

## MINUTES OF THE SENATE NATURAL RESOURCES COMMITTEE

The meeting was called to order by Chairman Carolyn McGinn at 8:30 a.m. on January 25, 2007, in Room 423-S of the Capitol.

All members were present.

## Committee staff present:

Raney Gilliland, Kansas Legislative Research Department  
Emalene Correll, Kansas Legislative Research Department  
Art Griggs, Revisor of Statutes Office  
Judy Holliday, Committee Assistant

## Conferees appearing before the Committee:

Judy Mohler, Legislative Services Director, Kansas Association of Counties  
William Bider, Director, Bureau of Waste Management, Kansas Department of Health & Environment  
Doug Sommers, President, Kansas Landfill Association  
Shawn Herrick, Executive Director, Mid-America Tire Dealers Association

## Others attending:

See attached list.

Chairman McGinn introduced Senator David Wysong who replaced Senator Ruth Teichman on the Committee.

William Bider, Director, Bureau of Waste Management, Kansas Department of Health and Environment, presented testimony as a proponent of **SB 145, Solid Waste, siting restrictions** (Attachment 1). Mr. Bider explained that the bill would establish modified landfill siting restrictions to protect Kansas water resources and selected wildlife preserves and refuges. He noted an important change to this bill from that proposed by the Department last year relating to the proposed separation distance from certain landfill types to protected water resources. The distance from a municipal solid waste landfill, which represents the highest risks due to the variety of materials accepted at these facilities, is unchanged at one mile, but for other types of landfills the separation distance has been decreased to one-half mile.

Mr. Bider cited maps attached to his testimony which identify protected resources and show that 21 percent of the state is not recommended for siting new municipal solid waste landfills and 12 percent is not recommended for construction and demolition landfills or industrial landfills.

Current laws and regulations provide minimal restrictions regarding siting of landfills near water resources and wildlife areas. This bill will provide added safeguards for protecting natural resources without affecting public or private investments in landfill development. In addition, it would assist government officials, solid waste planners, and private developers for future landfills by setting guidelines for site selection. Mr. Bider noted that even new landfills can leak and contaminate groundwater sources.

Judy Mohler, Legislative Services Director, the Kansas Association of Counties, testified in support of **SB 145** (Attachment 2). Ms. Mohler stated the Kansas Association of Counties' Policy Statement has included a portion supporting clean water standards, and SB 145 balances the importance of clean water for Kansans with sensible landfill siting regulations.

Doug Sommers, President, Kansas Landfill Association, testified as an opponent of **SB 145** (Attachment 3). Mr. Sommers testified that additional regulatory and financial burdens would make it difficult for existing landfills to expand and for new landfills to be built. He also said the time involved to obtain permits—already a time-consuming process—would also increase. Mr. Somers stated that **SB 145** fails to define the type of wells to be protected from expansions. Mr. Somers testified that **SB 145** will raise the cost of solid waste handling and disposal and decrease the number of landfills. An unintended consequence of the bill would be an increase in air pollution and wear on roadways because the landfills would be located farther away. Illegal dumping or increased litter will result because many people will dump along roadsides rather than drive to the landfills. Finally, Mr. Sommers testified that the bill transfers to the State the decision-making of the private sector on matters of siting, design and liability, all of which should remain with the private sector.

CONTINUATION SHEET

MINUTES OF THE Senate Natural Resources Committee at 8:30 a.m. on January 25, 2007, in Room 423-S of the Capitol.

Senator Lee asked Mr. Sommers for a list of Landfill Association members.

Chairman McGinn declared the hearing on **SB 145** closed, and told the Committee they may work it next week.

Bill Bider, Director, Bureau of Waste Management, Kansas Department of Health & Environment, provided background on **SB 146, Solid waste, waste tire management fund** (Attachment 4).

Judy Mohler, Legislative Services Director, Kansas Association of Counties, testified as a proponent of the bill (Attachment 5). Ms. Mohler testified that the Kansas Association of Counties supports the bill provisions that allow KDHE to administer the waste tire grant program on a permanent basis and that assists local governments in purchasing playground material made from recycled Kansas waste tires.

Shawn Herrick, Executive Director, Mid-America Tire Dealers Association, testified as a proponent of **SB 146** with three minor changes (Attachment 6). First, MATDA recommends lowering from 75% to 50% the amount of the grants to local units of government to purchase and install playground cover made from recycled Kansas waste tires. Second, taking out the words "*and install*" because with the limited funds for recycled waste tire grants, too much could be used for the construction of the playground, such as labor, excavation, sidewalks, playground equipment, etc. Third, MATDA would recommend adding "*or other products*" to expand the types of products eligible for grants. Finally, MATDA feels returning unused grant funds for the waste tire program will be an improvement to the program.

Chairman McGinn told the Committee that the hearing on **SB 146** would be continued at the Friday, February 2 meeting.

The meeting adjourned at 9:25 a.m.





Kathleen Sebelius, Governor  
Roderick L. Bremby, Secretary

DEPARTMENT OF HEALTH  
AND ENVIRONMENT

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Division of Environment

**Testimony on Senate Bill 145**  
presented to  
**Senate Natural Resources Committee**  
by  
William L. Bider  
Director, Bureau of Waste Management  
January 25, 2007

KDHE appreciates this opportunity to present testimony on Senate Bill 145 which would establish modified landfill siting restrictions to protect the increasingly valuable water resources of Kansas and selected wildlife preserves and refuges. This bill includes an important change to the department's proposal from last year related to the proposed separation distance from certain landfill types to a protected resource. The distance from a municipal solid waste (MSW) landfill, which presents the highest risks due to the wide variety of materials received, is unchanged at one mile, but the separation distance for all other landfill types has been decreased to one-half mile.

Current laws and regulations provide minimal restrictions regarding the siting of landfills near valuable water resources and wildlife areas. For example, a landfill could be placed within a few feet of a public water supply well or a river that does not qualify as a "navigable stream used for interstate commerce." Despite the adoption of regulations containing enhanced standards of design and operation over the past 15 years, landfills still have the potential to release hazardous constituents and impact nearby water resources. A map is attached which shows all MSW landfills that have been permitted since the early 1970s and those which have resulted in groundwater contamination. Based upon this "potential to pollute" and the fact that water resources are becoming increasingly valuable, KDHE recommends establishing minimal separation distances between new landfills and the resources included in this bill.

Two maps which identify the protected resources are attached: one shows the one mile separation distance for MSW landfills and one shows the one-half mile separation distance for construction & demolition (C&D) landfills and industrial landfills. These maps show that about 21 percent of the state is not recommended for siting new MSW landfills and 12 percent is not recommended for C&D and industrial landfills.

