Kansas Rural Development Council

Kansas Crossroads: The Future of Rail Freight Movement in Rural Kansas

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Kansas Crossroads

Kansas is situated in the middle of the contiguous United States and consequently in the middle of most market transportation routes. Therefore, it comes as no surprise that Kansas ranks in the top ten states for miles of highway and miles of rail. Railroad mileage was at its zenith in 1917 with 9,363 miles of track. While one can not expect the state to need that much track in the 21st century, the state needs to keep what it left today. Currently Kansas has:

- 4,465 miles of railroad track
- 2,351 miles track owned and operated by Class I railroads
- 2,114 miles of track owned and operated by Class III (short-line) railroads (47% of all railroad track in Kansas)

While much of the track that has been lost in the past was do to the growth of the highway system and the increased competition from truck traffic, the rail abandonments of recent years can not be easily remedied by increased truck usage and the result directly impacts rural Kansans. Figure 1 shows the miles of track abandoned and the decades during which the abandonments occurred.[1]

Since 1982, Kansas has lost approximately 40 % of its rail through abandonment and during the same period of time, the ton-miles of freight moved by rail increased three-fold. Even with the increased freight movement, over 200 miles of track are slated to be abandoned within the next few years. Of the 207 miles of rail line on the chopping block, 48 % of this track is owned by short-line railroads.[2]

No one would disagree that transportation is a key ingredient for rural communities to thrive and that the lack of choice of transportation modes makes it difficult for rural communities to survive. It is a well recognized fact that rural communities need a well balanced multimodal transportation system. The freight rail system, including branch lines, mainlines, rail corridors, terminals, yards and equipment

[1] *Kansas Rail Plan 2002 – 2003*. Kansas Department of Transportation, p. 75
[2] *Kansas Rail Plan 2002 – 2003*, p.73

is an important component of this multimodal system. As this paper will demonstrate, the freight rail system, and more specifically, the short-line freight rail system, is a vital component of the multimodal transportation system and it is especially important to rural communities where grain production is an integral part of the local economy

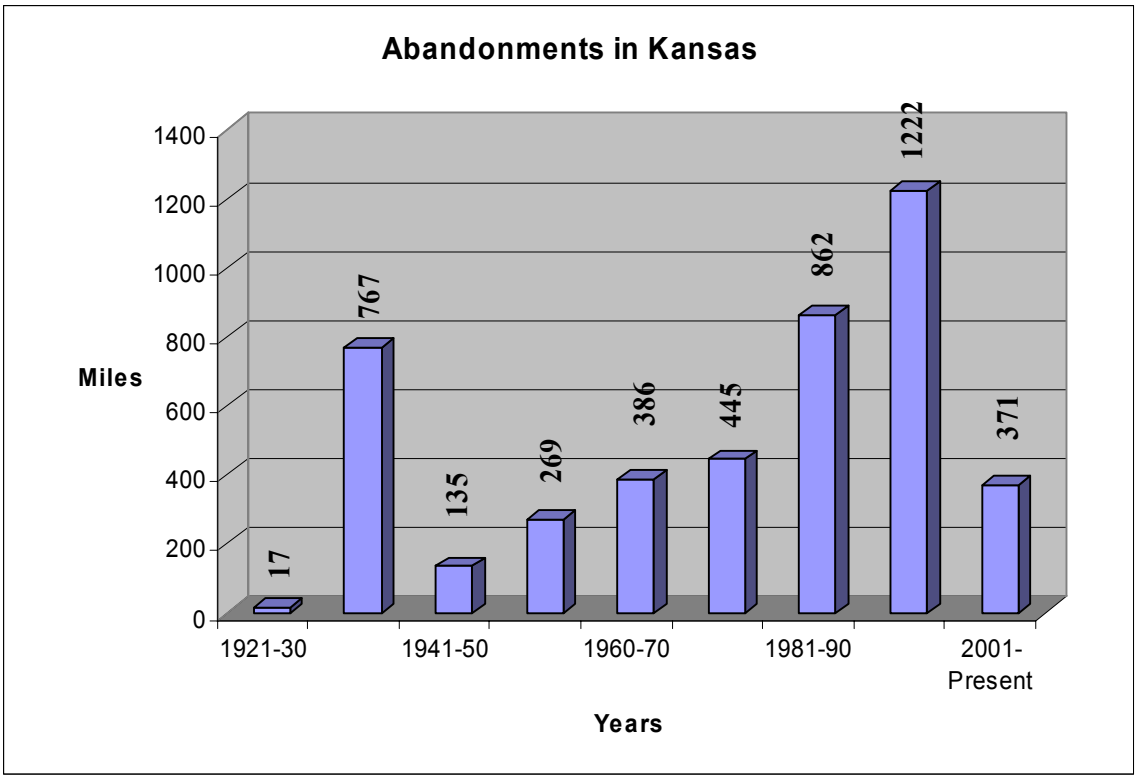

Figure 1

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The loss of a freight rail system is devastating to rural communities. Lost rail service impacts not only the shippers but it also effects farmers and local government and the entire community. Some of the most significant impacts on rural communities are:

- Lower grain prices received by farmers.
- Higher transportation costs and lower profits for rail shippers.
- Loss of market options for shippers.
- Possible loss of businesses directly and indirectly tied to rail shipments.
- Lost economic development opportunities in rural communities resulting in less diversification of employment.
- Higher road maintenance and reconstruction costs.

Rail abandonment alters the delivery to market for many commodities. In addition, the resultant motor vehicle freight traffic increases the burden on state highways and county roads. In many cases, the cost of maintaining and upgrading the state highways and county roads exceeds the cost of maintaining rail freight service. **A national study states that over one-half of the direct economic impact will be incurred by farmers.**[3] Lower grain prices due to higher shipping costs (as much as 10 to 12 cents per bushel) essentially wallop the farmer's balance sheet from two directions, lower revenue and increased production costs. Ultimately, the farmers, shippers, residents and businesses of rural communities, through increased taxes, pay for increased road and bridge maintenance which easily can reach into millions of dollars.

