

MICROFILM DIVIDER

OMB/RECORDS MANAGEMENT DIVISION

SFN 2053 (2/85) 5M



ROLL NUMBER

DESCRIPTION

2268

2005 SENATE NATURAL RESOURCES

SB 2268

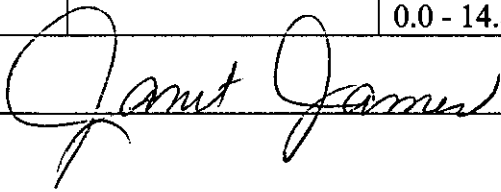
2005 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB 2268

Senate Natural Resources Committee

☐ Conference Committee

Hearing Date February 3, 2005

| Tape Number | Side A | Side B | Meter # |
|---------------------------------------------------------------------------------------------------------------|--------|--------|------------|
| 1 | | X | 23.7 - end |
| 2 | X | | 0.0 - end |
| | | X | 20.5 - end |
| 3 | X | | 0.0 - 14.8 |
| Committee Clerk Signature  | | | |

Minutes:

Senator Stanley Lyson, Chairman of the Senate Natural Resources Committee opened the hearing on SB 2268 relating to waste rubber recycling, abatement and remediation of waste rubber tire stockpiles, and to recover the components of petroleum-based products.

All members of the committee were present except **Senator John Traynor**.

Senator Karen Krebsbach of District 40 the prime sponsor of Bill 2268 introduced the bill stating the process as explained would do several things for the state of North Dakota. First of all it can take care of the problem of waste tires that fill our landfills. It can be of assistance to cities, counties and dealers of tire sales. This will be a new industrial opportunity for our state of recovering oil, carbon and natural gas. Finally this process can be sold to other communities in the state and even the nation. To accomplish this project will not be easy and it does have some risks, but with desire, hard work and cooperation it can happen. She understands the concerns

and appreciates the heavy burden but upon the state health and commerce departments. The bill will supply the product for this manufacturing process to happen.

Representative Glen Froseth of District 6 cosponsor of SB 2268 testified how exciting it has been to see the development of the plant of this endeavor. This process will take the waste product of used tires and turn it into a useable resource by recapturing the natural resources again. He presented to the committee a copy of "The Kenmare News" newspaper that featured the plant (See attached copy). He also offered the support of SB 2268 from cosponsor

Representative Mary Ekstrom of District 11 who was unable to attend due to a death in the family.

Senator Todd Seymore (29.6) cosponsor of SB 2268 from District 5 testified that this is the type of project North Dakota is looking for. There are several entrepreneurs who have done the proper research to bring a great project into the rural area.

Representative James Kerzman (30.1) cosponsor of SB 2268 from District 31 testified that this bill is about an exciting process and is a real benefit to handle the tires on the road, tires on farms and in landfills.

Ervin Lee (32.2 - end, Side B, 0.0 - 22.2) farmer, attorney, entrepreneur and developer of the project presented in SB 2268 testified to present his project and request support of the committee (See attached testimony).

Duane Erickson (22.3) the designer and fabricator of equipment used in the project testified in support of SB 2268 stating he has always wanted to bring manufacturing back to North Dakota. The project is a real opportunity and the company will employ 50 people with annual sales \$50,000,000.00. They already have customers that are interested in the products recovered through

the process. This project will make North Dakota have a leading edge in manufacturing and environmental technology.

Senator Rich Wardner asked how many are presently employed and if the intent is to set up the plants around the state.

Duane Erickson answered that presently there are three others besides himself, but when things are up and running there will be at least 12 employees to run 24 hours a day to manufacture the equipment used to process the tires. Plants could then be set up around the state as well as the nation. He further stated that their process is done under low temp compared to others using a high temp which produces products at less quality and with emissions.

Jack Johnson (30.0) testified in support of SB 2268 stating that after visiting the lab in Pittsburgh and the plant in North Dakota he feels the process is viable. He further stated that the government should create an environment for an enterprise to succeed and SB 2268 will accomplish this.

Senator Lyson briefly turned the hearing over to vice chairman **Senator Ben Tollefson**.

Dean Lampe, (32.6) Executive Director of the North Dakota Emergency Medical Services Association testified in support of SB 2268 (See attached testimony).

Senator Lyson asked for opposing testimony of SB 2268.

Wayne Kern, (39.8) Director of the Division of Waste Management of the North Dakota Department of Health testified in opposition on SB 2268 (See attached testimony).

Senator Michael Every asked about a bill in the house that is addressing credit trading with other states and asked if the bill were amended to include other prongs of approach, would the department be supportive.

Wayne Kern stated he was not aware of the credit exchange bill. He further commented that if the focus of the bill is the process to recover materials from waste rubber and that if that focus was to change to enable additional options to be used, a lot of the remaining portions of the bill would crumble and fall away. Furthermore the bill proposes the use of environmental credits and the use of credits is now not allowable under federal and state law.

Senator Lyson closed the hearing on SB 2268.

Tape 2, Side B, 20.5 - end

Senator Stanley Lyson opened the committee work on SB 2268.

All members of the committee were present except **Senator John Traynor** and **Senator Ben Tollefson**.

Discussion was held as the committee liking the idea of cleaning up the environment, creating a new industry in the state and jobs, but the committee stated the bill was very complicated and had a difficult grasping the concept. They like the idea enough for it to be looked into, but not knowing enough about the bill there were concerns of passing the bill into law with such a large fiscal note. They felt more time was needed to be able understand the project and give it's due attention.

Senator Every wanted to ask for a brief explanation of the mandate that is contained in the bill and how he has a problem with the health department's testimony with the limit of options for disposal of waste rubber.

Ervin Lee (22.6) stated that Section 10 contains the fees and the mandate that will supply the tires needed to proceed with the project. He further stated the he feels the problem the health department is having with mandate is addressed in the definitions.

Senator Heitkamp asked what would happen if nothing was done for two years and would any one get ahead on the project.

Senator Lyson stated that in the bill there is an improper distribution of funds given to the health and law enforcement organizations and that it was similar items such as this that the committee sees problems with the bill.

Senator Freborg questioned the fees on all tires no matter the size and if the fee is on new vehicle tires. He further stated that there is so much in the bill that does not seem to fit together.

The committee continued to discuss that there is so much in the bill and there is not enough time to give it justice. The fiscal note would need to be changed and the green credits mentioned in the bill would need to be removed as there is no state law to govern them. The committee does not want the bill to die but thinks it might deserve a study because there just is not enough time.

Maybe Mr. Lee should visit with more departments and return in two years with a more defined bill.

Ervin Lee told the committee that if the disposal portion of the bill could be put into place, it would get the project going and manufacturing started. He further explained the section by section of the bill that he would be willing to change, put into study resolution or do without in order to get things started.

Section 1 - Remove definitions

Section 2 - remove legislative finding

Section 3 - leave in the mission statement

Section 4 - sets up the agenda for the cleanup over 15 years

Section 5 - describes the drop points for disposal

Section 6 - can delete sections of green credits

Section 7 - remove

Section 8 - can amend

Section 9 - sets flat fee

Tape #3 Side A 0.0 - 14.8

Section 10 - sets disposal fees

Senator Heitkamp still not convinced, suggested the bill be given to appropriations and hopefully those involved with commerce will see the potential and support it.

Discussion was held as which approach would be better for the project. In order not to lose the bill, maybe a study would be the route or maybe hog house the bill into a study. Can the project be put on hold for two years?

Ervin Lee agreed to clean up the bill and present it to the committee in the morning.

Senator Lyson closed the committee work on SB 2268.

2005 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB 2268

Senate Natural Resources Committee

☐ Conference Committee

Hearing Date February 4, 2005

| Tape Number | Side A | Side B | Meter # |
|-----------------------------------------------|--------|--------|------------|
| 1 | | X | 8.4 - 38.4 |
| | | | |
| | | | |
| Committee Clerk Signature <i>Janet Garner</i> | | | |

Minutes:

Senator Stanley Lyson opened the committee work on SB 2268 to provide for waste rubber recycling, abatement and remediation of waste rubber tire stockpiles and to recover the components of petroleum-based products.

All members of the committee were present.

Ervin Lee entrepreneur of the waste rubber project proposed in SB 2319 presented to the committee the revised or amended copies of bill as prepared by him. One copy is with the underscores and over strikes and the other copy presented shows how the bill appears after the changes. He also presented a spreadsheet of data including fiscal information, cumulative waste tires for North Dakota, Resource Recovery and Conservation Fee and Resource Recovery Fee. He kept the money the same for the disposal and added the amount for training and then changed the bill to reflect that the money goes from the tax department to the two trusts. The state administration fee was changed from two cents to four cents to cover the fiscal impact of the

state. The environmental section were deleted along with the ranking of technologies. The burden of the state to set up the criteria of those who want to receive the funds from the state has been eliminated. He further went section by section of the bill and the changes that were made.

Senator Layton Freborg commented that the fee was missing in Section 19, Line 6.

Ervin Lee assured the committee that was an accident and has already spoke to the intern to include the fee of 25 cents. He also stated that there will not be a fee on new vehicles.

Senator Rich Wardner asked if he could not secure enough tires to keep things going for the next two years so that this could be studied.

Ervin Lee stated this project has been privately supported and that the issue is to have the state require the recycling to address the clean up of this waste rubber.

Senator Michael Every asked about the environmental fee that is charged by car dealerships.

Ervin Lee answered that part of it for disposal of oil tires, etc.

Senator Traynor thought there may be some discrepancies between the fiscal note developed by the health department and the changes made by Ervin Lee.

Discussion was held if the bill needs to be rereferred to Appropriations.

Senator Every made a motion to adopt the amended bill as prepared by Ervin Lee.

Senator Heitkamp second the motion.

Roll call vote #1 was taken by voice vote indicating 7 YEAS, 0 NAYS AND 0 ABSENT OR NOT VOTING.

Senator Heitkamp made a motion for a Do Pass as Amended and Rereferred to Appropriations of SB 2268.

Senator Every second the motion.

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Senate Natural Resources Committee

Bill/Resolution Number SB 2268

Hearing Date 2-4-05

Roll call vote #2 of SB 2268 was taken indicating 7 YEAS, 0 NAYS AND 0 ABSENT OR NOT VOTING.

Senator Heitkamp will carry SB 2268.

The amended version of SB 2268 was not written by the Legislative Council but was rereferred to Appropriations as written by Ervin Lee.

FISCAL NOTE
Requested by Legislative Council
02/10/2005

Amendment to: Engrossed
 SB 2268

1A. State fiscal effect: *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

| | 2003-2005 Biennium | | 2005-2007 Biennium | | 2007-2009 Biennium | |
|----------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|
| | General Fund | Other Funds | General Fund | Other Funds | General Fund | Other Funds |
| Revenues | | | | | | |
| Expenditures | | | | | | |
| Appropriations | | | | | | |

1B. County, city, and school district fiscal effect: *Identify the fiscal effect on the appropriate political subdivision.*

| 2003-2005 Biennium | | | 2005-2007 Biennium | | | 2007-2009 Biennium | | |
|--------------------|--------|------------------|--------------------|--------|------------------|--------------------|--------|------------------|
| Counties | Cities | School Districts | Counties | Cities | School Districts | Counties | Cities | School Districts |
| | | | | | | | | |

2. Narrative: *Identify the aspects of the measure which cause fiscal impact and include any comments relevant to your analysis.*

SB 2268 is now a study on issues related to waste rubber recycling, abatement and remediation of waste rubber tire stockpiles, and the recovery of components of petroleum-based products.

No fiscal impact.

3. State fiscal effect detail: *For information shown under state fiscal effect in 1A, please:*

A. Revenues: *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

B. Expenditures: *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

C. Appropriations: *Explain the appropriation amounts. Provide detail, when appropriate, of the effect on the biennial appropriation for each agency and fund affected and any amounts included in the executive budget. Indicate the relationship between the amounts shown for expenditures and appropriations.*

| | | | |
|----------------------|----------------|-----------------------|------------|
| Name: | Kathy J. Albin | Agency: | Health |
| Phone Number: | 328.4542 | Date Prepared: | 02/10/2005 |

FISCAL NOTE

Requested by Legislative Council
02/07/2005

Amendment to: SB 2268

1A. State fiscal effect: *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

| | 2003-2005 Biennium | | 2005-2007 Biennium | | 2007-2009 Biennium | |
|----------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|
| | General Fund | Other Funds | General Fund | Other Funds | General Fund | Other Funds |
| Revenues | | | | \$6,400,000 | | \$6,400,000 |
| Expenditures | | | | \$6,400,000 | | \$6,400,000 |
| Appropriations | | | | \$6,400,000 | | \$6,400,000 |

1B. County, city, and school district fiscal effect: *Identify the fiscal effect on the appropriate political subdivision.*

| 2003-2005 Biennium | | | 2005-2007 Biennium | | | 2007-2009 Biennium | | |
|--------------------|--------|------------------|--------------------|--------|------------------|--------------------|--------|------------------|
| Counties | Cities | School Districts | Counties | Cities | School Districts | Counties | Cities | School Districts |
| | | | | | | | | |

2. Narrative: *Identify the aspects of the measure which cause fiscal impact and include any comments relevant to your analysis.*

SB 2268 identifies actions to be completed the Health Department. This bill requires a collection of fees of 25 cents per pound per year for new tires sold in North Dakota. Section 8 of the bill identifies how the funds are to be distributed.

Due to the complexity of the bill, it is difficult to determine all of the impacts on the Department; however, the following is a list of new activities anticipated for the Health Department:

1. Abatement of daily waste rubber flow through:
Plan development; notification to retailers of law; enforcement of the law; establishment of process for fee payment; and to establish fee structure for waste rubber based upon weight.
2. Abate waste rubber stockpiles through:
Plan development; establish waste tire abatement priority list; enforcement of stockpile abatement plan; provide financial assistance to cooperating owners of stockpiles; remediate stockpiles of recalcitrant stockpile owners, and seek cost recovery.
3. Assist tire service or retailers with waste rubber abatement;
Plan development; establish waste rubber abatement priority list; develop waste rubber census with locations; provide financial assistance to cooperating owners; remediate stockpiles of recalcitrant owners, and seek cost recovery.
4. Prepare request for proposals to seek contractors to process waste rubber.
5. Establish and maintain Waste Tire Management Fund.
6. Pursue cost recovery to include liens on property.
7. Contract administration.

3. State fiscal effect detail: *For information shown under state fiscal effect in 1A, please:*

- A. Revenues:** *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

Revenues would be generated from a 25 cents per pound fee collected on the sale of new tires. Assuming that

640,000 tires each weighing 20 pounds are sold annually, this would generate approximately \$3.2 million each year.

B. Expenditures: *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

Section 8 of this bill identifies how the funds would be distributed. The bill also allows 4 cents to be used for administrative costs. The Health Department estimates \$834,500 of expenditures, 5.5 new FTE's and operating costs per biennium to administer this fund.

C. Appropriations: *Explain the appropriation amounts. Provide detail, when appropriate, of the effect on the biennial appropriation for each agency and fund affected and any amounts included in the executive budget. Indicate the relationship between the amounts shown for expenditures and appropriations.*

Included in the appropriations amount are administrative costs of \$1,024,000 and the balance of \$5,376,000 are distributed as per section 8 of this bill.

| | | | |
|----------------------|----------------|-----------------------|------------|
| Name: | Kathy J. Albin | Agency: | Health |
| Phone Number: | 328.4542 | Date Prepared: | 02/08/2004 |

FISCAL NOTE
Requested by Legislative Council
01/18/2005

Bill/Resolution No.: SB 2268

1A. State fiscal effect: *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

| | 2003-2005 Biennium | | 2005-2007 Biennium | | 2007-2009 Biennium | |
|-----------------------|--------------------|-------------|--------------------|--------------|--------------------|--------------|
| | General Fund | Other Funds | General Fund | Other Funds | General Fund | Other Funds |
| Revenues | | | | \$10,240,000 | | \$10,240,000 |
| Expenditures | | | \$329,780 | \$10,240,000 | \$329,780 | \$10,240,000 |
| Appropriations | | | \$329,780 | \$10,240,000 | \$329,780 | \$10,240,000 |

1B. County, city, and school district fiscal effect: *Identify the fiscal effect on the appropriate political subdivision.*

| 2003-2005 Biennium | | | 2005-2007 Biennium | | | 2007-2009 Biennium | | |
|--------------------|--------|------------------|--------------------|--------|------------------|--------------------|--------|------------------|
| Counties | Cities | School Districts | Counties | Cities | School Districts | Counties | Cities | School Districts |
| | | | | | | | | |

2. Narrative: *Identify the aspects of the measure which cause fiscal impact and include any comments relevant to your analysis.*

SB 2268 identifies actions to be completed by either the Health Department alone or in cooperation with the Commerce Department, the Tax Department or the Department of Transportation. This bill requires a collection of fees of 40 cents per pound per year for new tires sold in North Dakota. Section 10 of the bill identifies how the funds are to be distributed.

Due to the complexity of the bill, it is difficult to determine all of the impacts on the Department; however, the following is a list of new activities anticipated for the Health Department:

1. Abatement of daily waste rubber flow through:
Plan development; notification to retailers of law; enforcement of the law; establishment of process for fee payment; and to establish fee structure for waste rubber based upon weight.
2. Abate waste rubber stockpiles through:
Plan development; establish waste tire abatement priority list; enforcement of stockpile abatement plan; provide financial assistance to cooperating owners of stockpiles; remediate stockpiles of recalcitrant stockpile owners, and seek cost recovery.
3. Assist tire service or retailers with waste rubber abatement;
Plan development; establish waste rubber abatement priority list; develop waste rubber census with locations; provide financial assistance to cooperating owners; remediate stockpiles of recalcitrant owners, and seek cost recovery.
4. Prepare request for proposals to seek contractors to process waste rubber.
5. Establish and maintain Waste Tire Management Fund.
6. Pursue cost recovery to include liens on property.
7. Establish and track environmental credits.
8. Contract administration.

The following is a list of new duties for the Commerce Department:

- Assist in the development of new technologies designed to recover resources from waste petroleum-based

products for reuse in industry.

- Analyze the potential for strategically using the oil recovered from waste rubber as fuel for peak power generation.
- Provide industrial and consumer education on other benefits of recycled waste tire products through the preparation of fact sheets and public workshops;
- Prepare an annual summary report and analysis of markets and disposition of both stockpiled tires and annually generated waste tires;
- Find optimal uses for energy recovered on behalf of state refining and electrical generation; and
- Negotiate with the processors of the waste for ownership of the oil recovered from waste petroleum products, including waste rubber

The Tax Department or Department of Transportation did not provide any cost estimates to be included in this bill.

3. State fiscal effect detail: *For information shown under state fiscal effect in 1A, please:*

A. Revenues: *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

Revenues would be generated from a 40 cents per pound fee collected on the sale of new tires. Assuming that 640,000 tires each weighing 20 pounds are sold annually, this would generate approximately \$5 million each year.

B. Expenditures: *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

The Health Department estimates \$623,600 of expenditures, 4 new FTE's and operating costs per biennium to administer this fund. The Commerce Department estimates \$206,180 of expenditures, 1 new FTE and operating costs. The fee collection only allocates 2 cents per pound or \$500,000 for administrative costs so general funds will be needed to supplement the program.

C. Appropriations: *Explain the appropriation amounts. Provide detail, when appropriate, of the effect on the biennial appropriation for each agency and fund affected and any amounts included in the executive budget. Indicate the relationship between the amounts shown for expenditures and appropriations.*

Included in the appropriations amount are administrative costs for the Department of Health (\$623,600) and the Commerce Department (\$206,180). The balance of the appropriation is to distribute the funds according to Section 10 of this bill.

| | | | |
|----------------------|----------------|-----------------------|------------|
| Name: | Kathy J. Albin | Agency: | Health |
| Phone Number: | 328.4542 | Date Prepared: | 02/02/2005 |

Roll Call Vote #:

BILL/RESOLUTION NO. 2268

Committee

Check here for Conference Committee

Legislative Council Amendment Number

Adopt Amendments as proposed by Mr. Lee

Neitham

[illegible]

No

Absent

Floor Assignment

If the vote is on an amendment, briefly indicate intent:

Date: 2-4
Roll Call Vote #: 2

2005 SENATE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. 2268

Senate Senate Natural Resources Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken Do Pass as Amended & referred to Appropriations

Motion Made By Heitkamp Seconded By Every

| Senators | Yes | No | Senators | Yes | No |
|-----------------------------------|-----|----|-----------------------|-----|----|
| Senator Stanley Lyson, Chairman | ✓ | | Senator Joel Heitkamp | ✓ | |
| Senator Ben Tollefson, Vice Chair | ✓ | | Senator Michael Every | ✓ | |
| Senator Layton Freborg | ✓ | | | | |
| Senator Rich Wardner | ✓ | | | | |
| Senator John Traynor | ✓ | | | | |
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Total (Yes) 7 No 0

Absent 0

Floor Assignment Senator Heitkamp

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

SB 2268: Natural Resources Committee (Sen. Lyson, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** and **BE REREFERRED** to the Appropriations Committee (7 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). SB 2268 was placed on the Sixth order on the calendar.

Page 1, line 1, after "A BILL" replace the remainder of the bill with "for an Act to provide for waste rubber recycling, abatement and remediation of waste rubber tire stockpiles, and to recover the components of petroleum-based products.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. Definitions. As used in this Act, unless the context or subject matter otherwise requires:

1. "Abate and abatement" means:
 - a. To remove waste rubber tires from a waste rubber tire dump or waste rubber tire stockpile by processing or properly disposing of the tires on an enforceable schedule ensuring compliance with the prohibitions of this Act; or
 - b. Action taken pursuant to authority under a state program to process or properly dispose of waste tires.
2. "Added value processing" means the use of technologies or processes that processes waste rubber into the highest and best use.
3. "Beneficial use" means the use of solid waste material, which would otherwise need to be placed in a landfill or disposed of through alternative means, in such a manner that the nature of the use constitutes a reuse of the solid waste material or its constituent components rather than disposal in a landfill. Beneficial uses include:
 - a. Incorporation of a solid waste material which is a legitimate substitute for a raw material into a product marketable to an end user.
 - b. Recovery of the constituent components in a manner that allows for the reuse of the constituent components by industry.
 - c. Recovery of the oil embedded in solid waste material for the generation of electricity with an emphasis on the use of oil for distributed generation.
 - d. Waste rubber that is reformed into another rubber-based product may be considered to be beneficially used only if there is no viable technology to recover the energy or material embedded in waste rubber for reuse in industry.
 - e. Waste rubber that is burned as tire-derived fuel for the purposes of recovering usable energy may be considered to be beneficially used only if there is no viable technology to recover the energy or material embedded in waste rubber for reuse in industry or in distributed generation.
 - f. Waste rubber that is used in civil engineering projects may be considered to be beneficially used only if there is no viable

technology to recover the energy or material embedded in waste rubber for reuse in industry.

4. "Best available technology" means the use of technologies that are economical, environmentally friendly, and state-of-the-art currently in use for processing petroleum-based products, including waste rubber.
5. "Collection site" means a facility, installation, building, or site, including all of the contiguous area under the control of a person controlled by the same person used for the storage or disposal of more than four hundred waste rubber tires but not including shredded rubber tire material that has been properly disposed.
6. "Commerce" means the department of commerce.
7. "Constituent components" means the raw materials used to manufacture the original rubber product.
8. "Department of health" means the state department of health.
9. "Emergency response services" means those fire and ambulance services provided by state, county, and city governments and by volunteer rural ambulance and fire departments to the public in the commerce of life.
10. "End use" means that a product requires no further processing or manufacturing and is suitable for reuse in industry or use by a consumer for the rubber-based product's intended application and is not merely a means of inappropriate disposal.
11. "End user" means the ultimate customer of the recovered constituent components of a rubber-based finished product.
12. "Energy cost-savings" means the estimate of dollar savings resulting from the fuel-related cost reductions that are due to the use of resource recovery technology.
13. "Environmental resource" means air and water used in the manufacture of petroleum-based products.
14. "Highest and best use" means those technologies or processes that produce products whose value either as energy or as an industrial material is greater than the value of competing technologies or processes.
15. "Industrial material" means the use of the recovered constituent components from rubber-based products which is suitable for use in the manufacturing industry.
16. "Life cycle outcomes" means the outcome over the lifetime of the technology for recovery of the resources from waste petroleum-based products.
17. "Material" means the physical products embedded in waste petroleum-based products.
18. "Monofill" means a place designed solely to receive and store waste rubber, including tires.

19. "New tires" means tires that have never been placed on a motor vehicle wheel rim or tires placed on a motor vehicle before its original retail sale.
20. "Net economic benefit" means the summation of energy cost-savings, nonenergy cost-savings, consumer investment, consumer expenditures, and other governmental expenditures for a particular year due to the use of the resource recovery technology.
21. "Noncompliant waste rubber stockpile" means a facility, including a waste rubber tire storage facility, parcel of property, or site designated by the department of health in accordance with this Act, where four hundred or more waste rubber tires or mechanically processed waste rubber tires have been accumulated, stored, or buried in a manner that the state department of health or a court of competent jurisdiction has determined violates any judicial administrative order, decree, law, regulation, permit, or stipulation relating to waste rubber tires, waste rubber tire storage facilities, or solid waste.
22. "Nonenergy cost-savings" means those dollar savings or costs related to nonfuel-related operations that are due to the use of the resource recovery technology. The term includes items such as extension of proven reserves of natural resources and reduction in costs of pollution.
23. "Other environmental benefits" means an estimate, based upon known science, of the amount of nonemission pollutants displaced annually due to the use of the resource recovery technology to process waste petroleum-based products, including waste rubber.
24. "Other governmental expenditures" means the anticipated expenditures by the state, county, and city governments directly related to the providing of traffic services, landfill operating costs, and emergency response due to fires.
25. "Other greenhouse emissions displaced" means an estimate, based upon known science, of the amount of greenhouse emissions other than sulfur dioxide, nitrogen oxide, carbon monoxide, carbon, particulates, and volatile organic compounds displaced due to the use of the resource recovery technology to process waste petroleum-based products, including waste rubber.
26. "Petroleum-based product" means products that are made out of natural rubber, synthetic rubber, or other natural resources.
27. "Process" means to produce or manufacture usable materials or energy with real economic value from waste petroleum-based products, including waste rubber tires.
28. "Properly disposed" means the conversion of waste rubber into a rubber-based product or into the constituent components for resale in industry. Placing waste rubber, including whole tires, into a landfill, a monofill, or a tire stockpile containing whole tires or shredded rubber tires may not be considered properly disposed.
29. "Public resource" means the traffic services, emergency response services, rural ambulance and fire services, and public works services consumed by the public in the commerce of life.

30. "Real economic value" means the highest and best use of the recovered constituent components from petroleum-based products.
31. "Recyclables" means solid waste materials that exhibit the potential to be used to make marketable products for end users.
32. "Recycle" means to use recyclables in manufacturing a rubber-based product for an end use other than burning the actual waste rubber for recovery of usable energy in a civil engineering application, tire-derived fuels, or shredded tire material.
33. "Recycling fee" means that fee charged consumers for the costs of disposal of waste rubber, including fee collection, transportation, and processing.
34. "Removed from service" means removed within this state from the service for which the tires were intended to be used when the tires and tire casings were separated for retreading.
35. "Resource" means the environmental, natural, and public resources consumed or used in the manufacture of petroleum-based products and in the commerce of life.
36. "Resource conservation" means the use of the recovered energy and material from petroleum-based products by industry so that the need to use natural and environmental resources is decreased.
37. "Resource recovery" means the recovery of the energy and material contained in waste petroleum-based products in a manner that allows for reuse in industry.
38. "Resource recovery funds" means those funds collected by a tire retailer and used to recover the resources embedded in waste rubber and to offset the moneys used by the state, counties, and cities to provide traffic services, emergency response services, and other governmental expenditures.
39. "Resource recovery technology" means the use of a technology or process that allows for the recovery of the constituent components of waste petroleum-based products for beneficial uses in an economical and environmental manner.
40. "Retail sale" means the sale to any person in the state for any purpose other than resale.
41. "Shredded tire material" means tire material resulting from tire shredding that produces pieces four square inches or less in size that do not hold water when stored in piles.
42. "Solid waste material" means solid waste composed of petroleum-based products, including plastic and rubber.
43. "Tire" means any pneumatic or solid tire, including a tire manufactured for use on any type of motor vehicle, construction, farm implement, tractor tires or other offroad equipment, aircraft, or industrial machinery.
44. "Tire collector" means a person that owns or operates a collection site.

45. "Tire dump" means a tire collection site without a collector or processor permit that is maintained, operated, used, or allowed to be used for the disposal, storing, or depositing of waste rubber tires.
46. "Tire hauler" means a person engaged in picking up or transporting waste tires to a storage or disposal facility.
47. "Tire processor" means a person that processes waste tires to produce or manufacture usable materials or to recover energy.
48. "Tire service or tire retailer" means any person or business in this state that either sells or installs new tires, hoses, or belts for use on any vehicle and any person or business that engages in the retail sale of new motor vehicles. A person who is not the end point of sale, any governmental agency, and a political subdivision are excluded from this term.
49. "Tire stockpile" means a waste rubber tire storage facility operating pursuant to a permit issued by the state department of health at which either shredded rubber tire material from fifty or more waste tires or whole rubber tires are stored for future processing or disposal.
50. "Traffic services" means policing, emergency response, planning, courts, street lighting, parking enforcement, and driver training.
51. "Waste rubber" means any solid waste that consists of a petroleum-based product, such as belts, hoses, or tires.
52. "Waste rubber tire" means any solid waste that consists of whole tires or portions of tires. Tire casings separated for retreading and tires with sufficient tread for resale are included under this term; however, crumb rubber is not considered a solid waste.
53. "Waste rubber tire storage facility" means a facility at which waste tires are stored and for which a permit or registration has been issued.

SECTION 2. Purpose. The purpose of this Act is:

1. To further the common good through the responsible stewardship of resources, including environmental, natural, and public resources;
2. To assure that the life cycle of all petroleum-based products, including rubber-based tires, hoses, and belts, used in this state is managed in a manner that is environmentally sound and which maximizes the economic value of recovered energy and material to the citizens of the state and our nation by permitting reuse of the constituent components of petroleum-based products in industry; and
3. To assure that the end users of traffic services, emergency response services, public resources, and rural ambulance and fire departments pay for part of the cost of the unreimbursed traffic and emergency response services so as to reduce the burden on property and income taxpayers.

SECTION 3. Waste management priorities for petroleum-based products.

In the interest of public health, safety, and welfare, to conserve natural resources, to promote recovery of the constituent components of waste petroleum-based products, to encourage recycling and market development for the recovered components of

petroleum-based products, and to support the national agenda for reducing our dependence on foreign oil, the state establishes a policy on the management of waste petroleum-based products, based upon known science, that states:

1. The waste management priorities for petroleum-based products in this state are to:
 - a. Reduce the amount of waste generated in the most beneficial manner, yearly, through the collection of waste products at the time of origination;
 - b. Remediate that waste in the most beneficial manner according to a plan established and published by the state department of health;
 - c. Remediate waste rubber tire stockpiles located in city and county landfills, at illegal or noncompliant waste rubber piles, or located at the location of tire retailers;
 - d. Recycle the waste, including waste rubber into value-added products that provide the maximum environmental, fiscal, and natural resource benefits to the state;
 - e. Encourage the development and use of technologies that beneficially use waste rubber in an environmentally acceptable manner; and
 - f. Encourage the use of technologies that can recover the constituent components required to manufacture petroleum-based products that presently cannot be economically recycled or otherwise beneficially used.
2. State government must make an essential contribution to the development and implementation of environmentally, economically, and technically viable waste rubber management programs and technologies.

SECTION 4. Acceptance of waste rubber. Any tire service or tire retailer shall:

1. Until December 31, 2020, accept from a customer waste rubber, including waste tires of approximately the same size and in a quantity equal to the number of new tires purchased or installed by the customer; and
2. Until December 31, 2020, post written notice in a prominent location, which must be at least eight and one-half inches by fourteen inches in size and contain the following language:

"The legislative assembly in the interest of national energy security, public health, safety, and welfare and in order to conserve natural resources and prevent pollution has established this Act which requires us to accept and manage waste rubber such as tires, belts, and hoses from vehicles in exchange for an equal number of new rubber-based products such as tires, belts, and hoses that we sell or install.

We are required to charge a separate and distinct waste rubber management and recycling fee for each new tire we sell. This fee is established by the state department of health.

Any additional tire management and recycling costs are included in the advertised price of the new tire."

SECTION 5. Duties of state department of health.

1. Abatement of the daily waste rubber flow.
 - a. By September 1, 2005, the state department of health shall prepare a plan to handle the waste rubber generated daily, including waste rubber tires;
 - b. The state department of health shall notify all tire retailers that they will be required to collect all waste rubber, including waste rubber tires, beginning November 1, 2005;
 - c. The state department of health shall notify all registered tire collectors and transporters of the requirements of this Act;
 - d. The state department of health shall establish criteria for collecting, transporting, and disposal of waste rubber;
 - e. The state department of health shall have authority to enter all sites where waste rubber tire stockpiles are located for the purpose of investigation and abatement;
 - f. The state department of health shall establish standards for collecting, storing, transporting, shredding, and added value processing of waste rubber;
 - g. The state department of health shall establish a process for paying fees for collecting, storing, transporting, shredding, and processing of waste rubber; and
 - h. The state department of health shall establish fees for all waste rubber products based upon their weight, category, and the base fees established in section 7 of this Act.
2. Abatement of waste rubber stockpiles.
 - a. Not later than one year after the effective date of this Act, the state department of health shall prepare and submit to the governor and the legislative assembly a comprehensive plan designed to abate all waste tire stockpiles by December 31, 2020.
 - b. The plan must establish a waste rubber tire stockpile abatement priority list and schedule for abatement of each waste rubber tire stockpile based on potential adverse impacts upon public health, safety or welfare, the environment, or natural resources.
 - c. The plan must include a description of how the state department of health intends to manage the abatement funds collected to assure that abatement funds are used to economically and systematically remove aboveground tire piles with the goal of achieving total removal by July 1, 2020.
 - d. The plan should include the state department of health's estimated census of the number of waste rubber tire stockpiles, where they are

located in the state, the individual or entity who owns the waste rubber tire stockpile, and the number of waste rubber tires believed to be stored at each site.

- e. The plan must also include a proposed amnesty period for owners of the waste rubber stockpile to work with the state department of health to develop a plan to remediate the waste rubber tires located on their premises.
 - (1) If the owners of the waste rubber stockpile comply, they must be allowed to be considered a permitted collection site and are entitled to receive financial assistance from the state department of health for the remediation of the waste rubber tire stockpile on their property.
 - (2) If the owner of the waste rubber stockpile fails to comply, then the state department of health may declare the waste rubber tire stockpile to be illegal and shall proceed to remediate the waste rubber tire stockpile under the provisions of subsection 4.
 - f. The owner or operator of a permitted waste rubber tire stockpile shall, at the state department of health's request, submit to and cooperate with any and all remedial measures necessary for the abatement of waste rubber tire stockpiles with funds from the state department of health.
3. Assist tire service or tire retailers to abate waste rubber located on their premises.
- a. Not later than one year after the effective date of this Act, the state department of health shall prepare and submit to the governor and the legislative assembly a comprehensive plan designed to abate all waste rubber tire stockpiles located on the premises of tire retailers by December 31, 2015.
 - b. This plan must establish a waste rubber tire stockpile abatement priority list and schedule for abatement of each waste rubber tire stockpile based on potential adverse impacts upon public health, safety or welfare, the environment, or natural resources.
 - c. The plan must also include a census of the number of waste rubber tire stockpiles, where they are located in the state, the individual or entity who owns the waste rubber tire stockpile, and the number of waste rubber tires believed to be stored at each site.
 - d. The plan must also include a proposed amnesty period for tire retailers to work with the state department of health to develop a plan to remediate the waste rubber tires located on their premises.
 - (1) If the tire retailer complies, they must be allowed to be considered a permitted collection site and are entitled to receive financial assistance from the state department of health for the remediation of the waste rubber tire stockpiles on their property.

- (2) If the tire retailer fails to comply, then the state department of health may declare the tire retailer or owner of the waste rubber tire stockpile to be illegal and shall proceed to remediate the waste rubber tire stockpile under the provisions of subsection 4.
 - (3) The tire retailer shall, at the state department of health's request, submit to and cooperate with any and all remedial measures necessary for the abatement of waste rubber tire stockpiles with funds from the state department of health.
4. Prepare requests for proposals. Not later than one year from the effective date of this Act, the state department of health shall publish requests for proposals to seek contractors to prepare whole and mechanically processed waste tires situated at noncompliant waste tire stockpiles for arrangement in accordance with fire safety requirements and for removal for appropriate processing, recycling, or beneficial use. Disposal may be considered only as a last option.
5. Illegal waste rubber stockpiles.
 - a. In the case of illegal waste tire stockpiles, the expenses of remedial and fire safety activities at a noncompliant waste tire stockpile must be paid by the person who owned, operated, or maintained the noncompliant waste tire stockpile, or from the waste tire management and recycling fund and is a debt recoverable by the state from all persons who owned, operated, or maintained the noncompliant waste tire stockpile, and a lien and charge may be placed on the premises upon which the noncompliant waste tire stockpile is maintained and upon any real or personal property, equipment, vehicles, and inventory controlled by that person.
 - b. Moneys recovered must be paid to the state department of health for use for further abatement.
 - c. If execution upon a judgment for the recovery of the expenses of any such remedial and fire safety activities at a noncompliant waste tire stockpile is returned wholly or partially unsatisfied, such judgment, if docketed in the place and manner required by law to make a judgment of a court of record, a lien upon real property, is a first lien upon the premises, and has preference over all other liens and encumbrances whatever. Notwithstanding the foregoing, the lien does not have preference over any mortgage or other encumbrance for the benefit of the state or a public benefit corporation thereof.
 - d. The state department of health shall make all reasonable efforts to recover the full amount of any funds expended from the waste tire management and recycling fund for abatement or remediation of illegal or noncompliant waste rubber tire stockpiles through litigation or cooperative agreements.
 - e. All moneys recovered, repaid, or reimbursed pursuant to this section must be deposited with the state treasurer and credited to the fund.