This bill contains important provisions related to the operation and expansion of existing facilities that are located within the restricted zones. First, each existing landfill will be allowed to fully utilize all currently permitted space regardless of whether those areas have been constructed. No facility will be forced to prematurely close. Also, expansion of facilities in restricted zones would be allowed, but conditionally. For example, expansions could not move the landfill disposal area any closer to a protected resource. Another type of conditional

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*Senate Natural Resources  
January 25, 2007  
ATTACHMENT 1*

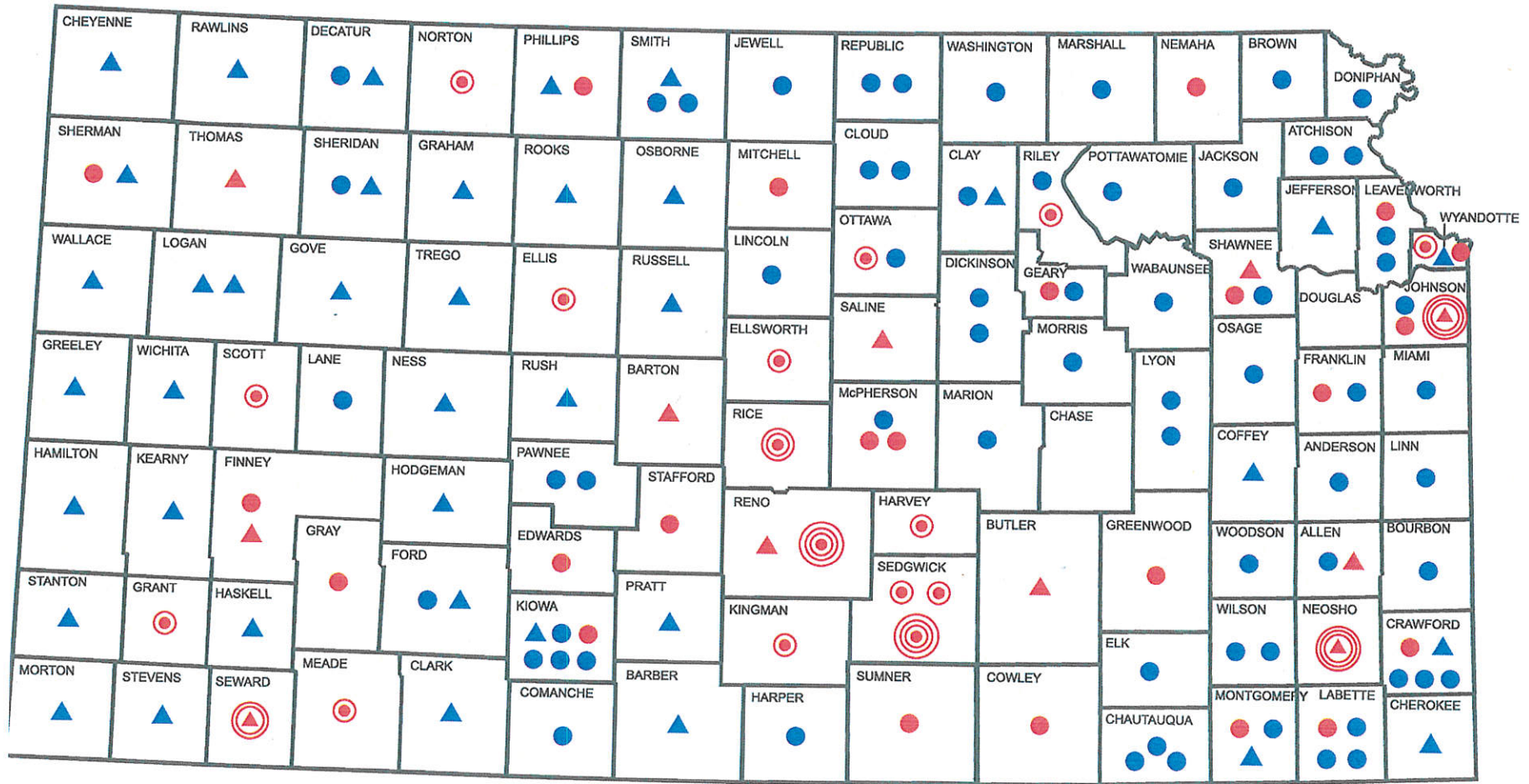
Testimony on Senate Bill 145  
Presented to the Senate Natural Resources Committee  
January 25, 2007











expansion could take place for facilities located in an alluvial aquifer used for a public water supply. In such cases, the applicant could demonstrate that the movement of groundwater from the landfill site to the nearest downgradient well would take more than five years.

This bill contains other provisions that would allow landfills to be developed or expand in restricted areas by performing demonstrations that show the risks to the protected resource are acceptable. KDHE is directed in the bill to develop regulations that further define how those demonstrations should be carried out. Another area of flexibility is a provision to waive separation distances if certain conditions are met.

This bill will provide added safeguards for protecting valuable Kansas natural resources without affecting past public or private party investments in landfill development. It will also help local solid waste planners, government officials, and private developers plan for future landfills by setting guidelines for site selection. It has the potential to streamline landfill permitting by selecting sites that pass this important test regarding proximity to sensitive resources.

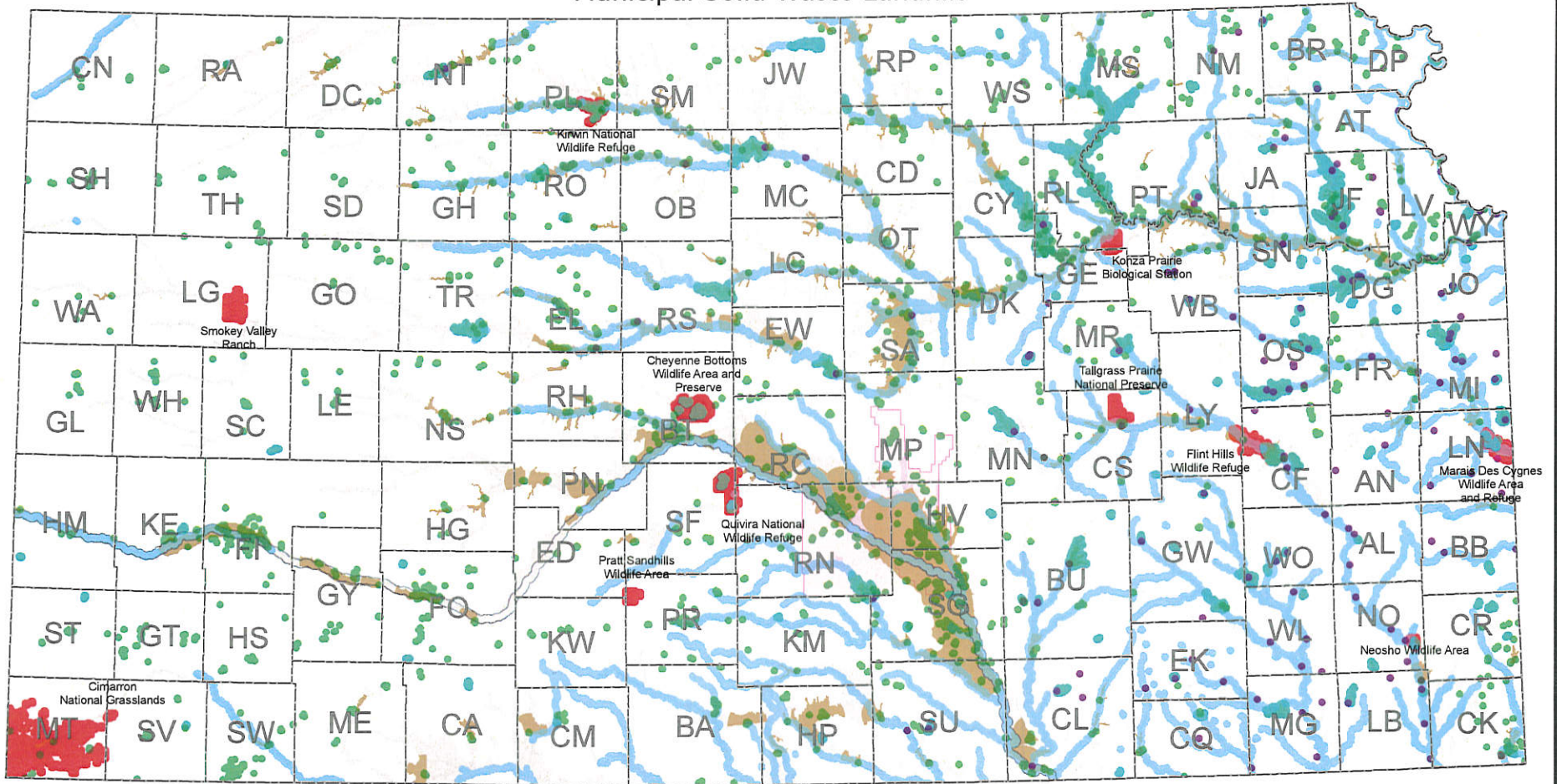
# Groundwater Monitoring at Municipal Solid Waste Landfills