Movements from production origins to country elevators by farm truck, result in increases in road damage costs by 43 % after a rail line has been abandoned. Similarly, for movements from country elevators to terminal elevators by commercial truck, road damage costs increase by 50 % after abandonment.[4] It is rare that a county experiencing rail abandonment will experience increased valuation.

Rural Rail Forum

The Kansas Rural Development Council (KRDC) became involved when a new round of rail abandonment was scheduled for South Central Kansas in 2000. The production of grain is prevalent in this area of the state and rail service is critical to the sustainability of rural communities. Following the pattern of rail abandonment in the past, strategic loss of track could lead to greater rail abandonment that could affect a larger portion of South Central Kansas as well as Southwest Kansas.

Initial fact-finding led to interviews with impacted businesses in communities along the track slated for abandoned. After this process, it was determined that there was no clear cut recourse for communities along abandoned track and a plan of attack was needed. The next step led to interviews and discussions with the following interest groups and stakeholders:

- Operators of Class III Railroads (short-line railroads)
- Legislators in South Central and Southwest Kansas
- Legislators on the House and Senate Transportation Committees
- Grain shippers in South Central and Southwest Kansas
- Kansas Department of Transportation
- Representatives from the Port Authority operating a short-line railroad

[3] Keith A. Klindworth and John A. Batson, Economic Impact of Proposed Kansas Rail Abandonments. Agriculture Marketing Service, U.S. Dept. of Agriculture (Washington, DC, June 1990), p.25
[4] Michael Babcock, Professor of Economics, Kansas State University, Testimony before The Special Committee on Rail Transportation, Kansas State Legislature, 1998

- Associations representing shippers and producers
  - Kansas Grain and Feed Association
  - Kansas Farm Bureau
  - Kansas Farmers Union
- The Kansas Association of Counties
- Transportation experts who have had experience with the Surface Transportation Board
- Economists with expertise in short-line railroads
- U.S. Departments of Agriculture and Transportation

The salient points that emerged from these early discussions with the aforementioned groups and the transportation experts on the dais at a public forum were simple and straightforward. However, this does not mean this was easy to accomplish. Local initiative, regional trust and action, statewide policy change and public/private partnerships are necessary for Kansans to save their short-line railroad infrastructure.

1. Kansas lacks a clear policy on rail line abandonment. While the Kansas Department of Transportation has a low interest loan and grant program for Class III Railroads, primarily designed to assist with major track rehabilitation projects, there is no clear policy for helping communities facing track abandonment. In some cases, the low interest loans have been made to companies that were abandoning track within the boundaries of the State. Studies show that the cost of truck traffic rises exponentially to the ton-miles carried. Kansas's taxpayers, in some cases, subsidize railroads through the loan and grant program and pay for additional costs of truck traffic in the same areas. In some areas of the State, the removable of diamonds and the paving over of track have further degraded the rail infrastructure.

2. Not all costs associated with lost rail service to rural communities are immediately noticed by the residents. If the increased maintenance costs of roads in the county are included into the profit formula for short-line rail operations, in some cases, it would be advantageous to continue the operation of the rail. In other words, local government needs to understand the high cost of road and bridge repair. Currently, trucks pay only two-thirds of road costs through taxes and fees associated with usage.

3. More study was needed to measure the potential economic losses suffered by shippers, producers and communities when rail line is abandoned. Traditionally when a rail line is abandoned, railroads have concentrated on showing financial insolvency on the rail line in question, leaving impacted communities to argue, without hard economic facts, the economic hardship to their respective community. Estimating economic impacts on communities have to be based on loss of income, additional road damage costs and loss of property taxes. A 1990 rail abandonment study of 480 miles of track in Kansas showed that the direct loss would be approximately $2.3 million per year. This figure did not consider the potential multiplier effects, which could greatly increase the total costs of abandonment.[5]

[5] Keith A. Klindworth, et. al., p.23

Obviously, measuring the community impacts of abandonment of rail service is more complex than measuring operating losses suffered by a railroad. Greater usage of regional input/output models along with other economic models is needed to support the community's case. The results should then be made readily available to local communities.

4. A public entity that has the authority to purchase and maintain existing rail is necessary for the continuance of a freight rail system. A port authority that has jurisdiction in all of the impacted counties is the most logical and possibly most cost efficient method of maintaining rail service to our small rural communities. The port authority could operate in a multi-county area with a board of directors having the authority to purchase rail line, seek financing, upgrade track where necessary, enter into contracts and lease track to short-line railroad operators. Legislation is in place for the creation of a port authority and a large multi-county port authority is in existence. While the establishment of such an entity would be difficult to say the least, it is not impossible. "The first step of many is to build support with community leaders and county commissioners. Their support, along with shippers and producers and a lot of hard work can make it happen."[6]

Stakeholder Meeting

A public forum conducted in January 2000 led to the creation of a broad-based task force of stakeholders. Their charge was to develop a long range program to overcome the deficiencies in rail development that included stemming the tide of rail line abandonment and keeping the existing rail infrastructure in place. A white paper was developed to provide background information and a clear understanding of the problem and an organizational meeting was conducted. This meeting was designed to give the participants the necessary information on rail abandonment and solicit their assistance in accomplishing this program. State Senators and Representatives from South Central and Southwest Kansas, U.S. Senators and Representatives, County Commissioners, Kansas Department of Transportation representatives, rail shippers, producer groups, representatives from the railroads and Kansas State University all received a copy of the white paper and were asked to participate. The task force also brought together the various associations asking for their legislative support to accomplish this task. The Kansas Farm Bureau, the Kansas Grain and Feed Association, the Kansas Wheat Growers Association, Kansas Corn Growers Association and the Kansas Association of Counties agreed to help with this project during the subsequent legislative session.

The long arduous task of working through the various facets of rail abandonment in Kansas was very productive in the short term but much needed to be accomplished before rural Kansas communities and agriculture producers could feel more confident about the long term stability of the short-line railroad transportation networks. After much discussion with stakeholders and policy makers, four major issues surfaced and

[6] Cy Moyer, President, first National Bank, Phillipsburg, Presentation before the Kansas Rural Development Council Rail forum, January 5, 2000

were adopted by the Kansas Rural Development Council and the task force. These issues were:

1. Ask for legislation to create a non-binding resolution to temporarily declare a moratorium on rail abandonment.
2. Pursue multi-county port authorities where possible.
3. Develop a Kansas rural transportation plan.
4. Develop an economic model to help local governments determine the costs of lost rail service.