SECTION 6. Prohibition on land burial.

1. A person may not knowingly dispose of waste rubber tires in a landfill except as provided in subsection 2.
2. Moneys from the fund may not be used to dispose of waste tires in a landfill unless the state department of health has determined that it is not feasible to convert the waste tires to a beneficial use. Department-approved beneficial uses of scrap tire-derived material for leachate collection systems or gas collection systems in the construction or operation of a landfill are not considered proper disposal.

SECTION 7. Resource recovery and conservation fee.

1. Until December 31, 2010, a resource recovery and conservation fee of twenty-five cents per pound must be charged on each new rubber-based product sold for automobile, industry, and agricultural use. The fee must be paid by the purchaser to the tire service at the time the new tire is purchased. The resource recovery fee does not apply to:
 - a. Recapped or resold tires;
 - b. Mail-order sales;
 - c. The sale of new motor vehicle tires to a person solely for the purpose of resale provided the subsequent retail sale in this state is subject to the fee; or
 - d. Tires, belts, and hoses on new motor vehicles, pickup trucks, trucks, agricultural machinery, and other industrial equipment.
2. Until December 31, 2020, the retailer of tires, belts, and hoses shall collect on behalf of the state various fees from the purchaser of the new rubber-based products at the time of the sale and shall remit such fees to the tax commissioner with the quarterly report filed pursuant to subsection 3:
 - a. The fees imposed must be stated as an invoice item separate and distinct from the selling price of the tire.
 - b. The fee must be based upon the weight and category of the petroleum-based product sold and in the case of rubber tires must be uniform for the rim size and category of tire.
 - c. Any additional management and recycling costs of the retailer must be included in the published selling price of the new tire.
3. Until March 31, 2020, each tire service maintaining a place of business in this state shall make a return to the tax commissioner on a quarterly basis, with the return for December, January, and February being due on or before the immediately following March thirty-first; the return for March, April, and May being due on or before the immediately following June thirtieth; the return for June, July, and August being due on or before the immediately following September thirtieth; and the return for September, October, and November being due on or before the immediately following December thirty-first.
 - a. Each return must include:

- (1) The name of the tire service;
 - (2) The address of the tire service's principal place of business and the address of the principal place of business, if that is a different address, from which the tire service engages in the business of making retail sales of tires;
 - (3) The name and signature of the person preparing the return;
 - (4) The total number of new tires sold at retail for the preceding quarter and the total number of new tires placed on motor vehicles before original retail sale;
 - (5) The amount of waste tire management and recycling fees due; and
 - (6) Such other reasonable information as the tax commissioner may require.
- b. Copies of each report must be retained by the tire service for three years. If a tire service ceases business, it shall file a final return and remit all fees due under this Act with the tax commissioner not more than one month after discontinuing that business.
4. All waste tire management and recycling fees collected by the tax commissioner must be transferred to the appropriate state agencies as prescribed in section 8 of this Act.

SECTION 8. Use of resource recovery fees. Funds from the resource recovery fund established in section 7 of this Act must be made available to the following departments for the following purposes:

1. The state department of health must receive seventeen cents per pound for collection, transportation, shredding, and added value processing and abatement.
 - a. Tire retailers must receive five cents per pound for collecting the waste rubber, including waste rubber tires and the resource recovery and conservation fee.
 - b. Transporters must receive three cents per pound for transportation.
 - c. Shredders must receive four cents per pound for shredding.
 - d. Three cents per pound must be collected for financial incentives for added value processing the waste rubber into the highest and best use, including avoidance of pollution, savings of natural resources, potential for reducing governmental expenditures and benefit to the state's economy.
 - (1) The state department of health may pay up to three cents per pound for the added value processing that rubber into the highest and best use, including avoidance of pollution, savings of natural resources, potential for reducing governmental expenditures, and benefit to the state's economy.

- (2) Those companies or persons seeking to receive the financial incentive for added value processing shall have the burden of demonstrating to the state department of health how their process converts waste rubber into the highest and best use, including avoidance of pollution, savings of natural resources, potential for reducing governmental expenditures, and benefit to the state's economy.
- e. The state department of health must receive three cents per pound for abatement. This fee shall expire upon completion of the abatement of waste rubber stockpiles as prescribed in section 5 of this Act.
- 2. The North Dakota peace officer standards and training board must receive two cents per pound for training purposes. The tax commissioner shall disburse the money to the North Dakota peace officer standards and training board.
- 3. The North Dakota emergency services association trust must receive two cents per pound for training purposes. The tax commissioner shall disburse the money to the North Dakota emergency services association trust.
- 4. There is an administrative fee of four cents per pound for state administrative expenses. The agencies affected by this Act must devise a formula for sharing the administrative expenses based upon the requirements of the agency."

Renumber accordingly

2005 SENATE APPROPRIATIONS

SB 2268

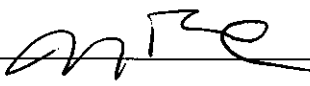
2005 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB 2268

Senate Appropriations Committee

☐ Conference Committee

Hearing Date 02/09/05

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Minutes: **Chairman Holmberg** opened meeting on SB 2268.

Sen. Krebsbach, District 40 appeared to provide an overview of SB 2268. Sen. Krebsbach is the prime sponsor of SB 2268. She also provided an amendment for consideration, see appendix I.

Sen. Mathern (2396) Does the policy committee have any objection to us adopting this amendment.

Sen Krebsbach: The chairman on Natural Resources, Sen Lyson is very much in favor of the study.

Ervin Lee, lawyer, Minot ND appeared in support of SB 2268. Mr. Lee provided the committee with written testimony, see appendix II. Mr. Lee stated this bill would be in ND for many reasons, it is a long term solution to hazardous waste problem. Mr. Lee stated that this bill provides an incentive to find the best use" for waste rubber. Mr. Lee also handed out jars of tire byproducts.

Sen. Bowman: what is the value of products when separated?

Mr. Lee: The value of a burned tire is 20 cents, oil 80 cents to 1\$ per gallon, carbon black is 25 cents, steel is 1 cent, and that has will go to re-heat the process, it is self containing.

Mr. Lee indicated that he has spoken to a number of tire retailers and they would be able to compete on a level playing field.

Dave MacIver, ND Chamber of Commerce, appeared in opposition of SB 2268. Mr. MacIver provided the committee with written testimony, see appendix IV. Mr. MacIver indicated to the committee the reasons why he was against this bill. Mr. MacIver stated that if passed, ND would be the nations leader in taxing rubber products. He stated also that the fiscal note would hurt business, because the retailers would not be able to compete. Mr. MacIver also provided the committee with a list of members of a coalition that opposes this bill. Mr. MacIver also stated that it should be an economic development project.

Sen. Schobinger (5022): We have a proposed amendment that turns this bill into a study resolution, does that change the view of the greater ND chambers view?

Mr. MacIver: Based on the conversations we had yesterday, it would not.

No further questions were asked.

Dave Glatt, ND Department of Health appeared in opposition to this bill, they feel that it needs further study.

Dave Schrek, President and Co-Owner Mainstreet Tire, Bismarck appeared in opposition to SB 2268. No written testimony was provided. He stated that this bill flew under the radar and no one in the tire business was aware of it. He also stated that they would not be able to keep afloat with these new extra costs, they operate and a 1% profit.

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Senate Appropriations Committee

Bill/Resolution Number SB 2268

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No questions were asked of Mr. Schreck.

Chairman Holmberg closed hearing on 2268.

REPORT OF STANDING COMMITTEE

SB 2268, as engrossed: Appropriations Committee (Sen. Holmberg, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (12 YEAS, 3 NAYS, ABSENT AND NOT VOTING). Engrossed SB 2268 was placed on the Sixth order on the calendar.

Page 1, line 1, after "A BILL" replace the remainder of the bill with "for an Act to provide for a legislative council study of waste rubber recycling and remediation."

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. LEGISLATIVE COUNCIL - WASTE RUBBER RECYCLING AND REMEDIATION STUDY. The legislative council shall consider studying, during the 2005-06 interim, issues related to waste rubber recycling, abatement and remediation of waste rubber tire stockpiles, and the recovery of components of petroleum-based products. The legislative council shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixtieth legislative assembly."

Renumber accordingly

2005 HOUSE NATURAL RESOURCES

SB 2268

2005 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. **SB 2268**

House Natural Resources Committee

☐ Conference Committee

Hearing Date **March 4, 2005**

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Minutes:

Chr. Jon O. Nelson: I will open the hearing on SB 2268 and ask the clerk to read the title.

Quorum was present, Rep. Keiser absent.

Ervin Lee, Delta Energy LLC: (Written testimony attached)

Chr. Nelson: Are there any questions?

Rep. Donald L. Clark: Jack Johnson in your photo is a one-time colleague of mine. How is he involved?

Lee: He's with NDSU, which we invited in to help us with some of the engineering issues.

They work with and help local manufacturer's. The photo is of him and Travis Maddock. Jack is working with NDSU on a feed processing plant to do a 40-cow a day operation slaughterhouse. Their problem is offal. Rendering plants are being shut down by the EPA, or the small butcher shops are dropping the guts into pastures. We've done a test in a laboratory in Pittsburg and it

shows that we can recover oil, trace minerals and maybe address the recovery of the bfc, the bovine (unintelligible). NDSU is in the process of trying to get a grant to do further testing.

Rep. Dennis Johnson: The pictures show mostly car tires. Do you work with semi and tractor tires and all types?

Lee: We focus on car tires because that's the easiest type of rubber treads to get. We will take anything that is carbon based. We require a different type of configuration of our machinery to handle a semi tire or a tractor tire. A tractor tire has more natural rubber in it and a semi has more steel in it versus what the car tires have. There is a potential.

Chr. Nelson: Are there any further questions? Seeing none, thank you for your testimony. Is there further supporting testimony?

Sen. Karen Krebsbach, Dist. 40: Mr. Lee is the driving force behind this entire project. Jack Johnson has been a great help to them. I have known him since his days of involvement in Steiger Tractor Co. They are very fortunate to have his capabilities behind this project. The first bill that was introduced was a little overwhelming. It was complicated and costly although it wasn't the intent on anyone's part to make it a costly endeavor. However, I'm sure there will be costs involved if we do get into a statewide system. I think there is much value in having some type of a uniform disposal system for tire and other rubber products. I think it will be beneficial to the public land fills, possibly even to some farmer's pastures and fields. I think this study could be of much benefit to a thriving industry that is just taking off in our state. That industry has much to gain for the state in the recapture and resale of the product, plus in their ability to further manufacture their plant equipment and to distribute that throughout the state and nation. I hope you look favorably on the study.

Chr. Nelson: Are there any questions? Seeing none, thank you for your testimony. Is there further supporting testimony?

Wayne Kern, ND Dept. of Health, Div. of Waste Management: (Written testimony attached)

Chr. Nelson: Are there any questions? Seeing none, thank you for your testimony. Is there further supporting testimony? Seeing none, is there opposing testimony?

Kory Grossman, Northwest Tire: I represent retail locations in distribution and directly to end users. I feel this bill was introduced for the wrong reasons. Now, we dispose of our tires to three different companies, two of which are out of state, and one in state. Rubber mats and truck bed liners are made from them. There are some people doing this, but they are also tri-state companies. It's very expensive to do, so they have to solicit those types of channels. Mr. Lee referred to oil being used for tires. Right now, we sell a tire made out of canola oil, there are coming alternatives to petroleum based products. They are studying the use of plastic in tires. Yokohama Tire and Rubber has plastic liners in their tires. They are talking in Europe about plastic tires. So, ten years from now, is that going to be the same problem as it is today? You can check any one of our locations, as well as our competitors, for the majority of reasons, I believe that we're all following the right thing to do. There are some people that are not following the rules and I think it's a matter of enforcement. We've been solicited by some of these people. We pay to dispose of our tires. It was said earlier that they get nothing and they pay nothing. That's not a true statement for our company and many others. We pay to dispose of those tires. To handle them, build a cage to store them, it's expensive. We don't make any money on it. It's a negative to the customer, they don't like paying for it. Our company opposes

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House Natural Resources Committee

Bill/Resolution Number **SB 2268**

Hearing Date **March 4, 2005**

the original bill. The fear we have is that if it goes to a study it will come back in the next Legislative session with similar recommendations as were in the previous bill.

Chr. Nelson: Are there any questions? Seeing none, thank you for your testimony. Is there any further testimony in opposition. Seeing none, I will close the hearing on SB 2268.

2005 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB 2268

House Natural Resources Committee

☐ Conference Committee

Hearing Date March 11, 2005

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Minutes:

Chr. Nelson: Let's take up SB 2268. I believe we have the same situation, "the Legislative Council shall consider study."

Rep. Nottestad: I move an amendment that the "shall" be changed to "may."

Rep. Keiser: Second.

Chr. Nelson: A motion has been made and seconded. Committee discussion?

Rep. Kelsh: Question.

Chr. Nelson: Question has been called on proposed amendment of changing shall to may. All those in favor signify by saying aye. Opposed, same sign. **Motion carried-Unanimous.** What is the committee's wishes?

Rep. DeKrey: I move do pass as amended.

Chr. Nelson: DeKrey moves do pass as amended. Is there a second?

Rep. Kelsh: Second.

Chr. Nelson: Any committee discussion?

Rep. Porter: This bill was a tax and a mandate back in a study. I applaud the individuals for what they've done with their machine and unit. I think it is great because in some of the larger states and even in some pockets of ND there are large piles of tires. There are also other processes in place across the state that are using these tires for the purpose. There are shredding machines and businesses already operating. I don't know what the study is going to come back and say, other than, "Yes, there are things going on." The core issue to this bill was a tax back onto the consumers to pay for this recycling project. As good a process as they explain, then it should pay for itself and we don't need the study, we don't need the mandate, we don't need the tax. So I'm not going to vote for it just to be studied because I don't know what they're going to tell us other than add a tax and mandate.

Chr. Nelson: Is there committee discussion? Rep. Porter, I don't see the word "tax."

Porter: It was in the bill.

Chr. Nelson: The study was silent on the tax issue. That may have come up. Wouldn't it also be possible that another form of revenue could come out of that study? I would have opposed the bill if it taxed tires and then rubber products. I really don't have a problem with a study if they pick it up. Further committee discussion. Seeing none, we have a do pass as amended motion on SB 2268. Call the roll.

Do Pass as Amended vote:

7-Yeas; 6-Nays; 1-Absent; CARRIER: Nelson

2005 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. **SB 2268**

House Natural Resources Committee

☐ Conference Committee

Hearing Date **March 17, 2005**

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| Committee Clerk Signature <i>Loren Bonnet</i> | | | |

Minutes:

Chr. Jon O. Nelson: Let's take up SB 2268.

Rep. George J. Keiser: I make a motion to reconsider our previous action on SB 2268.

Rep. David Drovdal: Second.

Chr. Nelson: Motion by Rep. Keiser to reconsider our action on SB 2268, second by Rep.

Drovdal. All those in favor of the reconsideration, signify by saying aye. Opposed, same sign.

Motion carried.

Rep. Drovdal: I make a motion

Rep. Dennis Johnson: Second.

Chr. Nelson: Motion to reconsider our amendment to SB 2268 by Rep. Drovdal, second by

Rep. Johnson. Committee discussion? Seeing none, all in favor of the motion signify by saying

aye. Opposed, one. Motion carried.

Rep. Drovdal: I will move a do pass on SB 2268.

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House Natural Resources Committee

Bill/Resolution Number **SB 2268**

Hearing Date **March 17, 2005**

Chr. Nelson: We have a do pass motion by Rep. Drovdal. Is there a second?

Rep. Drovdal: We took the "may" out and replaced it with "shall."

Rep. Donald L. Clark: Second.

Chr. Nelson: Any committee discussion? Hearing none, I will ask the clerk to call the roll:

Do Pass, vote:

8-Yeas; 3-Nays; 3-Absent; CARRIER: Nelson

March 11, 2005

PROPOSED AMENDMENTS TO REENGROSSED SENATE BILL NO. 2268

Page 1, line 5, replace "shall" with "may"

Renumber accordingly

Date: 3/11/05
Roll Call Vote #: 1

2005 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. SB 2268

House NATURAL RESOURCES Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number :

Action Taken : Move amendment to change "shall" to "may"

Motion Made By : Nottestad Seconded By : Keiser

| Representatives | Yes | No | Representatives | Yes | No |
|-------------------------------|-----|----|---------------------|--------|----|
| Chairman - Rep. Jon O. Nelson | ✓ | | Rep. Lyle Hanson | ✓ | |
| Vice Chairman - Todd Porter | ✓ | | Rep. Bob Hunskor | ✓ | |
| Rep. Dawn Marie Charging | ✓ | | Rep. Scot Kelsh | ✓ | |
| Rep. Donald L. Clark | ✓ | | Rep. Dorvan Solberg | Absent | |
| Rep. Duane DeKrey | ✓ | | | | |
| Rep. David Drovdal | ✓ | | | | |
| Rep. Dennis Johnson | ✓ | | | | |
| Rep. George J. Keiser | ✓ | | | | |
| Rep. Mike Norland | ✓ | | | | |
| Rep. Darrell D. Nottestad | ✓ | | | | |
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Total (Yes) Unanimous 13 No 0

Absent 1 - Solberg

Floor Assignment N/A - Amendment only

If the vote is on an amendment, briefly indicate intent:

Line 5, change "shall" consider to "may" consider.

3/11/05
OD right bill w.
amend to LC
2:45/hold
for final

Date: 3/11/05
Roll Call Vote #: 2

2005 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. SB 2268

House NATURAL RESOURCES Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number :

Action Taken : Do Pass as Amend.

Motion Made By : De Krey Seconded By : Kelsh

| Representatives | Yes | No | Representatives | Yes | No |
|-------------------------------|-----|----|---------------------|-----------|----|
| Chairman - Rep. Jon O. Nelson | ✓ | | Rep. Lyle Hanson | | ✓ |
| Vice Chairman - Todd Porter | | ✓ | Rep. Bob Hunsakor | ✓ | |
| Rep. Dawn Marie Charging | ✓ | | Rep. Scot Kelsh | ✓ | |
| Rep. Donald L. Clark | ✓ | | Rep. Dorvan Solberg | <u>Ab</u> | |
| Rep. Duane DeKrey | ✓ | | | | |
| Rep. David Drovdal | | ✓ | | | |
| Rep. Dennis Johnson | ✓ | | | | |
| Rep. George J. Keiser | | ✓ | | | |
| Rep. Mike Norland | | ✓ | | | |
| Rep. Darrell D. Nottestad | | ✓ | | | |
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Total (Yes) 7 No 6

Absent 1

Floor Assignment ~~De Krey~~ Nelson

If the vote is on an amendment, briefly indicate intent:

Change

Date: 3/17/05
 Roll Call Vote #: 1

2005 HOUSE STANDING COMMITTEE ROLL CALL VOTES
 BILL/RESOLUTION NO. SB 2268

House NATURAL RESOURCES Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number :

Action Taken : Do Pass

Motion Made By : Drovdal Seconded By : Clark

| Representatives | Yes | No | Representatives | Yes | No |
|-------------------------------|-----|----|---------------------|-----|----|
| Chairman - Rep. Jon O. Nelson | ✓ | | Rep. Lyle Hanson | ✓ | |
| Vice Chairman - Todd Porter | | ✓ | Rep. Bob Hunskor | ✓ | |
| Rep. Dawn Marie Charging | ✓ | | Rep. Scot Kelsh | Abs | |
| Rep. Donald L. Clark | ✓ | | Rep. Dorvan Solberg | ✓ | |
| Rep. Duane DeKrey | Abs | | | | |
| Rep. David Drovdal | ✓ | | | | |
| Rep. Dennis Johnson | ✓ | | | | |
| Rep. George J. Keiser | | ✓ | | | |
| Rep. Mike Norland | Abs | | | | |
| Rep. Darrell D. Nottestad | | ✓ | | | |
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Total (Yes) 8 No 3

Absent 3

Floor Assignment Nelson

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE (410)
March 18, 2005 8:27 a.m.

Module No: HR-50-5378
Carrier: Nelson
Insert LC: . Title: .

REPORT OF STANDING COMMITTEE

SB 2268, as engrossed: Natural Resources Committee (Rep. Nelson, Chairman)
recommends DO PASS (8 YEAS, 3 NAYS, 3 ABSENT AND NOT VOTING).
Engrossed SB 2268 was placed on the Fourteenth order on the calendar.

2005 TESTIMONY

SB 2268

MOORHEAD

MINNESOTA

500 Center Avenue, Box 779 • Moorhead, MN 56561
(218) 299-5301 • TDD: (218) 299-5370
www.ci.moorhead.mn.us

February 2, 2005

Mr. Ervin Lee
Lee Law Offices
317 3rd St. NW
Minot, ND 58702

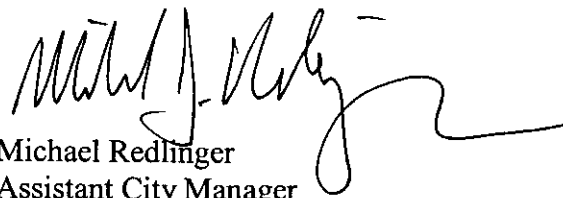
Dear Ervin:

Thank you for updating us this week on Delta Energy, LLC's plans to move forward with the tire remediation project. I appreciate you stopping by to update us on your progress in working with members of the North Dakota Legislature on tire fees and disposal-related issues.

As we discussed at our meeting this past week, it will be important to move forward in Minnesota with legislative efforts to ensure parity with North Dakota's waste tire disposal rates and policies. As a border community and supporter of the Delta Energy, LLC project, we will assist you in setting up meetings with our area legislators to discuss the potential changes in North Dakota tire disposal fees.

As always, we look forward to working with you and your team on this important project in the future. Thank you again for your time this past week.

Sincerely,



Michael Redlinger
Assistant City Manager

RJ Lee Group, Inc.

The Materials Characterization Specialists

350 Hochberg Road
Monroeville, PA 15146
Tel: (724) 325-1776
Fax: (724) 733-1799

February 2, 2005

Mr. Ervin Lee, Esq.
Delta Energy LLC

Dear Ervin,

Today I met with US Congressman John Murtha's district manager and his staff. The purpose of the meeting was to update them on several Department of Defense projects in which RJ Lee Group is engaged. I took this opportunity to describe several other projects which we are engaged in. Among them was Delta Energy's tire recycling project. They showed great interest. We explored the potential for using this technology in the state of Pennsylvania. We talk of possibilities of incorporating it into other environmental economic development programs. They felt the project would be of great interest to Pennsylvania DEP strongly urged us to present the idea is to the Secretary of DEP, Kathleen A. McGinty. I informed them we have a meeting scheduled with her in late February. They promised to contact her office and share their opinions about the Delta energy technologies. They were impressed with the fact that the state of North Dakota was considering legislation to address in mental problems surrounding used tires. The idea of removing an environmental hazard, reducing our dependence on foreign oil, and recovering other raw materials that could be used in the manufacturer of rubber and steel struck them as elegant and timely.

I commend you on your efforts in North Dakota. My hope is that we can if develop us a similar program for the state of Pennsylvania.

Sincerely yours,



Glenn Harmon

Vice President of Opportunity Development

A Proposal for the Resource Recovery & Conservation Act (RRC)

During the next century, North Dakota will generate 640,000-plus waste tires per year or one for every man, woman and child. In addition, North Dakota currently has more than two million waste tires on the ground.

Because of North Dakota's location, the state's industries and agriculture depend on access to oil, much of which comes from foreign sources. Reducing this dependence calls for an innovative approach, an approach that addresses the environmental concerns of North Dakotans and simultaneously creates positive revenue streams to North Dakota municipal and county governments.

The challenge is to frame a proposal which changes the state's current approach to waste tires and other solid wastes into one with a positive appeal to all stakeholders -- government, industry, property and income taxpayers, consumers, etc. The purpose would be to create a program whereby North Dakota taxpayers receive some form of measurable benefit from the tire disposal program (i.e. reduced property taxes and costs of government) while giving those consumers who pay for the disposal of waste tires some value for their fees.

The solution is the establishment of the Resource Recovery & Conservation Act (RRC). RRC is based upon the assumptions (1) that many traffic services are not fully paid for by gas taxes, or in the present case, the tire disposal fee; (2) that North Dakota tire consumers are paying anywhere from \$2.00 to \$6.00 for tire disposal while the tire retailers generally pay between \$1.00 to \$1.50 per tire for disposal; and (3) that a uniform law needs to be in place to handle the recovery of energy and material from petroleum based products, such as waste tires, hoses, belts, etc.

The burden of providing traffic services falls upon local, county and state government. Traffic services for this purpose include policing, emergency response, planning, courts, street lighting, parking enforcement, and driver training. These are, in essence, unfunded mandates. For example, the Victoria Transportation Policy Institute, Victoria, British Columbia's studies of the external costs of automobiles cited a report from Apogee Research which estimated the costs of providing these traffic services to range from approximately \$0.005/vehicle mile in rural areas to \$0.015/vehicle mile in urban. The N.D. Department of Transportation estimated that in 2003 7.3 billion miles were driven in the state. Using an average cost of \$0.0075/mile for traffic services means that North Dakota taxpayers -- property and income -- paid approximately \$55 million dollars to support unreimbursed traffic services.

In addition to traffic services and emergency response services paid for by taxpayers, there are those emergency response services provided for by volunteer ambulance and fire departments. The people who volunteer do so out of their commitment to helping others in need. They do not get paid and often have to sacrifice income in order to meet their public commitment. These departments do not have a steady stream of income and many use fund-raisers like bake sales to obtain fuel, oxygen, training and other vital supplies.

RRC is designed to be self-supporting and would eliminate approximately 640,000 scrap tires yearly. It would provide funds necessary to clean up the estimated 2 to 4 million waste tires that are stockpiled (legally and illegally) across the state. It would provide property tax relief.

Under RRC, the state pursuant to its authority to protect the public's health and welfare would require that waste tires and other petroleum based products be recycled, provided there is a viable

process. A reasonable user fee on the sale of new tires would be implemented as a source of funding necessary to pay for the collection, shredding and processing the waste tires. RRC's primary focus would be to encourage the use of technologies that allow for recovery of the energy and material contained in waste tires.

Unique to the proposed legislation is the division of the recovered products from waste rubber, etc. The oil recovered from the waste tires (about 1.1 gallons/automobile tire) could be used for electrical generation or refined to extract the high end oil products (approximately 35%) for resale to the plastics industry, with the balance of oil to be used for electrical generation.

Under RRC, the oil recovered could be purchased by the state for use in providing a fuel supply for peak power generation if the state deemed it to be in the best interests of North Dakota citizens. The purchase price would be fixed and not subject to the market. This would allow the state to provide needed fuel to an electric utility at a reasonable cost to the utility and to all the utility's customers.

Another feature of the proposed legislation is the creation of air pollution credits – Environmental Credits or EC. The rationale behind the EC is to recognize the "recovery" of the oil used to manufacture a tire (ex. 22 gallons of crude oil), and the avoidance of the pollution resulting from the extraction and refining of those resources (ex. 143 pounds of carbon dioxide) by passing a portion of the pollution avoided through to industry. The goal is to help North Dakota manufacturers and utilities receive a credit to be applied toward the pollution generated in their day-to-day operations, thus helping them to meet some of the U.S. EPA regulations controlling the discharge of greenhouse gases, etc. This type of credit would create an incentive to establish long-term contracts to acquire the recovered fuel from the state.

Conclusion

The RRC would change the existing paradigm from one where petroleum based products are thrown away to one where they are recovered and reused. It would provide a legislative solution for the waste tires generated throughout North Dakota that contributes to the sustainability of local communities while promoting the national agenda by:

- a. Being environmentally and socially responsible;
- b. Being economically viable;
- c. Contributing to payment for traffic services and emergency response services; and,
- d. Contributing to the economic well-being of county and local governments while addressing the rate of increase in property taxes.

The RRC would also achieve the following goals:

1. It would reduce the number of waste tires and other petroleum based products currently being accumulated throughout N.D.;
2. It would remediate waste tire stockpiles in noncompliance;
3. It would encourage the recycling of waste rubber into value-added products (rubber mats, etc.);
4. It would encourage the development and use of technologies that beneficially use waste tires in an environmentally acceptable manner; and,
5. It would encourage the use of technologies which can recover the energy and material (oil, steel, carbon black, and gas) used to manufacture rubber (waste tires) and other petroleum based products that presently cannot be economically recycled or otherwise beneficially used.

59th North Dakota Legislative Assembly
Senate Natural Resources Committee
SB 2268, Recycling of Petroleum Based Products – Feb. 3, 2005

North Dakota Emergency Medical Services Association

Good morning, Chairman Lyson and members of the committee. My name is Dean Lampe, and I am the Executive Director of the North Dakota Emergency Medical Services (EMS) Association. Our association represents approximately 1600 individual EMS provider members throughout the state who primarily serve on North Dakota's 143 licensed ambulance services and 62 Quick Response Units. Approximately 90% of our state's EMS providers serve their communities and service areas as volunteers. On behalf of our membership, I am pleased to share with you our thoughts concerning this bill.

When our association became aware of this proposed legislation, we felt compelled to indicate our strong support. First of all, while there appears to be a surplus in North Dakota, we know it is not sufficient to meet all of the requests and needs of the state, including ours. What we like about this legislation is a linkage between having a small end-user fee which is collected at the time individuals or entities, such as our ambulance services, purchase a set of tires; and, then a portion of the fee comes back to EMS for the purpose of helping to defray the training costs of our state's EMS providers and ambulance services.

As the committee is aware, the training and continuing education requirements for an Emergency Medical Technician (EMT) are significant. The initial training course consists of a curriculum designed on 110 hour base. However, this course most often requires more than 150 classroom hours to complete. In addition, the continuing education requirements for an EMT are 72 classroom hours every two years. For our volunteers, this training must be completed at night and on weekends because most have their normal jobs to attend to during the workday. In addition to their personal time, in a lot of cases these volunteers pay their own childcare, travel, and other expenses involved in their training. This is a significant sacrifice to ask of our volunteers.

Of course, on behalf of the North Dakota EMS Association, I am not here to speak to the merits of this legislation from an environmental standpoint. I am here to speak about the impact this bill would have on our ambulance services and EMS providers. Most all of you are aware that our state lost an esteemed legislator and EMS, most especially "rural" EMS, lost an valued and important advocate when Representative Dale Severson passed away a little more than one year ago. What the committee members may not be aware of is that Representative Severson bequeathed \$50,000 to the North Dakota EMS Association in his estate. Dale's wish was for our association to establish a perpetual means of continuing the work he had done over the years in the legislature^{ure} for EMS. In keeping with his wishes, our association has now established the North Dakota Emergency Medical Services Foundation, which is a 501(c) 3 charitable trust. The foundation has as its mission and sole purpose identifying worthy volunteer candidates and subsidizing the training costs for rural EMS providers; which, of course, are vital to the basic healthcare delivery system in our rural communities.

With this in mind, we would request one amendment to the bill. Rather than to have the funds go from the Tax Commissioner to the Department of Health, it is our suggestion that the funds go directly from the Tax Commissioner to the EMS foundation. If this were done, it would lessen the recordkeeping burden on the Department of Health and, at the same time, allow the foundation to seek federal grants and other sources of matching funds so that we can leverage the funds received.

On behalf of our members, I thank you for the opportunity to speak on this important legislation and we ask you to recommend a "Do Pass" on the Senate floor subject to our proposed amendment.

Testimony

Senate Bill 2268

Senate Natural Resources Committee

Thursday, February 3, 2005; 10:30 a.m.

North Dakota Department of Health

Good morning, Chairman Lyson and members of the Senate Natural Resources Committee. My name is Wayne Kern, and I am director of the Division of Waste Management for the North Dakota Department of Health. I am here today to provide testimony in opposition to Senate Bill 2268.

The Department of Health supports recycling and reuse of solid waste and is not opposed to legislation that would further such efforts with respect to waste tires and other waste rubber. However, we have a number of concerns regarding Senate Bill 2268, including implementation, infrastructure, the establishment and use of air pollution credits, and the preclusion of other waste-management options.

The management of scrap tires and other waste rubber is a significant solid waste issue. Improperly managed waste tires can blight the landscape and lower property values. They also pose significant public health, safety and environmental concerns. For example, improperly managed waste tires increase the potential for disease transmission and fires that can result in significant land, air and water pollution.

In North Dakota, waste tires represent a small portion of the total annual waste, estimated at less than 2 percent by weight. Despite this low percentage, waste tires present unique challenges. It is estimated that about 4 million waste tires may be stockpiled or scattered throughout the state. The largest landfills in North Dakota do not dispose of whole tires because they are bulky and difficult to bury. Although many tires are sent to legitimate processors or permitted disposal sites, illegal stockpiles have been found in ravines, fence rows, rented warehouses and ditches, creating environmental and liability issues for property owners, tire generators and political subdivisions.

The following points detail the department's main concerns regarding Senate Bill 2268:

- 1) The bill requires significant resources for implementation, including a large infrastructure involving four state agencies. If waste tires and other waste rubber are to be further addressed, a simpler and less resource-intensive approach is needed.

- 2) The bill requires a number of complex technical determinations based on definitions or concepts that are difficult to understand and interpret. Information needed to make these determinations may not be available without conducting technology-specific demonstration projects involving considerable data collection. Examples include added value determinations and determinations related to energy and resource savings.
- 3) The bill requires the establishment and use of air pollution credits for ranking resource recovery technologies and in seeking credits in other states and countries. To enable use of such credits, the bill also requires pursuit of changes to federal laws or regulations.

Currently, North Dakota does not have a system for banking or trading air pollution credits. Such a system would require the development of a significant tracking and management system that, in the end, would not be required to meet current federal Clean Air Act requirements. In addition, seeking federal law and regulation changes to enable use of such credits would be an onerous task with little, if any, realistic chance for success.

- 4) The bill proposes a one-prong approach for addressing waste rubber: the use of processes such as pyrolysis to extract embedded petroleum and other products for sale.

Waste management strategies should not rely on just one option, but should be broad, flexible and adaptive to local conditions, and should enable an array of practical, feasible and cost-effective options. The Department of Health supports a multi-pronged approach for managing solid waste that includes waste reduction, reuse, recycling, energy recovery, and disposal, if needed, in permitted landfills.

- 5) The bill requires the Department of Commerce to develop markets for such products. In order for the approach proposed in Senate Bill 2268 to work, sustainable markets would need to be developed for the byproducts of resource recovery processes. Historically, resource recovery processes such as pyrolysis have not been economically sustainable due to the lack of markets for the byproducts. Therefore, a possible outcome of a strategy focused solely on resource recovery processes may be the accumulation of byproducts that may be hazardous, cannot be marketed and could be expensive to dispose.
- 6) Finally, the bill precludes or makes it extremely difficult to pursue other acceptable management options for waste tires and other waste rubber, such as tire-derived fuel, engineered uses and landfill disposal. Use as fuel represents an important and viable option that could address all waste tires and other waste rubber in the state

and region. Also, landfill disposal should be an option for addressing waste rubber that cannot be feasibly recycled or used for material or energy recovery.

In summary, the Department of Health is not opposed to legislation that would further efforts to address waste tires and other waste rubber in the state; however, because of the reasons stated above, we cannot support this bill. If this matter is to be further addressed in legislation, the department believes that a simpler, less resource-intensive and more workable approach is needed.

This concludes my testimony. I am happy to answer any questions you may have.

Feature Stories (Vol. 107 No. 4--01/26/2005)

It Can't Be Done . . . But They're Doing it Berthold entrepreneurs create efficient process for recycling waste rubber and tires

By Caroline Downs



It's never been done before . . . Duane Erickson stands next to the heating chamber of a low temperature waste rubber pyrolysis reactor designed and built by L & E Systems at the Lee farm outside of Berthold. The prototype, a result of state-of-the-art technology combined with common sense manufacturing, recycles waste tires in an environmentally safe process while recovering valuable oil, gas and carbon materials for resale.

They were told their idea was too costly, too impractical to replicate, and too risky.

The equipment wouldn't work, the science couldn't be explained, the pollutants couldn't be controlled, and the markets did not exist.

Blessed with the strong sense of purpose famous among North Dakotans, they forged ahead, working in a shop built specifically for their purposes on a family farm north of Berthold.

Now, a group of entrepreneurs stands ready to address certain environmental and economic issues with a new process for recycling waste tires.

"I've spent five years working on this," said Ervin Lee of Minot, who serves as a spokesman for the project. "I've got the rolling tire disease really bad!"

Basically, the process heats shredded tires and a chemical catalyst to relatively low temperatures to recover the oil, gas, carbon and steel products used to manufacture the tires. No combustion is involved, so very little pollution and no harmful byproducts are generated. The equipment used in the process was adapted from "off-the-shelf" parts commonly seen on North Dakota farms and rural communities. The recovered materials are of such high quality they can be marketed with little or no further refining.

Several years in the making

The idea germinated in the late 1990s, when farmer-turned-attorney Lee was representing the Turtle Mountain Chippewa. The tribe had purchased equipment for a rubber crumbing operation, but turnover on the tribal council led to other interests. The tribe also released Lee from their service, but he continued his research on the potential uses of waste rubber.

Through his study, he met Ron Nichols, an inventor living in Denver who had been working on a process using heat and chemicals, known as pyrolysis, to break down waste rubber into recoverable and useful components. Actually, several individuals and companies around the world had been seeking for decades to recycle waste tires in a safe and economical fashion, but Nichols was the first to devise a method using a chemical catalyst and low heat.