- |   |   |
|---|---|
|  OPEN - No Contamination               |  CLOSED - No Contamination               |
|  OPEN - Contamination Onsite           |  CLOSED - Contamination Onsite           |
|  OPEN - Contamination Offsite >100 ft  |  CLOSED - Contamination Offsite >100 ft  |
|  OPEN - Contamination Offsite >300 ft  |  CLOSED - Contamination Offsite >300 ft  |
|  OPEN - Contamination Offsite >1200 ft |  CLOSED - Contamination Offsite >1200 ft |

# Modified KSA 65-3407 Proposed Restriction Zones

## Municipal Solid Waste Landfills



### Restriction Zones

- KSA 10cfs Streams - 1 mi. Buffer
- 5 mi. Upstream Alluvial Aquifer
- Public Water Supply Wells - 1 mi. radius
- Ks. Lakes > 100ac - 1mi. Buffer
- Equus Beds GMD #2
- Selected Preserves - 1 mi. radius
- Arkansas River - 1mi. Buffer
- Public Water Supply Intakes - 1 mi. radius

### Reference

Alluvial Aquifer

Criteria	Square Miles	Percent of State
Streams	10650.78	12.9
Alluvial	4225.93	5.1
Wells	3568.66	4.3
Lake	2014.51	2.4
Equus Beds GMD #2	1381.98	1.7
Selected Preserves	908.11	1.1
Ark River	805.97	1.0
Intakes	404.01	0.5
<b>All Criteria Combined</b>	<b>17621.00</b>	<b>21.4</b>

### Data Sources:

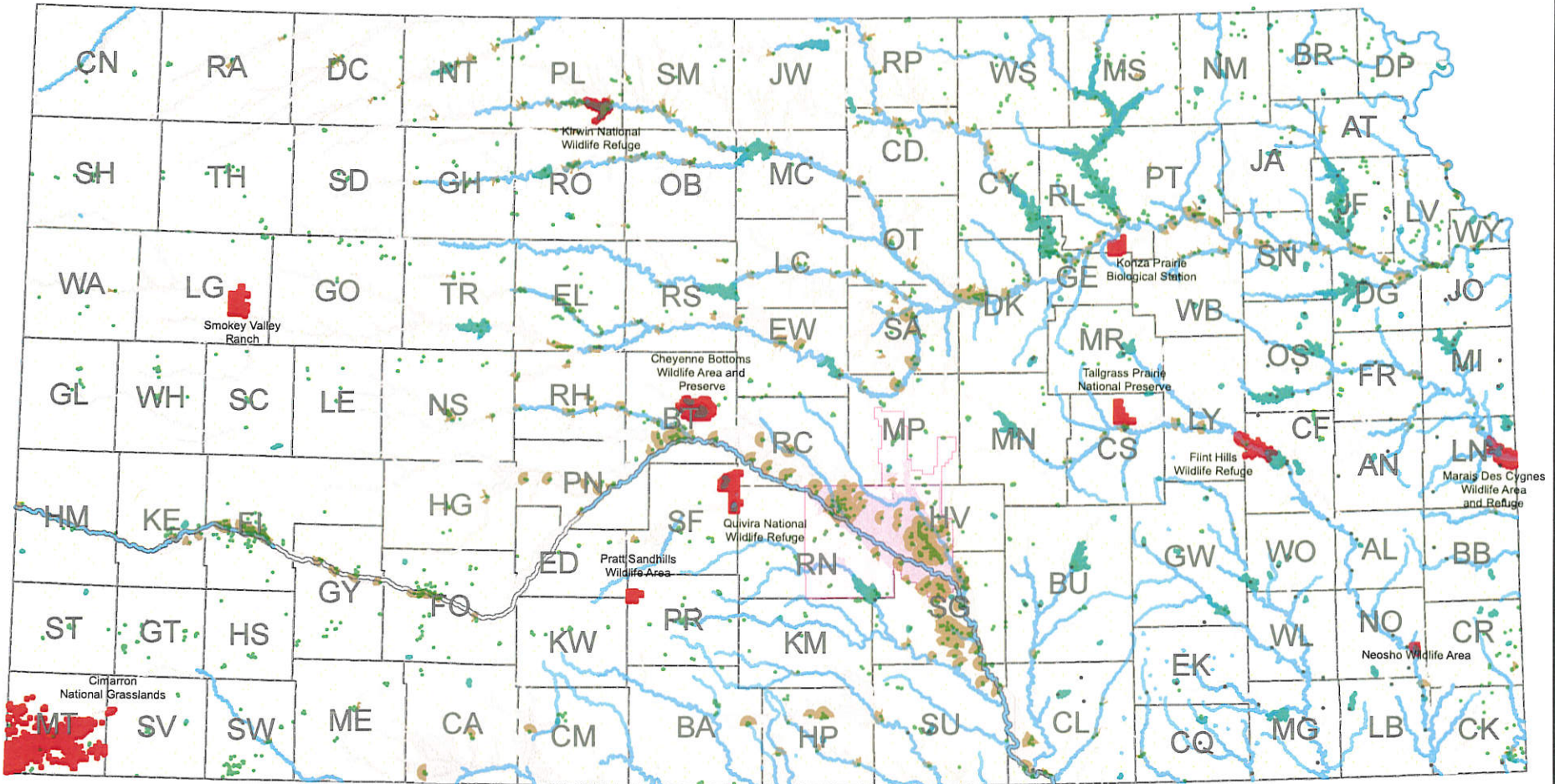
Kansas Biological Survey  
 Kansas Department of Agriculture  
 Kansas Department of Health and Environment  
 Kansas Geological Survey  
 U.S. Geological Survey

1-1

# Modified KSA 65-3407 Proposed Restriction Zones

Construction & Demolition, Industrial, and Waste Tires Landfills

1-5



### Restriction Zones

- KSA 10cfs Streams - .5 mi. Buffer
- Public Water Supply Wells - .5 mi. radius
- Alluvial Aquifer within 2 mi. of downstream PWS well
- Ks. Lakes > 100ac - .5 mi. Buffer
- Equus Beds GMD #2
- Selected Preserves - .5 mi. radius
- Arkansas River - .5 mi. Buffer
- Public Water Supply Intakes - .5 mi. radius