The results of the efforts of those involved with the task force have been quite rewarding for the rural communities in Kansas. First and foremost, The Kansas Rural Development Council and the taskforce were able to help save the threatened rail service in South Central and West Central Kansas. With the immediate emergency quieted, the Council was able to focus its energy on the long range problems facing short-line railroads: research into the impacts of lost rail service to rural communities and the development of a long range policy to keep all modes of transportation available to shippers and producers.

To date, the Kansas Rural Development Council has been able to:

- Foster an environment that created the sale of over 900 miles of endangered short-line rail service in South Central Kansas, thus keeping the service operating
- Educate shippers and communities on the processes of warding off threatened abandonments
- Obtain a **$150,000** grant from the Kansas Department of Transportation for the study and the development of a model to predict costs associated with lost rail service. The Kansas State University study (Economic Impacts of Railroad Abandonment on Rural Kansas Communities by Prof. Michael Babcock) has indicated that Kansas will have to spend an additional **$57.8 million** on road repair if short-line rail service in the study area would be abandoned and an additional **$20.7 million** in grain handling costs would be incurred by producers.
- Conduct, with a $10,000 grant from the U.S. Department of Transportation, a series of public forums to discuss county specific road maintenance costs, and solicit public input for future policy recommendations and begin the dialog to bring about a rural transportation plan for Kansas.

Public Forums
December, 2003

In December of 2003 the Kansas Rural Development Council hosted a series of public forums designed to disseminate county specific information on road damage estimates if short-line rail service would be lost in Western Kansas and solicit input for future policy discussions. Since the majority of grain is produced in the western two-thirds of Kansas, only the counties in the corresponding crop reporting districts were used

in the study and consequently the sites for the public meetings. At these forums current research data developed by Kansas State University was presented to stakeholders and both the stakeholders and public were asked for input on possible long-term remedies for rural freight service. The forums were based on a three-step process:

1. The development of empirical data that was both current and practical. As mentioned earlier in this paper, the research was conducted by Kansas State University with funding provided by the Kansas Department of Transportation. The two studies that were the source of the data presented at the public forums are:
   - Economic Impacts of Railroad Abandonment on Rural Kansas Communities, Report No. KS-03-4 by Michael W. Babcock, July 2003
   - Impact of Kansas Grain Transportation on Kansas Highway Damage Costs, Report No. K-Tran: KSU-01-5 by Michael W. Babcock, March 2002
   - Both of these research reports can be found in their entirety on the Kansas Department of Transportation website: http://www.ksdot.org/burrail/rail/publications/publmap.htm

2. The list of stakeholders was refined and their representative organizations were contacted to help advertise the upcoming forums. The publicity for the forums was then sent to the member associations representing producers, shippers and local government for dissemination through their channels. Two different news releases were prepared and distributed through the Kansas Press Association. All elected State Senators and Representatives in the study area received individual invitations. Through the use of a press clipping service, we found that the coverage of the event was excellent.
3. A cadre of knowledgeable transportation experts was assembled to present data and answer questions. Representatives of the Kansas Department of Transportation, the two major short-line railroads operating in Kansas and Kansas Rural Development Council representatives were presenters at these forums.

The program started with an overview of the current situation of lost rail service and the increasing use of motor carrier to haul grain produced within the area. Between 1998 and 2001 91.2% of all wheat produced in the State was produced in the study area. This area also accounted for 79.6% of all sorghum, 80.9% of all corn and 38.9% of all soybeans produced. Of all grains produced, these crop reporting districts accounted for 81.6% of all major grains produced in Kansas.[7]

Figure 2 depicts the share of grain shipped by truck in 1990 and 2000.

In a survey of Kansas shippers conducted by Prof. Michael Babcock, some of the most frequently mentioned reasons given by shippers as to why trucking has increased its grain hauling in the past ten years were:

[7] Michael W. Babcock, James L. Bunch, James Sanderson and Jay Witt, *Economic Impacts of Railroad Abandonment on Rural Kansas Communities*. Kansas State University (Manhattan, KS, July 2003), p.1

- Truck service is more frequent and dependable than rail service
- Truck rates are lower than rail rates
- Uncompetitive rail rates

Structural changes to grain handling have also contributed to the increased usage of motor carrier. These are:

- Construction of shuttle train stations on Class I main lines
- Fewer, larger farms giving way to larger farm trucks
- Increasing size of rail grain cars