"Ron found out what combination of chemicals worked," Lee said. "Nobody else has found that out. I saw it as something that could be manufactured in North Dakota."

Nichols and Lee teamed up with two other individuals to try to sell the idea. Lee described that time as a period when he personally observed "gold fever" among representatives from national corporations who tried to capitalize on or even steal the process. "It brings out the larceny and greed in everybody," he said.

Finding no trustworthy investors, the original group of four dissolved. Lee and Nichols still believed in the potential of the process, however, and in 2000 they convinced Lee's brother Dr. Richard Lee, of the R. J. Lee Group, Inc. based in Monroeville, Pennsylvania, to assist them. As a physicist, Dr. Lee contributed his scientific expertise and credibility to the project. Working with the R. J. Lee Group, Nichols obtained a patent for his method.

"One of the issues is how you articulate the science," Ervin Lee said, "because when you see the machinery, you don't see anything happening."

In August that year, with the support and assistance of Agriculture Commissioner Roger Johnson, the men presented a bench demonstration of the process on the steps of the capitol building in Bismarck. The scale model created plenty of interest among observers, including the city planner from Las Vegas, NV. However, most people in the audience had the same question: how do you know you can do this with a full production model?

Under the umbrella of the R. J. Lee Group, the men continued developing the waste tire pyrolysis reactor. In 2001, Ervin Lee met up with Duane Erickson, originally from Carpio, at a meeting of the Minot Area Development Corporation.

For more than 30 years, Erickson had worked as a manufacturing engineer across the United States and around the world for corporations such as John Deere, Bourgault and others. "He was returning to Minot to start a manufacturing operation," Lee said.

Equipment tested and perfected

Lee invited Erickson to take a look at the process. Erickson was intrigued enough to accept Richard Lee's offer for L & E Systems, Erickson's company, to work on the project. He admitted to becoming consumed by the challenge, spending 10 to 12 hours a day, six or seven days each week at the Lee farm.

"They spent six to eight months building it," said Ervin Lee, adding that the time since then has been used to perfect and test the equipment, the process and the recovered products. Four people worked full-time on the project for two years, with eight to ten other people brought in as needed for their skills and expertise.

By 2002, the group realized they needed to add a management component, so they convinced the eldest Lee brother Paul, a former operations officer with MCI Worldcom, to join the project as the chief operations officer. At that point, the group, now referring to themselves as Delta Energy LLC, was ready to investigate the possibility of marketing their equipment as a safe and viable method for waste tire recycling.

As they continued their research and development efforts during the past two years, they also invited several interested parties to observe the process. Chemists scratched their heads and engineers double-checked the calculations, but they all agreed it works.

Although the science may be mystifying, the numbers are hard to ignore. Every standard 20-lb tire manufactured requires 22 gallons of crude oil, 7 gallons of refined oil, 0.56 gallons of natural gas, 2 pounds of coal, 14 kWh of electricity and 3 gallons of water. Delta Energy's pyrolysis process recovers 1.13 gallons of oil, 0.33 gallons of gas, 7.2 pounds of carbon material and 2.5 pounds of steel per tire.

In the state of North Dakota, where approximately 640,200 waste tires are generated each year, that means an annual average of 11,977 barrels of oil, 151 gallons of gas, 1646 tons of carbon material and 572 tons of steel would be recovered.

All of those materials have a market value. For example, assuming oil at \$42 a barrel for Nymex Crude, the value recovered from North Dakota waste tires in one year would be \$503,034.

Delta Energy also calculated that if such a waste tire recovery process were to be implemented across the state, the amount of raw materials needed to produce the same number of tires each year would be reduced by half, as would the amount of pollution generated in the extraction and refining of those raw materials.

Interest extends to other states

The potential behind the reactor's viability has people excited in the New York State legislature and the city governments of Las Vegas and Salt Lake City. The Anheuser-Busch malting plant in Moorhead, Minnesota, is considering installing one of the plants to use the recovered fuel in their operations. In fact, they estimate the total oil generated from the waste tires processed in North Dakota each year would be sufficient for their needs.

Kim Christianson, State Energy Officer with the Department of Commerce-Division of Community Services, was one of a handful of state officials and legislators who visited the Lee farm. "We've been very impressed with what we've seen," he said. "There's no question dealing with waste tires has been a real problem area."

Christianson believed some details about the process still needed consideration, such as maintaining a steady supply of waste rubber and covering the costs of collecting and shipping tires to be processed. However, he said the recovery of valuable resources from waste rubber was worthwhile, especially if the facilities could be located near waste tire stockpiles. "We applaud the Lees for all the effort and investment they've put into this," he said. "Anything we can do to utilize those waste tires would be beneficial to the state."

Ervin Lee, as the group's governmental relations person, remains committed to creating opportunities in North Dakota. "One of the obstacles is that everybody wants the action to occur where they live," he said. "I wanted the manufacturing and science done here. I thought it would be a great way to create jobs here."

75% of used tires go to waste

Lee considered waste tire reprocessing in the broader context of environmental, societal and economic issues in the state. Although consumers pay tire disposal fees, most tires generally find their way to landfills, where they pose a fire hazard as well as contribute to the growth of West Nile virus by providing habitat for mosquitoes.

"They're just transported, and there's no benefit to anybody," Lee said. According to a U.S. Department of Energy study, 75 percent of all tires are landfilled,

stockpiled or illegally dumped. Thus, a source of useful oil and carbon black goes untapped while public health and safety are endangered.

At the same time, costs for providing traffic services, such as policing, emergency response, planning, courts, street lighting, parking enforcement and driver training, are paid indirectly by the state's income and property taxpayers. Described as unfunded mandates, these services have high price tags, with urban areas running three times as much as rural areas. In 2003, the North Dakota Highway Patrol estimated the cost for providing those services for the 7.3 billion miles driven in the state to be at least \$37 and possibly as high as \$110 million.

Lee worked to draft legislation addressing both problems. In his proposal, now known as Senate Bill 2268, the state would establish and encourage a waste rubber reprocessing program funded by disposal fees paid by consumers. A portion of the fees would also provide public benefits through distribution state back to the counties to pay for traffic and emergency response services.

Other states and municipalities are watching the bipartisan bill's progress and outcome. "Nevada is very interested," Lee said. "Right now, they import 95 percent of their energy." If the North Dakota legislature supports the proposal, the state's program will likely serve as a model across the nation.

Reactors could be built here for export to other states

"This is a product with broad appeal beyond North Dakota," Lee said. Delta Energy estimated that three of the pyrolysis reactors would be sufficient to handle the waste tires in the state, with each plant running around the clock and processing some 210,000 tires per year.

If other states adopt a similar approach to waste rubber recycling, some of North Dakota's manufacturers could find themselves busy. "We estimate three units for every million tires," Lee said. "That's a lot of manufacturing we could bring back here."

He and Erickson believe manufacturers and fabricators already established in the state will be able to produce the reactors as needed for use in North Dakota and around the nation. They favor a distributed manufacturing approach, where various components of the reactors could be constructed and then transported for assembly.

"We're committed to manufacturing this in North Dakota, but we don't have a need to build a big factory," Lee said. "Our goal is to stabilize the jobs that are already there."

"When you look at the process, what you're doing and why you're doing it, it's something good for business and the environment," Erickson said.

With only one prototype available right now and the legislation awaiting its initial hearing on February 4th, Delta Energy knows they're looking at some long range goals. That's fine with them. They're accustomed to making an impact with the impossible.

Read more about the
**PROPOSED WASTE RUBBER RECYCLING
LEGISLATION**

Read more about the
**BACKGROUND OF THE WASTE
TIRE PYROLYSIS PROJECT**



Feature Stories (Vol. 107 No. 4--01/26/2005)

Legislation would tie rubber recycling to funding of public services

By Caroline Downs

The statistic stays consistent: all across America, one waste tire is generated per man, woman and child each year.

In North Dakota, that translates into 640,000 tires requiring disposal on an annual basis. In addition, there are an estimated two to three million more waste tires stockpiled illegally around the state.

Despite disposal fees ranging from \$2 to \$6 per tire paid by North Dakota consumers, waste tires accumulate in landfills or illegally on private property. This practice leads to health and safety problems, including fire hazards and breeding sites for mosquitoes that carry West Nile virus.

In the meantime, North Dakotans drive an average of 7.3 billion miles per year, making use of traffic services they're not paying for directly, including policing, emergency response, planning, courts, street lighting, parking enforcement and driver training. Property and income taxpayers shoulder the burden for these services in the state.

Then there's the matter of the state's dependence on foreign oil and the increasing cost of energy.

Ervin Lee, who serves as a spokesman for Delta Energy LLC, saw a relationship among these issues and studied ways they could benefit one another. The result is a proposal that would use tire disposal fees to pay for processing waste tires, hoses and belts while encouraging the use of new technologies to recover marketable materials from the waste rubber. A portion of the fees collected would be returned to the municipalities through the state to help fund unreimbursed traffic services.

That proposal is now before the state legislature as Senate Bill 2268, with a hearing scheduled on February 4th at 10 am before the Natural Resources Committee.

The bill promotes the responsible stewardship of environmental, natural and public resources by managing all rubber-based products in the state, including tires, belts and hoses, in a way that maximizes the economic value of the energy and materials recovered from the products. Another element of the proposed legislation requires the end users of traffic services, emergency response services, and rural ambulance and fire departments to pay for part of the cost of those unreimbursed services.

Various sections of the bill address waste management priorities for rubber-based products, outline a procedure for accepting waste rubber for the next 15 years, and delineate the duties of the Department of Health in working with tire retailers to collect waste rubber and to abate current waste rubber stockpiles.

The Department of Commerce would also be involved in the program, with one section of the bill devoted to specifying the department's commitment to assist in the development of new technologies designed to recover marketable materials from waste rubber, to educate the public about the process, and to handle the use or sale of energy recovered in the process.

A unique feature of the bill is the creation of environmental credits that reward the use of energy and materials recovered from waste rubber processing. The credits would take into account the savings in pollution, energy, natural resources and cost resulting from the use of the recovered products. Such environmental credits could be banked and traded by the end users of those products and applied toward compliance with federal regulations in their own operations in the state or around the country.

One of the bill's most important components is the section addressing the collection and dispersal of the resource recovery fees. The bill proposes 39 cents per pound be collected for each new rubber-based product sold for automobile, industry or agricultural use. For an average vehicle tire, consumers would pay \$7.80, with \$3.60 of that money applied toward processing the waste rubber. Another \$2.40 cents per tire would be returned to the Department of Health to fund county and city emergency response services, as well as volunteer rural ambulances and fire departments, and to the Department of Transportation to fund traffic services provided by the North Dakota Highway Patrol, county sheriff offices, and local law enforcement.

The waste rubber processing program would be self-sustaining, with \$1.40 of each tire fee applied toward research and market development, as well as for the state's purchase of the oil for energy generation. The remaining 40 cents would cover the administrative costs incurred by the state for implementing and operating the waste rubber recycling program.

The bill also defines and specifies the terms for the technologies approved for use under the legislation, with an emphasis on the recovery and marketing of value-added products in a way that protects the environment. "The rules are laid out for any group, not just our company," Lee said. "This creates a level playing field."

Because of its innovative nature, the bill has attracted bipartisan support in both chambers of the legislature. Senator Karen Krebsbach (R) of Minot is the prime sponsor, with Senator David O'Connell (D), Lansford, and Senator Tom Seymour (D), Minot co-sponsoring the bill in the Senate. In the House, Representatives Glen Froseth (R), Kenmare, Mary Ekstrom (D), Fargo, and Jim Kerzman (D), Mott, have all signed their support.

"It's the purest form of economic development," said Seymour. "I would like to see a regional system of tire collection that enhances the economic development efforts of small and large communities. The money generated should support the efforts of the entrepreneurs who created the idea."

Ekstrom, who encourages other sustainable projects like wind energy, appreciated the proposal's attention to environmental concerns. "I am drawn to the process because it not only recycles and recovers existing materials, but it does it in an environmentally sensitive way," she said. "There is another 'natural' resource that can be transformed back into energy while cleaning up the environment and not filling up the landfills."

Froseth agreed with the dual approach to business and the environment. "They can extract the original natural resource out of the product while eliminating the vast piles of tires laying around," he said. "I like the idea of the business opportunities this is going to create for the recycling of those products. The building of those units (waste rubber pyrolysis reactors) is going to create an industry in itself."

Like Ekstrom and Seymour, Froseth has observed the operation of the prototype waste rubber pyrolysis reactor at the Lee farm northeast of Berthold. "I didn't expect it to be anything that sophisticated or all-encompassing," he said. "I was impressed with the research they've put into it. They know everything there is to know about the process, about the oil industry and the rubber industry."

The unusual plan for funding the program by relating it to emergency and traffic services has also intrigued the bill's sponsors. "I like [the] idea of distributing the monies to the various entities," Ekstrom said. "Safety, infrastructure and education are the most important roles of state government. We have a fragile safety system that, at least in the rural areas, is largely run by volunteers. I have been worried for some time that some of these systems are in danger of imminent collapse because of the lack of funds...."

Froseth considered the use of the tire disposal fees a strong incentive to support the waste rubber recycling effort. "It's not an industry that will just benefit those who own the equipment," he said. "I think that's unselfish of the developers. It should be a big benefit in the end to the consumers."

The waste rubber recycling process has already received several endorsements from individuals, agencies and municipalities, including U. S. Senator Byron Dorgan and Congressman Earl Pomeroy, the North Dakota Departments of Health, Agriculture and Commerce-Division of Community Services, as well as the cities of Fargo, Minot, and Las Vegas. Now with the bill drafted and awaiting its hearing, Lee had plans this week to meet with the Burleigh County Commissioners, the Fargo city managers and the Jamestown city council to discuss the process and the related bill.

"We have an opportunity where good business and good politics combine to make good legislation," he said.

It remains to be seen if the 59th Legislative Assembly of the State of North Dakota agrees.

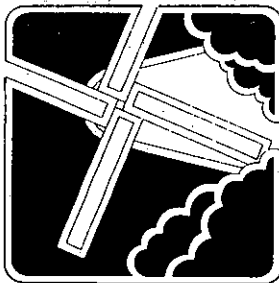


Read more about the the
WASTE TIRE PYROLYSIS REACTOR

Read more about the
**BACKGROUND OF THE WASTE TIRE PYROLYSIS
PROJECT**

*Park Board interested
in buying school sports
complex property*

see story on page 7



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Kenmare News

HOME OF THE OLD DANISH MILL AND THE KENMARE HONKERS

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Kenmare, ND 58746

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IT'S CAN'T BE DONE . . . BUT THEY'RE DOING IT

Berthold entrepreneurs create efficient process for recycling waste rubber and tires

By Caroline Downs
They were told their idea was too costly, too impractical to replicate, and too risky.

The equipment wouldn't work, the science couldn't be explained, the pollutants couldn't be controlled, and the markets did not exist.

Blessed with the strong sense of purpose famous among North Dakotans, they forged ahead, working in a shop built specifically for their purposes on a family farm northeast of Berthold.

Now, a group of entrepreneurs stands ready to address certain environmental and economic issues with a new process for recycling waste tires.

"I've spent five years working on this," said Ervin Lee of Minot, who serves as a spokesman for the project. "I've got the rolling tire dis-

Basically, the process heats shredded tires and a chemical catalyst to relatively low temperatures to recover the oil, gas, carbon and steel products used to manufacture the tires. No combustion is involved, so very little pollution and no harmful byproducts are generated. The equipment used in the process was adapted from "off-the-shelf" parts commonly seen on North Dakota farms and rural communities. The recovered materials are of such high quality they can be marketed with little or no further refining.

Several years in the making

served "gold fever" among representatives from national corporations who tried to capitalize on or even steal the process. "It brings out the envy and greed in everybody," he said.

Finding no trustworthy investors, the original group of four dissolved.

Lee and Nichols still believed in the potential of the process, however, and in 2000 they convinced Lee's brother Richard Lee, of the R. J. Lee Group, Inc. based in Monroeville, Pennsylvania, to assist them. As a physicist, Richard Lee contributed his scientific expertise and credibility to the project.

"One of the issues is how you articulate the science," Ervin Lee said, "because when you see the machinery, you don't see anything happening."

In August that year, the men presented a bench demonstration of the process on the steps of the capital building in Bismarck. The scale model created plenty of interest among observers, including the city planner from Las Vegas, NV. However, most people in the audience had the same question: how do you know you can do this with a full production model?

Under the umbrella of the R. J. Lee Group, the men continued developing the waste tire pyrolysis reactor in 2001. Ervin Lee met up with Duane Erickson, originally from Carpio, at a meeting of the Minot Area Development Corporation. For

some de-

Christianson believed tails about the process containing consideration, such as a steady supply of waste, covering the costs of shipping tires to be processed, he said the recovery of valuable resources from waste was worthwhile, especially if the facilities could be located for all the effort and investment they've put into this.

thing we can do to utilize waste would be beneficial to the state," Ervin Lee, as the general manager, committed to creating a business in North Dakota. "On the ob-

scapes is that everybody action to occur where the science and science done here, it would be a great way to live."

Lee considered waste processing in the broader context of environmental, social and economic issues in the state. Although consumers pay tire disposal fees, most tires generally find their way to landfills, where they are as a fire hazard as well as contribute to the growth of West Nile virus and habitat for mosquitoes. "They're just trash and there's no benefit to it," Lee said.

75% of used tires go to waste.

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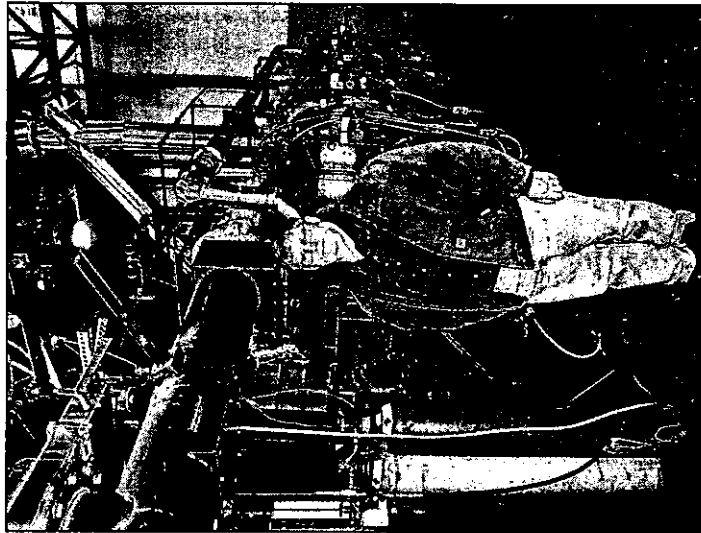
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It's never been done before Duane Erickson stands next to the

With only one prototype available right now and the legislation awaiting its initial hearing on February 4th, Delta Energy knows they're looking at some long range goals. That's fine with them. They're accustomed to making an impact with the impossible.

for part of the cost of bursed services. Departments of the bill address government priorities for products, outline a program to produce waste rubber for the markets, and delineate the Department of Health and Welfare's role in collecting rubber and to abate curber stockpiles. The Department of Commerce is involved in the pro-

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Communities would benefit from rubber recycling

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KENMARE SCHOOL HONOR ROLL

Kenmare Public School announces second quarter honor roll names for 2004-2005.

Seniors earning Straight A Honors were Andrew Hager, Eric Jacobson, Julie Johnson, Casey Jones, Megan Mahlum and Brock Zietz. Seniors placed on the A Honor Roll were Jessica Brekhus, Nicole Brekhus, Joy Corey, Cyle Golde, Paige Helmers, Amber Jensen, Carter Norrie and Danielle Sigloh. Seniors on the B Honor Roll were Matt Borud, Brekka Norrie, Jamie Peterson, Chelsea Schwartz and Jackie Thompson.

A junior earning Straight A Honors was Kay Goettle. Juniors placed on the A Honor Roll were Cole Bauer, Joshua Gottschall, Melissa Harris, Christopher Johnson, Erica Pullen,

Christopher Rockeman, and John Zeltinger. Juniors on the B Honor Roll were Jaclyn Bauer, Kelli Jensen, Kayla Miller and Desire'e Steinberger.

Sophomores earning Straight A Honors were Katy Hanson, Laura Johnson and Jennifer Nelson. Sophomores placed on the A Honor Roll were Shane Heidel, Laura Keller, Kacy Keysor and Tiffany Lawler. Sophomores on the B Honor Roll were Jessica Carlson, Zachary Cerklefskie, Scot Ness and Trevor Westlake.

A freshman earning Straight A Honors was Lisa Bauer. Freshmen placed on the A Honor Roll were Carly Hedlin and Laura Johnson. Freshmen on the B Honor Roll were Sam Kalmbach and Anna Moss.

Eighth graders earning Straight

A Honors were Ian Anderson, Stephanie Barnhart, Marci Johnson and Keri Nelson. Eighth graders placed on the A Honor Roll were Craig Goettle, Hope Johnson, Cory Keller, Brett Rockeman and Kaleen Schmit. Eighth graders on the B Honor Roll were Alexia Colby, Kendra Miller, Molly Skjoldal and Jordan Thompson.

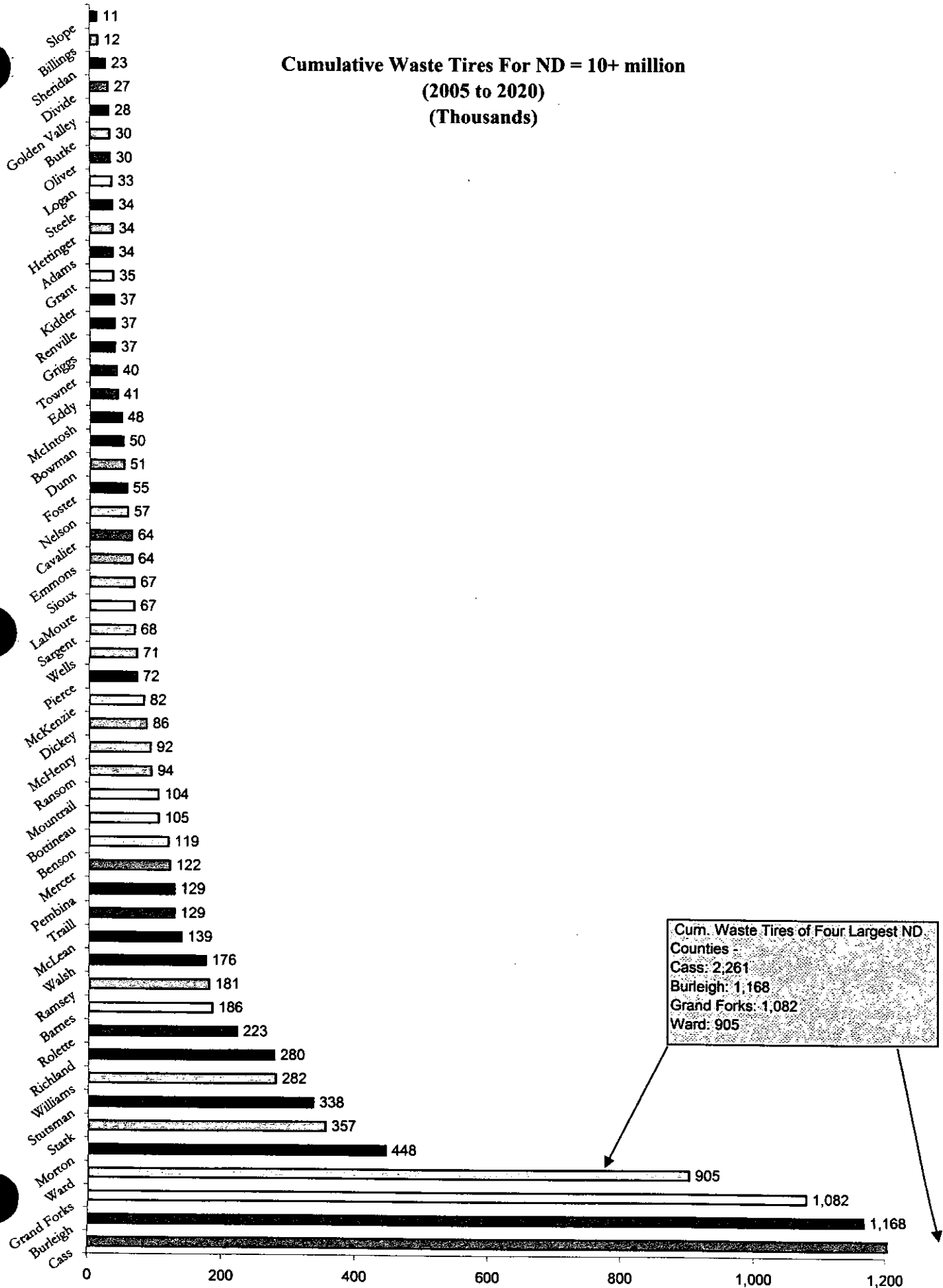
Seventh graders earning Straight A Honors were Meghan Essler, Dayna Froseth, Sadie Grubb, Macie Harris, Lyndsie Nelson and Nicholas Nelson. Seventh graders on the A Honor Roll were Cody placed Dignan, Matthew Hager, Brittany Harris, Kody Keysor, and Chelsey Zietz. Seventh graders on the B Honor Roll were Stephanie Harris, Clinton Johnson, Sarah Kalmbach and Kiah Smith.

Paradeant in Kenmare on Saturday

Distribution Schedule of Resource Recovery Conservation Fees

| Responsible Agency | Purpose/line item | Line Item | Total Dollars | Dollars | Percentage |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------|---------------|----------------|------------|
| | | Dollars | | per waste tire | |
| Disposal Costs | | | | | |
| Department of Health | Tire Retailers - Collection/handling fees | \$642,200 | | | |
| | Transportation | 385,320 | | | |
| | Shedding of tire | 513,760 | | | |
| | Added - value processing | 385,320 | | | |
| | Abatement of waste rubber stockpiles (City, County, Tire Retailers, Legal and Illegal stockpiles) | 385,320 | | | |
| | Total for Disposal | | \$2,311,920 | \$3.60 | 46% |
| Traffic services and Emergency Response Services | | | | | |
| Department of Health | Emergency response services provided for by city/county governments and volunteer rural ambulances and fire | \$770,640 | | | |
| Department of Transportation | Traffic services provided by the NDHP, County Sheriff and local law enforment | 770,640 | | | |
| | Total for Traffic Services & Emergency Response | | \$1,541,280 | \$2.40 | 31% |
| Research/Market Development & Purchase of Oil by State | | | | | |
| Department of Commerce | Research for added-value resource recovery technologies & Market Development | \$128,440 | | | |
| | Monies for state purchase of oil for peak power generation or abatement of tires | 642,200 | | | |
| | Electric transmission lines interest buy- down (PACE) | 128,440 | | | |
| | Total for Research/Market Development & Purchase of Oil by State | | \$899,080 | \$1.40 | 18% |
| Tax Commissioner | State administration | \$256,880 | \$256,880 | \$0.40 | 5% |
| | Totals | | \$5,009,160 | \$7.80 | 100% |
| Waste Tires Generated Yearly North Dakota | | | | | |
| | | 642,200 | | | |

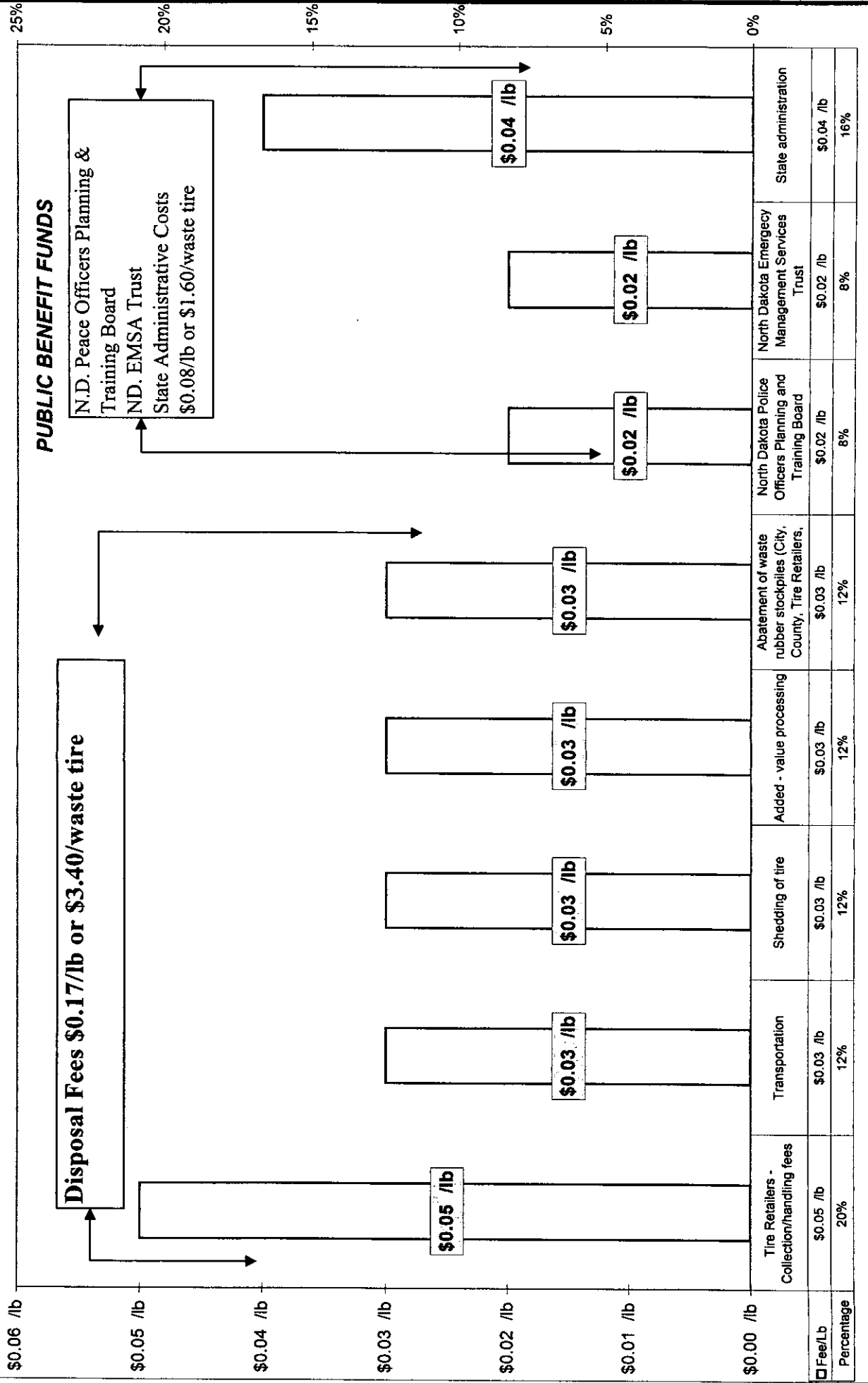
**Cumulative Waste Tires For ND = 10+ million
(2005 to 2020)
(Thousands)**



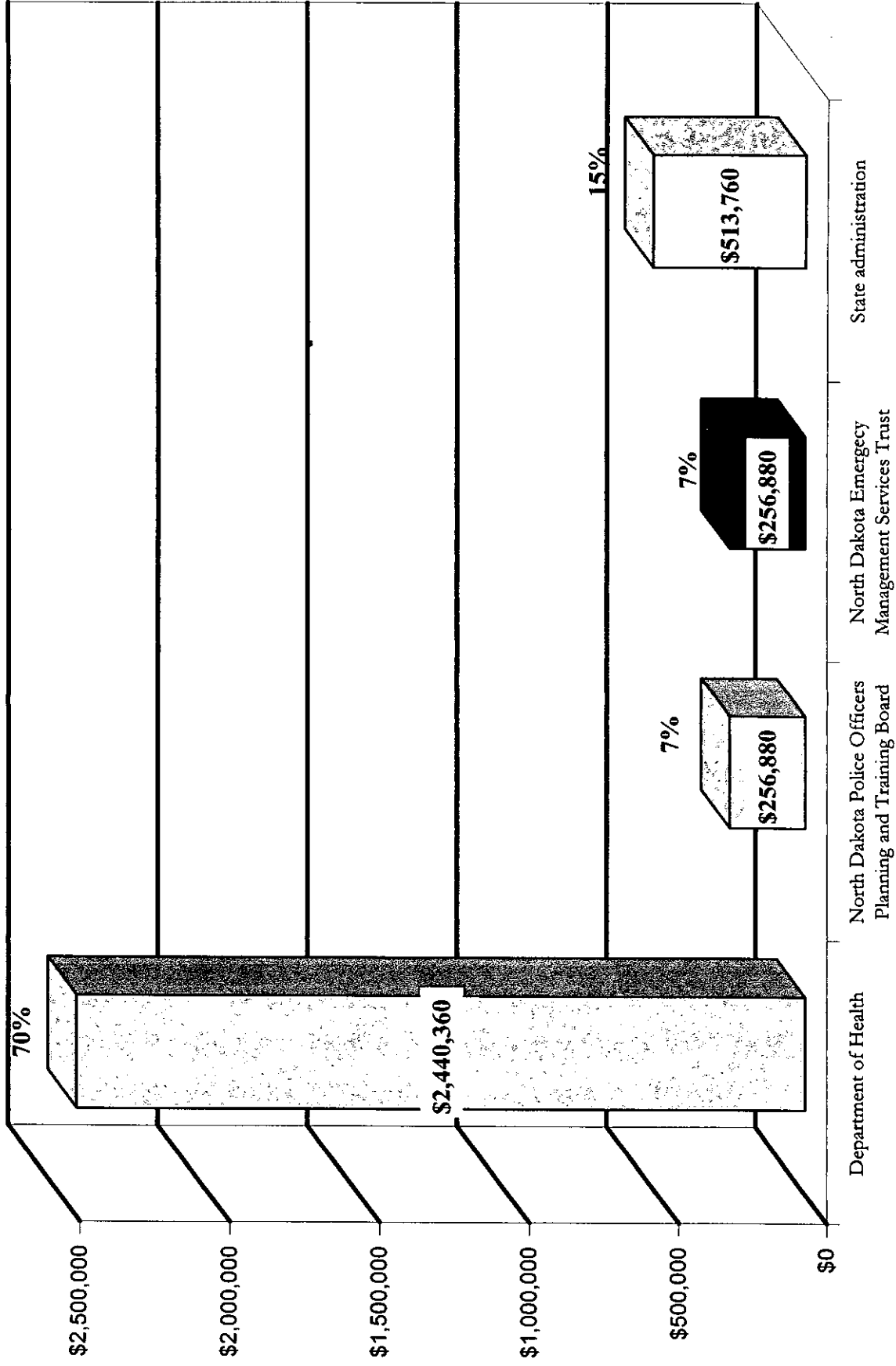
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| | Transportation | 385,320 | | | |
| | Shedding of tire | 385,320 | | | |
| | Added - value processing | 385,320 | | | |
| | Abatement of waste rubber stockpiles (City, County, Tire Retailers, Legal and Illegal stockpiles) | <u>385,320</u> | | | |
| | Total for Disposal | | \$2,183,480 | \$3.40 | 81% |
| Traffic services and Emergency Response Services | | | | | |
| North Dakota Police Officers Planning and Training Board | | \$256,880 | | | |
| North Dakota Emergency Management Services Trust | | <u>256,880</u> | | | |
| Tax Commissioner | State administration | <u>\$513,760</u> | \$513,760 | \$0.80 | 19% |
| | Totals | | \$2,697,240 | \$4.20 | 100% |
| Waste Tires Generated Yearly In North Dakota | | 642,200 | | | |

Resource Recovery and Conservation Fee (\$0.25/lb or \$5.0 for one 20 lb waste tire)



