agency

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City State Zip+4

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- address correction
- add to newsletter mail list
- send *KUTC 2000 Lending Library Catalog*

*For all international requests, the requester must pay postage. We will notify you of the postage cost and will send materials after receiving payment.

Kansas LTAP

Let us at the KUTC help you find the answers to your transportation-related questions.

KUTC, 1530 W. 15th St. #2011, Lawrence, KS, 66045
Call 785/864-5658 (fax 785/864-3199)
www.kutc.ku.edu

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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Director Joe Lee
Editor Lisa Harris
Contributing Writers Kathryn Jensen, Craig Damlo
. Tom Mulinazzi



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KUTC Resource and Education Staff

Traffic and Hwy. Engineering Joe Lee / Tom Mulinazzi
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