### Reference

Alluvial Aquifer (non-restricted)

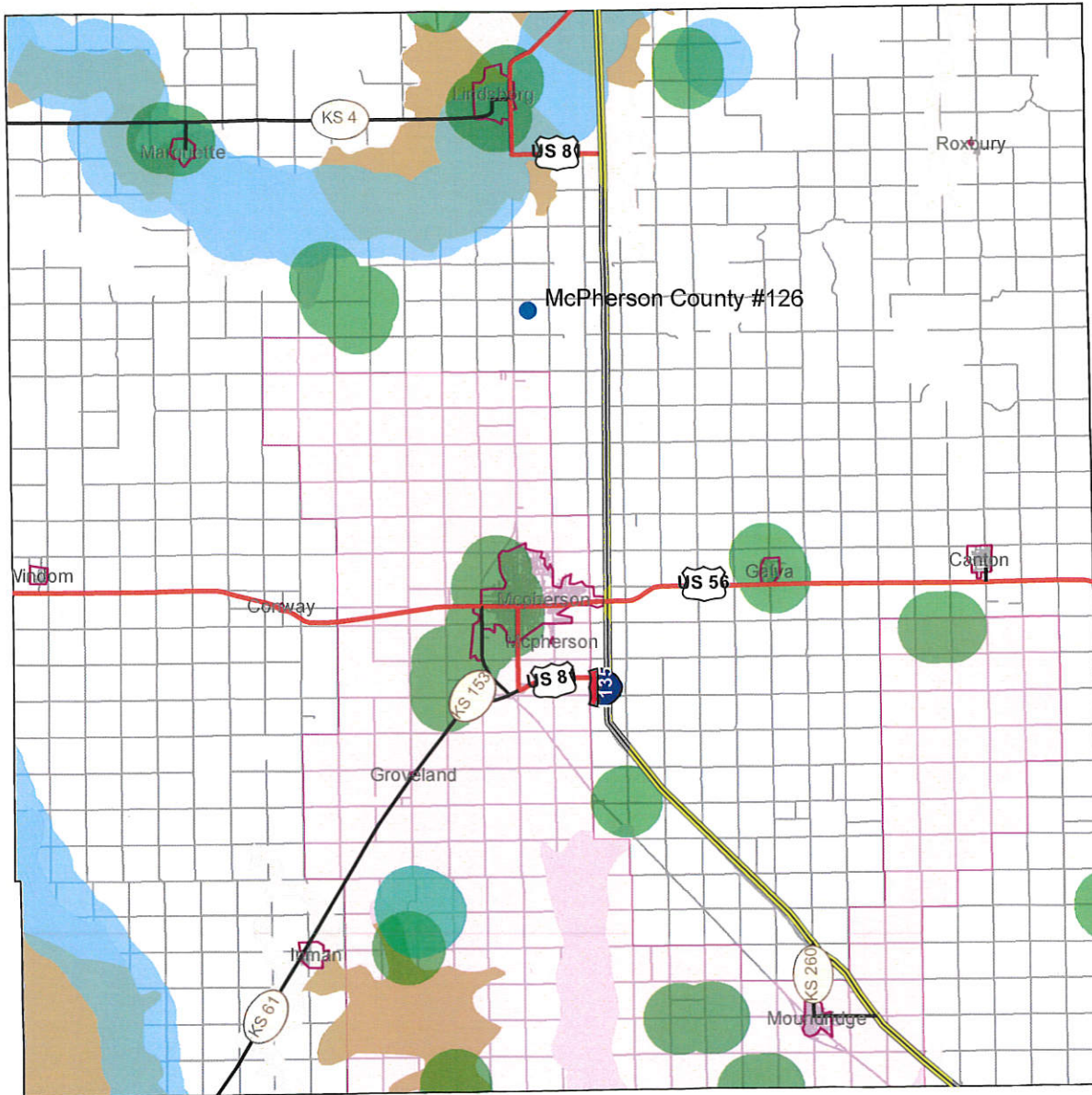
Criteria	Square Miles	Percent of State
Streams	5818.40	7.1
Alluvial	1747.36	2.1
Wells	1292.98	1.6
Lake	1203.18	1.5
Equus Beds GMD#2	1381.98	1.7
Selected Preserves	680.30	0.8
Ark River	412.96	0.5
Intakes	104.38	0.1
<b>All Criteria Combined</b>	<b>10219.00</b>	<b>12.4</b>

### Data Sources:

Kansas Biological Survey  
 Kansas Department of Agriculture  
 Kansas Department of Health and Environment  
 Kansas Geological Survey  
 U.S. Geological Survey



# Modified KSA 65-3407 Proposed Restriction Zones McPherson County



## Restriction Zones

- KSA 10cfs Streams - 1 mi. Buffer
- Public Water Supply (PWS) Wells - 1 mi. radius
- Alluvial Aquifer within 5 mi of downstream PWS well
- Ks. Lakes > 100ac - 1mi. Buffer
- Equus Beds GMD #2
- Selected Preserves - 1 mi. radius
- Arkansas River - 1 mi. Buffer
- Public Water Supply Intakes - 1 mi. radius

## Reference

- Alluvial Aquifer (non-restricted; > 5 mi from downstream well)
- mcphersoncountylatlong Events

Criteria	Square Miles	Percent of State
Streams	10650.	12.9
Alluvial	4225	5.1
Wells	3568	4.3
Lake	2014	2.4
Equus Beds GMD #2	1381	1.7
Selected Preserves	908	1.1
Ark River	805	1.0
Intakes	404	0.5
<b>Total of All Criteria</b>	<b>17621</b>	<b>21.4</b>

## Data Sources:

Kansas Biological Survey  
 Kansas Department of Agriculture  
 Kansas Department of Health and Environment  
 Kansas Geological Survey  
 U.S. Geological Survey

Prepared by:  
 KDHE



**KANSAS**  
ASSOCIATION OF  
**COUNTIES**

Testimony on Senate Bill 145  
Senate Natural Resources Committee  
Presented by Judy A. Moler, Legislative Services Director  
January 25, 2007

The Kansas Association of Counties is in support of SB 145 which would establish landfill siting regulations to protect water resources.

Mr. Bider and KDHE have done due diligence by holding meetings with all effected stakeholders to bring to this committee a bill that is agreed upon. In addition, he met several times with the KAC Policy Committee as this bill was being drawn up for presentation.

This bill includes provisions related to the expansion and current operations of existing facilities which are within the restricted zone. This was of utmost importance to the Policy Committee. This bill was crafted with well thought out concern for existing facilities.

The Kansas Association of Counties' Policy Statement has long had a portion supporting clean water standards. SB 145 recognizes the importance of clean water for Kansans while proposing sensible siting regulations for landfills.

The Kansas Association of Counties asks you to vote "yes" on SB 145.

The Kansas Association of Counties, an instrumentality of member counties under K.S.A. 19-2690, provides legislative representation, education and technical services, and a wide range of informational services to its member counties. Inquiries concerning this testimony should be directed to Randall Allen or Judy Moler by calling (785) 272-2585.