Resource Recovery Fee Breakdown by State Agency



Resource Recovery Fees For County Sheriffs and Local Law Enforcement by County
(Funds to be pro-rated between city and rural populations)

| County | Rank | Cumulative Monies collected between 2005 to 2020 @ \$1.20/tire | Yearly Average | County's Percentage | Running Total | NDHP (Cumulative @ \$0.40/tire) | County Sheriff/ Local Law Enforcement (Cumulative @ \$0.80/tire) |
|---------------|------|----------------------------------------------------------------|----------------|---------------------|---------------|---------------------------------|------------------------------------------------------------------|
| Cass | 1 | \$2,713,517 | \$180,901 | 21.86% | 21.86% | \$904,506 | \$1,809,011 |
| Burleigh | 2 | 1,401,376 | 93,425 | 11.29% | 33.14% | 467,125 | 934,250 |
| Grand Forks | 3 | 1,298,453 | 86,564 | 10.46% | 43.60% | 432,818 | 865,635 |
| Ward | 4 | 1,086,112 | 72,407 | 8.75% | 52.35% | 362,037 | 724,074 |
| Morton | 5 | 537,041 | 35,803 | 4.33% | 56.68% | 179,014 | 358,027 |
| Stark | 6 | 427,914 | 28,528 | 3.45% | 60.12% | 142,638 | 285,276 |
| Stutsman | 7 | 405,770 | 27,051 | 3.27% | 63.39% | 135,257 | 270,514 |
| Williams | 8 | 338,508 | 22,567 | 2.73% | 66.12% | 112,836 | 225,672 |
| Richland | 9 | 335,663 | 22,378 | 2.70% | 68.82% | 111,888 | 223,775 |
| Rolette | 10 | 267,682 | 17,845 | 2.16% | 70.98% | 89,227 | 178,454 |
| Barnes | 11 | 222,854 | 14,857 | 1.80% | 72.77% | 74,285 | 148,570 |
| Ramsey | 12 | 217,130 | 14,475 | 1.75% | 74.52% | 72,377 | 144,754 |
| Walsh | 13 | 211,135 | 14,076 | 1.70% | 76.22% | 70,378 | 140,757 |
| McLean | 14 | 167,308 | 11,154 | 1.35% | 77.57% | 55,769 | 111,538 |
| Trail | 15 | 154,490 | 10,299 | 1.24% | 78.81% | 51,497 | 102,994 |
| Pembina | 16 | 154,406 | 10,294 | 1.24% | 80.06% | 51,469 | 102,938 |
| Mercer | 17 | 146,597 | 9,773 | 1.18% | 81.24% | 48,866 | 97,731 |
| Benson | 18 | 143,170 | 9,545 | 1.15% | 82.39% | 47,723 | 95,446 |
| Bothineau | 19 | 125,434 | 8,362 | 1.01% | 83.40% | 41,811 | 83,622 |
| Mountrail | 20 | 124,986 | 8,332 | 1.01% | 84.41% | 41,662 | 83,324 |
| Ransom | 21 | 112,250 | 7,483 | 0.90% | 85.31% | 37,417 | 74,834 |
| McHenry | 22 | 110,333 | 7,356 | 0.89% | 86.20% | 36,778 | 73,555 |
| Dickey | 23 | 103,694 | 6,913 | 0.84% | 87.04% | 34,565 | 69,130 |
| McKenzie | 24 | 98,514 | 6,568 | 0.79% | 87.83% | 32,838 | 65,676 |
| Pierce | 25 | 86,580 | 5,772 | 0.70% | 88.53% | 28,860 | 57,720 |
| Wells | 26 | 85,699 | 5,713 | 0.69% | 89.22% | 28,566 | 57,133 |
| Sargent | 27 | 81,438 | 5,429 | 0.66% | 89.87% | 27,146 | 54,292 |
| LaMoure | 28 | 80,594 | 5,373 | 0.65% | 90.52% | 26,865 | 53,730 |
| Sioux | 29 | 80,522 | 5,368 | 0.65% | 91.17% | 26,841 | 53,682 |
| Emmons | 30 | 76,609 | 5,107 | 0.62% | 91.79% | 25,536 | 51,073 |
| Cavalier | 31 | 76,218 | 5,081 | 0.61% | 92.40% | 25,406 | 50,812 |
| Nelson | 32 | 68,628 | 4,575 | 0.55% | 92.96% | 22,876 | 45,752 |
| Foster | 33 | 66,383 | 4,426 | 0.53% | 93.49% | 22,128 | 44,255 |
| Dunn | 34 | 61,261 | 4,084 | 0.49% | 93.98% | 20,420 | 40,841 |
| Bowman | 35 | 60,108 | 4,007 | 0.48% | 94.47% | 20,036 | 40,072 |
| McIntosh | 36 | 57,028 | 3,802 | 0.46% | 94.93% | 19,009 | 38,018 |
| Eddy | 37 | 49,598 | 3,307 | 0.40% | 95.33% | 16,533 | 33,066 |
| Towner | 38 | 47,939 | 3,196 | 0.39% | 95.71% | 15,980 | 31,959 |
| Griggs | 39 | 44,896 | 2,993 | 0.36% | 96.07% | 14,965 | 29,930 |
| Renville | 40 | 44,800 | 2,987 | 0.36% | 96.44% | 14,933 | 29,866 |
| Kidder | 41 | 43,829 | 2,922 | 0.35% | 96.79% | 14,610 | 29,219 |
| Grant | 42 | 42,448 | 2,830 | 0.34% | 97.13% | 14,149 | 28,298 |
| Adams | 43 | 41,279 | 2,752 | 0.33% | 97.46% | 13,760 | 27,519 |
| Hettinger | 44 | 41,156 | 2,744 | 0.33% | 97.79% | 13,719 | 27,438 |
| Steele | 45 | 40,766 | 2,718 | 0.33% | 98.12% | 13,589 | 27,178 |
| Logan | 46 | 39,718 | 2,648 | 0.32% | 98.44% | 13,239 | 26,478 |
| Oliver | 47 | 36,500 | 2,433 | 0.29% | 98.74% | 12,167 | 24,334 |
| Burke | 48 | 35,484 | 2,366 | 0.29% | 99.02% | 11,828 | 23,656 |
| Golden Valley | 49 | 33,788 | 2,253 | 0.27% | 99.29% | 11,263 | 22,526 |
| Divide | 50 | 32,710 | 2,181 | 0.26% | 99.56% | 10,903 | 21,806 |
| Sheridan | 51 | 27,844 | 1,856 | 0.22% | 99.78% | 9,281 | 18,562 |
| Billings | 52 | 14,390 | 959 | 0.12% | 99.90% | 4,797 | 9,594 |
| Slope | 53 | 12,600 | 840 | 0.10% | 100.00% | 4,200 | 8,400 |
| Totals | | \$12,415,150 | \$827,677 | 100.00% | | \$4,138,383 | \$8,276,766 |

Resource Recovery Fees For Emergency Response Services Provided by County/City Governments and Rural Ambulance and Fire Departments

| County | Rank | Cumulative Monies collected between 2005 to 2020 @ \$1.20/tire | Yearly Average | County's Percentage | Running Total | Emergency response services provided for by city/county governments and volunteer rural ambulances and fire departments |
|---------------|------|----------------------------------------------------------------|----------------|---------------------|---------------|-------------------------------------------------------------------------------------------------------------------------|
| Cass | 1 | \$2,713,517 | \$180,901 | 21.86% | 21.86% | \$2,713,517 |
| Burleigh | 2 | 1,401,376 | 93,425 | 11.29% | 33.14% | 1,401,376 |
| Grand Forks | 3 | 1,298,453 | 86,564 | 10.46% | 43.60% | 1,298,453 |
| Ward | 4 | 1,086,112 | 72,407 | 8.75% | 52.35% | 1,086,112 |
| Morton | 5 | 537,041 | 35,803 | 4.33% | 56.68% | 537,041 |
| Stark | 6 | 427,914 | 28,528 | 3.45% | 60.12% | 427,914 |
| Stutsman | 7 | 405,770 | 27,051 | 3.27% | 63.39% | 405,770 |
| Williams | 8 | 338,508 | 22,567 | 2.73% | 66.12% | 338,508 |
| Richland | 9 | 335,663 | 22,378 | 2.70% | 68.82% | 335,663 |
| Rolette | 10 | 267,682 | 17,845 | 2.16% | 70.98% | 267,682 |
| Barnes | 11 | 222,854 | 14,857 | 1.80% | 72.77% | 222,854 |
| Ramsey | 12 | 217,130 | 14,475 | 1.75% | 74.52% | 217,130 |
| Walsh | 13 | 211,135 | 14,076 | 1.70% | 76.22% | 211,135 |
| McLean | 14 | 167,308 | 11,154 | 1.35% | 77.57% | 167,308 |
| Trails | 15 | 154,490 | 10,299 | 1.24% | 78.81% | 154,490 |
| Pembina | 16 | 154,406 | 10,294 | 1.24% | 80.06% | 154,406 |
| Mercer | 17 | 146,597 | 9,773 | 1.18% | 81.24% | 146,597 |
| Benson | 18 | 143,170 | 9,545 | 1.15% | 82.39% | 143,170 |
| Bottineau | 19 | 125,434 | 8,362 | 1.01% | 83.40% | 125,434 |
| Mountrail | 20 | 124,986 | 8,332 | 1.01% | 84.41% | 124,986 |
| Ransom | 21 | 112,250 | 7,483 | 0.90% | 85.31% | 112,250 |
| McHenry | 22 | 110,333 | 7,356 | 0.89% | 86.20% | 110,333 |
| Dickey | 23 | 103,694 | 6,913 | 0.84% | 87.04% | 103,694 |
| McKenzie | 24 | 98,514 | 6,568 | 0.79% | 87.83% | 98,514 |
| Pierce | 25 | 86,580 | 5,772 | 0.70% | 88.53% | 86,580 |
| Wells | 26 | 85,699 | 5,713 | 0.69% | 89.22% | 85,699 |
| Sargent | 27 | 81,438 | 5,429 | 0.66% | 89.87% | 81,438 |
| LaMoure | 28 | 80,594 | 5,373 | 0.65% | 90.52% | 80,594 |
| Sibour | 29 | 80,522 | 5,368 | 0.65% | 91.17% | 80,522 |
| Emmons | 30 | 76,609 | 5,107 | 0.62% | 91.79% | 76,609 |
| Cavalier | 31 | 76,218 | 5,081 | 0.61% | 92.40% | 76,218 |
| Nelson | 32 | 68,628 | 4,575 | 0.55% | 92.96% | 68,628 |
| Foster | 33 | 66,383 | 4,426 | 0.53% | 93.49% | 66,383 |
| Dunn | 34 | 61,261 | 4,084 | 0.49% | 93.98% | 61,261 |
| Bowman | 35 | 60,108 | 4,007 | 0.48% | 94.47% | 60,108 |
| McIntosh | 36 | 57,028 | 3,802 | 0.46% | 94.93% | 57,028 |
| Eddy | 37 | 49,598 | 3,307 | 0.40% | 95.33% | 49,598 |
| Towner | 38 | 47,939 | 3,196 | 0.39% | 95.71% | 47,939 |
| Griggs | 39 | 44,896 | 2,993 | 0.36% | 96.07% | 44,896 |
| Renville | 40 | 44,800 | 2,987 | 0.36% | 96.44% | 44,800 |
| Kidder | 41 | 43,829 | 2,922 | 0.35% | 96.79% | 43,829 |
| Grant | 42 | 42,448 | 2,830 | 0.34% | 97.13% | 42,448 |
| Adams | 43 | 41,279 | 2,752 | 0.33% | 97.46% | 41,279 |
| Hettinger | 44 | 41,156 | 2,744 | 0.33% | 97.79% | 41,156 |
| Steele | 45 | 40,766 | 2,718 | 0.33% | 98.12% | 40,766 |
| Logan | 46 | 39,718 | 2,648 | 0.32% | 98.44% | 39,718 |
| Oliver | 47 | 36,500 | 2,433 | 0.29% | 98.74% | 36,500 |
| Burke | 48 | 35,484 | 2,366 | 0.29% | 99.02% | 35,484 |
| Golden Valley | 49 | 33,788 | 2,253 | 0.27% | 99.29% | 33,788 |
| Divide | 50 | 32,710 | 2,181 | 0.26% | 99.56% | 32,710 |
| Sheridan | 51 | 27,844 | 1,856 | 0.22% | 99.78% | 27,844 |
| Billings | 52 | 14,390 | 959 | 0.12% | 99.90% | 14,390 |
| Slope | 53 | 12,600 | 840 | 0.10% | 100.00% | 12,600 |
| Totals | | \$12,415,150 | \$827,677 | 100.00% | | \$12,415,150 |

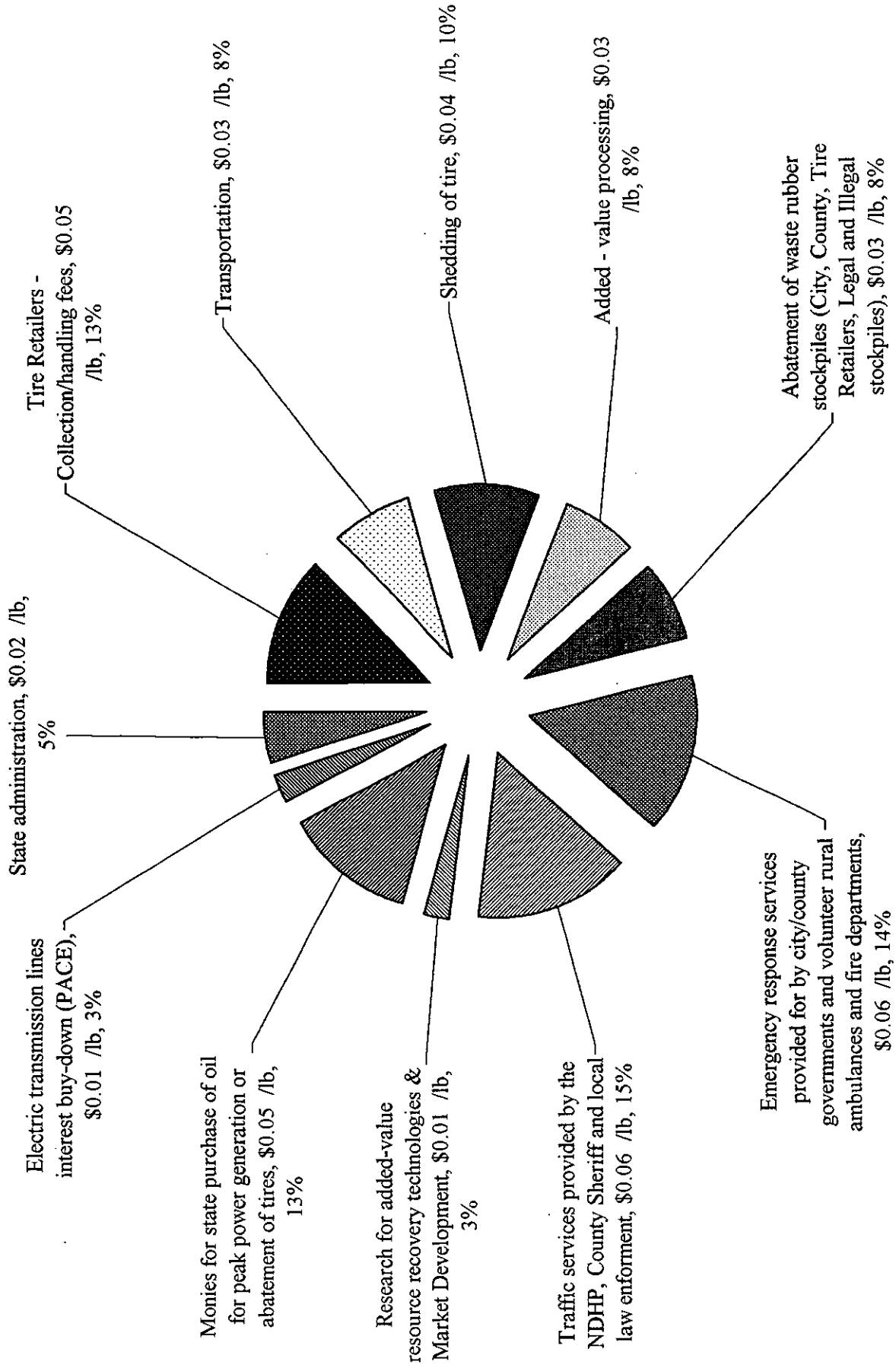
N.D. Population Projections 2005 to 2020
North Dakota Data Center at NDSU

| County | 2000 census | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Dakota | 123,138 | 131,097 | 132,422 | 133,748 | 135,073 | 136,399 | 137,724 | 139,155 | 140,586 | 142,018 |
| Burleigh | 69,416 | 70,524 | 70,925 | 71,327 | 71,728 | 72,130 | 72,531 | 72,801 | 73,071 | 73,341 |
| Grand Forks | 66,109 | 66,545 | 66,746 | 66,947 | 67,149 | 67,350 | 67,551 | 67,638 | 67,726 | 67,813 |
| Ward | 58,795 | 57,427 | 57,287 | 57,147 | 57,008 | 56,868 | 56,728 | 56,652 | 56,576 | 56,501 |
| Morton | 25,303 | 26,272 | 26,514 | 26,756 | 26,997 | 27,239 | 27,481 | 27,695 | 27,909 | 28,122 |
| Stark | 22,636 | 22,220 | 22,230 | 22,240 | 22,250 | 22,260 | 22,270 | 22,276 | 22,282 | 22,289 |
| Stutsman | 21,908 | 21,452 | 21,417 | 21,382 | 21,348 | 21,313 | 21,278 | 21,230 | 21,182 | 21,133 |
| Williams | 19,761 | 18,556 | 18,437 | 18,317 | 18,198 | 18,078 | 17,959 | 17,831 | 17,703 | 17,574 |
| Richland | 17,998 | 17,715 | 17,686 | 17,657 | 17,628 | 17,599 | 17,570 | 17,539 | 17,508 | 17,476 |
| Rolette | 13,674 | 13,687 | 13,743 | 13,798 | 13,854 | 13,909 | 13,965 | 13,976 | 13,987 | 13,997 |
| Barnes | 11,775 | 11,574 | 11,572 | 11,570 | 11,568 | 11,566 | 11,564 | 11,577 | 11,590 | 11,603 |
| Ramsey | 12,066 | 11,591 | 11,562 | 11,533 | 11,505 | 11,476 | 11,447 | 11,400 | 11,353 | 11,306 |
| Walsh | 12,389 | 11,621 | 11,545 | 11,468 | 11,392 | 11,315 | 11,239 | 11,146 | 11,054 | 10,961 |
| McLean | 9,311 | 8,973 | 8,942 | 8,912 | 8,881 | 8,851 | 8,820 | 8,781 | 8,743 | 8,704 |
| Traill | 8,477 | 8,263 | 8,239 | 8,214 | 8,190 | 8,165 | 8,141 | 8,110 | 8,079 | 8,049 |
| Pembina | 8,585 | 8,254 | 8,228 | 8,202 | 8,177 | 8,151 | 8,125 | 8,094 | 8,063 | 8,033 |
| Mercer | 8,644 | 8,151 | 8,071 | 7,991 | 7,911 | 7,831 | 7,751 | 7,687 | 7,623 | 7,559 |
| Benson | 6,964 | 7,101 | 7,147 | 7,192 | 7,238 | 7,283 | 7,329 | 7,377 | 7,426 | 7,474 |
| Bottineau | 7,149 | 6,839 | 6,803 | 6,768 | 6,732 | 6,697 | 6,661 | 6,613 | 6,565 | 6,516 |
| Mountrail | 6,631 | 6,492 | 6,497 | 6,502 | 6,508 | 6,513 | 6,518 | 6,518 | 6,517 | 6,517 |
| Ransom | 5,890 | 5,834 | 5,836 | 5,838 | 5,840 | 5,842 | 5,844 | 5,847 | 5,850 | 5,854 |
| McHenry | 5,987 | 5,787 | 5,782 | 5,776 | 5,771 | 5,765 | 5,760 | 5,755 | 5,750 | 5,746 |
| Dickey | 5,757 | 5,536 | 5,514 | 5,492 | 5,470 | 5,448 | 5,426 | 5,414 | 5,402 | 5,389 |
| McKenzie | 5,737 | 5,391 | 5,352 | 5,313 | 5,275 | 5,236 | 5,197 | 5,164 | 5,131 | 5,099 |
| Pierce | 4,675 | 4,575 | 4,576 | 4,577 | 4,577 | 4,578 | 4,579 | 4,561 | 4,543 | 4,526 |
| Wells | 5,102 | 4,783 | 4,745 | 4,707 | 4,669 | 4,631 | 4,593 | 4,547 | 4,501 | 4,456 |
| Sargent | 4,366 | 4,258 | 4,252 | 4,247 | 4,241 | 4,236 | 4,230 | 4,229 | 4,228 | 4,227 |
| LaMoure | 4,701 | 4,466 | 4,435 | 4,404 | 4,372 | 4,341 | 4,310 | 4,269 | 4,228 | 4,186 |
| Sioux | 4,044 | 4,096 | 4,121 | 4,147 | 4,172 | 4,198 | 4,223 | 4,221 | 4,220 | 4,218 |
| Emmons | 4,331 | 4,187 | 4,171 | 4,154 | 4,138 | 4,121 | 4,105 | 4,069 | 4,033 | 3,997 |
| Cavalier | 4,831 | 4,391 | 4,327 | 4,263 | 4,198 | 4,134 | 4,070 | 4,022 | 3,974 | 3,926 |
| Nelson | 3,715 | 3,603 | 3,601 | 3,599 | 3,596 | 3,594 | 3,592 | 3,585 | 3,579 | 3,572 |
| Foster | 3,759 | 3,637 | 3,621 | 3,605 | 3,589 | 3,573 | 3,557 | 3,525 | 3,492 | 3,460 |
| Dunn | 3,600 | 3,435 | 3,405 | 3,374 | 3,344 | 3,313 | 3,283 | 3,248 | 3,214 | 3,179 |
| Bowman | 3,242 | 3,177 | 3,178 | 3,179 | 3,179 | 3,180 | 3,181 | 3,166 | 3,152 | 3,137 |
| McIntosh | 3,390 | 3,142 | 3,122 | 3,102 | 3,081 | 3,061 | 3,041 | 3,016 | 2,991 | 2,967 |
| Eddy | 2,757 | 2,669 | 2,662 | 2,655 | 2,647 | 2,640 | 2,633 | 2,616 | 2,600 | 2,583 |
| Towner | 2,876 | 2,666 | 2,637 | 2,608 | 2,579 | 2,550 | 2,521 | 2,505 | 2,489 | 2,472 |
| Griggs | 2,754 | 2,557 | 2,529 | 2,501 | 2,474 | 2,446 | 2,418 | 2,389 | 2,359 | 2,330 |
| Renville | 2,610 | 2,425 | 2,410 | 2,396 | 2,381 | 2,367 | 2,352 | 2,342 | 2,331 | 2,321 |
| Kidder | 2,753 | 2,548 | 2,515 | 2,483 | 2,450 | 2,418 | 2,385 | 2,347 | 2,309 | 2,270 |
| Grant | 2,841 | 2,531 | 2,488 | 2,446 | 2,403 | 2,361 | 2,318 | 2,275 | 2,232 | 2,190 |
| Adams | 2,593 | 2,365 | 2,334 | 2,302 | 2,271 | 2,239 | 2,208 | 2,181 | 2,155 | 2,128 |
| Hettinger | 2,715 | 2,432 | 2,391 | 2,350 | 2,310 | 2,269 | 2,228 | 2,192 | 2,155 | 2,119 |
| Steele | 2,258 | 2,190 | 2,179 | 2,168 | 2,156 | 2,145 | 2,134 | 2,128 | 2,121 | 2,115 |
| Logan | 2,308 | 2,202 | 2,185 | 2,167 | 2,150 | 2,132 | 2,115 | 2,098 | 2,082 | 2,065 |
| Oliver | 2,065 | 1,995 | 1,984 | 1,973 | 1,961 | 1,950 | 1,939 | 1,925 | 1,911 | 1,896 |
| Burke | 2,242 | 2,024 | 2,001 | 1,978 | 1,954 | 1,931 | 1,908 | 1,882 | 1,857 | 1,831 |
| Golden Valley | 1,924 | 1,856 | 1,845 | 1,834 | 1,822 | 1,811 | 1,800 | 1,785 | 1,769 | 1,754 |
| Divide | 2,283 | 2,006 | 1,964 | 1,922 | 1,880 | 1,838 | 1,796 | 1,757 | 1,718 | 1,678 |
| Meridian | 1,710 | 1,562 | 1,545 | 1,528 | 1,511 | 1,494 | 1,477 | 1,463 | 1,449 | 1,436 |
| Billings | 888 | 815 | 807 | 799 | 791 | 783 | 775 | 765 | 756 | 746 |
| Slope | 767 | 705 | 699 | 693 | 687 | 681 | 675 | 668 | 661 | 653 |

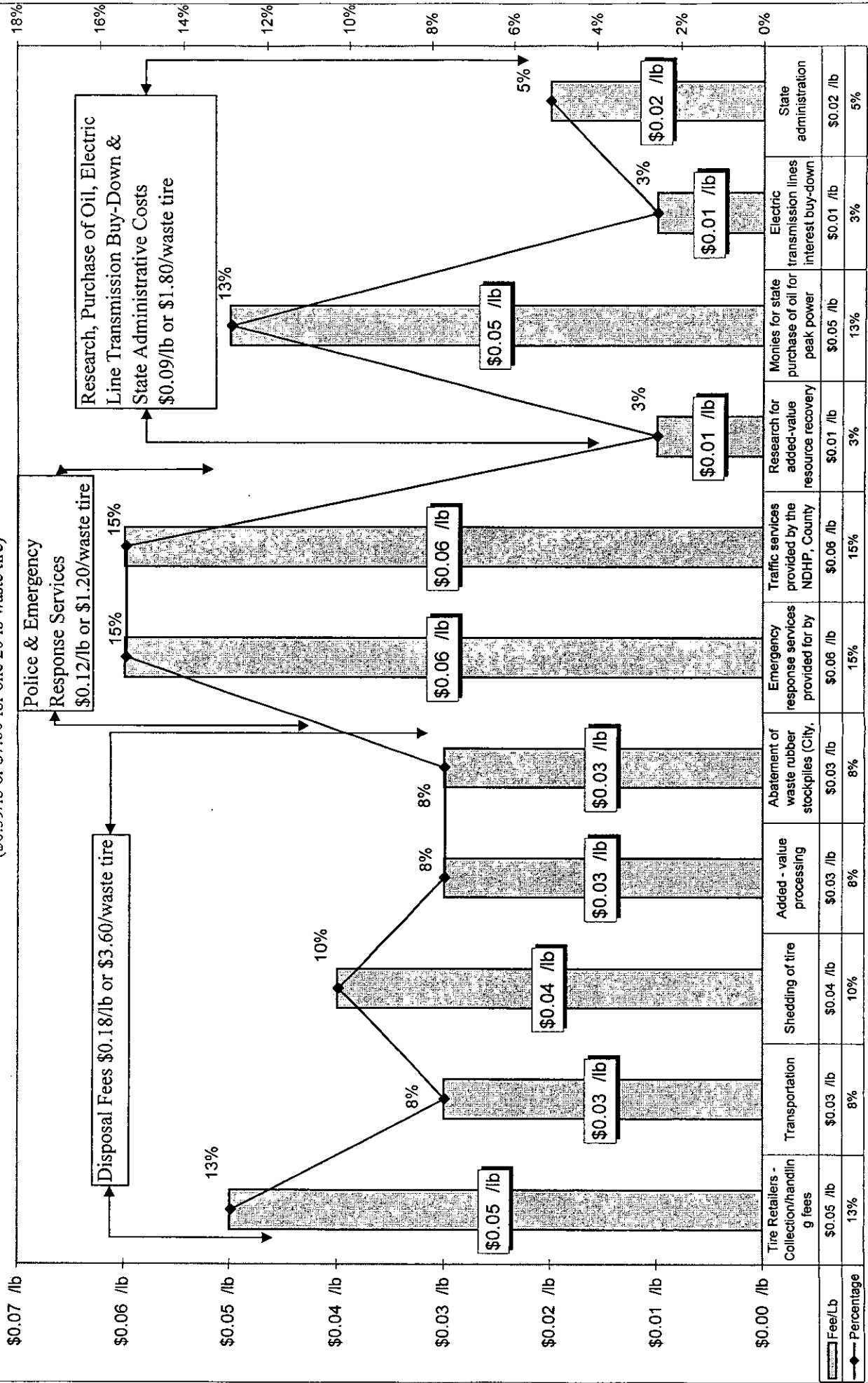
N.D. Population Projections 2005 to 2020
North Dakota Data Center at NDSU

| County | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Cumulative waste tires | Average Waste |
|---------------|---------|---------|---------|---------|---------|---------|---------|---------------------------|---------------|
| Assault | 143,449 | 144,880 | 146,234 | 147,588 | 148,943 | 150,297 | 151,651 | 2,261,264 | 141,329 |
| Burleigh | 73,611 | 73,881 | 74,050 | 74,219 | 74,389 | 74,558 | 74,727 | 1,167,813 | 72,988 |
| Grand Forks | 67,901 | 67,988 | 68,038 | 68,088 | 68,138 | 68,188 | 68,238 | 1,082,044 | 67,628 |
| Ward | 56,425 | 56,349 | 56,241 | 56,133 | 56,025 | 55,917 | 55,809 | 905,093 | 56,568 |
| Morton | 28,336 | 28,550 | 28,744 | 28,938 | 29,133 | 29,327 | 29,521 | 447,534 | 27,971 |
| Stark | 22,295 | 22,301 | 22,313 | 22,325 | 22,336 | 22,348 | 22,360 | 356,595 | 22,287 |
| Stutsman | 21,085 | 21,037 | 20,977 | 20,917 | 20,857 | 20,797 | 20,737 | 338,142 | 21,134 |
| Williams | 17,446 | 17,318 | 17,190 | 17,062 | 16,935 | 16,807 | 16,679 | 282,090 | 17,631 |
| Richland | 17,445 | 17,414 | 17,375 | 17,336 | 17,296 | 17,257 | 17,218 | 279,719 | 17,482 |
| Rolette | 14,008 | 14,019 | 14,021 | 14,023 | 14,025 | 14,027 | 14,029 | 223,068 | 13,942 |
| Barnes | 11,616 | 11,629 | 11,638 | 11,647 | 11,657 | 11,666 | 11,675 | 185,712 | 11,607 |
| Ramsey | 11,259 | 11,212 | 11,161 | 11,110 | 11,060 | 11,009 | 10,958 | 180,942 | 11,309 |
| Walsh | 10,869 | 10,776 | 10,688 | 10,600 | 10,512 | 10,424 | 10,336 | 175,946 | 10,997 |
| McLean | 8,666 | 8,627 | 8,586 | 8,545 | 8,505 | 8,464 | 8,423 | 139,423 | 8,714 |
| Traill | 8,018 | 7,987 | 7,944 | 7,901 | 7,857 | 7,814 | 7,771 | 128,742 | 8,046 |
| Pembina | 8,002 | 7,971 | 7,939 | 7,907 | 7,874 | 7,842 | 7,810 | 128,672 | 8,042 |
| Mercer | 7,495 | 7,431 | 7,398 | 7,365 | 7,333 | 7,300 | 7,267 | 122,164 | 7,635 |
| Benson | 7,523 | 7,571 | 7,624 | 7,677 | 7,729 | 7,782 | 7,835 | 119,308 | 7,457 |
| Bottineau | 6,468 | 6,420 | 6,376 | 6,333 | 6,289 | 6,246 | 6,202 | 104,528 | 6,593 |
| Mountrail | 6,516 | 6,516 | 6,513 | 6,511 | 6,508 | 6,506 | 6,503 | 104,155 | 6,510 |
| Ransom | 5,857 | 5,860 | 5,856 | 5,852 | 5,848 | 5,844 | 5,840 | 93,542 | 5,846 |
| McHenry | 5,741 | 5,736 | 5,729 | 5,722 | 5,715 | 5,708 | 5,701 | 91,944 | 5,747 |
| Dickey | 5,377 | 5,365 | 5,349 | 5,332 | 5,316 | 5,299 | 5,283 | 86,412 | 5,401 |
| McKenzie | 5,066 | 5,033 | 5,011 | 4,989 | 4,968 | 4,946 | 4,924 | 82,095 | 5,131 |
| Pierce | 4,508 | 4,490 | 4,464 | 4,438 | 4,412 | 4,386 | 4,360 | 72,150 | 4,509 |
| Wells | 4,410 | 4,364 | 4,310 | 4,256 | 4,202 | 4,148 | 4,094 | 71,416 | 4,464 |
| Sargent | 4,226 | 4,225 | 4,234 | 4,244 | 4,253 | 4,263 | 4,272 | 67,865 | 4,242 |
| LaMoure | 4,145 | 4,104 | 4,063 | 4,022 | 3,980 | 3,939 | 3,898 | 67,162 | 4,198 |
| Sioux | 4,217 | 4,215 | 4,214 | 4,212 | 4,211 | 4,209 | 4,208 | 67,102 | 4,194 |
| Emmons | 3,961 | 3,925 | 3,882 | 3,839 | 3,796 | 3,753 | 3,710 | 63,841 | 3,990 |
| Cavalier | 3,878 | 3,830 | 3,787 | 3,744 | 3,700 | 3,657 | 3,614 | 63,515 | 3,970 |
| Nelson | 3,566 | 3,559 | 3,556 | 3,552 | 3,549 | 3,545 | 3,542 | 57,190 | 3,574 |
| Foster | 3,427 | 3,395 | 3,359 | 3,323 | 3,288 | 3,252 | 3,216 | 55,319 | 3,457 |
| Dunn | 3,145 | 3,110 | 3,073 | 3,037 | 3,000 | 2,964 | 2,927 | 51,051 | 3,191 |
| Bowman | 3,123 | 3,108 | 3,094 | 3,080 | 3,066 | 3,052 | 3,038 | 50,990 | 3,131 |
| McIntosh | 2,942 | 2,917 | 2,887 | 2,858 | 2,828 | 2,799 | 2,769 | 47,523 | 2,970 |
| Eddy | 2,567 | 2,550 | 2,534 | 2,518 | 2,502 | 2,486 | 2,470 | 41,332 | 2,583 |
| Towner | 2,456 | 2,440 | 2,428 | 2,417 | 2,405 | 2,394 | 2,382 | 39,949 | 2,497 |
| Griggs | 2,300 | 2,271 | 2,237 | 2,202 | 2,168 | 2,133 | 2,099 | 37,413 | 2,338 |
| Renville | 2,310 | 2,300 | 2,293 | 2,286 | 2,280 | 2,273 | 2,266 | 37,333 | 2,333 |
| Kidder | 2,232 | 2,194 | 2,154 | 2,114 | 2,075 | 2,035 | 1,995 | 36,524 | 2,283 |
| Grant | 2,147 | 2,104 | 2,061 | 2,018 | 1,976 | 1,933 | 1,890 | 35,373 | 2,211 |
| Adams | 2,102 | 2,075 | 2,053 | 2,030 | 2,008 | 1,985 | 1,963 | 34,399 | 2,150 |
| Hettinger | 2,082 | 2,046 | 2,012 | 1,978 | 1,945 | 1,911 | 1,877 | 34,297 | 2,144 |
| Steele | 2,108 | 2,102 | 2,096 | 2,091 | 2,085 | 2,080 | 2,074 | 33,972 | 2,123 |
| Logan | 2,049 | 2,032 | 2,009 | 1,987 | 1,964 | 1,942 | 1,919 | 33,098 | 2,069 |
| Oliver | 1,882 | 1,868 | 1,854 | 1,840 | 1,827 | 1,813 | 1,799 | 30,417 | 1,901 |
| Burke | 1,806 | 1,780 | 1,761 | 1,742 | 1,724 | 1,705 | 1,686 | 29,570 | 1,848 |
| Golden Valley | 1,738 | 1,723 | 1,710 | 1,697 | 1,684 | 1,671 | 1,658 | 28,157 | 1,760 |
| Divide | 1,639 | 1,600 | 1,564 | 1,528 | 1,492 | 1,456 | 1,420 | 27,258 | 1,704 |
| Heridan | 1,422 | 1,408 | 1,399 | 1,390 | 1,382 | 1,373 | 1,364 | 23,203 | 1,450 |
| Billings | 737 | 727 | 717 | 708 | 698 | 689 | 679 | 11,992 | 750 |
| Slope | 646 | 639 | 632 | 625 | 619 | 612 | 605 | 10,500 | 656 |

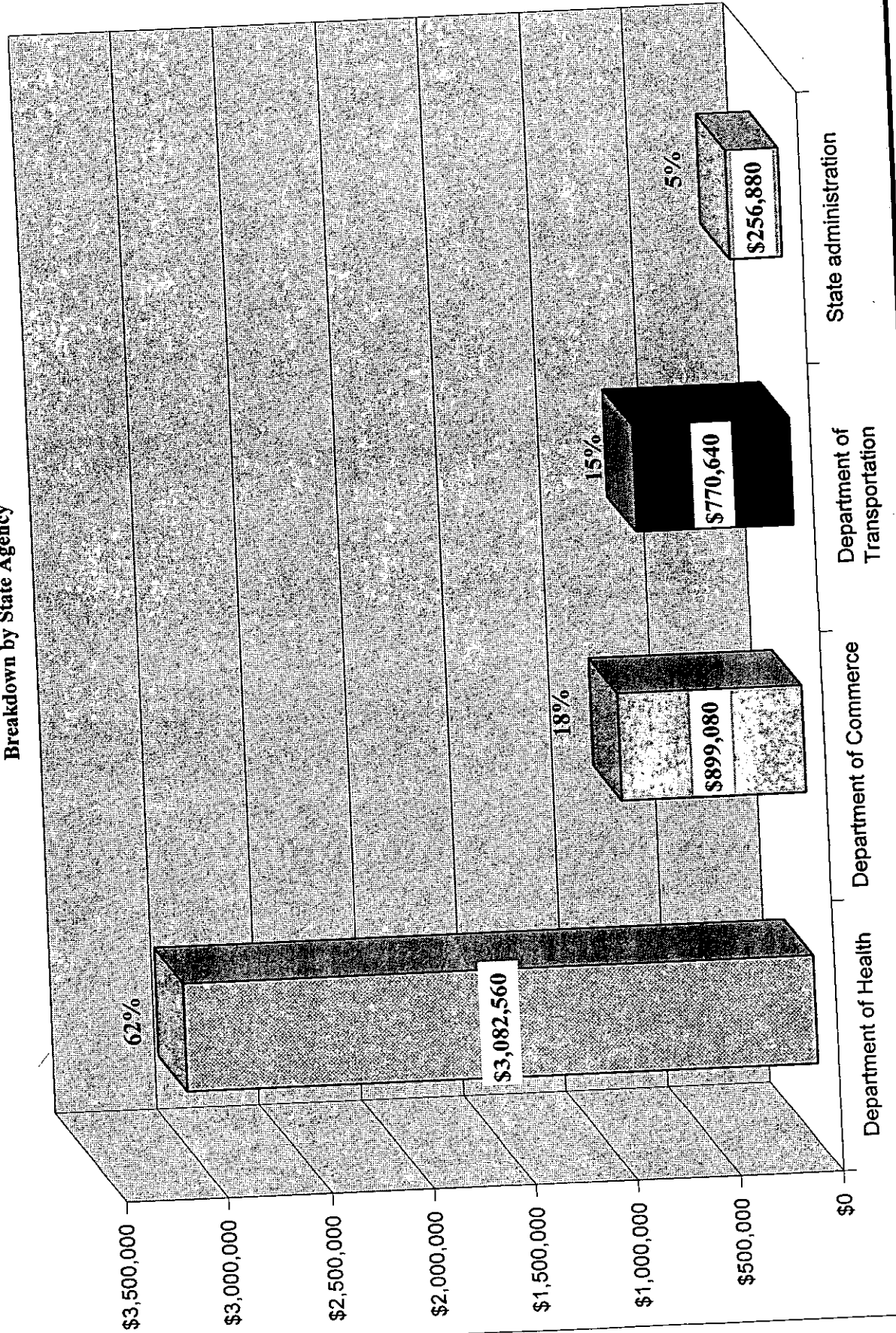
Resource Recovery and Conservation Fee Breakdown of \$0.039/lb Fee



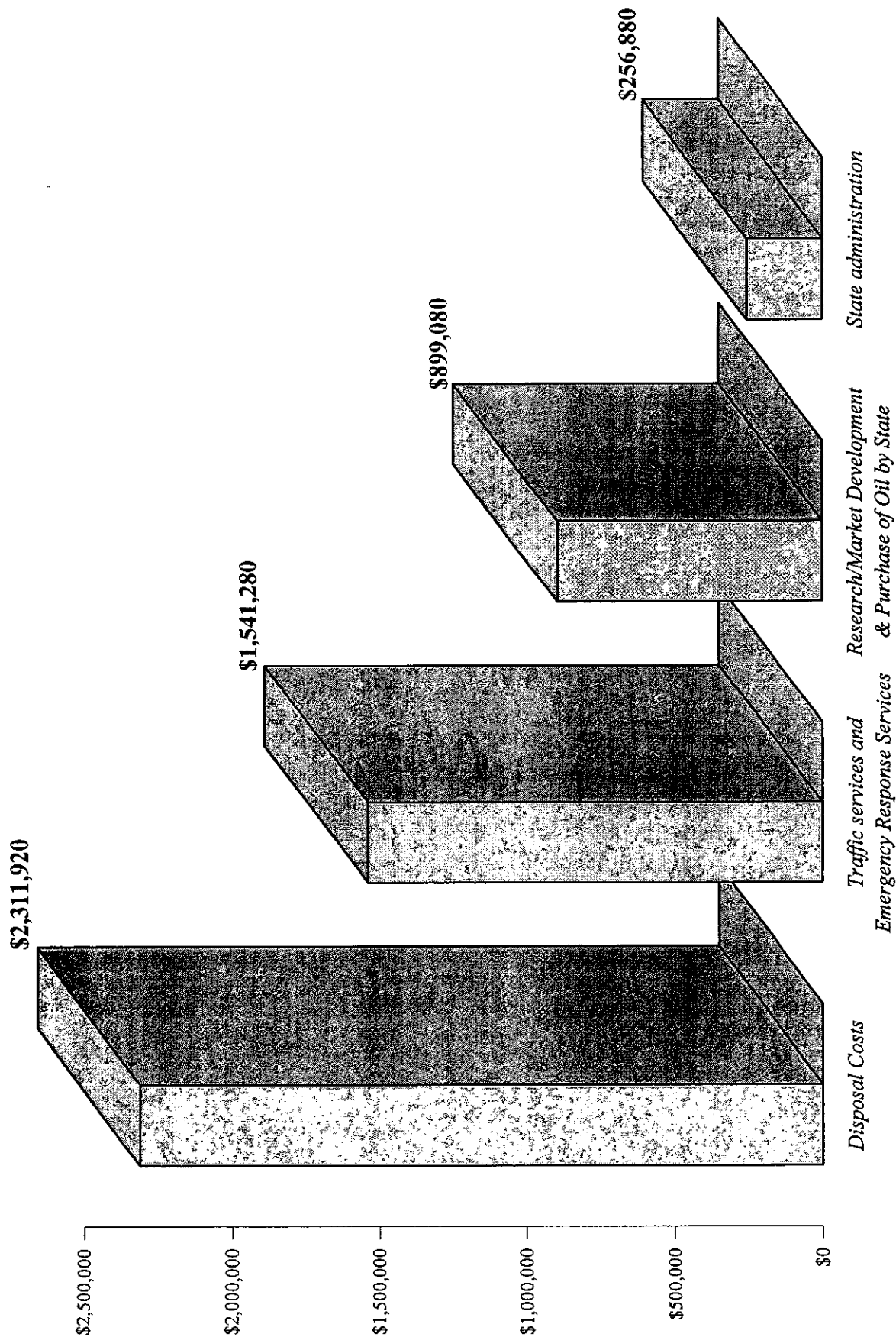
Resource Recovery and Conservation Fee (\$0.39/lb or \$7.80 for one 20 lb waste tire)



**Resource Recovery Fee
Breakdown by State Agency**



Resource Recovery & Conservation Fee Breakdown by Category



Waste tire pyrolysis made practical

New technology and equipment developed at Berthold site

By Caroline Downs

The challenge of developing a waste tire pyrolysis reactor in North Dakota proved irresistible to Carpio native Duane Erickson.