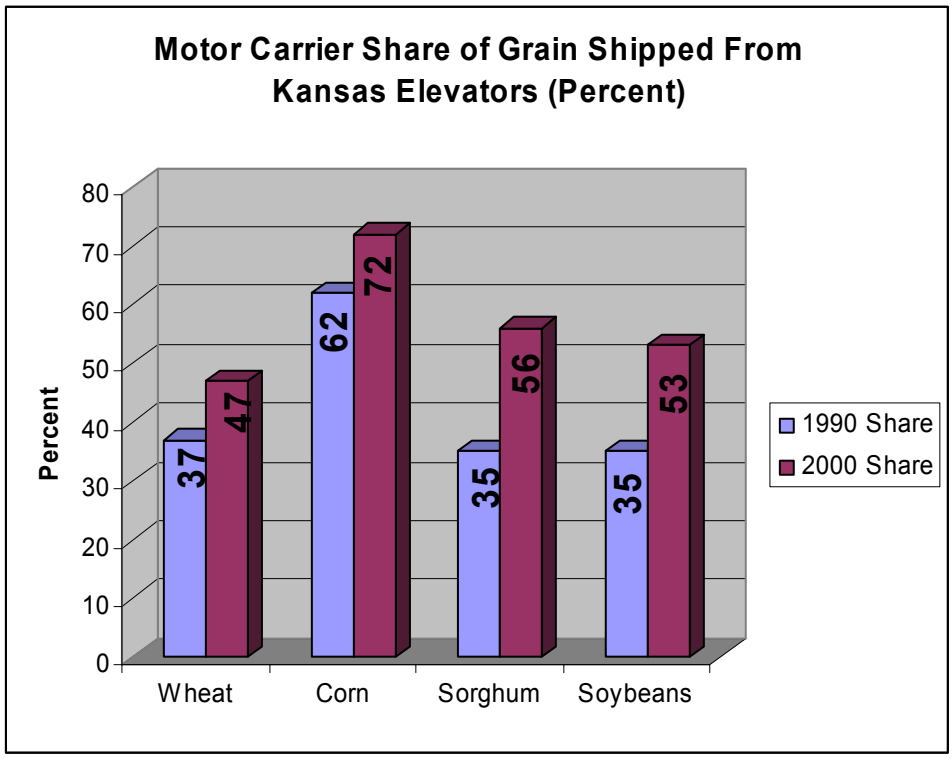


Figure 2

Since grain is the most important commodity shipped by short-line rail in Kansas, lost shipping to motor carrier directly affects the profitability and the economic viability for a sustainable operation. The potential effects of lost short-line rail service are:

- Lower grain prices received by farmers
- Higher transportation costs and lower profits for rail shippers
- Loss of market options for shippers
- Lost economic development opportunities for rural communities
- Loss of local tax base needed for basic government services
- Potential increases in highway accidents due to increased truck traffic
- Increased road damage costs on county roads and state highways

The research presented at these forums had three major objectives:

1. Compute the changes in transportation and handling costs due to short-line railroad abandonment
2. Calculate additional highway accident costs and benefits attributable to increased incremental truck traffic resulting from short-line railroad abandonment
3. Compute the increase in truck attributable road damage cost to Kansas County and State roads as result of short-line railroad abandonment

Transportation and grain handling costs were projected from a logistics system based on the shipping of wheat only. Since the greatest quantity of wheat is shipped via short-line rail it was used for the model. The model traced the flow of wheat from the farm field to terminal markets. Costs were determined based on the typical shipment of grain of which short-line railroad was used where it was normally used and then without short-line railroad service. Based on this model, loss of short-line railroad service for the shipment of wheat could cost Kansas producers an additional $20.7 million annually in additional transport and handling costs.[8]

The county road damage estimates were based on an incremental road damage model that has been an industry standard for a number of years. The theory behind the model is that when railroad service is lost, the freight will he moved by truck, increasing the ton-mile traffic on the existing road system. The American Association of State Highway Transportation Officials (AASHTO) procedures were used to estimate pavement deterioration rates. Engineering coefficients of truck axel weight in relation to road thickness and composition were used as the variables in the model. A survey conducted by Prof. Babcock of the counties in the study area provided the researchers with the miles of road and types of roads and road conditions in each county. The survey found that the typical county in the study area had an average of 784 miles of road with a high of 1608 miles and a low of 214 miles. Based on the research, the annual cost to the 66 counties in the study area additional road maintenance was $58.7 million. When that figure is reduced by incremental fuel tax revenue do to additional trucking, the net cost is $57.5 million.[9]

The computation of highway accident costs was accomplished through the use of a safety cost-benefit model. The basic assumption of this model is that if the short-line railroads were lost, all shipments would then proceed by truck, thus increasing the number of trucks on the state highways and county roads. The cost is equal the increased truck miles times the number of accidents per mile traveled times the cost per accident. The benefit side of the equation is calculated by a decrease of active rail crossings due to the loss of short-line rail service times the accidents per rail crossings times the cost per accident. The interesting result of this analysis was that lost rail service would bring a positive benefit in the traffic safety costs. While the costs of fatalities, non-fatal injuries

[8] Michael Babcock, et. al., p. 73
[9] Michael Babcock, et. al., p. 119

and property damage equaled $1.3 million the benefit of fewer rail crossings was $2.7 million resulting in a net benefit of $1.4 million.[10]

Since the Staggers Act in 1980, the rail industry is better positioned to fulfill the shipping role for Kansas producers. The Staggers Act has allowed the number of short-line railroads and regional railroads to more than double in number. In the United States, short-line and regional railroads account for over a third of all freight hauled by rail. But, the demand for large amounts of capital to operate has been a problem and has choked off potential growth. Since many of the lines operated by short-line railroads are old Class I lines, deferred maintenance has led to degradation of much of the short-line railroad infrastructure. The industry change to 286,000 pound heavy axel load jumbo grain hopper cars is creating an increasingly large demand for more capital for both short-line railroad system infrastructure and cars. By the year 2010 Union Pacific expects the 286,000 pound cars will account for 60% of their grain car fleet, while Burlington Northern Santa Fe expects these cars to amount to 50% of the grain car fleet. Even with these problems looming on the horizon, short-line rail is positioned to be an efficient mode of freight movement, especially in our rural areas. The advantages short-line railroads have over trucks are:

- Lower cost for freight hauled over 250 miles
- Utilizes fuel more efficiently
- Designed for movement of bulk commodities such as grain and aggregate without damaging highways, roads and bridges

Recommendations

Comments received at the public forums covered a broad range of topics; from direct government intervention on the operation of rail to a *laissez-faire* attitude of let the market dictate the winners and losers, and from the need for better highways to handle increased truck traffic to the diversion of as much freight traffic to rail as possible. However, one overarching fact that couched all comments was cost, either for rail or roads. At all sites, no one looked at lost rail service as just a freight hauling issue. Everyone present looked at this issue as an economic development issue that affected all persons within the rural community and ultimately, the State. As a farmers' cooperative manager stated at one of the public forms: "When an elevator is bypassed and grain is hauled elsewhere; that local elevator is financially hurt and possibly requires closure a good part of the year if not for good. This means loss of jobs at the elevator that may have offered other farm supplies, fuels and etc.; this in turn would be shopped for out of town. Everyone loses in this situation." Communities that lost rail service lost one important artery to the community. Everyone felt that the loss of one artery led to the over dependence on another and in this case the use of motor carriers. The participants also felt that the loss of transportation options led to less competitive rates for the hauling of their commodities and for local communities to compete in a global market they needed all options available.