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*Senate Natural Resources  
January 25, 2007  
Attachment 2*

STATEMENT  
OF  
KANSAS LANDFILL ASSOCIATION

BEFORE THE  
**SENATE NATURAL RESOURCES COMMITTEE**

JANUARY 25, 2007

DOUG SOMMERS  
PRESIDENT  
KANSAS LANDFILL ASSOCIATION  
7321 NW ROCHESTER RD  
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(785) 286 1110  
(785) 286 0611 FAX

*Senate Natural Resources  
January 25, 2007  
Attachment 3*

The Kansas Landfill Association represents private C&D, Industrial and MSW landfill owners in Kansas. The Kansas Landfill Association opposes SB 145 for economic, technical and principled reasons.

**From an economic perspective,**

1. This legislation would make it more difficult for existing landfills to expand and new landfills to locate due to additional regulatory and financial burdens. These burdens are not offset by economic or environmental returns.
2. We believe this legislation will increase the time and effort required to obtain permits – a process which is already time consuming and uncertain from the permit applicants' perspective.

**From a technical perspective,**

1. The strict siting criteria proposed in SB 145 are not justified by groundwater contamination currently observed in the field. Environmental controls more recently required by KDHE have resulted in improved performance. We believe this is a positive trend that will continue without this legislation.
2. We're concerned the technical provisions, such as for lakes greater than 100 acres, restriction distances of two miles (non-municipal solid waste landfill) and five miles (municipal solid waste landfill) in the upstream direction of an alluvial aquifer, and stream segment with median flow greater than 10 cubic-feet-per-second, have been arbitrarily selected, having no demonstrable basis in science, regulatory history, or technical precedent in sister states or Kansas law.
3. SB 145 uses many terms that are not defined in the bill. Examples include *sections of land*, *alluvial aquifer*, and *enhanced standards*.
4. The provisions in the bill that allow existing landfills to expand are not clearly defined. For example, part (3)(A)(i) of SB 145 states that existing landfills can expand if the expansion moves the disposal area no closer to the nearest well in the aquifer. SB 145 fails to define the type of well to be protect. Is it a public water supply well? Private well? Agricultural well? Landfill monitoring well?

**From the principled perspective,**

1. SB 145 will raise the cost of solid waste handling and disposal, and decrease the number of landfills.
2. We believe this legislation would provide minimal additional protection of water resources beyond existing statutes and does not provide a return commensurate with the economic impacts.
3. KDHE has estimated SB 145 would restrict 21% of the land area in Kansas. But, this seemingly small percentage incorporates the majority of operating landfills because landfills logistically locate near population centers and the majority of population centers occur in the vicinity of water resources.
4. We believe an unintended consequence of this legislation to be an increase in air pollution and use of public roadways because new landfills will have to locate farther outside of population centers – a direct result of the increased distance of transport. The increased transportation distance is bound to wear out highways quicker, thus requiring the State to spend more money repairing or replacing them.
5. We believe another unintended consequence of this legislation will be increased litter and illegal dumping. With landfills located farther away from population centers, many people will find it easier to dump their solid waste along the roadside than to drive all the way to the landfill.
6. Finally, the scope of this legislation is expansive and transfers decision-making that should be with the private sector, to the State. Landfill owners and operators are responsible corporate citizens; therefore the primary responsibility for siting, design and ultimately liability should be with the private sector, with concurrence – not mandates - from the State.

The Kansas Landfill Association respectfully requests you oppose SB 145.



Kathleen Sebelius, Governor  
Roderick L. Bremby, Secretary

DEPARTMENT OF HEALTH  
AND ENVIRONMENT

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Division of Environment

**Testimony on Senate Bill 146**  
presented to  
**Senate Natural Resources Committee**  
by  
William L. Bider  
Director, Bureau of Waste Management  
January 25, 2007

KDHE appreciates this opportunity to present testimony on Senate Bill 146 which is related to waste tire recycling. This bill would permanently authorize KDHE to administer the waste tire grant program in accordance with a proviso to the department's FY 2007 budget. If passed, this bill would amend the existing waste tire recycling grant program to include grants to local governments to assist in the purchase of playground cover material made from recycled waste tires. KDHE already has authority to award waste tire recycling grants to purchase specialized equipment to process waste tires into usable products.

The bill also removes current statutory restrictions on how much money KDHE may spend annually on waste tire grants. The current provisions of law limit grant expenditures to revenue in the previous year minus the amount spent for administering the statewide regulatory program and waste tire pile clean-up. There is a problem with this restriction. For example, if grant applications in a given year do not meet minimum requirements and available funds are not used, those funds become unavailable for grants in future years, even if excellent new applications are received. Since program administration expenditures are also limited by statute and tire pile clean-up may be unnecessary, it is possible that there will be no authorized ways to use unspent funds.

KDHE could not fully implement the provisions of the proviso in FY 2007 because no companies in Kansas had the capability to produce playground cover from waste tires. Thus, it was necessary to phase in this new program with the first phase being focused equipment grants to assist Kansas companies in gearing up to produce playground cover material from Kansas waste tires. Two grants were awarded totaling \$500,000 as incentives to Kansas companies who will also invest considerably more of their own money. The next phase of the program will be the grants to local governments to help them purchase the recycled rubber products as playground cover.

Without the grant subsidies, few communities will purchase recycled rubber as playground cover because it is more costly than traditional cover materials such as sand or pebbles. This bill should promote the use of waste tires in this beneficial way while also minimizing landfill disposal and improving the appearance and safety of playgrounds.

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*Senate Natural Resources  
January 25, 2007  
Attachment 4*



**KANSAS**  
ASSOCIATION OF  
**COUNTIES**

Testimony on SB 146  
Senate Natural Resources Committee  
By Judy A. Moler, Legislative Services Director  
January 25, 2007

The Kansas Association of Counties supports SB 146 which allows KDHE to administer the waste tire grant program on a permanent basis. In addition, this bill allows for the waste tire grant program to give grants to assist local governments in the purchase of playground material that is made from these recycled waste tires. This grant program promotes the use of these recycled products for playgrounds as it is unlikely that many counties would choose this as it is more expense than other traditional ground covers.

The Kansas Association of Counties urges you to support SB 146.

The Kansas Association of Counties, an instrumentality of member counties under K.S.A. 19-2690, provides legislative representation, educational and technical services, and a wide range of information services to its member counties. Inquiries concerning this testimony should be directed to Randall Allen or Judy Moler by calling (785) 272-2585.

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*Senate Natural Resources  
January 25, 2007  
Attachment 5*



**Statement of the  
Mid-America Tire Dealers  
Association**

**Submitted by  
Shawn Herrick, Executive Director**

**Before the  
Senate Natural Resources  
Committee**

**January 25, 2007**

Madam Chair, Members of the Committee;

My name is Shawn Herrick. I'm the Executive Director of the Mid-America Tire Dealers Association (MATDA), and on behalf of our members, I appreciate the opportunity to be here today to state our position on SB 146.

The Mid-America Tire Dealers Association supports Senate Bill 146 with three minor changes. The members of our association would like to commend the Senators for considering this legislation and the Kansas Department of Health and Environment's (KDHE) efforts to improve end markets in the tire recycling industry.

MATDA would offer three amendments that we feel would improve the probability of achieving the intent of this bill, should it become law.