After more than 30 years in manufacturing, working for some of the biggest industry names all around the world, he came back to the state in 2001, intending to start his own manufacturing firm. "There's quality of life in North Dakota few people know about," he said.

Then he heard about Delta Energy's project in Berthold from Ervin Lee. Intrigued, Erickson agreed his new company, L & E Systems, would shoulder the engineering and fabricating responsibilities for a process that was undefined at the time.

"There's a tremendous opportunity," he said. "No one's really made it commercial before. We're creating new products that aren't available right now."

Erickson used his position as consultant to bring together the best expertise in the country. "I talked to the original inventor and some of the people who worked on it," he said. "I researched, read all the patents. We paid attention to the problems and designed our plant to minimize them."

He frequently refers to the collaborative efforts behind the process. "You get as much input as you can and take the best," he said. "We've had tremendous horsepower."

That "horsepower" included some of the top scientists and university professors in the state and the country who specialize in petroleum, pyrolysis processing, coal pyrolysis and chemistry. Coal gasification experts from the Energy & Environmental Research Center at the University of North Dakota have been

involved, as well as personnel from a U. S. Department of Energy laboratory in Pittsburgh.

Erickson is excited about the results of the group's work and the potential of the pyrolysis reactor that has been designed, starting with the energy savings in the recovered products. "It takes 300,000 BTUs to burn one tire," he said. "By reprocessing the way we do, we're able to pull out 200,000 to 240,000 BTUs in gas and oil."

There's market value in that gas and oil. "Our process is a refinery-type process. We're collecting two types of oil," Erickson explained. "The majority is the #3 or #4 kerosene. The other is a very high quality light oil, high in solvents."

Then there's the solid carbon reinforcing material, looking something like the fine black powder found in a toner cartridge for a copy machine. Often called "carbon black" in the industry, the recovered material has commercial value, whether as a replacement for coal or in rubber manufacturing.

"It's overcooked in a lot of the processes, but we do it at a low temperature," Erickson said. "At coal value, it's worth a nickel a pound. If we can find a customer and prove we have a quality product that meets their needs, it could be selling for 25 to 50 cents a pound."

In the Delta Energy process, many of the filler particles used in making tires, such as clays, silicas, and other additives, are recombined with the carbon black rather than released.

From preliminary testing, those filler products appear to contribute to an increased tensile and elasticity in rubber made with the recovered carbon black. "Our rubber reinforcing material may have some superior characteristics over plain carbon black," Erickson said.

Another aspect of the low temperature process that pleased Erickson was the fact the system stays virtually pollution-free. "We can take the gas (produced) and use it to fuel our heating system," he said. "We have such little sulphur coming out, we may not even have to have scrubbers on our system."

Problems with sulphur dioxide emissions terminated many of the high temperature processes across the country. However, in Delta Energy's reactor, the lower temperatures prevent the sulphur from separating from the carbon material, so none of the hazardous gas is formed. "We're very, very clean," Erickson said.

The process begins with shredded rubber, from tires, belts, hoses, etc. Delta Energy's reactor can accept various sizes of crumb rubber. "We've used nine-sixteenths inches, one and one-quarter inches," Erickson said. "We've done as high as three and a half inches in size. The companies that make crumb rubber have a limited market for their product. We can take whatever's left over into our process."

A regular belt conveyor, found on any North Dakota farm, feeds the rubber into the reactor's first holding bin. One bin handles up to two tons of crumb rubber, and the production model will feature two bins to allow for continuous operation.

A vacuum gate, one of the safety features, seals the bin and the reactor. "The entire operation runs in a vacuum," Erickson explained.

An auger carries the crumb rubber at a specified number of pounds per minute through a metal tube, where it mixes with a measured amount of the selected chemical catalyst. "The catalyst allows the rubber molecules to break apart under heat and vacuum," Erickson said.

The mixture drops into a 25-foot chamber heated with halogen infrared bulbs and is augered through four temperature zones. The process starts at 750 degrees F, then drops to 675 degrees before climbing to 790 degrees and finishing at 835 degrees. The heating shroud is lined with stainless steel to reflect the infrared heat, and is insulated inside and out for better heat efficiency.

The infrared heaters used are typically seen in powdered paint operations. "They've never been applied in this type of technology," Erickson said. "We can maintain the temperature in each zone within four degrees. The most swing I'll see is ten degrees."

He monitors the temperatures in each zone diligently, with 24 thermocouples taking readings in the chamber. He also designed special probes to insert into the rubber mixture itself. "That way we can verify the temperature is the same inside (the mixture) as the thermocouple is measuring on the outside," he said.

A network of wires transmits the temperature data from the chamber to a computer in Erickson's office, where he graphs the information from each run and uses it for comparison and consistency studies.

A vacuum balance line and a nitrogen supply line run above the heating chamber. "If there is a failure, we can flood the system with nitrogen and control the temperature," Erickson said.

The safety features have been carefully planned. Erickson indicated the pressure pop-off valves on the chamber. "They're designed to vent off at 15 psi," he said.

Then he pointed out an accordion-like device at one end of the chamber designed to allow for thermal expansion. "Our tube grows an inch and a quarter in length once it's heated," he said. "All the connections and gear cases have to be able to flex to maintain vacuum and move without working against each other."

The entire system will automatically shut itself down if overheating occurs. "Another safety feature with the production system is a back-up generator required to keep the vacuum pumps running if there's ever a power outage," Erickson said.

As the rubber mixture is heated in the first and second zones, gas and oil vapors rise and enter a series of condensers, like a horizontal distillation tower. The first two condensers on the system pull off the heavier materials, while the second set captures the lighter oils. Small storage tanks collect the oil, which can then be pumped to larger tanks outside.

Some gas vapors are directed back through the vacuum pumps to maintain a constant vacuum. The remaining vapors can be flared off or reused to fuel the entire system.

The "ash" residue augered from the heating chamber into a cooling bin is actually the carbon reinforcing material. "It's augered to a magnetic separator where the steel gets pulled out," Erickson said. "Then we classify out the fibers and the heavier particles."

The steel can be sold for scrap, while the carbon black can be sent out for milling and classification for manufacturing use.

The gas can be made available for energy. The oil, without further refining, has value as a bunker fuel or an additive. Additional processing could make it suitable for use in the plastics industry.

According to Erickson, workers operating the reactor can be assured their health will be protected, which was another problem with the higher temperature models. "There are no clouds of dust," he said, "and if there is any dust, there is a vacuum ventilation system. The way the plants are run, tires come in and are processed immediately, so there's no tire pile-up."

He continued, "Carbon black is a stable material that can be landfilled. Because we run with vacuums and low temperature, and have several backup systems, safety issues are no different than for any other manufacturing operation."

No pollution issues, no hazardous byproducts. Just marketable resources recaptured from waste tires piled up around America, at an attractive price.

"Other systems have been high in cost due to their high temperature operation," Erickson said. "Everything has to be built around those high temperatures. We can use other building methods, which allows us to be one-third the cost."

Delta Energy has not yet determined a purchase price for its reactor. For the sake of comparison, Erickson described a typical high temperature plant processing 30 tons of crumb rubber a day. "That would cost \$10 to \$12 million," he said. "We would be in the \$3 to \$5 million range."

One reason for the bargain is the relative simplicity and practicality of the system. "We've used off-the-shelf materials, which are cheaper," Erickson said, mentioning the halogen bulbs used in the heating chamber as an example. "Most of the equipment we use is available anywhere in the state."

The reactor working today is the third model developed. To keep research and development costs low, Erickson and the fabricators from Northland Coal, Inc. in Berthold adapted equipment commonly used for agricultural purposes, including modified grain bins, gas tanks, and augers. "If we didn't have it, we built it," Erickson said.

He emphasized the technology, engineering and manufacturing behind the project is state-of-the-art. "This is not a backyard chemistry set," he said. "Because we're located out on the farm, you don't expect to see this equipment. We have highly skilled people, and the type of things we're building are normally seen around petroleum research and development plants."

Erickson said the reactor is now ready for commercial use, although he continues to monitor and perfect specific elements. He runs the plant two to four times each week, processing loads between 400 and 2000 pounds of rubber. "Right now, running a thousand pounds at a time allows the system to normalize and provides good production data," he said.

The reactor is sized to process ten tons of crumb rubber--about a thousand tires--each day, operating 24 hours.

The concept and equipment appear simple, but Erickson admitted to frustrating moments as the project developed. "We thought we've been close to the final result," he said. "At times, it's been two steps forward, one step back. But we're understanding more and more how to resolve the technical issues."

The major hurdle left to overcome is a prejudice against the process, given the failures of similar systems in the past. "A lot of promises were made that failed," Erickson said. "We feel we've solved a majority of the puzzle."

With the reactor now in the public eye because of proposed legislation outlining a statewide plan for waste rubber recycling, Erickson expressed his appreciation to the local companies that have supported the project during the past few years.

"They knew research and development are expensive, and they gave us good terms," he said. "They helped us get through this by keeping our costs down and helping us get our parts made. They realize we're in for the long haul."

Good Morning, my name is Ervin Lee.

I want to thank you for the opportunity to meet with you, explain the reasons why I drafted S.B. 2268, and, then to ask you for a do – pass on this vital piece of legislation.

I want to thank Senators Kresbach, O'Connell and Seymour and Representatives Froseth, Ekstrom and Kerzman for their willingness to put their names and support behind this legislation. Since, my spouse, Kari Conrad, is a freshman legislator and has been asked to support or sign onto several different bills, I can personally appreciate the faith and willingness of these legislators to introduce and support a major piece of legislation – that is S.B. 2268.

I am a lawyer in Minot, ND. I am a graduate of UND. I farmed for several years before becoming an attorney. One of the lingering effects from farming was the fun in producing physical products – such as grain.

I also am an entrepreneur. Throughout my law practice, I have found myself intrigued by the potential of finding a product which could be manufactured here and exported outside of the state.

In 1999, I met Ron Nichols of Evergreen, Colorado. Ron developed a system to recover the oil, carbon black, steel and gas contained in waste tires. The process used was pyrolysis. Ron also used a catalyst in his process. Ron sent me a video showing the process in action. What intrigued me about Ron Nichols process was the fact that the plant I saw in the video was made out of a grain auger, two hopper bins and a commercial condenser. The products recovered were oil, a carbon black type powder, steel and gas.

Upon seeing the video, I immediately thought that this could be manufactured in North Dakota.

I also thought that showing people the process would be sufficient and that we could simply go forward.

On the first thought – that the equipment could be manufactured in ND – I was right.

On the second thought – that simply showing people the products from the process would be sufficient to create sales for the product – I was wrong.

Conventional wisdom, rightly so, stated that pyrolysis did not work. It was expensive and without merit. We needed to be able to articulate the science.

There were other issues.

The potential buyers for the equipment asked if we could deliver a quality machine in a timely manner given our abilities, were economical and environmentally friendly. They were concerned about whether or not our process was patented. We were a team of four without capital and could not give adequate assurances of our ability to manufacture and manage. Nor, did we have any patents.

The potential buyers for the recovered oil, carbon black, steel and gas asked if they purchased the recovered energy and material could we deliver – on a consistent basis. We were asking them to buy a “green product” because it was the “right thing” to do. They also questioned why they should

change their manufacturing processes to use this "green product". However, we because of the nature of our feedstock – waste tires – we could not give any assurances that we would have a reliable feedstock of waste rubber from which to recover the "green products".

These issues required several things to be done:

1. We needed a way to articulate the science.
2. We needed to see if we had a process which was patentable.
3. We needed to show that it was environmentally friendly.
4. We needed to show it could be manufactured economically.
5. We needed to show that we could manage the manufacturing process.
6. We needed to determine way to secure a reliable source of feedstock.
7. We needed to give our potential buyers of our "green products" a reason to buy and show that we could deliver them on a timely basis over a long period of time.

We also needed to find individuals who had a commitment to bringing jobs to North Dakota.

One could say that had I known then what needed to be done and the difficulty in doing it – I may have had second, third, fourth and fifth thoughts. Fortunately, I didn't.

In order to articulate the science, I turned to the only scientist I knew who was interested in North Dakota. He happened to be a brother and his name is Richard Lee. Richard went to UND for undergraduate. He has a Ph.D. in Physics from Colorado State University. Richard owns a company called the RJLee Group – a company which specializes in environmental cleanup, testing of products and analysis. Richard employs approximately 200 people and his company is located in the Pittsburgh, Pennsylvania area.

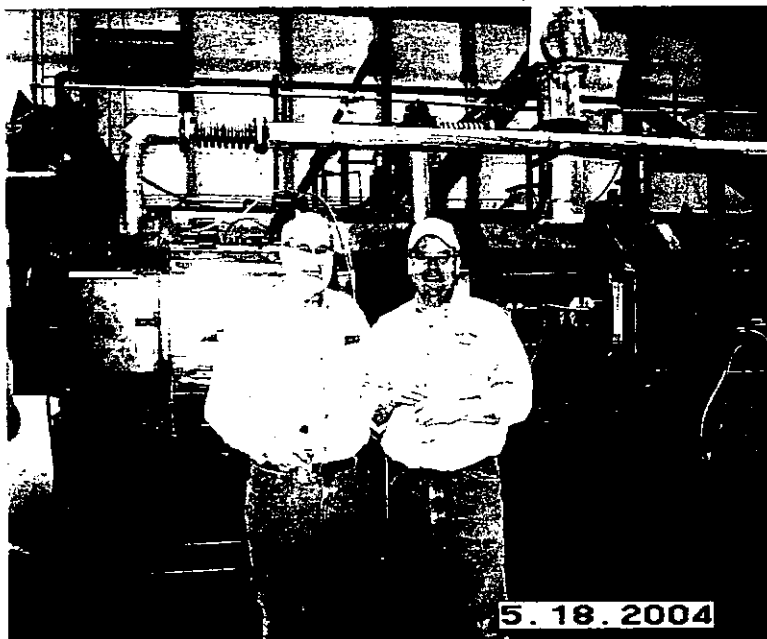
Richard's company, RJLee Group, has been involved in several major environmental cleanups. One occurring here in North Dakota - that was the anhydrous ammonia spill in Minot, ND in 2000. The other was being involved in the environmental cleanup and structural analysis of the remaining standing buildings around the World Trade Center.

The RJLee Group spent two years testing the process in their laboratory. They determined that they could articulate the science and have been able to do so in a manner that convinced the U.S. Patent Office to grant us two patents on the process.

In order to address the manufacturing issues – we turned to the only manufacturing engineer we knew. He happened to grow up on a farm five miles north of our farm. His name is Duane Erickson. Duane grew up on a farm five miles north of our farm. Duane went to NDSU and obtained an engineering degree. Duane has spent thirty years in the manufacturing field and came home to begin a manufacturing plant. He agreed to join our efforts.

In order to address the management issues, Richard, Duane and I sought to find someone with "real world business experience", who was as interested as we were in bringing jobs to North Dakota and who had experience with a start up company that went global. That person was named Paul Lee. Paul spent thirty years in the telecommunications industry. He started as a manager for Northwest Bell in Williston, ND and completed his career as the operations officer for MCI – World Comm. Paul was one of the first twelve employees to start a telecommunications company in Missouri.

After fifteen years this company ended up being sold to what is now MCI for over \$4 billion. Paul had approximately 7,000 employees under his division. Paul also happens to be a brother.



Jack Johnson and Travis Maddock of NDSU before the 10 ton plant.

Together, we have formed a company called Delta Energy, LLC a North Dakota corporation. It is a company which is under the umbrella of the RJ Lee Group. The RJ Lee Group is the principal owner and financial backer of Delta Energy. This company has been working on this project for the last three and has completed the building of a 10 ton (1,000 tire/day) beta plant on the family farm near Berthold, ND.

The beta plant uses a process that heats shredded tires and a chemical catalyst to relatively low temperatures to recover the oil, gas, carbon and steel products used to manufacture the tires. No combustion is involved, so very

little pollution and no harmful byproducts (pollution) are generated. The equipment

used in the process was adapted from "off-the-shelf" parts commonly seen on North Dakota farms and rural communities. The recovered materials are of such high quality they can be marketed with little or no further refining.

Delta's depolymerization process recovers energy and material from one 20 lb waste rubber tire.

- 1.1 gallon of oil (a #4 or #5 fuel oil)
- 7.2 pounds of Delta Black (a carbon black reinforcing agent)
- 3 pounds of steel
- 4 pounds of gas

The beta plant can process approximately 300,000 waste tires per year, as configured. There are over 290 million waste tires generated yearly in the U.S. alone, with 640 thousand generated in ND yearly. There is between 300 million to 3 billion tires lying on the ground with between 2 to 4 million waste tires on the ground in North Dakota depending upon the source. There is a need for approximately 1,000 of these beta plants in the U.S. to handle the yearly waste tire flow. In addition, depending on the number of waste tires lying on the ground there is a need for an additional 67 units to process these waste tires into "green products". See Exhibit "E"

It is a goal of Delta Energy to manufacture these systems in North Dakota. Because of the unique nature of our system we can use "off the shelf parts". Parts which can be manufactured in North Dakota. Since, we were able to manufacture this machine on the family farm in a building built specially for that purpose by our farmer brother, Alan Lee; we now believe that it is possible to manufacture these parts in North Dakota. We, however, do not have a need to ask Ward County, Minot or the state to build a large plant. Rather, we would like to out-source the manufacturing. But, rather than going overseas we want to out-source it to light fabrication shops located across the state

whether they are located in Newberg (Sund), Jamestown (Haybuster), Minot (Central Machining), Dickinson (Stephens) or Walhalla (Le Rouch).

This goal is shared by several people who have been involved in this project and are here today. I would like to introduce Jack Johnson, Duane Erickson and Gordon Lee.

Jack Johnson is currently employed by NDSU in their mechanical engineering college. Prior to that Jack served as the Chief Engineer for the Melroe Bobcat when it was first manufactured. He later was recruited to become the manufacturing engineer for the Steiger Tractor Company. Both products – I believe – were first of their kind.

The Bobcat was the first skid-steer loader.
The Steiger was the first four-wheel drive tractor.

Both products have contributed to helping North Dakota have a manufacturing base and the good jobs that come with manufacturing.

Both Duane and Jack have one thing in common – they have broad experience in the manufacturing field on a global basis, and, unfortunately are graduate of N.D.S.U.

They both take great delight in helping us UND graduates negotiate the world on manufacturing.

Gordon Lee is another brother who has been involved in helping to define and articulate some of the goals and objectives of Delta Energy. He is a Lutheran minister and lives in Moorhead, MN. Gordon helped Delta in looking at our role as one of stewardship of our resources, environment and people.

Although we have accomplished much, - articulating the science, obtaining patents, securing “highly qualified manufacturing and management people” and building a machine that delivers a quality product relative to the competition - there is still much to do. We need to find a way to obtain a reliable feed stock of waste rubber in order to give our buyers. We also need to determine a way to manufacture these machines in North Dakota.

We still need to find a mechanism to obtain a reliable feedstock of waste rubber, a method of giving buyers of the “green products” a reason to buy and a formula for marketing the equipment to other states and countries so that they could be manufactured here.

To accomplish this we need to change the existing paradigm from one where waste petroleum based products are thrown away to one where they are recovered and reused by industry.

S.B. 2268 deals with waste rubber, including waste tires. This legislation was based primarily on existing New York State law. Primarily follows existing New York law – this law is highlighted on EPA website for this region as being one which had the support of tire retailers, environmental groups and others. See, attached exhibit “A”.

As we all know waste tires are a breeding ground for mosquitoes carrying the West Nile Virus, rodents and disease. We also know that they are an environmental hazard, especially when started on fire. They are expensive to clean up and currently are being dumped in inert landfills in the state,

including a major tire dump here in Burleigh County. The State Health Department has published guidelines for waste rubber. This is Guideline 21 – Scrap Tire Management in North Dakota. The state regulates waste tires under Article 33-20 of the North Dakota Administrative Code (NDAC). Guideline 21 states that the generators of all solid waste, including waste tires, are responsible for the storage, transportation, disposal, recycling and reuse of waste materials. See, attached exhibit "B" & "C"

The purpose of the proposed legislation is as follows:

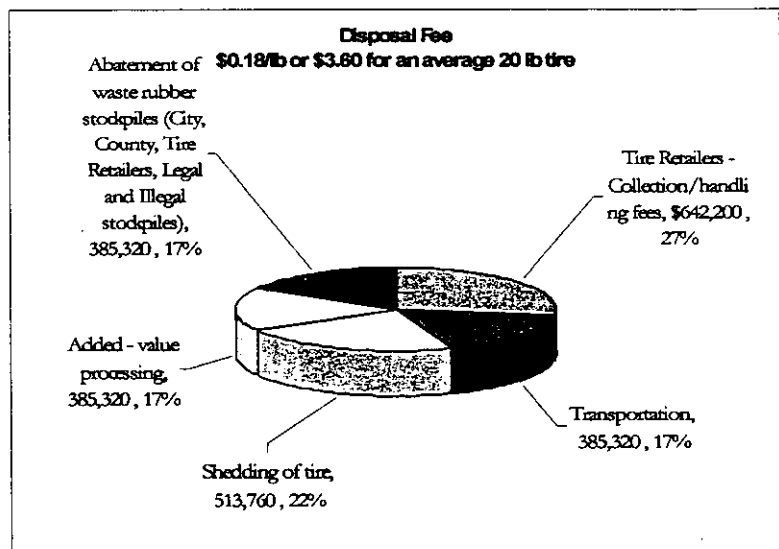
1. To further the common good through the responsible stewardship of resources – environmental, natural and public;
2. To assure that the life cycle of all petroleum based products, including rubber based tires, hoses and belts used in North Dakota are managed in a manner that is environmentally sound and which maximizes the economic value of recovered energy and material to the citizens of the state and our nation by permitting reuse of the constituent components of petroleum based products in industry; and,
3. To assure that the end users of traffic services, emergency response services, public resources and rural ambulance and fire departments pay for part of the cost of the unreimbursed traffic and emergency response services so as to reduce the burden on property and income taxpayers.

The goal is to provide a mechanism whereby all waste rubber is collected at the time of origination and disposed in a manner which extracts the constituent components in an environmentally friendly manner.

There is a fee which is paid at the time the consumer purchases a new tire, belt, hose, etc. The fee involved covers two components. The first component is a disposal fee and the second is a public benefit fee.

The disposal fee is based on a pound basis and is set at \$0.18/lb or \$3.60 per tire to ensure that adequate funding is in place to handle the collection, transporting and processing of waste rubber into the highest and best use.

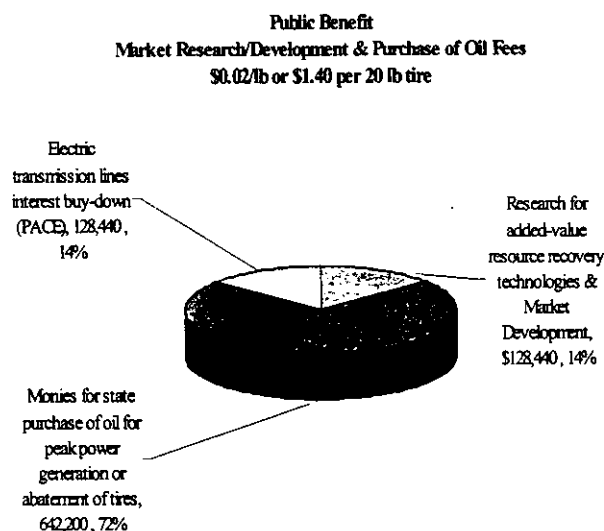
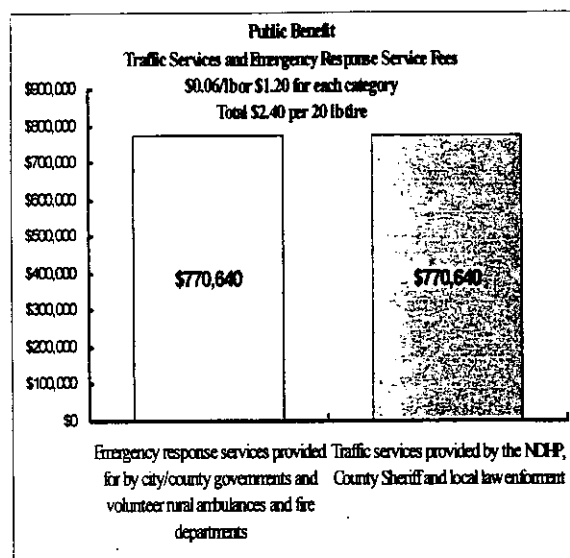
It also contains funding for the state to begin the abatement of rubber tires stockpiled across the state whether those tires are located in the Grand Forks landfill, a local tire retailer or out in the country on some farmers' land. The chart below shows the total distribution of the disposal fee by category for the 640,000 + waste tires generated in North Dakota yearly. The fee reflects the tire retailers' costs of handling the tire, the costs of transporting and shredding a tire and includes incentives for value-added processing.



The rationale behind the public benefit fee is that although every driver benefits from those traffic services (county sheriff, emergency response, volunteer ambulance services, fire departments, etc.)

which are paid mainly by property taxes and income taxes not every driver pays property or income tax. The goal is to recover some of those public resources expended on behalf of the end-user, in this case, the driver. This fee is set at \$0.12/lb or \$2.40/tire. The fee is designed to be divided between law enforcement and emergency response providers.

The second component of the public benefit fee is a fee of \$1.40/tire or \$0.07/lb. The rationale behind this is to provide funding for research projects related to waste, funding for the state to buy the oil recovered from the waste tires and funding to help with electric transmission line construction. These fees are related to the long-term goal of reducing the cost of electricity to all consumers. The adjacent chart shows the distribution of the funds.



The legislation also includes an innovative feature which recognizes the value of recovering the energy and material contained in a waste tire. Given the fact that approximately 22 gallons of crude oil is required in order to make the components necessary to manufacture a car tire and that in the process of extracting, transporting and refining the natural resources (oil, coal, iron ore, etc) approximately 143 pounds of carbon dioxide is generated; the potential environmental benefits from obtaining the reuse (up to 5 times for the carbon black) is quite significant.

For example, in North Dakota, the total yearly savings of crude oil is estimated to be approximately 50% of the virgin material required. Using crude oil as an example, this means approximately 11 gallons of crude oil per tire. On a yearly basis this results in approximately 168 thousand barrels per year. If extrapolated over a fifteen year basis this results in a savings of crude oil of approximately 2.5 million barrels of oil. Or, approximately 1% of North Dakota's oil reserves of 331 million barrels.

In terms of pollution, studies have shown that approximately 143 pounds of carbon dioxide (CO₂) is generated in the extraction, transporting and refining of the raw materials required to make a tire. If applied to North Dakota, then approximately 46 thousand tons of CO₂ per year is generated.

It seems only logical that if North Dakota was to take a pro-active approach towards recovering the energy and material contained in petroleum based products, then the end-user of the recovered oil

should have a "bankable" environmental credit to apply towards its air permits, whether in North Dakota, Minnesota or Canada.

Finally, the legislation contains a method for ranking the technologies in order to determine which technologies will recover the constituent components of petroleum based products in a manner which has the highest economic value, reduces the need to use virgin natural resources and protects the environment. This method is based upon the U.S. Department of Energy's matrix system for analyzing new technologies. The reason why the extensive definitions and metrics are included in this proposed law is simply to reduce the possibility of further legal disputes over whether the "criteria" to determine the best available technology is valid and logical. For example, one only needs to review the dispute between the North Dakota Department of Health and the EPA over the issue of what amount of pollution was being generated by North Dakota's power generating plants.

In conclusion, the benefits of this legislation are many and it will help North Dakota to complement the Federal Government's National Agenda for:

- Energy Security
- Natural Resources
- Environmental
- Public Health
- Economic growth
- Reduce state, county and city budget deficits

We have secured the support of the Burleigh County Commission, the Ward County Commission, the Grand Forks County Commission, the Minot City Council, the N.D. Peace Officers Association and the North Dakota Emergency Management Services Association. See Exhibit "D"

However, as Caroline Downs of the Kenmare News said in her articles, dated January 26, 2005, about the process and the legislation before you today are:

"IT CAN'T BE DONE BUT THEY'RE DOING IT!"

I ask that you support this legislation and give it a do pass.

Thank you.

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U.S. Environmental Protection Agency

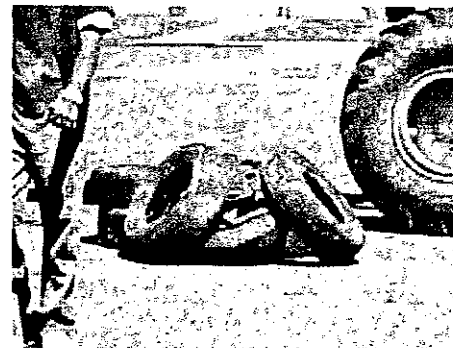
Management of Scrap Tires

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Laws/Statutes

Scrap tires are managed primarily at the state level. About 48 states have laws or regulations specifically dealing with the management of scrap tires. While each state has its own program, some typical features include:

- Funding via taxes or fees on automobiles or tires.
- Market development activities.
- Licensing or registration requirements for scrap tire haulers, processors and some end users.
- Manifests for scrap tire shipments.
- Requirements regarding who may handle scrap tires.
- Financial assurance requirements for scrap tire handlers, storage facilities, and disposers.
- Tire pile clean-up.



The City of Modesto Amnesty Program allows Modesto, California residents the opportunity to drop-off waste tires for recycling at no charge. Tires of all sizes are accepted.

In 1985, Minnesota enacted the first state law for the management of scrap tires. By now, 48 states have enacted laws that address scrap tire management. Alaska and Delaware do not have any scrap tire laws or regulations.

Each state makes its own scrap tire laws and regulations. These laws typically set the stage for rules for scrap tire storage, collection, processing, and use. States also establish programs to clean up old scrap tire stockpiles, and the funding needed to accomplish that goal. [More information about state tire programs.](#)

In recent years, scrap tire legislation has been a priority in many states. This is an indication that the majority of legislatures recognize that creating viable markets for scrap tires is an integral component of each state's environmental and recycling policies.

Some of the documents on this Web page are in PDF format. For information about PDFs, please click on the link provided.



[Adobe PDF files](#)

Tire Fees

Many states collect fees to fund scrap tire management programs or stockpile cleanup. Tire fees are typically assessed on the sale of new tires or on vehicle registrations. Fees generally range from \$0.50 to \$2 per passenger car.

In New York, representatives from the scrap tire industry, tire manufacturers, environmental groups, scrap tire end-users, and the municipal recycling/solid waste sector formed a roundtable group to address the state's scrap tire problem. In January 2000, the roundtable developed a consensus document that was eventually turned into a legislative package. Key elements included:

- Dedicated tire fee to be used to fund initiatives.

tire, and truck tire fees range from \$3 to \$5.

Some scrap tire fees also help local communities establish market programs, create licensing/enforcement systems, and host tire collection

programs/amnesty events. States and municipalities may also use money generated by scrap tire fees to offer grants or loans to scrap tire processors and end users of tire-derived materials.

- Short- and long-term market development programs.
- Consumer education programs.
- Creation of a stockpile remediation and abatement program.

Additional Information

- [State Scrap Tire Programs – A Quick Reference Guide: 1999 Update](#) (PDF 262 KB)

California's Integrated Waste Management Board is using a multi-tiered approach to tackle the state's tire problems:

- [Rubber Manufacturers Association Table of State Legislation of Scrap Tires](#) [EXIT disclaimer >](#)

- Identify illegal tire piles for cleanup and provide the funds to accomplish the job.
- Develop markets—enhance end products through the establishment of special recycling zones and grants.
- Conduct balanced enforcement action through scrap tire hauler licenses, public education and by targeting recyclers, collectors, and processors that are not in compliance.
- Enforce requirements regarding pile size, storage time, and fire prevention at permitted tire storage sites.

- [Rubber Manufacturers Association State Scrap Tire Fees and Point of Collection](#) [EXIT disclaimer >](#)

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Last updated on Tuesday, December 2nd, 2003
URL: <http://www.epa.gov/epaoswer/non-hw/muncpl/tires/laws.htm>



Exhibit B¹

GUIDELINE 21 - SCRAP TIRE MANAGEMENT IN NORTH DAKOTA

North Dakota Department of Health - Division of Waste Management

Telephone 701-328-5166 • Fax 701-328-5200 • Website www.health.state.nd.us

Rev: 02/03

The North Dakota Department of Health (NDDH) regulates scrap tires under Article 33-20 of the North Dakota Administrative Code (NDAC). Generators of solid waste, including scrap tires, are responsible for the storage, transportation, disposal, recycling and reuse of waste materials. Open burning of tires is prohibited under the Air Quality rules, NDAC Article 33-15.