[10] Michael Babcock, et. al., p. 129

Many of the individual comments generated at the public forums were grouped into the following general areas:

- If rail service would be lost to a specific community, freight rates charged by truck would increase due to the loss of competition.
- At peak hauling times there may not be enough trucks available to haul the grain.
- More large farm trucks are in use.
- Greater farm storage capacity.
- Rail service is necessary to make ethanol plants cost effective
- Some of the attendees with first-hand knowledge of road damage felt that the estimates for the individual counties were too conservative or underestimated the actual pavement degradation. Unpaved county roads were not included in the cost analysis.
- The State should buy grain cars and lease them to shippers when needed.
- Communities lost jobs when rail service was lost.
- Communities lost options when pursuing economic development opportunities if rail service was not available.

Incremental road damage estimates for counties if short-line rail service would be lost was the most interesting data presented to the groups at the public forums. This gave the attendees an idea of the amount of tax dollars their individual counties would have to raise in order to pay for the additional road maintenance from increased truck traffic. Based on the dependence of short-line rail service and amount of grain produced the annual maintenance costs were deduced. Two counties had annual increased maintenance costs of over $ 6 million. One was Sedgwick County with a population of over 450,000 with the city of Wichita driving its economy and the other was Greeley County with a population of less than 2,000. The question arises; "how does a county such as Greeley pay for this increase?"

Figure 3 shows the cost of road damage repair in each Western Kansas Crop Reporting District based on the average crop production for the years of 1998 through 2001.[11] The actual county cost estimates are available in the attachment following this text. The county population numbers were included to demonstrate the extreme financial burdens some counties will face.

Recommendations will be presented at two levels. The first set of recommendations will be directed toward National policy issues and the second set of recommendations will be Kansas specific. Participants recognized that the future of rail freight movement is interrelated with other modes of transportation and a strong National policy is necessary for states to be able to be effective in their respective policy development.

[11] Michael Babcock, et. al., p.p. 112 - 115

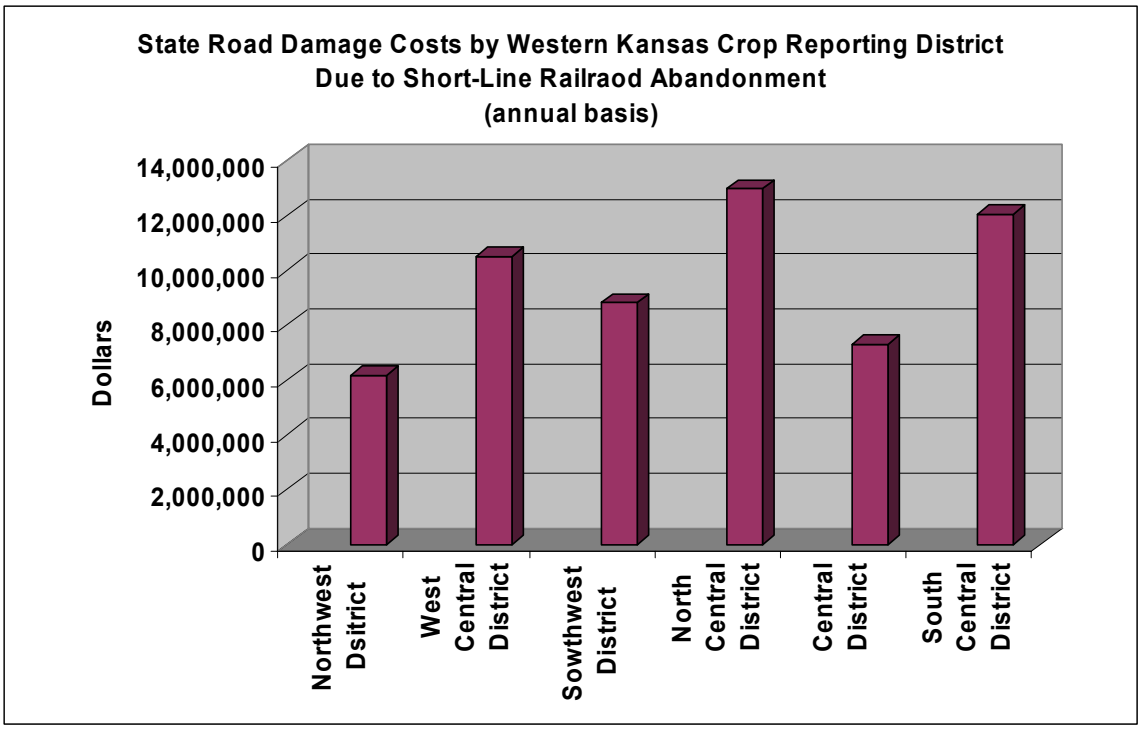


Figure 3

National

National Policy Recommendations:

- The U.S. Department of Transportation needs to deemphasize highways and spend more time educating the public about all modes of transportation. It is true that the majority people are most familiar with highway programs. However, the benefits of multimodal transportation, especially containerized freight, are more pronounced now than they were in the past and their benefits need to be better articulated.
- Transportation dollars spent on rail infrastructure are not mutually exclusive with dollars spent on highway infrastructure. The public needs to better understand that dollars spent on rail will lead to a savings of highway expenditures.
- Fuel efficiency for hauling freight by rail needs to part of the National Energy Policy. Public awareness of the long haul fuel efficiency of railroads needs to be better articulated.
- The Railroad Rehabilitation and Improvement Financing (RRIF) Program set aside for other than Class I railroads has been criticized for its inaccessibility for small railroads and it penalizes the railroads it is designed to help through high interest rates and especially the credit risk premium. Suggestions range from lowering the interest rate to eliminating the credit risk premium. While it is acknowledged that the credit risk premium has been simplified with an online calculator the fact remains

that it hinders borrowing for rehabilitation and building critical infrastructure.