First, page 2, on line 13, we would recommend lowering 75% to 50% or even lower. It is believed that this high of a percentage would not stimulate markets. It would more likely cause local governments to rely on funds from the state too much. This would not promote further purchases of recycled tire playground surfacing material, or any other recycled material. In addition, the scrap tire fund was never intended to be ongoing support.

I have attached to our testimony an article quoting Mr. Michael Blumenthal, of the Rubber Manufacturers Association, that explains this point further.

Second, we would like to suggest taking out the words "and install" on line 14. Our members are concerned that with limited funds for recycled waste tire grants, too much could be consumed for construction of the playground. Such expenses as labor, excavation, sidewalks, playground equipment, etc. could be considered under installation expenses. This outlay of money would do nothing to help increase the use of recycled tires.

Third, also on line 14, we would add "or other products" to broaden the scope of eligible products for grants. Our members don't understand the need to limit this to just playgrounds. There are many products made from recycled tires.

Finally, the MATDA understands that repealing (5) lines 7 to 11 would allow KDHE to use returned or unused grant funds for the waste tire program. In the past returned funds were used for other purposes and opportunities were lost. We feel this would be an improvement for the program.

With the above changes, MATDA would like to urge your support and passage of SB 146.

On behalf of our membership, thank you again for allowing me to express our concerns.



# BIGGER, FASTER, STRONGER MARKETS

**S**ince 2003, the U.S. scrap tire marketplace has experienced several significant changes. In 2005, end-use markets consumed nearly 87 percent of the scrap tires generated in the U.S. (259 million scrap tires to market of the 299 million scrap tires generated), up from 80 percent in 2003 (233 million tires to market out of the 290 million scrap tires generated). By weight, the Rubber Manufacturers Association (Washington) reports that 82 percent of scrap tires were consumed by end-use markets.

This growth was primarily due to increased consumption of tire-derived fuel (TDF). In 2005, TDF markets consumed more than half of all tires that went to a market (155 million or 51 percent, up from 41 percent). Ground rubber markets experienced modest growth, which off-set the slight decrease in the number of tires consumed by civil engineering applications. The consumption of all of the other, smaller-scale markets remained constant.

Other significant changes occurred during this period. Notably, scrap tire stockpiles contracted by 87 million tires. The 2005 data shows that 188 million tires currently are stockpiled, representing a massive reduction since 1990, when an estimated one billion scrap tires were stockpiled. Additionally, the overall market infrastructure appears to have become more stable. While these advances most certainly are welcome, some disturbing trends at the state level have emerged as well,

The 2005 U.S. scrap tires market survey indicates positive progress in market growth and stockpile reduction, though increased regulatory enforcement may still be needed for the industry to enjoy long-term success.

by Michael Blumenthal

which, if left unchanged, could limit the future growth and stability of scrap tire markets.

#### **Tire-derived fuel**

Tire-derived fuel (TDF) experienced the most dramatic growth in this period. At the end of 2005, 117 separate facilities were permitted to use TDF. Total annual TDF consumption was approximately 155 million scrap tires (2.14 million tons). Climbing energy costs, especially for energy intensive industries (e.g., cement manufacturing, pulp and paper mills, and power generating facilities) provided an incentive to search for less expensive alternative fuels, including TDF.

Several TDF market trends were notable. Several facilities began using TDF from 2003 to 2005, but most of the growth came from

facilities already using TDF, driving dynamic changes in the marketplace. Increased demand for TDF and the higher market prices that followed have facilitated improvements in fuel chip quality and consistency, and have increased the economical delivery radius of TDF beyond the traditional 150-mile limit.

Most significant, though, is the increased relative value of the material. TDF can no longer be considered a low-value-added product. In fact, the only other tire-derived product that has a higher value than high-quality TDF (one-and-one-half-inch minus) is ground or coarse rubber. The increased demand and greater processing capacity for TDF truly represents a triumph for the marketplace – economic forces led the way, with little to no assistance from state agencies.

Michael Blumenthal is the senior technical director with the Rubber Manufacturers Association (Washington). He can be contacted at [michael@mma.org](mailto:michael@mma.org).

two-year outlook for TDF remains positive, but several factors within this market sector should be noted. First, six facilities have discontinued the use of TDF since 2005. Although the market is large and stable overall, local or regional markets continue changing. RMA projections in 1990 indicated that about 50 U.S. cement kilns could use TDF. Today, TDF is used in 47 kilns. Another eight to 10 kilns potentially could use TDF. Consequently, the industry is rapidly approaching market capacity. Potential TDF end-users in other industry sectors will temporarily sustain the market growth for TDF and the RMA continues to evaluate potential TDF end-users.

While TDF will continue to be the largest end-use market for scrap tires, this market may approach full capacity in the near term. Certainly this would provide for a robust and stable market, though sustained long-term growth potential would be limited.

### Civil engineering applications

In 2005, approximately 49 million scrap tires were used in civil engineering applications (639,990 tons). This is a reduction of six million scrap tires, or a nearly six-percent decrease, since 2003. In civil engineering applications, scrap tires (usually shredded) are used in construction projects in lieu of conventional construction materials (sand, clean fill, etc...). The industry has now adopted the term tire-derived aggregate (TDA) when referring to the material used in these civil engineering applications. While this was a modest decrease, expansion was projected in this sector.

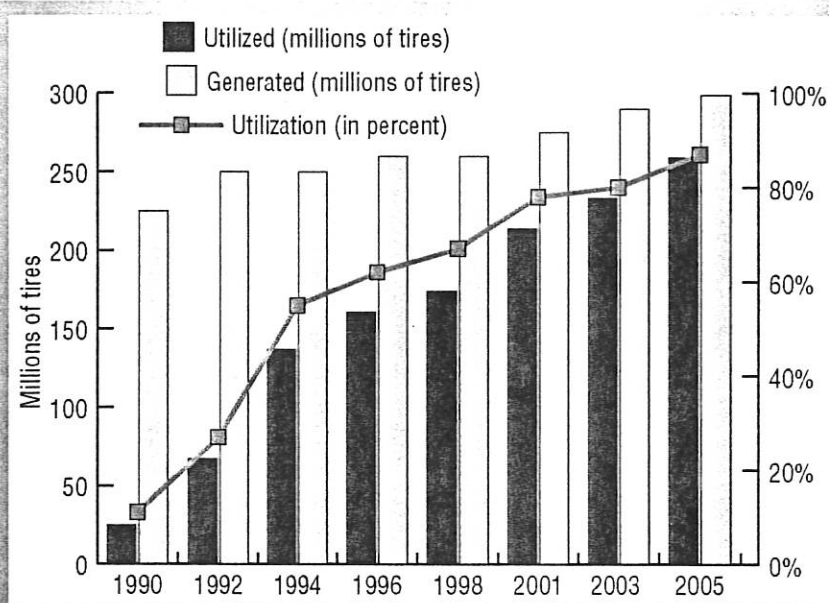
In the 2003 period, significant amounts of TDA were used in the Southeast and Gulf Coast states, where many TDF end-users are located. In 2005, increased demand for TDF limited potential supply of TDA, since the return on investment was greater for TDF.