Integrated waste management, a hierarchy for managing solid waste, includes waste reduction, reuse, recycling, energy recovery, and disposal. **Waste reduction** includes buying tires with a long tread life and providing tire maintenance (proper pressure, alignment, rotation, etc.) to optimize tire wear and life. **Reuse** of tires includes retreading tires. Many tires, especially truck tires, are reused many times through the retreading process. Purchase of retread tires is also reuse. **Recycling** tires includes processing tires into crumb rubber for play grounds, pavement surfaces, athletic track surfaces. Approved engineering uses of shredded tires include use as drainage fields, landfill construction, low weight fill, etc. Some large tires are used for livestock watering. **Energy recovery** includes burning tire-derived fuel (TDF) in a power facility, gasification plant, or cement kiln. TDF burns cleanly in a high temperature boiler (tires do not burn cleanly in the open environment). **Disposal in a permitted landfill** is a less desired element in the strategy; however, it is preferred to stockpiling or dumping tires. Landfills may legally bury tires in North Dakota; however, many choose not to bury tires due to handling or space constraints. Many generators contract with a tire processing/recycling facility who charge a tipping fee to pay for transportation, processing, marketing and disposal costs. Open dumping, stockpiling and open burning are illegal disposal options. **Improperly managed tires pose fire, insect, rodent, snake, and potential disease concerns.**

Tire fires pose serious threats to fire fighters, workers and citizens. According to the U.S. Environmental Protection Agency (EPA):

"Emissions from an open tire fire can represent significant, acute and chronic health hazards to firefighters and nearby residents . . . unprotected exposure to the visible smoke plume should be avoided . . . open tire fire emissions are estimated to be 16 times more mutagenic than residential wood combustion in a fireplace. One of the key contaminants is benzene."

Regarding **disease**, the Center for Disease Control (CDC) advises:

"Help reduce the number of mosquitoes in areas outdoors where you work or play, by draining sources of standing water. In this way, you reduce the number of places mosquitoes can lay their eggs and breed . . . remove discarded tires, and other items that could collect water."

Cities, counties, and tire dealers may obtain a "Permit-by-Rule" to store the equivalent of a semi-truck load of whole or shredded scrap tires for transport to a recycling or disposal facility subject to the following conditions: (1) storage must not create a public nuisance; (2) access to the storage area must be controlled; (3) the storage area must be accessible to fire control equipment; and (4) funds must be set aside for disposing or recycling the stored scrap tires. Storage of larger quantities requires a formal solid waste permit. Contact the NDDH for information on the permit provisions.

Commercial businesses collecting and hauling scrap tires must have a waste hauler's permit issued by the NDDH. Tires may not be delivered to a facility that is not in compliance with the state rules or abandoned upon any street, alley, highway, public place or private premises. Anyone hauling scrap tires to unapproved disposal sites (ravines, coulees, dumps, gravel pits, tree rows, etc.) is in violation of NDAC 33-20 and subject to enforcement action.

Tire businesses are advised to transport their tires to an end-user who will process, recycle and/or dispose the materials in a manner that complies with the laws of the state or the governmental jurisdiction having authority over waste management activities. In some cases, generators (tire dealers, cities, etc.) have been required to retrieve tires from persons paid to manage their waste because it was never managed properly. **If scrap tires are taken to a location which comes under enforcement action, generators may be liable for cleanup costs.**

To reduce liability, generators are urged to deal only with companies that properly manage wastes. The following article describes the U.S. EPA and the U.S. Department of Justice actions holding tire generators liable for tire cleanup activities:

"In 1997, Region 4 responded to a fire involving 100,000 to 300,000 tires stockpiled at a site in Irvington, Alabama. The EPA suppressed the fire and removed thousands of gallons of pyrolytic oil runoff from the fire that was threatening a wildlife sanctuary, incurring approximately \$230,000 in response costs. The EPA determined that the owner/operator was insolvent. Initially, the major generators balked, claiming that their disposal of used tires did not constitute disposal of a CERCLA "hazardous substance." Region 4 and Department of Justice persisted, however, and the tire generators agreed to settle their liability with the EPA.

This settlement enhances environmental protection by giving notice to arrangers for tire disposal that there is potential liability for tire fires and that they should take precautions to ensure that the tires are disposed of at responsible and secure facilities."

Individuals or businesses accepting scrap tires are subject to enforcement action if the activity: (1) creates a nuisance, (2) endangers public health or safety, or (3) presents a threat to environmental resources.

The NDDH does not have a program specific to scrap tires. Scrap tires are worth nothing unless processed into a saleable product for which there is a market. While the NDDH does not endorse specific companies, currently scrap tires are chiefly processed by three companies:

1. Waste Not Recycling, 2928-37th St. NW, Mandan, ND 58554, (701) 663-3370.
2. New Deal Tire, 117 W. Highway 12, Groton, SD 57445-2308, (605) 397-8473 or 8291.
3. Greenman Technologies, Inc., 12498 Wyoming Ave. S., Savage, MN 55378, (952) 894-5280.

More information regarding scrap tire issues is available through the Scrap Tire Management Council of the Rubber Manufacturers Association (RMA) at www.rma.org. Other information on tires, including fire control, health, and safety issues is available at:

<http://www.usfa.fema.gov/applications/publications> (do a search for "tires")

<http://www.epa.gov/epaoswer/non-hw/muncpl/tires.htm>

<http://www.epa.gov/jtr/docs/r9tirerecommend.pdf>

Information on **disease hazards** (including encephalitis, west nile virus, hantavirus, rabies, etc.), associated with uncontrolled tire accumulations is available through the CDC at <http://www.cdc.gov> (do a search for "tires, disease").



GUIDELINE 21 - SCRAP TIRE MANAGEMENT IN NORTH DAKOTA

North Dakota Department of Health - Division of Waste Management

Telephone 701-328-5166 • Fax 701-328-5200 • Rev: 11/02 • Website www.health.state.nd.us

The North Dakota Department of Health (NDDH) regulates scrap tires in the state of North Dakota under Article 33-20 of the North Dakota Administrative Code (NDAC). Generators of all solid waste, including scrap tires, are responsible for the storage, transportation, disposal, recycling and reuse of waste materials.

Businesses collecting and hauling scrap tires are required to have a waste hauler's permit issued by the NDDH. No solid waste may be delivered to a facility that is not in compliance with the state rules or abandoned upon any street, alley, highway, public place or private premises.

Currently, scrap tires from North Dakota are chiefly processed by three companies:

1. Waste Not Recycling, 2928-37th St. NW, Mandan, ND 58554 (701) 663-3370.
2. New Deal Tire, 117 W. Highway 12, Groton, SD 57445-2308, Phone: (605) 397-8473 or 8291.
3. Greenman Technologies, Inc., 12498 Wyoming Ave. S., Savage MN 55378, (952) 894-5280.

Scrap tires are generally processed into tire-derived fuel (TDF); however, an increasing amount is being processed into crumb rubber. A power plant in central North Dakota will purchase tire chips for augmenting coal as fuel. A large coal gasification plant has also indicated they would accept TDF for processing into a natural gas (this entity will not pay for tire chips). The Department has also allowed some engineered uses of scrap tires on a case-by-case basis.

The state of North Dakota does not have a loan or grant program specific to scrap tires. Businesses handling tires are advised to transport their tires to an end-user who will process and/or dispose the materials in a manner in compliance with or approved by the Department, or the governmental jurisdiction having authority over waste management activities. In some cases, generators have been asked to come get their tires from persons who do not process and/or manage their tires in a manner that reduces their liability.

Cities, counties, and tire dealers are eligible for a Permit-by-Rule to store a small amount of scrap tires while accumulating a load for transport to a recycling disposal or reuse facility. The Permit-by-Rule allows storage of either up to 1,300 scrap tires, 25 tons of shredded tires, or a pile of scrap tires equivalent in volume to a semitrailer load, with the following conditions: (1) the storage area must not create a public nuisance; (2) access to the storage area must be controlled; (3) the storage area must be accessible to fire control equipment; and (4) funds must be set aside for disposing or recycling the stored scrap tires. Storage of larger quantities of scrap tires requires a permit. Contact the Department for information on the Permit-by-Rule provisions.

Exhibit "C"

Mosquitoes Disease and Scrap Tires

It is well known among mosquito entomologists and mosquito abatement personnel that scrap automobile and truck tires often support large populations of certain mosquito species. In southern U.S. two exotic species predominate in tires. These two species (*Aedes aegypti* and *Aedes albopictus*) are known to be the principle vectors of Yellow Fever and Dengue, diseases which afflict millions of people in the tropics. In temperate regions of North America, *Aedes triseriatus* (the native "Eastern Treehole Mosquito") and *Aedes atropalpus* predominate in scrap tires (1). Based on samples taken in 1992, it is clear that these two species are dominant in tires in Rhode Island (personal observ.). Both of these species are known to be competent vectors of Eastern Equine Encephalitis (EEE) (2) and also of LaCrosse Encephalitis (LACV) (1). EEE is endemic to Rhode Island and fatality rates average near 50%. LACV, although much more prevalent than EEE, usually produces relatively mild symptoms in adults. It can cause serious infection and death in children, however (3). One study documented an association between scrap tires and 15 cases of LACV in Wisconsin in 1979 (4). Finally, dog heartworm, which is a growing problem in temperate North America, can also be transmitted by *Ae. triseriatus* (5).

Aedes albopictus (the "Asian Tiger Mosquito") merits special consideration. This species was accidentally transported from Japan to the western hemisphere in the mid-1980's in shipments of used tires. It has since become established in at least 23 states including Indiana and Delaware (6). Based on its native range in Asia, it will likely establish in Rhode Island (7). Its habits are such that it is considered the nation's most dangerous species. That status is because it reproduces rapidly in a wide variety of artificial containers, readily inhabits urban areas, and is a competent vector of EEE (8) and LACV (9). In fact, EEE-infected adults were collected at a large scrap tire pile in Florida in 1991 (6). This finding indicates that this species will readily feed on birds, which are the reservoir for EEE. Since *Ae. albopictus* is known to feed on a wide variety of mammals, it is considered a potentially effective vector of EEE and LACV.

It is obvious that eliminating scrap tires will eliminate a prolific mosquito habitat and the associated disease risks. It is also clear that the spread of the Asian Tiger Mosquito has been hastened by interstate shipments of scrap tires (10). Many states have banned importation of scrap tires for this reason. Where elimination is not feasible, mosquito abatement programs may be compelled to suppress mosquito populations at tire piles. This task is problematic and costly, particularly at large piles.

To suppress adult mosquitoes at a pile requires the frequent use of adulticides, none of which are

environmentally benign. Delivering adulticides effectively is problematic at large piles because it is very difficult to penetrate the pile to the depths where the mosquitoes are resting. Larval mosquitoes are likewise a difficult target to reach, as they most frequently inhabit tires beneath the surface of the pile. Two available larvicides are long-lasting and environmentally benign, but the costs become prohibitive at large piles.

While cost/effectiveness studies of larvicides on large piles are lacking, the results of one study provide a guide for calculation (11). The authors concluded that liquid *B.t.i.* (a bacteria selective for mosquitoes) would be the most effective at large piles because that formulation penetrated their small piles better than granule or pellet formulations. Unfortunately, the liquid formulation is only effective for 7 to 10 days, requiring numerous treatments during a season. This study calculated the liquid cost to be \$2.43 per tire per treatment for the cost of material only. Factoring in the added costs of spraying the pile from a helicopter, it is readily apparent that larviciding is cost-prohibitive at large scrap tire piles.

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[Buzz back to the Mosquito Homepage](http://www.uri.edu/research/eee/tires.html)

Exhibit "D"

"BE IT RESOLVED that the Grand Forks County Commission, does hereby express its support for the concept of the responsible stewardship of resources, including environmental, natural and public;

BE IT FURTHER RESOLVED that the Grand Forks County Commission supports the recovery of the energy and material embedded in waste rubber in order to reduce our nation's dependence on foreign oil; and

BE IT FURTHER RESOLVED that the Grand Forks County Commission recognizes the use of public resources by the Grand Forks County Sheriff's Office, the local law enforcement agencies and emergency response services to provide public services to people involved in traffic accidents and other roadside emergencies whether a resident or a non-residents of Grand Forks County; and

BE IT FURTHER RESOLVED that the Grand Forks County Commission recognizes the additional burden of financing the use public resources placed upon Grand Forks County property owners for traffic accidents and other roadside emergencies caused by non-residents of Grand Forks County; and

BE IT FURTHER RESOLVED that the Grand Forks County Commission believes it is only fair that the endusers of those public resources pay for part of the costs of providing those public services thereby reducing the burden on Grand Forks County property owners; and

BE IT FURTHER RESOLVED that the Grand Forks County Commission believes that a fair and reasonable enduser fee (one which does not affect the free market for the sale of tires) for the disposal of waste rubber, including waste tires should be placed on waste rubber; and

BE IT FURTHER RESOLVED that the Grand Forks County Commission believes that a fair and reasonable enduser fee (one which does not affect the free market for the sale of tires) for the recovery of those public resources expended on behalf of disposal of waste rubber, including waste tires should be placed on waste rubber in order to reduce the burden on property taxpayers; and

BE IT FURTHER RESOLVED that the Grand Forks County Commission respectfully requests that the 2005 North Dakota Legislature give careful and serious consideration to legislation that proactively deals with this type of recycling in North Dakota, including S.B. 2268 the "Resource Recovery and Conservation Act".

BE IT FURTHER RESOLVED that a fully executed copy of this resolution be transmitted to the 2005 North Dakota Legislature and to the North Dakota Association of Counties."

William M. Mugh

CHAIRMAN

Exhibit D

CITY OF JAMESTOWN



NORTH DAKOTA

OFFICE OF CITY ADMINISTRATOR
102 THIRD AVENUE SOUTHEAST
JAMESTOWN, ND 58401

PHONE 701/252-5900
FAX 701/252-5903
E-MAIL: JFUCHS@DAKTEL.COM
CELL: 701/320-8006

February 2, 2005

Mr. Erv Lee
Delta Energy
P. O. Box 359
Minot, North Dakota 58701

RE: Tire Recycling Project
S.B. 2268

Dear Erv:

This letter is to let you know that the Finance & Legal Committee of the Jamestown City Council unanimously passed a motion to recommend that the City Council of the City of Jamestown adopt a Resolution in support of the concepts found in the proposed Resource Recovery and Conservation Act (S.B. 2268) now being considered by the N.D. Legislature. It is anticipated that the City Council will adopt the Resolution of Support at its meeting on February 7, 2005.

The City Council and the residents of Jamestown understand the need for finding an alternative solution to the disposal of used tires other than simply depositing them in landfills. Landfill disposal of used tires is costly and results in a diminished capacity in landfills for other municipal wastes that have no other means for disposal. The City of Jamestown disposes of approximately 2,000 used tires annually in our city landfill.

Although the proposed legislation may need some amendments in order to provide for lower costs to the consumer as well as easier administration, the City Council feels that the concepts contained in the proposed bill merit careful and serious consideration by the Legislative Assembly.

Should you have any questions relative to this matter, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jeff Fuchs". The signature is written in a cursive, flowing style.

Jeff Fuchs
City Administrator

Ephibit 11



OHIO
DEPARTMENT
of NATURAL
RESOURCES



Recycle,
Ohio!

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Sam Speck, Director

Leaders in waste reduction, recycling and litter prevention

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This file was last modified on: 11/3/2004 10:08:59 AM

Recycling Tires

Problems with wasting scrap tires: Fire

[Return to index](#)

Even before the tire recycling business collapsed during the 1960s and early 1970s, scrap tires began accumulating in landfills, illegal dumps, vacant lots, abandoned buildings and roadsides around the nation.

The Rubber Manufacturers Association estimates that between two and three billion scrap tires are in landfills or are otherwise "stockpiled" across the United States. The Ohio EPA estimates that over 40 million scrap tires in large dumps around the state, with perhaps another 60 million more in roadside dumps, rural lots and warehouses around the state.

Even those that were dumped in sanitary landfills created environmental problems. Sometimes landfilled tires work their way back to the surface, causing expensive damage to liners and liquid collection systems and compromising their ability to keep landfill contaminants from mixing with local groundwater and surface water. Like most states, Ohio has banned the landfill disposal of whole tires.

Scratch that plan



Letting scrap tires accumulate in "stockpiles" until some future use could be identified backfired dramatically. In Ohio's Wyandot County, approximately 5 million tires in a 25-million scrap tire heap burned for days, poisoning the soil and nearby waterways after some teenage boys torched them in August 1999.

Scrap tires illegally dumped in abandoned buildings and on the

Where to

Find 100s of sites through

Recycling Pl

Recyclin

Datebook

[Work through lunch](#)

The Ohio Department of Natural Resources leads a series of brownfield revitalization projects. The Ohio Department of Natural Resources Association of Ohio Networking Luncheon will be held in Columbus on Feb. 9.

[Details in DATEBOOK](#)



[Litter Prevention Act](#)
[Online coloring page](#)

Cut junk mail

Junk mail costs 62 million dollars a year.

Electronics Rec

Hardware upgrade good
Toxic waste bad.

Pay-As-You-Throw

[Programs in Ohio](#)
Economic incentives encourage residential recycling.

landscape present even greater public and environmental health risks.

"The most obvious hazard associated with the uncontrolled disposal and accumulation of large amounts of tires outdoors is the potential for large fires that are extremely detrimental to the environment," notes Kurt Reschner, a University of Nebraska-educated chemical engineer working in scrap tire recycling in Germany, on his excellent web site on scrap tire recycling.

Fires in large tire piles are hard, if not impossible, to extinguish. Some have taken months to burn out, producing heavy smoke and toxic liquid run-off that can foul local groundwater and surface water. Air, water and soil pollution can actually be made worse if water or foam is used to put out the fire, so some have been consciously left to burn out.

This hazard became undeniable in Ohio shortly after August 21, 1999, when arsonists torched one of Ohio's largest tire piles — 26 million tires piled over 140 acres at the Kirby Tire Collection and Storage Facility in western Wyandot County.

Not to be outdone



A month after Ohio's big tire fire, another broke out in Stanislaus County, CA.

The fire burned five days, sending up a black column of smoke that could be seen more than 60 miles away. Oil released from the burning tires ran into a nearby creek, killing thousands of fish in the Sandusky River system. State officials estimated that five million tires burned in the blaze. More than 250 firefighters from 21 fire departments battled the blaze, finally bringing it under control by dumping topsoil on it.

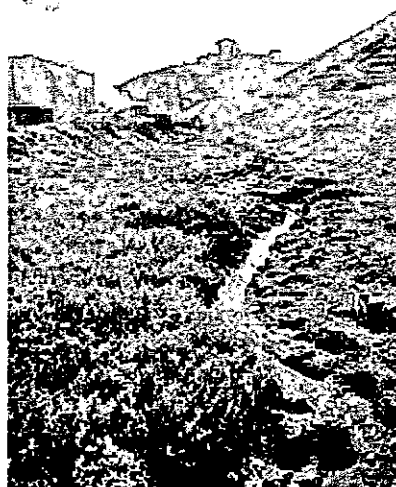
Even putting out the fire created environmental problems, according to the Ohio EPA. The 750 tons of topsoil dumped on the Kirby fire became contaminated with oils from the burning tires, according to an article in the July 11, 2003, issue of Solid Waste Report. Ohio is paying a clean-up firm \$837,000 to remove the soil and to treat contaminated

Run-off

water.

If some good can be said to have come from the Kirby fire, it moved the Ohio Environmental Protection Agency (Ohio EPA) and the state legislature to accelerate efforts to clear out the state's illegal tire dumps.

Since 1996, the state legislature had been levying a fee of 50 cents on each tire sold in the state. Most of the money raised by the fee was spent by the Ohio EPA on inspections, regulatory enforcement and clean-up efforts at scrap tire dump sites. Another \$1 million went to a Department of Development grant program that helped Ohio schools purchase running track pavement made from recycled tires.



Oil released by the massive tire fire flows to a catch basin at the Stanislaus County, CA, tire fire in 1999.

A year and a half after the Kirby fire, Ohio's legislature doubled the fee. The \$1 million-per-year grant program was transferred to the Division of Recycling and Litter Prevention for a program to help Ohio businesses conduct the research and purchase the equipment needed to integrate scrap tires into their production processes. The rest — now around \$11 million a year — is focused on the clean-up process. The state's goal is to have all its major tire piles cleared out by 2010, when the fee expires. By then, the state also hopes to have end-use markets for every newly scrapped tire generated in Ohio.

Ohio's 10 biggest tire piles

| Rank | Site | Estimated tire amount |
|------|-----------------------------------|-------------------------|
| 1. | Wyandot County, near Sycamore | 20,000,000 ¹ |
| 2. | Portage County, near Atwater | 1,200,000 |
| 3. | Portage County, near Deerfield | 1,200,000 |
| 4. | Morrow County, near Mount Gilead | 750,000 |
| 5. | Summit County, near Akron | 750,000 |
| 6. | Hancock County, near Findlay | 703,000 |
| 7. | Morrow County, near Mount Gilead | 250,000 |
| 8. | Harrison County, near Freeport | 238,000 |
| 9. | Perry County, near Crooksville | 208,400 ² |
| 10 | Muskingum County, near Zanesville | 200,000 |

¹ — The figure represents early estimates on the number of tires in the Kirby Tire Recycling dump before clean-up began. During the week of July 21, 2002, the Ohio EPA estimated there were between 13 and 15 million tires remaining at the site.

² — The Solid Waste Management Plan estimates that the Crooksville dump contains 2,084 tons of shredded rubber, equivalent to roughly 208,400

passenger car tires.

Source: Ohio EPA Scrap Tire Management Unit

As of the fall of 2003, the Kirby site was down to about 13 million of the tires, and it remains the largest scrap tire pile in Ohio by far. The next largest are estimated to contained 1.2 million tires each.

State officials believe it will take another three to five years to finish the Kirby clean-up, which has cost the state \$14.1 million so far. Then they will turn their attention to some of the state's other large tire dumps.

The clean-up at Kirby was well underway when another health risk associated with discarded tires started making headlines in Ohio in 2002.

West Nile Virus is not the only mosquito-borne virus in Ohio, but it has proved to be one of the most deadly in living memory. Its rapid spread across the continent put new urgency on efforts to eliminate scrap tires as a breeding place for mosquitoes.

Next: Problems with wasting scrap tires: Disease

- [Recycling Tires: Introduction](#)
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- [Charles Goodyear](#)
- [The rubber meets the road](#)
- [Search for synthetic rubber](#)
- [Rubber goes to war](#)
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Resource Recovery & Conservation Act (RRC)

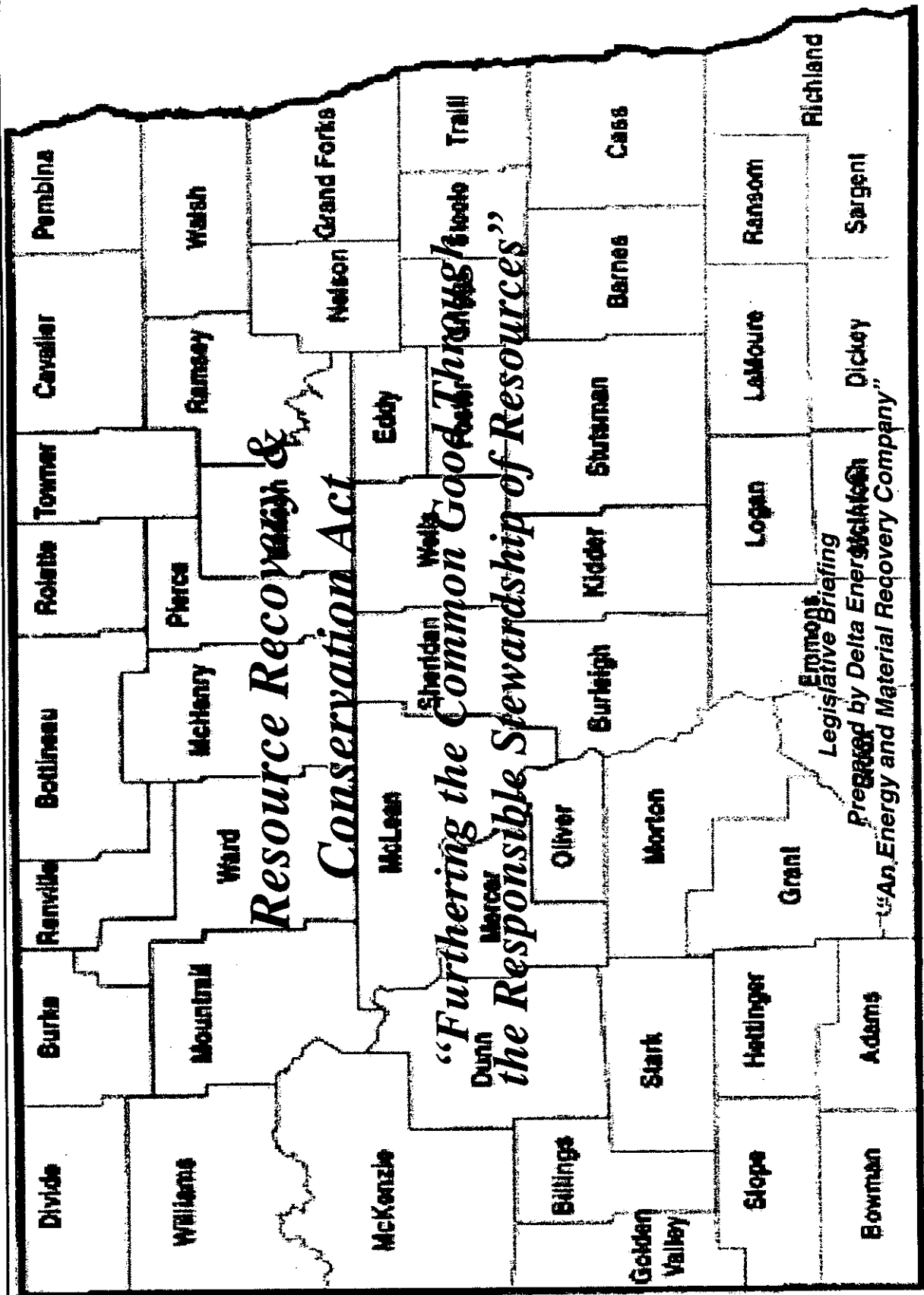


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Resource Recovery & Conservation Act (RRC)

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Resource Recovery & Conservation Act (RRC)

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Resource Recovery & Conservation Act (RRC)

•Proposed Legislation

ND Resource Recovery & Conservation Act (RRC)

–Comprehensive

- Modeled after New York and Nevada laws
 - U.S. EPA's - Clean Skies Initiative/Cap & Trade Program
- Reduces costs of government by eliminating solid waste at time of origination
- Reduces threat to public health and safety
- Uses a fair and uniform disposal fee
 - Creates a level playing field for tire retailers
 - Benefits tire consumers
- Benefits property taxpayers by having currently mandated services for landfill, traffic, fire, health, etc. paid for by generators of the waste
- Encourages the goal of recycling natural resources
 - Will contribute to reducing our nation's dependence on foreign oil
 - Will contribute to reducing environmental pollution
- Has the support of North Dakota, other states and community leaders

• What issues prompt the need for legislation?

N.D. does not have a program in place to handle the disposal of waste tires, nor, to clean up tire piles.

- N.D. waste tire flow and current disposal policies do not encourage the recovery of the energy and industrial materials contained in rubber tires.
- Tire retailer's disposal rates vary from \$2.00 to \$6.00/tire even though their costs of disposal range from \$0.75 to \$1.50/ tire.
- Tire jockeys presently dispose of tires in a manner most cost effective to them, leaving the problems of clean up, fires and health to the local, county and state governments.
- Tire consumers are not getting what they paid for.
- Lack of a stable feedstock for rubber to energy processes causes potential buyers of the oil and other products recovered by those processes to not be willing to commit to long term contracts.
 - For example, the Anheuser-Busch Malt Plant in Moorhead, MN, is interested in using the oil obtained from the ND waste tire flow in its plant, but, will not commit until they are sure of having a stable supply of oil for their facility.

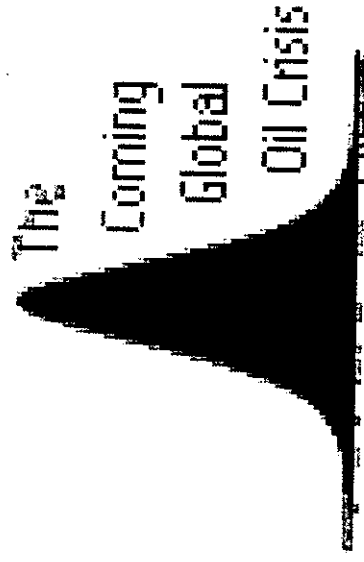
Resource Recovery & Conservation Act (RRC)

•What issues prompt the need for legislation? (Continued)

- Manufacturing of tires and other petroleum based products are dependent on foreign oil.
- It is in everyone's interest to have processes which allow for the reuse of oil from scrap rubber products.
- North Dakota's economy is price sensitive to fluctuations of oil prices.
- For example, in 2000 the price of anhydrous ammonia fertilizer went from \$295/ton to \$425/ton due to the Enron scandal in California, thus adding tens of millions of dollars to the cost of agricultural production.
- Nationwide, the USDA estimated that the Enron scandal added \$2.9 Billion in costs to farmers
- Current increases in gas and diesel prices are hurting local businesses
- The world's oil reserves are rapidly depleting.
- There are no simple solutions to our energy issues

Resource Recovery & Conservation Act (RRC)

Part 2:



- Slide 10 – Graphs showing the current amount of U.S. oil reserves and its rate of decline
- Slide 11- U.S. Geological Survey Graph Showing “The Big Rollover”
 - The point when oil demand is greater than oil supply
- Slide 12 – Graphs showing projected oil demand, supplies and estimated share of world oil reserves
- Slide 13 – EIA graph showing U.S. oil production & imports and chart showing North America’s projected share of world oil reserves
- Slide 14 – EIA graph showing global oil trade flows and excerpt from the New York Times regarding China’s oil dealing with Canada

Resource Recovery & Conservation Act (RRC)

The U.S. proven oil reserves are being rapidly depleted, thus increasing our dependence of oil from the Middle East.
Existing Oil Fields In The Lower 48 States

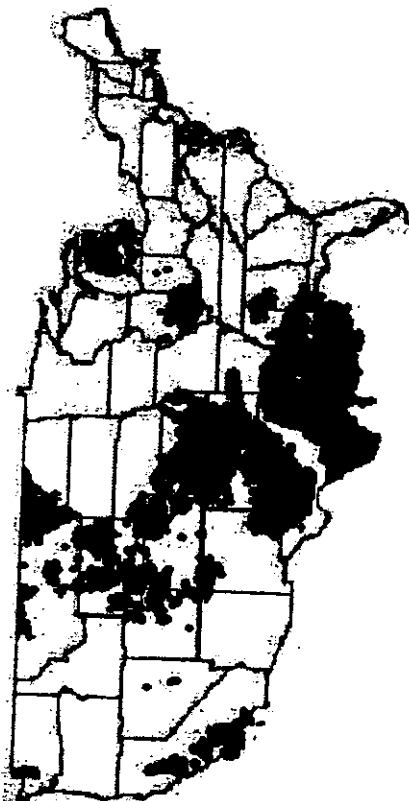
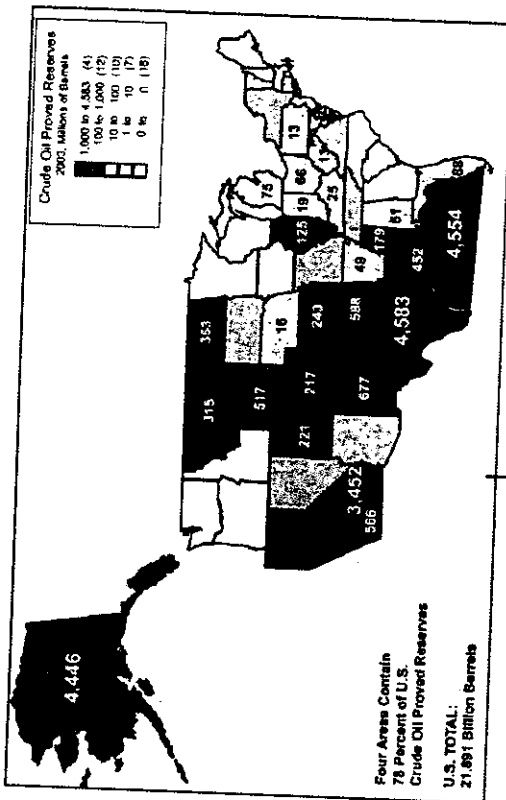
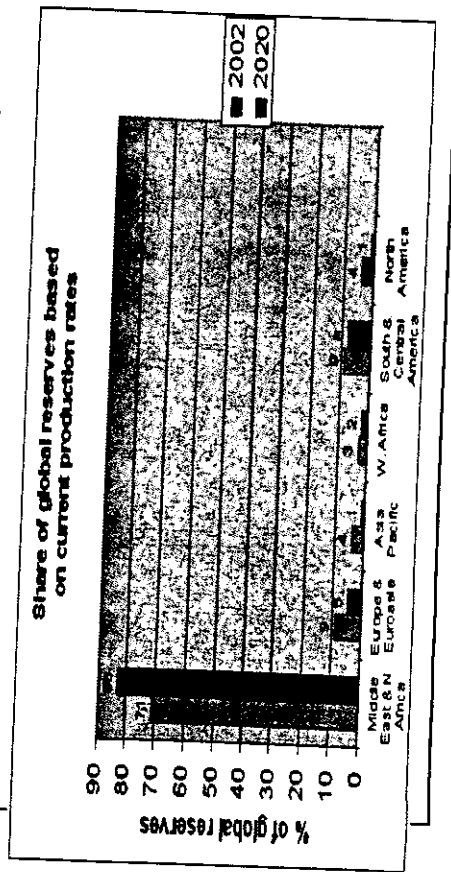


Figure 16. Crude Oil Proved Reserves by Area, 2003

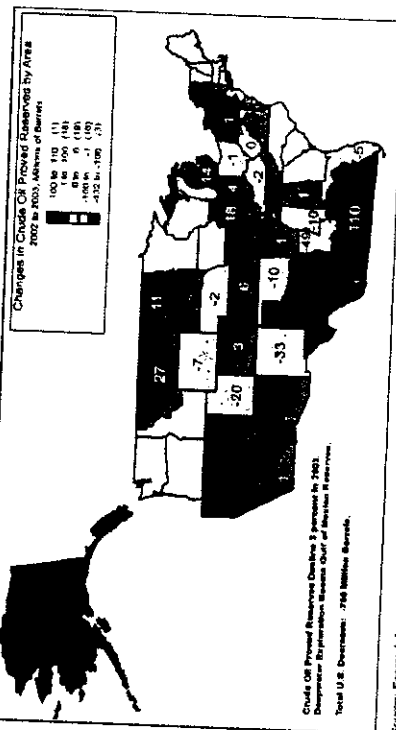


U.S. Share of Global Reserves Will Decrease By 75% By 2020



U.S. Oil Reserves Decreased By 3% in 2003

Figure 17. Changes in Crude Oil Proved Reserves by Area, 2002 to 2003



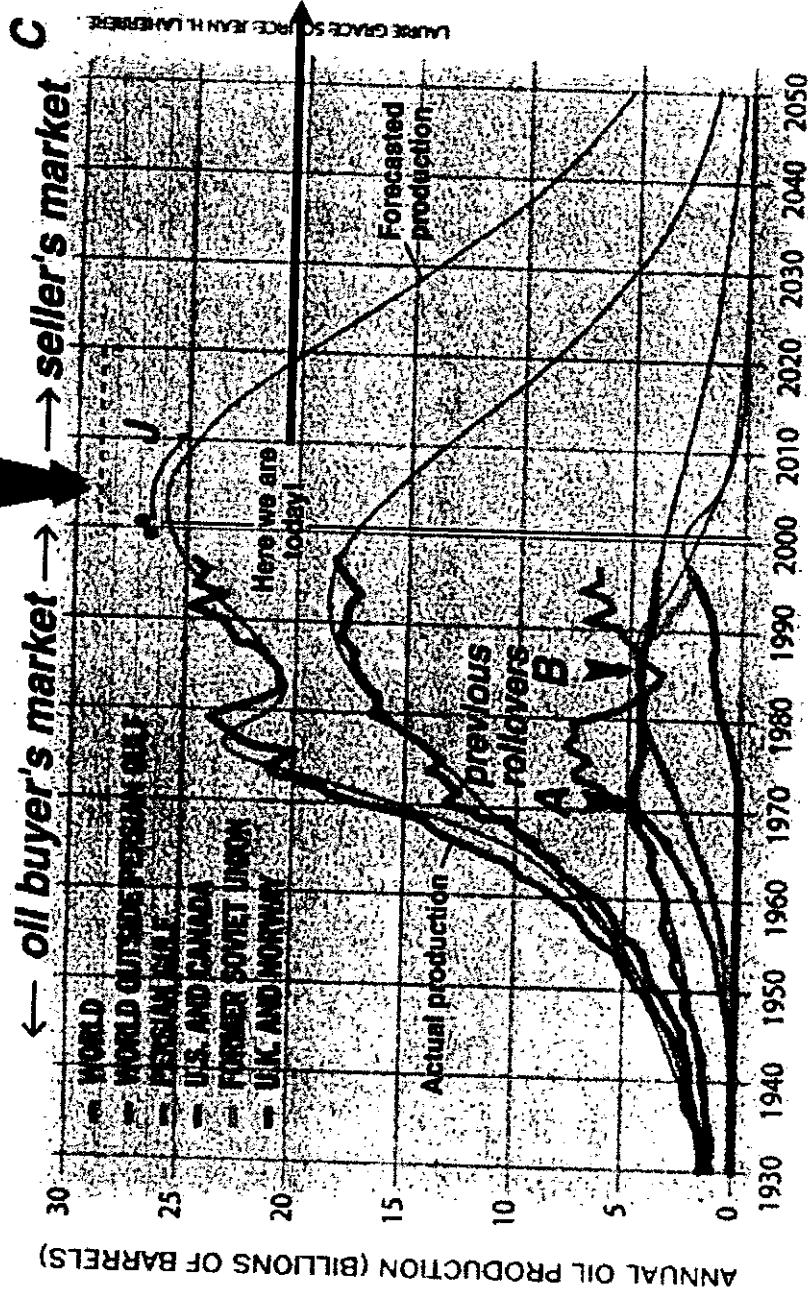
Source: Energy Information Administration, Office of Oil and Gas

Resource Recovery & Conservation Act (RRC)

The U.S. Geological Survey has projected the impact of the continued depletion of oil reserves on oil prices. Figure 1 shows that we have moved from an oil buyer's market to an oil seller's market. Agriculture is heavily dependent on oil, and, thus, is sensitive to any price changes.