- A tax credit bill has been introduced in the 108th Congress, H.R. 876, designed to provide a credit against federal income tax for expenditures for the maintenance of railroad tracks of regional and short-line railroads. It was believed that this will be quite beneficial for the Class II and III railroads.
- There is a need for an open National dialogue with state government, transportation administrators, state legislators, local government, freight user groups (shippers, producers and manufacturers) and economic development professionals on the future of freight movement. The collaboration of the respective public information groups and associations forming a private/public partnership with key federal agencies (U.S. Departments of Transportation, Agriculture, Commerce, Justice and Homeland Security) would make a good model to follow. Some of the topics that should be included but not limited to are:
  - Containerized freight movement
  - Identity preserved products
  - Terrorist threats to the freight supply system including food safety
  - Determine each individual state's stake in the movement of intrastate freight
  - Discussions on how individual states can best create multimodal efficiency in both intrastate and interstate freight movement.

While many of the recommendation listed above also apply to Kansas, a more state-specific program is necessary to address these issues. Issues such as better education as to the efficiency of rail freight movement; how tax dollars are not mutually exclusive when spent on rail rather than highways and the use of the State's low interest loan/grant program are necessary to increase the efficiency of the movement of freight.

Kansas

Kansas Policy Recommendations:

- It is important that state policy makers know the needs of their constituency. To better understand the freight issues, constituent groups need to better understand their needs and articulate them to policy makers. To make this a reality, regional planning groups need to be established. Since the movement of freight varies in each region of the state it is natural to assume that each region should help determine the best combination of transportation modes for freight movement. This could best be accomplished through the establishment of several regional transportation planning organizations that could direct input to the State's transportation administration. The boundaries of these regional planning organizations should be based on similar economic activity and road and rail usage. They could be based on current transportation district boundaries, crop reporting districts or planning area

districts. The underlying thread needs to be similar economic activity levels for each district. These transportation planning organizations would serve as a mechanism for local elected officials and stakeholders to aid in the design of a multimodal transportation plan that would capitalize the resources available to each region and create an efficient method of moving agricultural commodities and other freight. These organizations should:

- Be multi-county groups determined by sound criteria such as listed above
- Have a governing body that is representative of the local governments within the region
- Have transportation planners or direct access to them
- Provide a public forum for the cross flow of information
- Provide all necessary rail-related education for the region
- Be coordinated by the Kansas Department of Transportation

Stakeholder groups that should be enlisted are:

- City and county officials
- Agriculture producers
- Shippers of commodities and other freight
- Representative of Class I and III railroads and trucking companies
- Local economic development officials
- Transportation planners
- State elected officials from their respective region

- The State should continue and augment the low interest loan/grant program that is available for short-line railroads operating in the state
- As on the National level, the State should better educate its constituents about the benefits of an integrated, total transportation system that offers modal choice.
- A rail user's taskforce should be created to articulate regional freight issues and educate the public on the uses of multimodal transportation.
- The State should explore the possibility of buying rail cars and leasing them to shippers at peak demand times.
- The State needs to address the impact of larger grain cars (286,000 pound) on short-line railroads as fewer standard grain cars are available. Much of the fleet of standard sized grain cars (263,000 pound) has reached their useful life. It is recognized by the author, that the State's low interest loan/grant program is designed to help short-line rail companies deal with this situation, but the current level of program funding is inadequate to sufficiently help our short-line railroads with this situation.

ATTACHMENT

Slide 1

Report No. KS-03-4
Final Report

Economic Impacts of Railroad Abandonment on Rural Kansas Communities

Michael Babcock
James L. Bunch
James Sanderson
Jay Witt
Kansas State University

July 2003

Kansas Department of Transportation
Division of Planning and Development Bureau of Transportation Planning

Slide 2

Kansas Railroad Abandonment Trends

Time Period	Miles Abandoned
1970-1979	415
1980-1989	815
1990-2000	1,246
2001	335

- In the 1990-2000 period almost half of 1,246 miles were abandoned by shortlines
- In 2001, 86% of the 335 miles were abandoned by shortlines

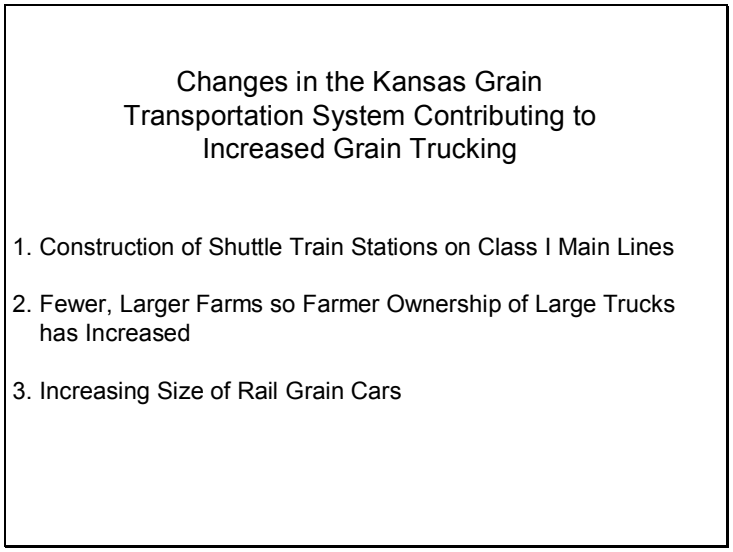
Slide 3

Motor Carrier Share of Grain Shipped
From Kansas Elevators
(Percent)

Grain Type	1990 Share	2000 Share
Wheat	37%	47%
Corn	62%	72%
Sorghum	35%	56%
Soybeans	35%	53%

Source: Kansas Grain Transportation (2001)

Slide 4


Changes in the Kansas Grain
Transportation System Contributing to
Increased Grain Trucking
1. Construction of Shuttle Train Stations on Class I Main Lines
2. Fewer, Larger Farms so Farmer Ownership of Large Trucks has Increased
3. Increasing Size of Rail Grain Cars

Slide 5

Reasons for Increased Grain Trucking
Shippers Located on Study Area
Shortline Railroads