The majority of TDA was consumed in eight states (California, Florida, Maine, New York, North Carolina, Ohio, Texas and Virginia), representing 37 million of the 49 million scrap tires. This market concentration is a concern, since the other states using TDA do so in limited quantities and less than half of the states use, allow or promote the use of TDA. TDA use is unlikely to increase dramatically, since little effort to promote TDA exists by more than half the states.

Several states restrict the use of TDA. In some cases, scrap tire-derived materials are defined as a solid waste, even after they have been processed and sold. Consequently, landfills or construction sites would have to obtain a solid waste storage permit before using TDA, which is cumbersome, time-consuming, expensive and unlikely to happen.

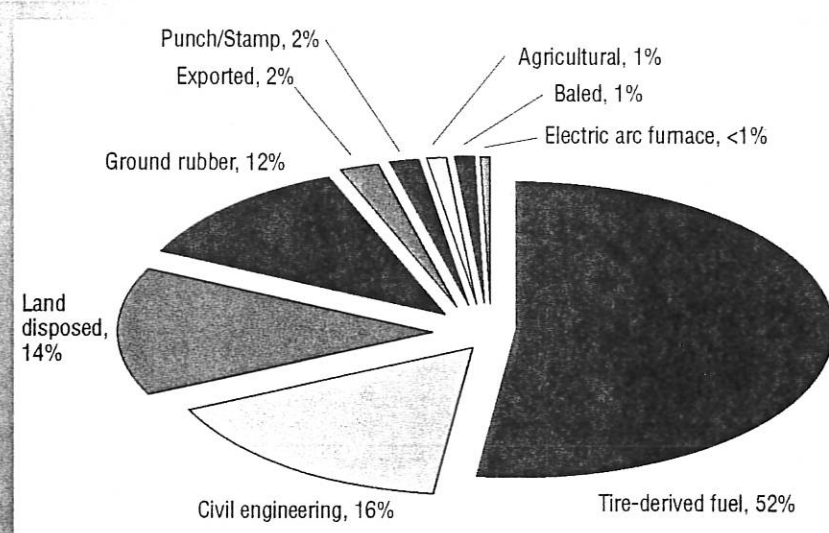
In other states, departments of water quality prohibit tires from being placed below

**Figure 1** U.S. scrap tire management trends, 1990-2005



Source: Rubber Manufacturers Association, 2006.

**Figure 2** U.S. scrap tire disposition, 2005



Source: Rubber Manufacturers Association, 2006.

groundwater levels, based on erroneous assumptions regarding the environmental impact, regardless of the engineering benefits. The process of changing each state's regulation is lengthy, with no assurance of success. Consequently, the outlook for TDA markets over the next two years is for little growth.

### Ground rubber

In 2005, about 37.5 million scrap tires were consumed by ground rubber applications (552,510 tons). This market has grown by

one-third since 2003, when 28.2 million tires were used by this market. At the same time, this market sector experienced relative stability, allowing a significant number of ground rubber processing companies to become better established. This stability can be attributed to the relatively few companies that attempted to increase ground rubber processing capacity in this time frame.

Several ground rubber processing facilities closed as well, allowing the supply and demand for ground rubber to nearly reach

equilibrium. This development is significant and welcome, since it may indicate recognition, on some level, that this industry is driven by demand, rather than supply. When new ground rubber production capacity expands without a corresponding increase in demand, the overall industry is weakened. A market correction typically follows within 18 months.

The major growth markets in the ground rubber sector have been athletic field surfacing, playground cover, horticultural products (mulch), and molded and extruded rubber products. The demand for these products has been nationwide, allowing for the production capacity of ground rubber to be widely distributed geographically. Many of these products, especially mulch and playground cover, are being sold at the retail level. All of these factors suggest a relatively stable and reasonable period of growth for the next two years, barring any sudden influx of additional production capacity.

Rubber modified asphalt, generally referred to as rubber asphalt concrete (RAC), did not expand during this period. Historically, RAC has been used in just five states (Arizona, California, Florida, South Carolina and Texas), but heavily concentrated in just three states (Arizona, California and Texas). Several possible explanations for the stagnation in this market exist, but the most profound is that the infrastructure for RAC is located in these five states. Some of the other 45 states are exploring the possibility of using RAC, with their efforts ranging from slightly interested (i.e., maybe in three to five years) to callous indifference (i.e., not in our lifetime).

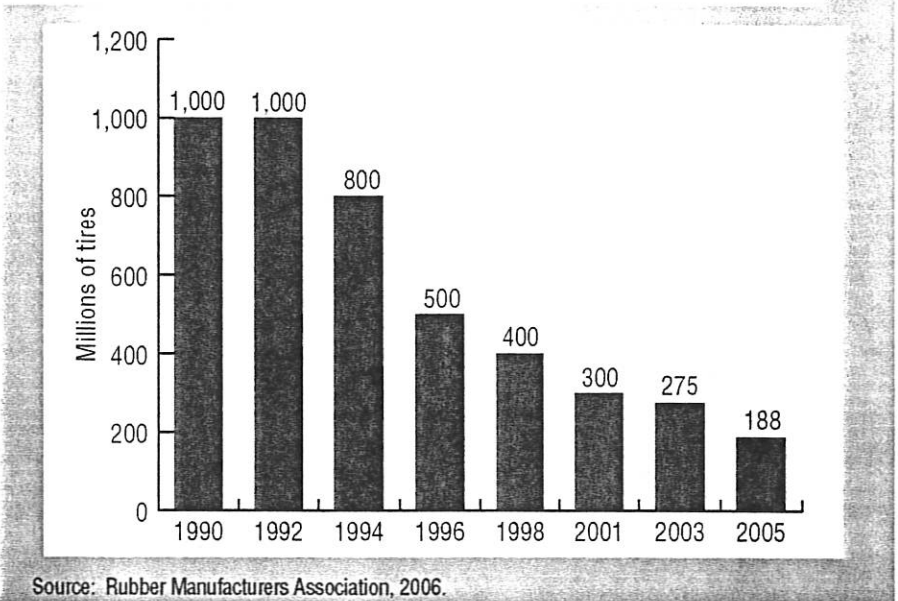
The outlook for increasing the use of RAC is not favorable, although two possibilities exist for market expansion. The first includes a Federal Highway Administration (Washington) focus on quiet-road technology (a natural fit for RAC) and the other is terminal blending of scrap tire rubber with asphalt binder. While both hold promise, any significant market impact remains years away.