THE BIG ROLLOVER

Figure 1



What will be the impact on the cost of petroleum based products for the U.S.?

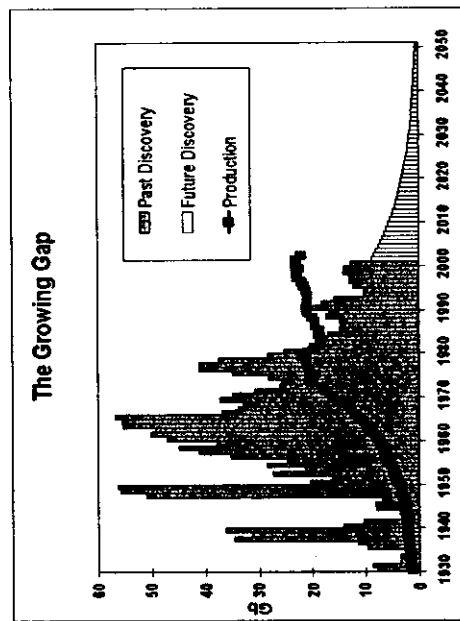
What will the effect be on North Dakota's economy?

What can we do to lessen the impact?

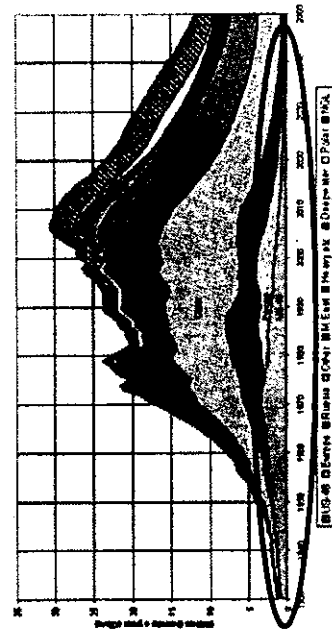
Modified from: Campbell and Lahavere, 1988

Resource Recovery & Conservation Act (RRC)

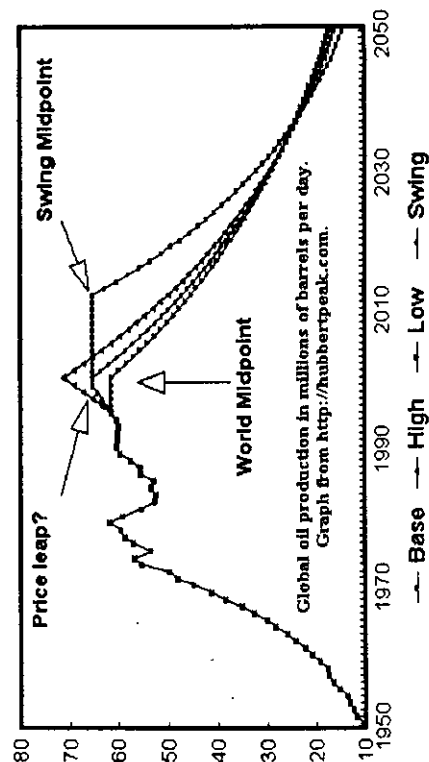
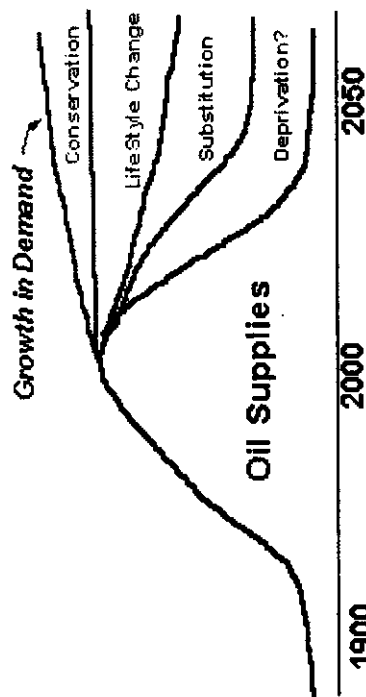
The challenge for policy makers today is how to maximize the use of finite resources today without harming or reducing the availability of finite resources for tomorrow's generations?



**OIL AND GAS LIQUIDS
2004 Scenario**



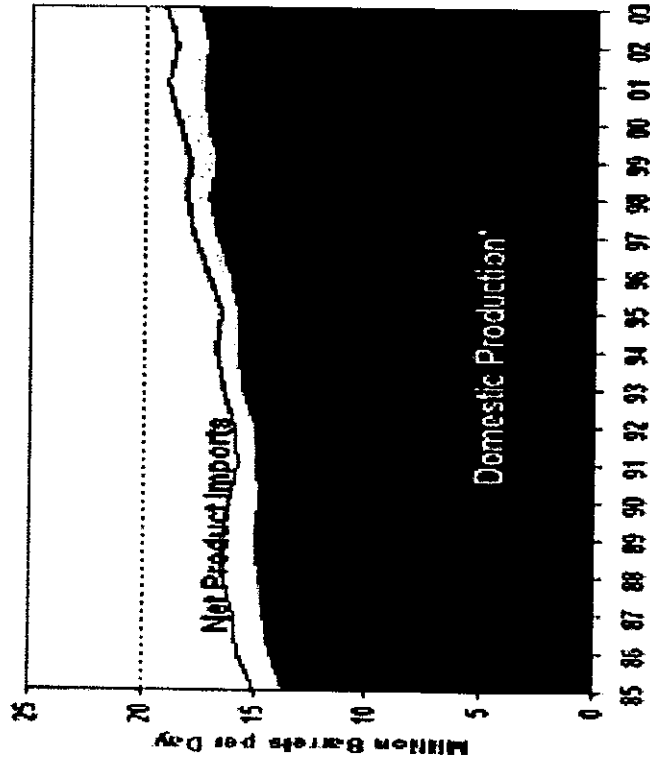
EIA graph showing decline of reserves up to 2050. The U.S. is circled



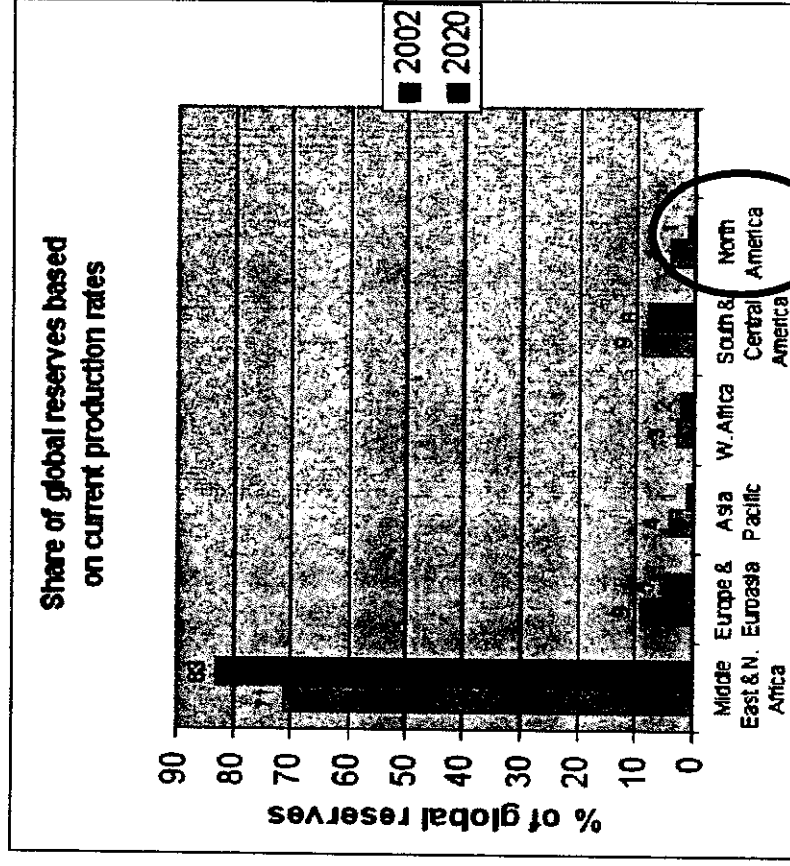
Resource Recovery & Conservation Act (RRC)

The challenge for U.S. policymakers is how to reduce our dependence on foreign oil given our projected rate of depletion of U.S. oil reserves?

U.S. Oil Production and Imports



*Domestic production includes crude oil, natural gas liquids, and other hydrocarbons and ethanol production, but does not include refinery gain



U.S. share of global reserves will drop 75% over the next 18 years.

Source: EIA

Resource Recovery & Conservation Act (RRC)

What can we do locally to help the U.S reduce its imports of foreign oil; given the present and future global demand for oil?

December 23, 2004

China Emerging as U.S. Rival for Canada's Oil

The New York Times
nytimes.com

By SIMON ROMERO

CALGARY, Alberta, Dec. 21 - China's thirst for oil has brought it to the doorstep of the United States.

Chinese energy companies are on the verge of striking ambitious deals in Canada in efforts to win access to some of the most prized oil reserves in North America. ...

Canada, the largest source of imported oil for the United States, has historically sent almost all its exports of oil south by pipeline to help quench America's thirst for energy. But that arrangement may be about to change as China, which has surpassed Japan as the second-largest market for oil, flexes its muscle in attempts to secure oil, even in places like the cold boreal forests of northern Alberta, where the oil has to be sucked out of the sticky, sandy soil.

"The China outlet would change our dynamic," said Murray Smith, a former Alberta energy minister who was appointed this month to be the province's representative in Washington, a new position. Mr. Smith said he estimated that Canada could eventually export as many as one million barrels a day to China out of potential exports of more than three million barrels a day.

"Our main link would still be with the U.S. but this would give us multiple markets and competition for a prized resource," Mr. Smith said.

... China's appetite for Canadian oil derives from its own insatiable domestic energy demand, which has sent oil imports soaring 40 percent in the first half of this year over the period a year ago. China's attempts to diversify its sources of oil have already led to several foreign exploration projects in places considered on the periphery of the global oil industry like Sudan, Peru and Syria.

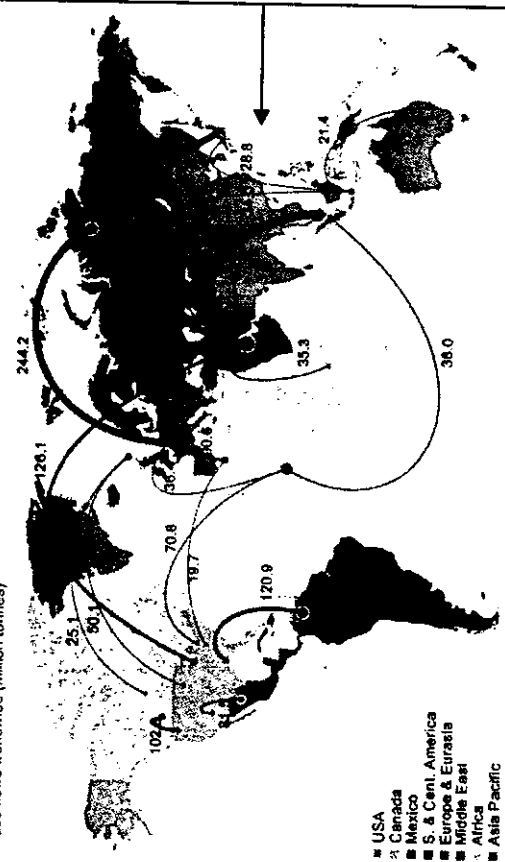
"China's gone after the low-hanging fruit so far," said Gal Luft, a Washington-based authority on energy security issues who is writing a book on China's search for oil supplies around the world. "Now they're entering another level of ambition, in places such as Venezuela, Saudi Arabia and Canada that are well within the American sphere."

Even so, there is the perception among many in Alberta's oil patch that Canada's rapidly growing energy industry remains an afterthought for most Americans. That might change, industry analysts say, if Canada were to start exporting oil elsewhere.

"A China agreement might serve as a wake-up call for the U.S.," said Bob Dunbar, an independent energy consultant here who until recently followed oil issues at the Canadian Energy Research Institute. ...

(A copy of the full article is included at the end of this section.)

Trade flows worldwide (million tonnes)



The New York Times

ON THE WEB

China Emerging as U.S. Rival for Canada's Oil

By SIMON ROMERO

Published: December 23, 2004

CALGARY, Alberta, Dec. 21 - *China's thirst for oil has brought it to the doorstep of the United States.*

Chinese energy companies are on the verge of striking ambitious deals in Canada in efforts to win access to some of the most prized oil reserves in North America.

The deals may create unease for the first time since the 1970's in the traditionally smooth energy relationship between the United States and Canada.

Canada, the largest source of imported oil for the United States, has historically sent almost all its exports of oil south by pipeline to help quench America's thirst for energy. But that arrangement may be about to change as China, which has surpassed Japan as the second-largest market for oil, flexes its muscle in attempts to secure oil, even in places like the cold boreal forests of northern Alberta, where the oil has to be sucked out of the sticky, sandy soil.

"The China outlet would change our dynamic," said Murray Smith, a former Alberta energy minister who was appointed this month to be the province's representative in Washington, a new position. Mr. Smith said he estimated that Canada could eventually export as many as one million barrels a day to China out of potential exports of more than three million barrels a day.

"Our main link would still be with the U.S. but this would give us multiple markets and competition for a prized resource," Mr. Smith said. Delegations of senior executives from China's largest oil companies have been making frequent appearances in recent weeks here in Calgary, Canada's bustling energy capital, for talks on ventures that would send oil extracted from the oil sands in the northern reaches of the energy-rich province of Alberta to new ports in western Canada and onward by tanker to China.



Dave Olecko/Bloomberg News
Energy companies from China are pursuing investments in the oil sands fields of Alberta. Any deals could cause some friction in the usually smooth energy relationship between the United States and Canada

Chinese companies are also said to be considering direct investments in the oil sands, by buying into existing producers or acquiring companies with leases to produce oil in the region. In all, there are nearly half a dozen deals in consideration, initially valued at \$2 billion and potentially much more, according to senior executives at energy companies here.

One preliminary agreement could be signed in early January. A spokesman for the Department of Energy in Washington said officials were monitoring the talks but declined to comment further.

China's appetite for Canadian oil derives from its own insatiable domestic energy demand, which has sent oil imports soaring 40 percent in the first half of this year over the period a year ago. China's attempts to diversify its sources of oil have already led to several foreign exploration projects in places considered on the periphery of the global oil industry like Sudan, Peru and Syria.

In Calgary, however, the negotiations with China have focused on the oil sands, an unconventional but increasingly important source of energy for the United States. Higher oil prices have recently made oil sands projects profitable, justifying the expense of the untraditional methods of producing oil from the sands. Large-scale mining and drilling operations are required to suck a viscous substance called bitumen out of the soil.

"China's gone after the low-hanging fruit so far," said Gal Luft, a Washington-based authority on energy security issues who is writing a book on China's search for oil supplies around the world. "Now they're entering another level of ambition, in places such as Venezuela, Saudi Arabia and Canada that are well within the American sphere."

Canada's oil production from the sands surpassed one million barrels a day this year and was expected to reach three million barrels within a decade. The bulk of output is exported to the Midwestern United States. That flow pushed Canada ahead of Saudi Arabia, Mexico and Venezuela this year as the largest supplier of foreign oil to the United States, with average exports of 1.6 million barrels a day.

Even so, there is the perception among many in Alberta's oil patch that Canada's rapidly growing energy industry remains an afterthought for most Americans. That might change, industry analysts say, if Canada were to start exporting oil elsewhere.

"A China agreement might serve as a wake-up call for the U.S.," said Bob Dunbar, an independent energy consultant here who until recently followed oil issues at the Canadian Energy Research Institute.

Executives at energy companies and investment banks in Calgary say an agreement with the Chinese could materialize as early as next month. Ian La Couvee, a spokesman for Enbridge, a Canadian pipeline company, said it was in talks to offer a Chinese company a 49 percent stake in a 720-mile pipeline planned between northern Alberta and the northwest coast of British Columbia.

The pipeline project, which is expected to cost at least \$2 billion, would send as much as 80 percent of its capacity of 400,000 barrels a day to China with the remainder going to California refineries. Sinopec, one of China's largest oil companies, was said by executives briefed on the talks to be the likeliest Chinese company in the project.

A rival Canadian pipeline company, Terasen, meanwhile, has held its own talks with Sinopec and the China National Petroleum Corporation about joining forces to increase the capacity of an existing pipeline to Vancouver. Richard Ballantyne, president of Terasen, said it had supplied almost a dozen tankers this year to help Chinese refineries determine their ability to process the Alberta crude oil blends.

"There's been significant interest so far, but the way I understand it, their refineries are still better suited to handling Middle Eastern crude than ours," Mr. Ballantyne said. "That has to change if they're intent on diversifying their sources of oil."

Separately, Marcel Coutu, the chief executive of the Canadian Oil Sands Trust, a company that owns part of one of the largest oil sands ventures in the tundralike region around the city of Fort McMurray in northern Alberta, said he had recently met with officials from PetroChina, one of China's several state-controlled energy concerns, and had agreed to send it trial shipments of oil.

In an interview, Mr. Coutu described PetroChina's interest in a deal as very serious, but he declined to say when one might materialize. "China can become one of our capital sources, enabling us to go a bit further afield than the New York market for our financing," Mr. Coutu said.

Additionally, Chinese companies are also said to be considering investments in smaller Calgary-based companies, like UTS Energy, that have approved leasing permits for parts of the oil sands. Officials from the Chinese companies said to be negotiating in Calgary - PetroChina, Sinopec and CNPC - did not respond to requests for comment.

Wilfred Gobert, vice chairman of Peters & Company, a Calgary investment bank, said Canada's main attractions for the Chinese are the stability of its political system and its sizable reserves. Canada ranks behind only Saudi Arabia in established petroleum reserves, now that its oil sands are included in international estimates of Canadian oil resources.

Before prices rose and the United States expanded its calculation for estimates of reserves, oil sands were often scoffed at as an uneconomical way to produce oil. They still involve risks not normally associated with conventional oil exploration.

Large amounts of capital are necessary to produce oil from the sands, with companies having to acquire large shovels, trucks, specialized drilling equipment or supplies of natural gas to make steam before producing one barrel of oil. So, the price of oil needs to remain elevated, at a level of \$30 a barrel or so, for ventures to remain profitable.

[Oil prices for February delivery slumped 3.3 percent, to \$44.24 a barrel, in New York on Wednesday, the biggest slide in two weeks.]

An entry into Canada would assure the Chinese of a steady flow of oil, even if the profit margins from the activities were to pale in comparison to what the international oil companies expect from their investments, said Kang Wu, a fellow at the East-West Center in Honolulu who follows China's energy industry. "For China it is foremost about securing supply and secondly about profits," he said. "That explains the incentive in going so far abroad."

China's growing demand for oil is responsible for much of the increase in worldwide prices in the last year. Mr. Kang of the East-West Center estimates that demand in China could grow from 6 million barrels a day to as much as 11.5 million barrels within a decade. China's domestic production is expected to remain nearly stagnant, Mr. Kang said, resulting in aggressive efforts to import more oil from sources like Canada.

"China needs oil resources and has a big market," Qiu Xianghua, a vice president at Sinopec, said in a speech in Toronto this month. "Canada needs markets."

Alberta, a province of 3.1 million people, is keenly aware of the potential for Chinese involvement even as American companies like Exxon Mobil, Burlington Resources and Devon Energy remain prominent in its energy industry. Ralph Klein, the premier of Alberta, traveled to Beijing in June to drum up investment in the tar sands.

And yet officials and authorities on Canadian energy supplies are cautious not to suggest that Canada will ever turn off the spigot to the United States. At a time of a highly competitive market for global oil, in fact, some analysts see greater interest in Alberta's oil reserves as a healthy avenue for China to explore, even if it were to push the United States to seek an even greater diversity for its own energy needs.

"The pipeline system that connects Alberta to the U.S. isn't going to be lifted out of the ground and put into the Pacific," said Daniel Yergin, chairman of Cambridge Energy Research Associates. "The flows to the U.S. will continue, but it should be expected and welcomed for China to meet the challenge of its growing dependence on imported oil."

Still, the prospect of dealing with China has many here pondering relations with the United States. The last time any significant oil-related friction arose between the nations was in the 1970's, when Ottawa became concerned over what it perceived as too much American control over Canadian oil, leading to greater federal involvement in the oil industry.

"Watch the Americans have a hissy fit if a Chinese incursion materializes," Claudia Cattaneo, a Calgary-based energy columnist for The National Post, recently wrote. "So far, the Americans have taken Canada's energy for granted."

Resource Recovery & Conservation Act (RRC)

Part 3: Waste Tires – “An unfunded mandate?”

- Slide 16 – Tires generated, natural resources required and pollution generated
- Slide 17 – Waste Tire Disposal Issues
 - – “An unfunded mandate”
- Slide 18 - Implications of status quo
- Slide 19 – Table showing current disposal of waste tires and relative value of waste tires as presently disposed

• **Waste Tires** – millions generated

- 284 million + generated yearly in the U.S.
- 620 thousand+ generated yearly in N.D.

- (1 tire generated for every person in the U.S.)

• **Tires** – a tire requires large amounts of energy and resources

- Crude Oil – 22 gallons
- Refined Oil – 7 gallons
- Natural Gas – 0.6 gallons
- Water – 3 gallons
- Electricity – 14 kWh

• **Tires** – pollution is generated in the extraction/refining of resources required to manufacture 1 tire

- Carbon Dioxide – 143 lbs/tire
- Sulfur Dioxide – 0.2 lbs/tire
- Nitrous Oxide – 0.02 lbs/tire
- Mercury – 0.0000158 lbs/tire

Resource Recovery & Conservation Act (RRC)

• **Waste Tires – A “Negative Value Resulting in Unfunded Mandates”**

• **1998 DOE Study found:**

- Approximately 75% of all tires generated (284 million) are land filled, stockpiled or illegally dumped
 - contrary to the RMA study cited earlier
- Estimated 4 Billion “on the ground” in landfills, mono-fills or illegal dumps
 - Between 3-4 million in ND
- Recycling options limited – 15% of tires recycled
 - Zero in ND majority (90% estimated) go to landfills or approved sites
- U.S. tire consumers spent nearly \$1 Billion on tire disposal costs
- **Oil and carbon black in waste tires which goes to landfills:**
 - 8.4 million barrels of oil/year (\$20/barrel)
 - 840,000 tons of carbon black/year (\$200/ton)
 - \$168,000,000 combined value

• **Waste Tires are environmental/health hazards**

• **Tire Fires**

- Hurts property values
- Causes air pollution, etc.
- Places huge demands on emergency response services

• **West Nile Virus**

- Affects horses
- Affects humans:

• **Public costs associated with automobiles and waste tires:**

• Costs such as:

- Operating and maintaining landfills
- Picking up and disposing of waste tires thrown away by individuals, on streets, alleys, etc.
- Cleaning up illegal tire dumps (\$1.00-\$2.00/tire)
- Fighting/cleaning up tire fires (\$3.00-\$5.00/tire involved in a tire fire)
- Public health costs of fighting the mosquitoes which carry the WNV
- Providing traffic services --Policing, emergency response, planning, courts, street lighting, parking enforcement, and driver training.

- Example, in 2003, the ND Highway Patrol estimated the total number of vehicle miles in ND to be 7.3 billion miles the cost of providing traffic service is estimated to be approximately between \$37 and \$110 million/year paid by property taxes (Rural areas spend approximately \$0.005/vehicle mile while urban areas spend approximately \$0.015/vehicle mile.)



Photo of how some of ND waste tires are disposed.
They are used as fences for pig feed lots.

Resource Recovery & Conservation Act (RRC)

•Current Status Quo

- **A lack of**
 - Natural resources – U.S. domestic oil supplies are being rapidly depleted
 - Viable processes for recovering industrial grade products from tires, etc.
 - Uniform waste disposal laws
 - Government resources for tire related problems

•Results in:

- Increase in “tires on the ground”
- Lack of stable supplies for buyers of the products from waste tires
- Increased costs for natural resources (crude oil)
 - U.S. imports 43% now with growth to 60% by 2020
 - It is now a “Sellers Market”
- China’s demand for resources
- Tire manufacturers costs for carbon black and other raw materials will continue to grow with those costs being passed onto the consumers
- ND. tire consumers continuing to spend dollars for tire disposal yet receive no benefit
- ND taxpayers (property and income) paying twice for the use of a tire
 - Once, as consumers, and
 - Twice, as unfunded mandates .



Photo of Filbin tire pile in Stanislaus County, CA. before it started on fire.

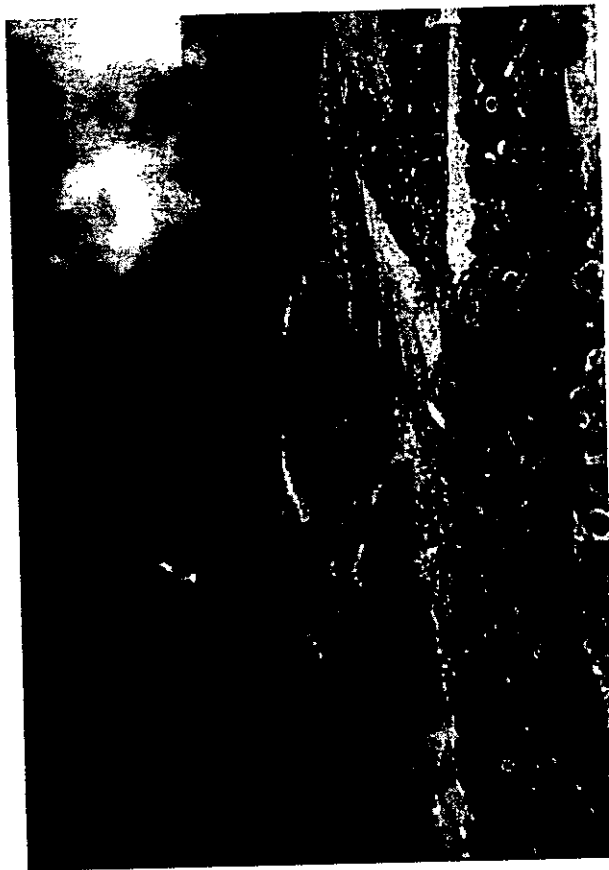


Photo of tire fire in Stanislaus County, CA. In 1999, a tire pile of 3-5 million waste tires started on fire. It cost the taxpayers of CA and the U.S. EPA approximately \$17 million to clean up. Lawsuits are currently pending Against the property owners.

Resource Recovery & Conservation Act (RRC)

Reported disposal of waste tires by the Rubber Manufacturers Association in 2003

| | Total Tires (In millions of tires) | Lbs Recovered For Use (Out of a 20 LB tire) | \$/tire Value or Cost Per Waste Tire ¹ | Gross Revenues or Costs For Landfills | Waste Tires Use As a % | Waste Tires Value As a % ² |
|------------------------------------|---------------------------------------|---------------------------------------------------|---------------------------------------------------------|------------------------------------------------|---------------------------------|------------------------------------------------|
| TDF - Fuel² | 129.70 | 19 | \$0.24 | \$30,803,750 | 44.1% | 33.1% |
| Ground Rubber | 28.20 | 14 | \$2.10 | 59,220,000 | 9.6% | 63.6% |
| Molded Products³ | 6.50 | 14 | \$2.52 | 16,380,000 | 2.2% | 17.6% |
| Civil Engineering | 56.40 | 14 | \$0.14 | 7,896,000 | 19.2% | 8.5% |
| Misc. & Agriculture | 3.00 | 20 | \$0.40 | 1,200,000 | 1.0% | 1.3% |
| Electric Arc Furnaces | 0.50 | 19 | \$0.24 | 118,750 | 0.2% | 0.1% |
| Export | 9.00 | 20 | \$0.00 | 0 | 3.1% | 0.0% |
| Landfilled⁴ | 60.70 | 20 | (\$0.37) | (22,459,000) | 20.6% | -24.1% |
| Total Generation | 294.00 | | | \$93,159,500 | 100% | 100% |

Average Value/Waste Tire With Status Quo

\$0.32

1. The values shown are based upon information received from industry official for the particular use and reflect an average value as of 12/1/2004. They are for demonstration purposes only. Even though TDF is the primary use for waste tires (44.1 %), it's percentage of the total value (29.8 %) is less than that of ground rubber (57.2 %).

2. TDF means tire derived fuel. TDF is used as an alternative to coal in cement kilns, pulp and paper mills, and industrial and utility boilers (coal fired electrical generators).

3. Molded products include cut/stamped and punched ground rubber. Ex. Bar mats, bumpers, playground.

4. Estimated costs of ongoing landfill operation costs of \$37.00/ton. This reflects the daily costs of maintaining and operating a landfill, and, in addition, reflects the future costs of building a replacement landfill. Waste tires are especially troublesome because one ton of waste tires consumes the same landfill volume as three tons of paper waste. Source: EPA

Resource Recovery & Conservation Act (RRC)

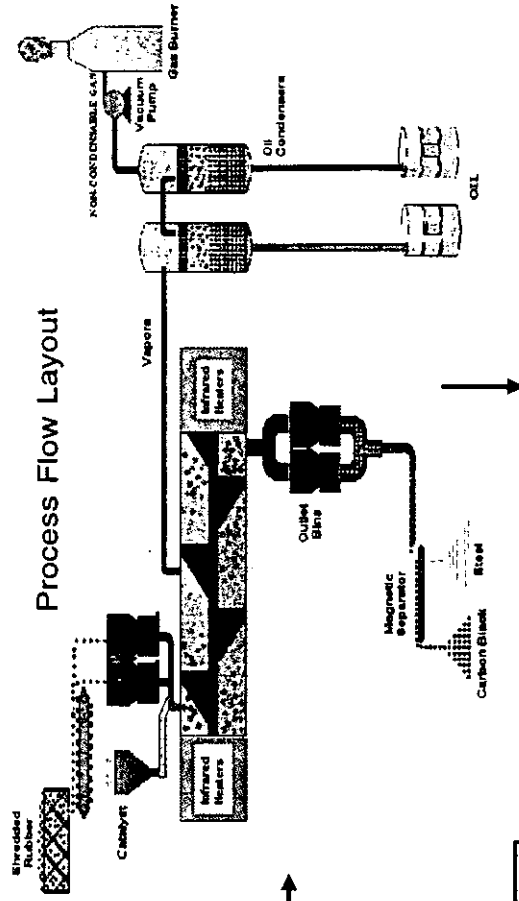
Part 4: Overview of Delta Energy's Process

- Slide 21 – Quad chart showing Delta Energy's de-polymerization process and value of recovered energy and material
- Slide 22 – Photo of Delta Energy's De-Polymerization Plant
- Slide 23 – Table showing the natural resources and energy extracted and refined to manufacture the raw materials needed to manufacture one tire and the savings of resources with Delta Energy's process
- Slide 24 – Table showing the pollution generated in the extraction and refining of the raw materials required to manufacture on tire and the amount of pollution avoided with Delta Energy's process
- Slide 25 – Table showing the material (oil, black, steel and gas) recovered with existing disposal processes and the amounts recovered using Delta Energy's process
- Slide 26 – Table showing the energy, in the form of BTU and kWH, recovered with existing disposal processes and the amounts recovered using Delta Energy's process
- Slide 27 – Table showing value of oil and energy embedded in waste tires

Resource Recovery & Conservation Act (RRC)

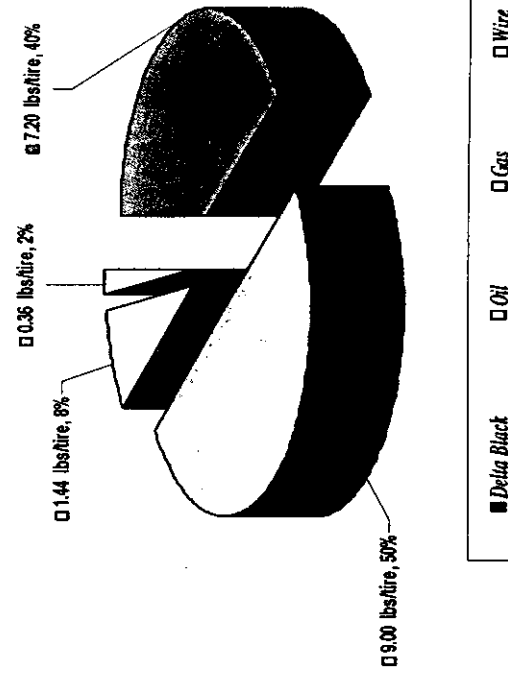
Delta Energy's Process Adds Value:

- Delta Energy has developed an unique energy efficient technology which de-polymerizes the rubber in tires to recover the energy/material products in a waste tire
- low-temperature
- vacuum-controlled
- catalyst-driven exothermic reaction (no combustion)
- environmentally friendly technology (US patent-pending)



| Value of Energy/Material Products Recovered From A Waste Tire | | | | | |
|-----------------------------------------------------------------|-----------------------|--------------------------|----------------|------------------|---------------|
| Product | Pounds Recovered | Units Available For Sale | \$/Unit | Value of Product | |
| Delta Black ¹ | 7.20 lbs/tire | = 7.20 lbs/tire | \$ 0.15 /lb | \$1.08 | |
| Oil ² | 9.00 lbs/tire | = 1.13 Gallon(s)/tire | \$1.00 /Gallon | 1.13 | |
| Gas ³ | 1.44 lbs/tire | = 30,528 Btu/tire | \$ 5.00 /MBtu | 0.15 | |
| Wire | 0.36 lbs/tire | = 0.36 lbs/tire | \$0.01 /lb | 0.0036 | |
| Total | 18.00 lbs/tire | | | | \$2.36 |
| Value of North Dakota Waste Tires With Present Disposal Methods | | | | | \$0.00 |
| Net Gain with Delta's Process | | | | | \$2.36 |

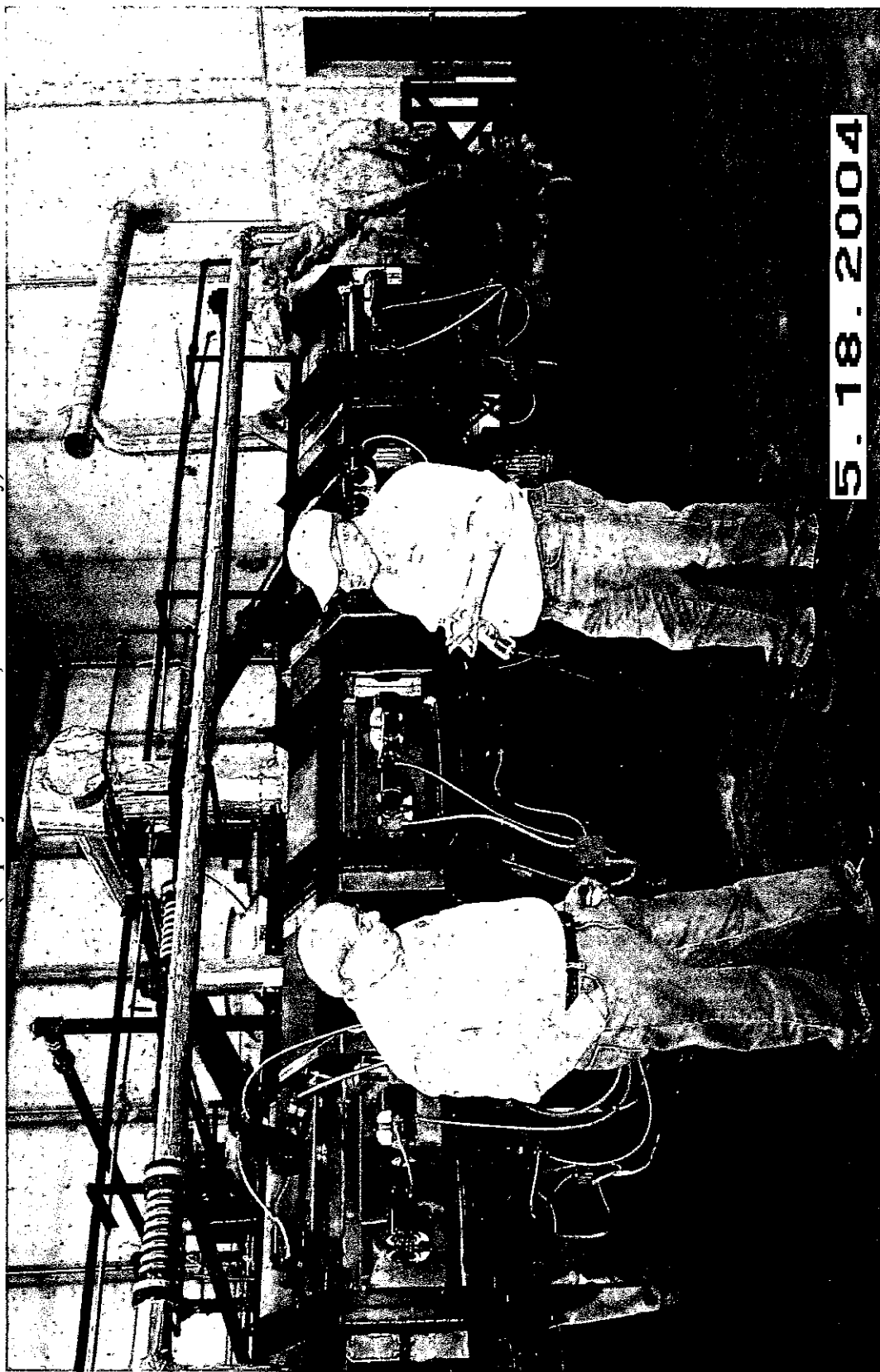
Energy/Material Recovered From A Depleted 20 Pound Tire
(Approximately 18 lbs of Rubber Processed - Lbs and Percentage Shown)



Resource Recovery & Conservation Act (RRC)

Delta Energy's De-Polymerization Plant

(Capacity – 10 tons or 1,000 waste tires/day)



Jack Johnson, left, and Travis Maddock, right, of NDSU discussing application of Delta's process to the meat packing industry. Initial experiments with animal waste (offal) indicates the Delta's process may have application in the animal slaughter house industry.