Reasons for Increased Grain Trucking	Number of Shippers Citing the Reason
1. Truck Service is More Frequent and Dependable Than Rail Service	121
2. Truck Rates are Lower Than Rail Rates	102
3. Uncompetitive Rail Rates	94
4. Best Markets Are Not Rail-Served (Sorghum, Corn, Soybeans)	76
5. Railcar Shortages	70
6. Construction of Shuttle Train Stations on Class I Railroads	53

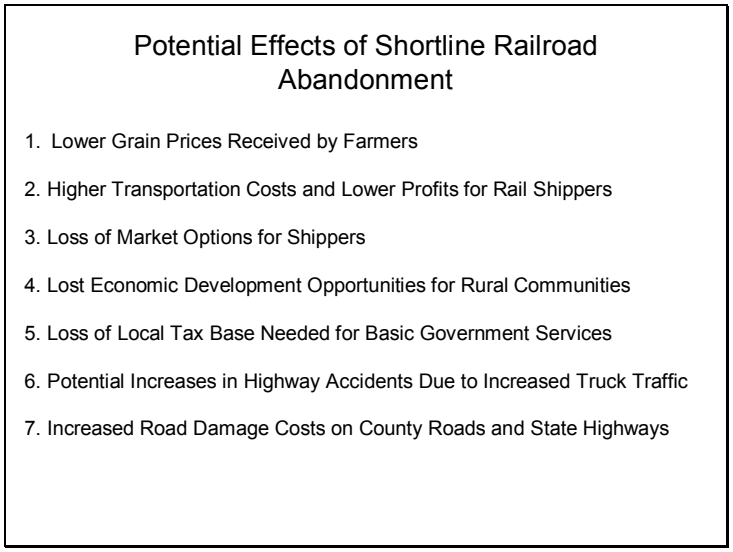
In General the Shippers as a Group Have Increased Their Grain Trucking Because They View Truck Service and Prices as Better Than That of Railroads

Slide 6

Implications of Increased Grain Trucking for Shortline Railroad Viability

1. Carloads per Mile of Track is the Most Important Determinant of Shortline Profitability
2. Grain is the Most Important Commodity Market for Kansas Shortlines
3. As More Grain is Shipped by Truck the Economic Viability of Shortlines is Threatened

Slide 7


Potential Effects of Shortline Railroad Abandonment
1. Lower Grain Prices Received by Farmers
2. Higher Transportation Costs and Lower Profits for Rail Shippers
3. Loss of Market Options for Shippers
4. Lost Economic Development Opportunities for Rural Communities
5. Loss of Local Tax Base Needed for Basic Government Services
6. Potential Increases in Highway Accidents Due to Increased Truck Traffic
7. Increased Road Damage Costs on County Roads and State Highways

Slide 8

Study Area and Objectives

1. Study Area is the Western Two-Thirds of Kansas. Accounts for 91% of Kansas Wheat Production

2. Major Objective is to Measure the Quantifiable Impacts of Shortline Railroad Abandonment Including:
   - Compute the Changes in Transportation and Handling Cost Due to Shortline Railroad Abandonment
   - Compute the Increase in Truck Attributable Road Damage Cost to Kansas County and State Roads as a Result of Shortline Railroad Abandonment
   - Calculate Additional Highway Accident Costs and Benefits Attributable to Incremental Truck Traffic Resulting From Shortline Railroad Abandonment

Slide 9

Study Area Railroads

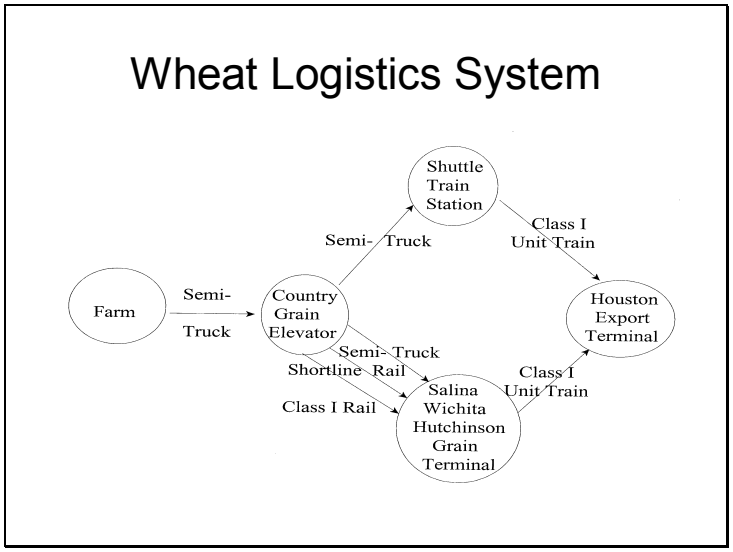
Shortline Railroads

Railroad	Kansas Route Miles
Kansas and Oklahoma	971
Kyle Railroad	482
Cimarron Valley Railroad	186
Nebraska, Kansas and Colorado Railnet	122

Class I Railroads

Railroad	Kansas Route Miles
Burlington Northern Santa Fe	1255
Union Pacific System	2049

Slide 10


Wheat Logistics System
Shuttle Train Station
Class I Unit Train
Semi- Truck
Semi-
Truck
Farm
Country Grain Elevator
Houston Export Terminal
Semi- Truck
Shortline Rail
Class I Rail
Class I Unit Train
Salina Wichita Hutchinson Grain Terminal

Slide 11

EMPIRICAL RESULTS
TRANSPORTATION AND HANDLING COST
(Millions of Dollars)

	(1) No Abandonment	(2) Abandonment	(2) -(1) Difference
Total Truck Transport Cost	$34.33	$43.49	$9.16
Total Shortline Transport Cost	$10.90	0	$-10.90
Total Class I Transport Cost	$81.40	$81.40	0
Total Handling Costs	$74.76	$97.13	$22.37
Total Transport & Handling Cost	$201.35	$222.02	$20.67

Slide 12

EMPIRICAL RESULTS
ROAD DAMAGE COST ANALYSIS
(Millions of Dollars)

Abandoned Shortline	Incremental Road Damage Cost
Kansas & Oklahoma	$30.57
Kyle Railroad	$15.76
Cimarron Valley Railroad	$8.53
Nebraska, Kansas & Colorado Railnet	$2.92
Total	$57.78