### State market development efforts

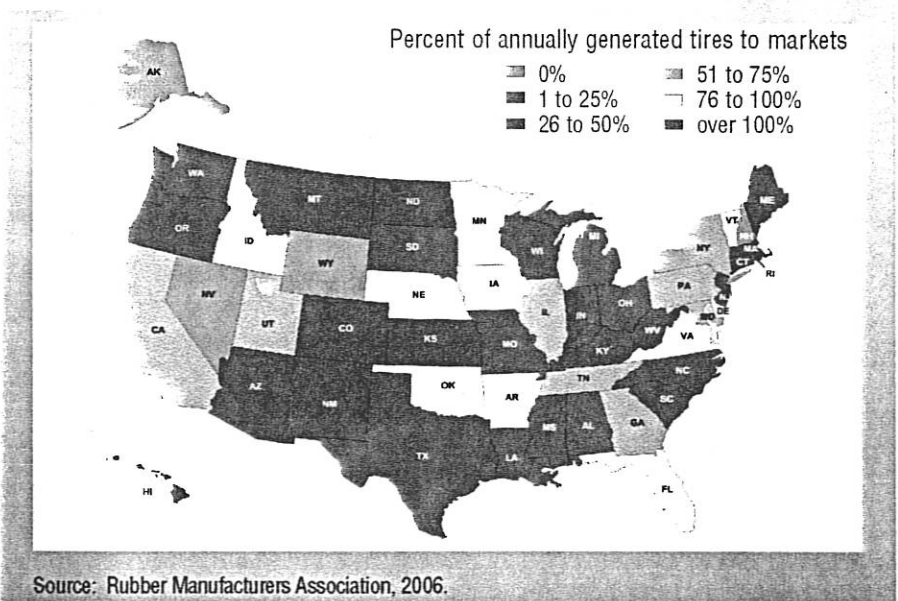
While 38 states have fees on tires, not all of these states use the funds for scrap tire programs. Of the 36 states using some funds for scrap tire programs, not all of these states focus on market development; several states simply use the funds for stockpile abatement.

When states do focus on market development projects, the majority of their efforts have been on advancing the markets for ground rubber. Several states are funding various TDA projects, but these typically are demonstration projects, which serve to postpone any real market impact for some three to five years. When states focus on expanding ground rubber markets, grants are often used to increase pro-

**Figure 3** Millions of scrap tires remaining in U.S. stockpiles, 1990-2005



**Figure 4** U.S. state scrap tire market percentages, 2005



duction capacity, which actually serves to undermine market stability.

When states do seek to expand recycled rubber products sales, one of the more popular mechanisms is awarding grants for the purchase of rubber products, typically playground cover or RAC subsidies. Once grants are awarded, the grantee readily purchases the designated product. However, reports from the processors selling these products indicate that such grant programs do not create secondary sales. It would seem that the grantees are content to wait for the next grant cycle before purchasing any more of these

products. If the purpose of these grants is to expose the public to these products, thus stimulating private sales, this approach does not appear to be successful.

Recently, California and Kansas changed their approaches to such grants, requiring grant recipients to submit reports on the experiences of these products. Over time, these reports will be used to chronicle the experiences – expected to be positive – for distribution to the public. In theory, promoting the positive aspects of these products (improved safety, no environmental issues, durability and performance) will give the public confidence in

products, thus stimulating sales.

A significant concern is that many states simply are not focusing any attention on scrap tire issues. This was evident in several ways. In some states, no one is assigned to track scrap tires issues, while some states simply did not respond to the RMA survey questionnaire at all. Many states have new personnel assigned to scrap tires with very limited exposure to this topic, reducing the likelihood that they can adequately engage in projects designed to develop markets, abate stockpiles or enforce the state's regulations.

Perhaps the most disturbing aspect of certain state scrap tire programs is where a state declares victory in the fight to eliminate stockpiles and establish markets for scrap tires. These states then use the remaining scrap tire funds for non-tire related projects, only later having to address new scrap tire problems.

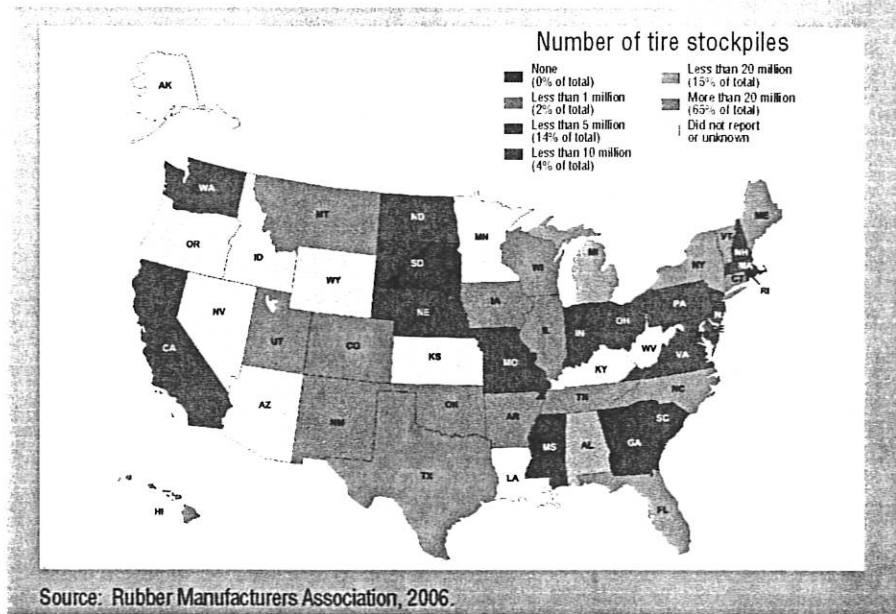
### Stockpiled scrap tires

In 2005, some 188 million scrap tires remained stockpiled. The data indicates a reduction of 87 million scrap tires from piles over the last two years. While some very aggressive stockpile abatement (Iowa, Michigan, Ohio, Texas and Virginia) undoubtedly occurred over the last two years, two other factors contributed to this decrease:

- ◆ Once a state begins abating stockpiles, estimates of how many tires remain in piles typically improve. Several states reduced their estimates of the number of stockpiled tires by this method, suggesting that the original estimates of the number of tires in stockpiles were probably inflated.
- ◆ Several states (Massachusetts, New Jersey, Pennsylvania and Washington) reduced estimates of stockpiled tires even though the states did not engage in any stockpile abatement projects the last two years.

The outlook for further reduction of stockpiled tires is mixed. Several states (Alabama, Michigan, Ohio and Virginia) will continue or begin aggressive abatement programs. While this obviously will have a positive impact, six states that contain almost 80 percent of the stockpiled tires (Colorado, Con-

**Figure 5** Scrap tires remaining in U.S. stockpiles, 2005



necticut, Massachusetts, New York, Pennsylvania and Texas) either have no abatement program, must rely on annual legislative allocations or are experiencing problems starting abatement programs. The key to further dramatic reductions in stockpile inventories lies in establishing a dedicated fund for stockpile abatement or the designation of tire funds for abatement.

### Keeping the pressure on

The past year saw overall scrap tire market growth, dramatic reductions in stockpiles and stockpiles remaining in just a few states. The Northeast, Atlantic Coast and Southeast generally enjoy strong market demand, but some areas within this geographic region still need markets. The remainder of the country has only market pockets, with large areas lacking sufficient market demand and infrastructure.

History clearly shows that markets come and go on a regular basis, which impacts all other markets. Experience also reveals that

regulatory enforcement helps keep the scrap tire infrastructure operating in an efficient manner by leveling the playing field for all involved in the scrap tire industry.

Finally, state scrap tire funds should be targeted at scrap tire stockpile abatement and market development programs. Even a state with a strong scrap tire market infrastructure needs to maintain a basic funding level to enforce state regulations and avoid the potential reappearance of scrap tire stockpiles. The long-term success of the scrap tire industry will be a function of continued market infrastructure advances and vigilant state oversight, leadership and enforcement. **RR**

*Scrap Tire Markets in the United States, 2005 Edition* can be downloaded from the RMA Web site at [www.rma.org/scrap\\_tires](http://www.rma.org/scrap_tires).

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