Total Road Damage Cost	$ 57.78
Less State User Fees	$ 0.288
Net Road Damage Cost Due to Abandonment	**$ 57.49**

Slide 13

EMPIRICAL RESULTS
HIGHWAY SAFETY COSTS AND BENEFITS

Type of Accident	(1) Benefits	(2) Costs.	(1)-(2) Difference
Fatality	$2,057,146	$649,196	$1,407,950
Non-fatal Injury	$626,831	$622,380	$4,451
PropertyDamage Only	$14,627	$23,785	-$9,158
Total	$2,698,604	$1,295,361	$1,403,243

Slide 14

SUMMARY OF SHORTLINE ABANDONMENT IMPACTS
(Millions of Dollars)

Increased Transport and Handling Cost	$20.7
Increased Net Road Damage Cost	$57.5
Increased Highway Safety Cost	$1.3
Increased Highway Safety Benefits	$2.7

Slide 15

Policy Recommendations

1. Study Area Shortline Railroads Annually Save the State of Kansas $57.5 Million in Avoided Road Damage Cost

2. Kansas Currently Has Two Shortline Railroad Assistance Plans:
   - Federal Local Rail Freight Assistance to States (LRFA)
   - State Rail Service Improvement Funds (SRSIF)

3. Funds in the SRSIF Program Need to be Greatly Increased.To Lower the Impact of SRSIF on Shortline Debt, the State'sShare of Track Projects Should be Raised from 70% to 80%, if SRSIF Funds Are Increased

4. The Federal Government Needs to Change the Railroad Rehabilitation and Improvement Financing (RRIF) Program Which Has Not Been Used in Kansas
   - Extend Maximum Repayment Period From 25 to 30 Years
   - Lower the Interest Rate From 6% to 3%
   - Modify the Credit Risk Premium to be More User Friendly

Slide 16

TABLE 16
State Road Damage Costs by County Due to Shortline Railroad Abandonment

Northwest District		
County	**2000 Population**	**Road Damage Costs**
Cheyenne	3,165	$ 21, 819
Decatur	3,472	$ 2,053,209
Graham	2,946	$ 1,253,124
Norton	5,953	$ 473,256
Rawlins	2,966	$ 675,037
Sheridan	2,813	$ 21,563
Sherman	6,760	$ 916,807
Thomas	8,180	$ 752,167
District Total		**$ 6,166,982**

Slide 17

West Central District		
County	**2000 Population**	**Road Damage Costs**
Gove	3,068	$ 0
Greeley	1,534	$ 6,185,838
Lane	2,155	$ 349,968
Logan	3,046	$ 0
Ness	3,454	$ 974,230
Scott	5,120	$ 540,343
Trego	3,319	$ 1,795,618
Wallace	1,749	$ 0
Wichita	2,531	$ 637,797
District Total		**$ 10,483,794**

Slide 18

Southwest District		
County	**2000 Population**	**Road Damage Costs**
Clark	2,390	$ 0
Finney	40,523	$ 1,776,815
Ford	32,458	$ 149,131
Grant	7,909	$ 1,347,314
Gray	5,904	$ 261,411
Hamilton	2,670	$ 0
Haskell	4,307	$ 1,239,858
Hodgeman	2,085	$ 12,946
Kearney	4,531	$ 0
Meade	4,631	$ 0
Morton	3,496	$ 123,401
Seward	22,510	$ 2,077,117
Stanton	2,406	$ 682,659
Stevens	5,463	$ 1,148,736
District Total		**$ 8,819,388**

Slide 19

North Central District		
County	**2000 Population**	**Road Damage Costs**
Clay	8,822	$ 0
Cloud	10,268	$ 2,940,507
Jewell	3,791	$ 13,874
Mitchell	6,932	$ 3,619,645
Osborne	4,452	$ 349,559
Ottawa	6,163	$ 18,771
Phillips	6,001	$ 745,011
Republic	5,835	$ 41,382
Rooks	5,685	$ 4,637,440
Smith	4,536	$ 305, 447
Washington	6,483	$ 301,728
District Total		**$ 12,973,454**

Slide 20

Central District		
County	**2000 Population**	**Road Damage Costs**
Barton	28,205	$ 30,868
Dickinson	19,344	$ 0
Ellis	27,507	$ 0
Ellsworth	6,525	$ 0
Lincoln	3,578	$ 3,018,086
McPherson	29,554	$ 25,235
Marion	13,361	$ 0
Rice	10,761	$ 732,154
Rush	3,551	$ 473,532
Russell	7,370	$ 0
Saline	53,597	$ 3,002,508
District Total		**$ 7,282,383**

Slide 21

South Central District		
County	**2000 Population**	**Road Damage Costs**
Barber	5,307	$ 484,158
Comanche	1,967	$ 194,901
Edwards	3,449	$ 903,129
Harper	6,536	$ 99,649
Kingman	8,673	$ 2,642,997
Kiowa	3,278	$ 440,512
Pawnee	7,233	$ 527,521
Pratt	9,647	$ 220,725
Reno	64,790	$ 187,188
Sedgwick	452,869	$ 6,288,384
Sumner	25,946	$ 65,251
District Total		**$ 12,054,415**

Study Area Total Road Damage Cost **$57,780,416**

Slide 22

TABLE 17
Road Damage Impacts by Railroad – State Highways

Railroad	Truck Miles	Miles of State Highway Impacted	Miles of Rail Abandoned	Pavement Damage Costs		
				Total Cost	Cost Per Truck Mile	Cost Per Rail Mile Abandoned
Kansas & Oklahoma	3,783,388	1,095	971	$ 30,564,897	$8.08	$31,478
Kyle	2,105,920	735	482	$ 15,763,173	$7.49	$32,704
Cimarron Valley	1,482,652	300	186	$ 8,534,025	$5.76	$45,882
Nebraska, Kansas & Colorado	706,908	269	122	$2,918,321	$4.13	$23,921
All Shortlines Total	8,078,868	2,399	1,761	$ 57,780,416	$7.15	$32,811