Resource Recovery & Conservation Act (RRC)

Cumulative Resources/Energy Consumed Without RRC and Conserved With RRC For North Dakota Between the Years of 2005 to 2020

| | Natural Resources Required To Mfg the Raw Materials For One 20 lb Tire | Cumulative Resources Consumed (Extrapolated From US DOE Industry Studies) | Average Resources Consumed | Resources Conserved When Resources Embedded in One 20 lb Tire are Recovered | Cumulative Resources Conserved (Est. 50% Savings of Resources Consumed) | Average Resources Conserved Yearly (Est. 50% Savings of Resources Consumed) |
|-------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Cumulative Total of Waste Tires Generated Between 2004 and 2025* | | | | | 9,603,000 Waste Tires | 640,200 Waste Tires/Year |
| <i>Crude Oil Feedstock</i> | 22 Gallons | 5,030,143 Barrels | 239,531 Barrels/Year | 11 Gallons | 2,515,071 Barrels | 119,765 Barrels/Year |
| <i>Refined Oil</i> | 7 Gallons | 1,600,500 Barrels | 76,214 Barrels/Year | 4 Gallons | 800,250 Barrels | 38,107 Barrels/Year |
| <i>Natural Gas</i> | 0.56 Gallons | 128,040 Gallons | 6,097 Gallons/Year | 0.28 Gallons | 64,020 Gallons | 3,049 Gallons/Year |
| <i>Coal</i> | 2.0 Lbs | 457,286 Tons | 21,776 Tons/Year | 1.0 Lbs | 228,643 Tons | 10,888 Tons/Year |
| <i>Iron Ore</i> | 4.0 Lbs | 914,571 Tons | 43,551 Tons/Year | 2.0 Lbs | 457,286 Tons | 21,776 Tons/Year |
| <i>Limestone</i> | 0.20 Lbs | 45,729 Tons | 2,178 Tons/Year | 0.10 Lbs | 22,864 Tons | 1,089 Tons/Year |
| <i>Electricity</i> | 14 kWh | 3,201,000 kWh | 152,429 kWh's/Year | 7 kWh | 1,600,500 kWh | 76,214 kWh's/Year |
| <i>Water</i> | 3.00 Gallons | 685,929 Gallons | 32,663 Gallons/Year | 1.5 Gallons | 342,964 Gallons | 16,332 Gallons/Year |

*The projections are based upon N.D.S.U.'s population estimate of 640,200. Source: North Dakota State Data Center - North Dakota Population Projections 2005 to 2020

Resource Recovery & Conservation Act (RRC)

Cumulative Pollution Generated Without RRC and Avoided With RCC & Using Delta Energy's Process For North Dakota Between the Years of 2005 to 2020 (Extrapolated From US DOE and EPA Industry Studies)

| Cumulative Total of Waste Tires Generated Between 2004 and 2025* | | | | | | | 9,603,000 Waste Tires | 640,200 Waste Tires/Year |
|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------|-----------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------|-----------------------------|
| Specific Emission: | Pollution Generated In The Extraction and Refining of the Raw Materials Required to Manufacture One Auto Tire | Yearly Pollution Generated | Cumulative Pollution Generate | Pollution Avoided With One Waste Tire Being Processed By Delta Energy | Yearly Pollution Avoided | Cumulative Pollution Avoided | | |
| Greenhouse Gases (CO2) | 143.0 Lbs/Tire | 45,774 Tons/Year | 686,615 Tons | 72.4 Lbs/Tire | 23,168 Tons/Year | 347,522 Tons | | |
| Sulfur Dioxide (SO2) | 0.157 Lbs/Tire | 50 Tons/Year | 754 Tons | 0.080 Lbs/Tire | 26 Tons/Year | 384 Tons | | |
| Nitrous Oxide (NOx) | 0.019 Lbs/Tire | 6 Tons/Year | 91 Tons | 0.0096 Lbs/Tire | 3 Tons/Year | 46 Tons | | |
| Carbon Monoxide (CO) | 0.044 Lbs/Tire | 14 Tons/Year | 210 Tons | 0.0223 Lbs/Tire | 7 Tons/Year | 107 Tons | | |
| Particulates (PM) | 0.030 Lbs/Tire | 10 Tons/Year | 144 Tons | 0.0152 Lbs/Tire | 5 Tons/Year | 73 Tons | | |
| VOC's | 0.0048 Lbs/Tire | 2 Tons/Year | 23 Tons | 0.0024 Lbs/Tire | 1 Tons/Year | 12 Tons | | |
| Toxic Metals : | | | | | | | | |
| Mercury (Hg) | 0.000015 Lbs/Tire | 0.0049 Tons/Year | 0.074 Tons | 0.000008 Lbs/Tire | 0.0025 Tons/Year | 0.038 Tons | | |

*The projections are based upon population estimate of 640,200. Source: North Dakota State Data Center - North Dakota Population Projections 2005 to 2020

Resource Recovery & Conservation Act (RRC)

Material Recovered From Waste Tires Generated In North Dakota Without and With RRC in Place Between the years of 2004 to 2025

| Cumulative Number of Waste Tires Generated Between The Years of 2004 and 2025 ¹ | | | | | | | 9,603,000 Waste Tires | 640,200 Waste Tires/Year |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|------------|----------------|-----------------------------------------------------------------------------|---------------------------------|-------------------------------------|--------------------------|-----------------------------|
| | Material Recovered Without RRC & Without Using Delta Energy's Process | Cumulative | Yearly Average | Material Recovered With RRC & With Using Delta Energy's Process | Cumulative | Yearly Average | | |
| Oil ² | 0.00 Gallon | 0 Barrels | 0 Barrels/Year | 1.10 Gallon | 251,507 Barrels | 11,977 Barrels/Year | | |
| Gas | 0.00 Gallon | 0 Barrels | 0 Barrels/Year | 0.33 Gallon | 3,169 Gallons <i>million</i> | 151 Gallons/Year <i>thousand</i> | | |
| Delta Black | 0.00 Lbs | 0 Tons | 0 Tons/Year | 7.20 Lbs | 34,571 Tons | 1,646 Tons/Year | | |
| Steel | 0.00 Lbs | 0 Tons | 0 Tons/Year | 2.50 Lbs | 12,004 Tons | 572 Tons/Year | | |

1. The projections are based upon population estimate of 640,200. Source: North Dakota State Data Center - North Dakota Population Projections 2005 to 2020

Resource Recovery & Conservation Act (RRC)

| Energy Recovered From Waste Tires Generated In North Dakota Without and With RRC in Place Between the years of 2004 to 2025 | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------|-------------------|------------------------------------------------------------------------|-------------------------------|-----------------------------|
| Cumulative Number of Waste Tires Generated Between The Years of 2004 and 2025 ¹ | | | | | | |
| | Energy Recovered Without RRC & Without Using Delta Energy's Process | Cumulative | Yearly Average | Energy Recovered With RRC & With Using Delta Energy's Process | Yearly Average in BTU's | 640,200 Waste Tires/Year |
| Oil | | | | | | Yearly Average in kWh |
| BTU's | | 0 MBtu | | 129,500 BTU/Tire | 82,906 MBtu | |
| kWh's* | 11 kWh/Tire @ 30% Efficiency | | 0 kWh's | 11 kWh/Tire @ 30% Efficiency | | 7,279,074 kWh's |
| Gas | | | | | | |
| BTU's | | 0 MBtu | | 59,360 BTU/Tire | 38,002 MBtu | |
| kWh's* | 5 kWh/Tire @ 30% Efficiency | | 0 kWh's | 5 kWh/Tire @ 30% Efficiency | | 3,335,442 kWh's |
| Total Yearly Average | | 0 MBtu's/Year | 0 kWh's/Year | | 120,908 MBtu's/Year | 10,614,516 kWh's/Year |
| Cumulative Totals | | 0 MBtu | 0 kWh's | | 1,813,623 MBtu | 159,217,740 kWh's |
| 1. The projections are based upon population estimate of 640,200. Source: North Dakota State Data Center - North Dakota Population Projections 2005 to 2020 | | | | | | |

Resource Recovery & Conservation Act (RRC)

| Value of Oil and Energy Embedded In North Dakota's Waste Tires | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------|------------|---------------------------------|-------------|
| | | Status Quo Current Legislation & Tire Disposal Processes | | RRC & Delta Energy's Process | |
| | | Yearly | Cumulative | Yearly | Cumulative |
| Oil ¹ | \$/Unit \$42.00 /bbl | \$0.00 | \$0.00 | \$503,014 | \$7,545,214 |
| Heating Oil ² | \$1.223 /Gallon | \$0.00 | \$0.00 | \$615,186 | \$9,224,797 |
| Electricity ³ | \$0.088 /kWh | \$0.00 | \$0.00 | \$640,559 | \$9,608,378 |
| <p>1. Oil at \$42.00/barrel for Nymex Crude on 12/29/04</p> <p>2. Heating oil at \$1.223/gallon for Nymex Heating Oil</p> <p>3. Electricity at \$0.088 per kilowatt hour</p> <p>Source for 1 & 2: downloaded from www.bloomberg.com/energy/ on 12/29/04</p> <p>Source for 3 is U.S. Dept. of Labor, Bureau of Labor Statistics downloaded from www.scan.com on 12/29/043.</p> | | | | | |

Resource Recovery & Conservation Act (RRC)

Part 5 : Overview of Proposed Legislation

- Slide 29 – Statement of proposed solutions
- Slide 30 – Federal objectives for the Resource Recovery & Conservation Act (RRC)
 - Formerly called the Resource Recovery & Conservation Act or MOEER
- Slide 31 – State legislative objectives
- Slides 32 through 3 – Letters of support for MOER
 - Slide 32 – N.D. Governor Hoeven and N.D. Agricultural Commissioner Roger Johnson
 - Slide 33 – N.D. State Health Department and N.D. Division of Community Services
 - Slide 34 – Nevada State Office of Energy and the City of Las Vegas, NV
 - Slide 35 – Clay County, MN and City of Moorhead, MN
 - Slide 36 – City of Fargo, ND and Bush Agricultural Resources of Moorhead, MN
 - Slide 37 – U.S. Senator Byron Dorgan and U.S. Representative Earl Pomeroy

Resource Recovery & Conservation Act (RRC)

What is needed are solutions which add value:

1. Industrial processes which adds value to a waste tires or other petroleum based products by converting them from a "negative value" to a "positive value", in an economical and environmentally acceptable manner;
2. Uniform state laws controlling the disposal of waste tires or other petroleum based products that adds value to local communities by fostering a positive business and environmental climate by:
 - A. Removing those waste tires or other petroleum based products generated daily from the solid waste stream;
 - B. Providing sufficient funding for local and state government to remediate existing waste tire stockpiles over a reasonable period of time;
 - C. Providing graduated financial incentives that encourages the recovery of the energy/material in waste tires and other petroleum based products in an economical, environmentally friendly and efficient process which maximizes the value of the recovered products;
 - D. Providing incentives that encourages industry to use the energy/material recovered from waste tires and other petroleum based products;
 - E. Shifting the indirect costs associated with waste tires and paid for by the public to a "user fee" which is fair and uniform in its application; and,
 - F. Providing additional revenues to local government to offset those remaining indirect costs related to automobiles (traffic services) borne by property taxpayers. **i.e. removing the unfunded mandate on property taxpayers**
3. Uniform federal laws controlling the disposal of waste tires which adds value to local communities and states by:
 - A. Establishing an environmental credit that encourages states to support and promote recycling programs, such as RRA. The states would receive an environmental credit (carbon credit) based upon the amount of pollution avoided through the recovery of energy and/or material from petroleum based products; or, reduces the need to use petroleum based products in the future.
 - B. Providing sufficient funding that encourages local and state government to remediate existing waste tire stockpiles over a reasonable period of time;
 - C. Create financial incentives (tax credits and/or environmental credits) that encourages industry to the use of products recovered from waste tires and/or other similar processes; and,
 - D. Create incentives that encourages electric utilities to have access to the oil recovered from waste tires for the purpose of meeting peak power demand needs; in exchange for the oil, the electric utilities would have the option of trading kilowatt hours from their coal fired generators rather than paying the current market value for the oil.

Resource Recovery & Conservation Act (RRC)

Macro Objectives for the Resource Recovery & Conservation Act (RRC)

- **Create legislation complementing the Federal Government's National Agenda for:**

- **Energy Security:**

- Reduce U.S. dependence on foreign oil by encouraging the local production of oil and gas from petroleum based products
- Create alternative energy supplies to meet the growing demand for electricity
- Maintain or increase electric reliability standards
- Avoid a repeat of the Northeast Blackout of 2003

- **Natural Resources:**

- Reduce consumption of natural resources through the use of technologies and processes that permits the reuse of the petroleum used to manufacture goods (tires, hoses, plastic bottles, etc.)

- **Environmental:**

- Reduce and prevent pollution through the use of federal policies which rewards state and local governments who promote recycling programs that "save natural resources and avoid pollution" by having "environmental credits" available for states to use to help local industries meet the unfunded mandates established by the Federal EPA i.e. "A rational tree-hugger approach"

- **Public Health:**

- Protect humans and animals from diseases, such as the West Nile Virus, by removing waste (tires and plastic bottles) from the waste stream

- **Economic growth:**

- **Create the macro-economic conditions for sustainable economic development by building on the strength of the markets, while addressing their limitations through selective interventions by:**

- Reducing the costs associated with electric transmission congestion (estimated to be between \$25 Billion to \$133 Billion yearly) by providing electric utilities fuel supplies to strategically meet peak power demand on a long term basis at a reasonable price
- Providing financial incentives for industry who use products or energy recovered from petroleum based products, bio-mass, solar power, or wind energy
- Providing environmental credits for states and cities to use to entice industry based upon the pollution avoided through the use processes, products or energy recovered from petroleum based products, bio-mass, solar power, or wind energy

- **Reduce state, county and city budget deficits:**

- By encouraging the creation of public/private partnerships wherein local governments can participate in the value providing the fuel supplies to electric utilities
- By establishing a user fee which reduces the indirect costs associated with vehicle traffic, etc. borne by state, county and local governments

Resource Recovery & Conservation Act (RRC)

- State objectives - create legislation that is:
 - Self funding
 - Reduces costs of city/county/state government
 - Avoids unfunded mandate problem
 - Recognizes the value of obtaining multiple reuses of the oil required to manufacture petroleum based products
 - Encourages development of rubber to energy (RTE) processes
 - Recognizes the value of preventing pollution
 - Recognizes the value of government support for recycling petroleum based products
 - The RRC a/k/ MOER concept is supported by North Dakota leaders and other states and communities:
 - Governor Hoeven's office has seen the process and has written a letter of support
 - N.D. Health Department has seen the process and written letter of support
 - City of Fargo has seen the process and has written a letter of support
 - The Nevada State Office of Energy has seen the process and has written a letter of support
 - City of Las Vegas, Nevada has written a letter of support
 - City of Moorhead, Minnesota has seen the process and has passed a resolution supporting the RRA concept
 - Clay County, Minnesota has seen the process and has written a letter of support
 - U.S. Senator Byron Dorgan and U.S. Representative Early Pomeroy have written a joint letter of support

Resource Recovery & Conservation Act (RRC)



State of
North Dakota
Office of the Governor

John Hoeven
Governor

November 28, 2003

Mr. Roger Hoogerheide
U.S. EPA, Region 8
999 18th Street, Suite 300
Denver, CO 80202-2466

Dear Mr. Hoogerheide:

North Dakota entrepreneurs have developed a new method for recycling waste tires near Berthold, ND. The process converts tire shreds into oil, gas, carbon black and steel. It appears that this technology is worthy of further investigation. The process could eliminate used tires from the solid waste stream and extract significant quantities of saleable by-products.

The proposing group is a team led by Delta Energy, LLC and includes North Dakota State University (NDSU), University of North Dakota (UND), the City of Moorhead, Minnesota, and the City of Las Vegas, Nevada. The College of Industrial Manufacturing and Engineering (IME) at NDSU and the Energy and Environmental Research Center (EERC) at UND are providing the advanced engineering.

The project calls for a modest EPA-sponsored engineering development project to gather data to commercialize this technology and to analyze the fiscal and environmental impact of recovering the energy and industrial materials contained in waste tires. The project proposes to employ sites in North Dakota and Moorhead, Minnesota.

The project also introduces a new concept called the Municipal Owned Energy Reserve Cooperative (MOER). This program is a public/private partnership whereby communities can address one problem - that of increasing the revenue to their governments while utilizing property taxes, while solving another - that of removing waste tires from the solid waste stream. The Cities of Moorhead, MN, Fargo, ND and Las Vegas, NV would provide data regarding their solid waste costs to the IME for analysis. This data would be used by decision makers to determine the efficiency of the process and to extrapolate on a national scale the multiple benefits (economic, environmental, pollution and energy) to cities and municipalities by participating in the MOER cooperative.

600 E Boulevard Ave
Bismarck, ND 58505-0001
Phone: 701.328.2200
Fax: 701.328.2205
www.discovernd.com

Enclosure 1 Enclosure 2
Enclosure 3 Enclosure 4
Enclosure 5 Enclosure 6
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Roger Johnson
Agriculture Commissioner
www.agdepartment.com



600 E. Boulevard Ave., Dept. 602
Bismarck, ND 58505-0020

November 21, 2003

Roger Hoogerheide
US EPA Region 8
999 18th Street, Suite 300
Denver, CO 80202-2466

Dear Mr. Hoogerheide:

Earlier this fall, I viewed the demonstration of Delta Energy, LLC's low-temperature pyrolysis unit at a farm near Berthold, North Dakota. I was very impressed with the way the unit converted clipped tires into carbon black, several grades of oil mixed with other hydrocarbons, a synthesized form of natural gas, steel and a small amount of ash and waste materials.

This low-temperature pyrolysis unit has great potential to help our country ensure our long-term energy needs while reducing, reusing, and recycling waste materials. In North Dakota alone, the Health Department estimates that we generate approximately 640,000 waste tires per year. National estimates put the number of used tires needing disposal in excess of one-quarter billion annually.

I encourage you to look favorably on Delta Energy's request for an EPA Innovation Pilot Initiative Grant. It would facilitate the implementation of Delta Energy's solution for managing scrap tires and the health, environmental, and disposal issues they pose.

Thank you.

Sincerely,

Roger Johnson
Commissioner

RJ/jb

Resource Recovery & Conservation Act (RRC)

P.002

TEL: 701 328 2308

DEC -05 03 (FRI) 12:02 COMMUNITY SERVICES



**NORTH DAKOTA
DEPARTMENT OF HEALTH**
600 East Boulevard Ave., Dept. 801
Bismarck, ND 58505-0800

**OFFICE OF
STATE HEALTH OFFICER**
Bismarck, ND 58505-0800
www.health.nd.gov

December 4, 2003

Roger Hoogerheide
U.S. EPA Region VIII
800 - 18th Street, Suite 300
Denver, CO 80202-2466

Re: North Dakota The Disposal Process

Dear Mr. Hoogerheide:

This letter is in regard to a grant proposal from the Souris Basin Planning Council on behalf of Delta Energy, LLC entitled "A Novel Program to Address the Disposal of Waste Tires, Reduce Pollution, and Improve the Revenue Stream of Cities and Counties."

Representatives from the Department's Divisions of Waste Management and Air Quality have viewed the low-temperature pyrolysis pilot plant being operated by Delta Energy, LLC in rural Berthold, ND. The facility seems to operate well and, based on our observations, no apparent pollution issues are evident, but further testing is necessary. The pyrolysis unit converts chipped tires into several grades of oil mixed with other hydrocarbons, a synthesized form of natural gas, carbon black, steel and a small amount of ash and waste materials.

We believe the low-temperature pyrolysis process is worthy of further investigation. Such a unit, if viable, could help the country in ensuring its long-term energy needs as well as taking care of a problem waste—tires. In North Dakota and other states, improperly managed waste tires pose obvious fire and insect-breeding hazards. The issue of the mosquito-borne West Nile virus is especially significant in North Dakota. It is estimated that each citizen in the United States generates the equivalent of one waste tire per year; North Dakota residents generate approximately 6-10,000 waste tires per year. Tires accumulated in rural areas and in stockpiles increase the potential for mosquito-borne illnesses. Tires also consume significant space in landfills and are difficult to manage.

The North Dakota Department of Health, the lead environmental and health agency in North Dakota, will be happy to assist Delta Energy, LLC in defining the testing criteria

Mr. Roger Hoogerheide

2

December 4, 2003

for the environmental study. We will also be happy to review any data on waste byproducts as well as information on the various fuels to further their commercial development and utilization. The North Dakota Department of Health supports environmentally sound efforts to reduce, reuse and recycle solid waste materials, especially when they pose obvious health, environmental and disposal issues.

We look forward to working with the Souris Basin Planning Council and Delta Energy, LLC on their endeavor.

Sincerely,

[Signature]
Teresa B. Bessie, MD, MPH-THM
State Health Officer

TLD/SJT:lr

cc: Erin Lee, Delta Energy, LLC

Graig Hagen, Souris Basin Planning Council

Roger Johnson, ND Agriculture Commissioner

Kim Christensen, ND Dept. of Commerce, Div. of Community Services

Tom Bachman, NDDH

Steve Tibbottson, NDDH

December 4, 2003

Roger Hoogerheide
US EPA Region 8
999 18th Street, Suite 300
Denver, CO 80202-2466

Dear Mr. Hoogerheide:

The North Dakota Department of Commerce - Division of Community Services supports the proposal submitted by Delta Energy, LLC titled, "A Novel Program to Address the Disposal of Waste Tires, Reduce Pollution and Improve the Revenue Stream of Cities and Counties." Our office serves as the Department of Energy designated state energy office for North Dakota.

We have worked with Delta Energy, LLC to explore ways to advance what we believe is a very valuable process of dealing with the waste tire issue. We have visited the pilot plant in Berthold, ND and observed a test run. The technology appears to be successful in recapturing most of the materials used in the manufacturing of tires - oil, gas, carbon black, and steel - while reducing the overall impact to the environment.

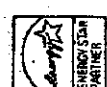
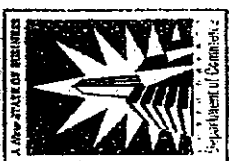
As you will see in the proposal, Delta Energy, LLC has worked hard to line up an impressive array of cooperative partners for their venture. We believe that larger scale testing and demonstration of this process will help many entities deal with their tire disposal problems and we respectfully ask for your favorable consideration of this proposal.

Sincerely,

[Signature]

Paul T. Gavig, Director
Division of Community Services

KC/pa



Resource Recovery & Conservation Act (RRC)

12/05/2003 09:37 7756874914

ENERGY OFFICE

PAGE 02

EMERY G. ANDERSON
Governor

STATE OF NEVADA

State Seal
Acting Governor



OFFICE OF THE GOVERNOR
NEVADA STATE OFFICE OF ENERGY

727 Fairview Drive, Suite F

Carson City, NV 89701

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<http://energy.state.nv.us/>

November 26, 2003

Roger Hoogerheide
US EPA Region 8
999 18th Street, Suite 300
Denver, Colorado 80202-2466

Re: North Dakota Tire Disposal Process

Dear Mr. Hoogerheide,

The Nevada State Office of Energy (NSOE) has witnessed the operation of the Delta Energy pilot plant at Bentholt, North Dakota and feels that the process can address the problem of tire disposal as well as mitigate problems that arise when left in the waste stream, can act as a host to such as rodents and mosquitoes. The common disposal site for waste tires is in land fill. Land fill is becoming an increasingly active source of land fill gas (methane) that can be used to generate electricity. When tires are removed from the waste stream, the land fill gas production can be enhanced and the usable life of the land fill site is extended.

Further testing and up-scaling of the plant/process will give greater credibility to this method of tire disposal. The NSOE is in support of this venture and the promise that the process has for mitigating many of the problems related to discarded tires.

Sincerely,

Peter Konesky
Peter Konesky
Energy Specialist



MINOR
OSCAR S. GOODMAN

CITY COUNCIL

GARY REESE

AMOR PRO-TEA

LARRY BROWN

LYNETTE B. McDONALD

LAWRENCE WEEKLY

MICHAEL MACK

JAMIE MONTGOMERY

CITY MANAGER

DOUGLAS A. SELBY

Roger Hoogerheide
US EPA Region 8
999 18th Street, Suite 300
Denver, Colorado 80202-2466

Subject: North Dakota at Tire Recycling Project

Dear Mr. Hoogerheide:

The City of Las Vegas, Nevada has long been an advocate and supporter of customers' energy needs and has been a leader in the quality of our citizens' lives. Delta Energy, LLC, an environmental recycling company, is just such an example. About two years ago, representatives from Delta Energy conducted a small demonstration of their pyrolytic technique at our Las Vegas fleet operations center in processing waste tires into energy and other recyclable materials. We were so impressed with the results that we encouraged them to proceed with a full production facility. They have since done this and we at the City of Las Vegas wholeheartedly support that effort.

Please accept this letter as the City's willingness to participate in a multi-state demonstration project that can and will provide the direct benefits to the general community. Delta Energy's pyrolytic process has been used for many years to convert waste tires into energy and other recyclable materials. We are convinced that the process and the facility replicated across the nation, will mitigate the growing hazardous material from our society.

Please feel to contact me personally at (702) 226-6971 if you have any questions.

Very truly yours,

Don Hyde

Don Hyde
Plant & Transportation Services Manager

CITY OF LAS VEGAS
400 STEWART AVENUE
LAS VEGAS, NEVADA 89101

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TTY 702.390.8108

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081134013400

Resource Recovery & Conservation Act (RRC)

P. 02

FAX NO. 2182895308

APR-15-2004 THU 03:30 PM City Manager

0002

CLAY COUNTY

12/04/03 16:22 FAX 218 289 5185

PLANNING AND ENVIRONMENTAL PROGRAMS

THE MAGNOLIA, Director
KATHY MANN, Coordinator
Office Telephone: (218) 289-5612
Fax: (218) 289-5186

CLAY

December 2, 2003

Roger Hoogerbeide
US EPA Region 8
999 18th Street, Suite 300
Denver, CO 80202-2466

Dear Mr. Hoogerbeide:

Clay County supports Delta Energy's innovative pilot project to recover for reuse and recycling the energy and materials contained in the waste tire stream. The demonstration project proposed for Moorhead, Minnesota, besides offering economic development and employment opportunities, will address health and environmental concerns associated with the waste tire problem, as well as contribute valuable research to the improvement of processing technology and the expansion of markets.

Clay County is pleased to be a partner in the project, and as a participant would help promote public awareness and implement a public education campaign directing the waste tire flow to the proposed plant.

Clay County applauds the efforts to recover and recycle materials that would otherwise be part of the waste stream. The proposed project is consistent with the County's commitment to the conservation of energy and natural resources, and the prevention of waste and pollution. The tire-recycling project would further enhance Clay County's recycling and waste reduction programs.

Sincerely,

W. K. Leth
Viggo Skott
County Administrator

Clay County Courthouse
507 11th Street North
P.O. Box 200
Moorhead, Minnesota 56501-0200
An Equal Opportunity Employer
Please do not reprint text

RESOLUTION

WHEREAS, City staff has been approached by Delta Energy, LLC of Minot, North Dakota, to evaluate the feasibility of the remediation of waste tire piles at the Tire Depot storage facility in Moorhead; and

WHEREAS, the waste tire pile poses a significant environmental health and fire safety risk to the City and the surrounding area near the Tire Depot site; and

WHEREAS, the proposed joint grant application by the Delta Energy, LLC group and the Souris Basin Planning Council presents a unique opportunity for the City of Moorhead to receive federal funds to assist in the remediation of a portion of the aforementioned waste tire pile and the related health and safety risks such a facility poses, key property owners, partners and stakeholders willing; and

WHEREAS, a successful grant application would permit the City to research and explore collaborative public/private partnerships and assess their viability for the long-term remediation of environmental problem areas such as waste tire piles.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Moorhead that City staff is hereby authorized to submit a joint grant application with the Souris Basin Planning Council and Delta Energy, LLC to the Environmental Protection Agency (EPA) for the remediation of waste tires at the Tire Depot site in Moorhead.

PASSED by the City Council of the City of Moorhead this 2nd day of February, 2004.

APPROVED BY:

ATTEST:

Kaye Buchholz
KAYE BUCHHOLZ, City Clerk
(SEAL)

Mark Voxland
MARK VOXLAND, Mayor

#2004-204

Resource Recovery & Conservation Act (RRC)

12/08/03 FRI 08:08 FAX 701-241-86707

CITY OF FARGO ND

0001

04/07/04 WED 13:48 FAX 701-241-86707

BUCH AG MEO

0001



Division of Solid Waste
2301 8th Avenue North
Fargo, North Dakota 58103
Phone: 701-241-1449
Fax: 701-241-8109



December 2, 2003

Mr. Evin Lee
Delta Energy, LLC
P.O. Box 359
Minot, ND 58702-0359

RE: Low-temperature Pyrolysis Demonstration

Dear Mr. Lee:

On behalf of the City of Fargo, Angela Boeshans and I would like to thank you for the opportunity to view the low-temperature pyrolysis demonstration on September 8, 2003. Fargo has historically been an active supporter of recycling and reuse strategies for waste products generated in our community. Specifically, scrap tires have been banned from the city landfill which has created a unique challenge with respect to suitable disposal and end use options.

The low-temperature pyrolysis process closely parallels the City's effort to capture and reuse methane gas produced at the municipal solid waste landfill. The opportunity to further utilize the byproducts of this process is encouraging. Thus, the City of Fargo supports the concept of conducting a local, pilot-scale project in our area.

We look forward to continued progress in the application of this technology.

Sincerely,

Bruce P. Grubb

Bruce P. Grubb
Enterprise Director

cc: Pat Zavoral, City Administrator
Angela Boeshans, Recycling Coordinator
Thomas Lane, Liaison Commissioner

BPG:jcm

K:\SolidWaste\WFOEDOC\LANDFILL\Envr Low-Pyrolysis Demonstration.doc

Commercial/Industrial Service 701-241-1449
Household Hazardous Waste 701-281-8915
Landfill 701-282-2489
Recycling 701-208-6944
Roll-off Service 701-241-1449
Web Site: www.cityoffargo.com/indl.html
Printed on Recycled Paper



April 7, 2004

Mr. Paul J. Lee
C.O.O.
Delta Energy, LLC
15 Chesterfield Lakes Rd.
Chesterfield, MO 63005

Re: Interest in Tire Recycling

Last Fall 2003, Kirby Kniff, Director Multi Admin./Env. Engineering, and I visited Delta Energy's pilot tire digester in Berthold, ND. The demonstration that we received was very impressive as to how clean an operation it was and the products that could be derived from a used tire. After viewing this operation, we could see the use of this type of technology to clean up the closed tire depot in Moorhead and as a surviving business for the City of Moorhead.

The Moorhead Multi Plant would be interested in obtaining 6,000 gallons of the #5 fuel produced from the process for a test burn. We feel that the fuel from this type of technology could become an alternative fuel source for industry to use on a local basis. Delta Energy's involvement with the removal of the tire piles from the closed Tire Depot would be both beneficial for the environment, not to mention an improved look to the Industrial Park for the City of Moorhead and the State of Minnesota.

Sincerely,

Greg S. Ballentine

Greg S. Ballentine
Plant Manager - Mailing Operations

GDB/wes

Per: K. Kniff

Delta Energy, LLC
15 Chesterfield Lakes Rd.
Chesterfield, MO 63005
Tel: 636-261-2200
Fax: 636-261-2201

Resource Recovery & Conservation Act (RRC)

48003

12/05/03 PRI 17:36 FAX 701 224 9431

COMMITTEE ON WAYS AND MEANS

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Committee on Energy and Commerce

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REP. POMEROY (BIS)



Earl Pomeroy
Congress of the United States
North Dakota

December 5, 2003

Roger Hoeghede
US EPA Region 8
999 18th Street, Suite 300
Denver, Colorado 80202-2466

Dear Mr. Hoeghede:

A group of North Dakota entrepreneurs have developed an economical, environmentally friendly process to reclaim, for reuse in industry, the energy and industrial material (oil, gas, carbon black and steel) from waste tires -- a national health and environmental problem.

Delta Energy, LLC has demonstrated its process to city, county and state agencies, and has now assembled a multi-state, multi-city, multi-university coalition to begin the process of commercializing the technology. The initial goal would be to test its operation by the remediation of an estimated 900,000 shredded tires in Moorhead, Minnesota.

The proposed EPA project calls for the initial remediation of 20 tons of tires. The operational data shall be collected by the Industrial Manufacturing and Engineering (IME) Department of North Dakota State University. The products recovered would be analyzed by the Energy and Environmental Research Center at the University of North Dakota (UND) under a separate contract with Delta Energy and (IME).

Delta Energy has also been discussing with the cities of Las Vegas, NV, Moorhead, MN, and Fargo, ND; a novel waste tire program called the Municipal Owned Energy Reserve Cooperative (MOER). MOER is a proposed public/private partnership, whereby communities can address the problem of increasing revenue to their governments, and at the same time stabilizing property taxes; while solving the problem of removing waste tires from the solid waste stream, and at the same time, controlling governmental expenditures for municipal solid waste and emergency response teams to fight tire fires.

Under the proposed grant the cities of Moorhead, MN; Fargo, ND, and Las Vegas, NV, would provide data regarding their solid waste and emergency response costs to the IME. This data would be used to determine the efficiency of the process and the potential multiple benefits (economic, environmental, pollution, and energy) to cities, municipalities and counties by participating in the MOER cooperative.

Page 2

We have a strong interest in supporting concepts and technologies that can contribute to energy efficiency, sustainable environmental policy, and economic development, while reducing our nation's dependence on foreign oil.

Delta Energy has gathered support for this project from the State of North Dakota. This includes Governor John Hoeven; Agricultural Commissioner Roger Johnson; Dr. Terry Dwell, State Health Officer; and Paul T. Goring, Director of Community Services for North Dakota. In addition, the Nevada State Office of Energy is giving its support, as well as Las Vegas, Nevada; Fargo, North Dakota, and Clay County, Minnesota.

I believe that both Delta Energy's technology and the Municipal Owned Energy Reserve Cooperative are worthy of further investigation and, therefore, we wish to add our support to this project.

Sincerely,

Byron L. Dorgan

Byron L. Dorgan
United States Senator

Earl Pomeroy

Earl Pomeroy
Member of Congress

Resource Recovery & Conservation Act (RRC)

Traffic Services Fees Proposed Distribution Breakdown by County

Part 6: Summary

- Slide 39 – Goals
- Slide 40 - Objectives
- Slide 41 - Strategy for RRC
- Slide 42 – Proposed legislative purpose for RRC
- Slide 43 – Specifics of RRC
- Slide 44 – Pie chart showing breakdown of RRC fees
- Slide 45 – Table showing breakdown of RRC fees by use & agency
- Slide 46 – Chart showing breakdown of RRC fees by state agency
- Slide 47 – Chart showing breakdown of RRC fees by use
- Slides 48, 49, 50 – Traffic Services Fees Proposed Breakdown by County
- Slides 51, 52, 53 – Emergency Response Fees Proposed Breakdown by County
- Slide 54 – Thank You

Resource Recovery & Conservation Act (RRC)

- **Goal for the Resource Recovery & Conservation Act Act (RRC)**
- **Further the Common Good Through the Responsible Stewardship of Resources**
 - Natural
 - Environmental
 - Public

Resource Recovery & Conservation Act (RRC)

Specific objectives examine the impact of the following issues on Federal, State, County and City governments:

- a. Public Health** - West Nile Virus/pollution from tire fires
- b. Landfill issues** – remove tires from the solid waste stream/reduce operating costs
- c. City deficits** – provide another revenue sources/reduce operating costs
- d. Property taxes** – stabilize the rate of increase by reducing the costs of traffic services
- e. Environmental treaties** – help the federal government meets its public commitments/treaty obligations under NAFTA
- f. Fairness in tax policy** – remove hidden subsidies for tire disposal/uniform treatment of users
- g. Environmental** – reduce pollution of air/ removal of mercury and other toxic pollutants
- h. Energy** – create a source of energy from waste tire either in the form of oil or electricity

Resource Recovery & Conservation Act (RRC')

- **Proposed Strategy:**
- Change the existing paradigm from one where waste petroleum based products are thrown away to one where they are recovered and reused by:
 1. Developing a legislative solution for the waste tires generated throughout North Dakota
 2. Ensure the solution contributes to the sustainability of local communities while contributing to the national agenda by:
 - a. Being environmentally and socially responsible
 - b. Being economically viable
 - c. Contributes to paying for traffic services
 - d. Contributes to the economic well-being of county and local governments while addressing the rate of increase in property taxes
 - e. Allows Federal/State/County and City leaders to “walk the talk”

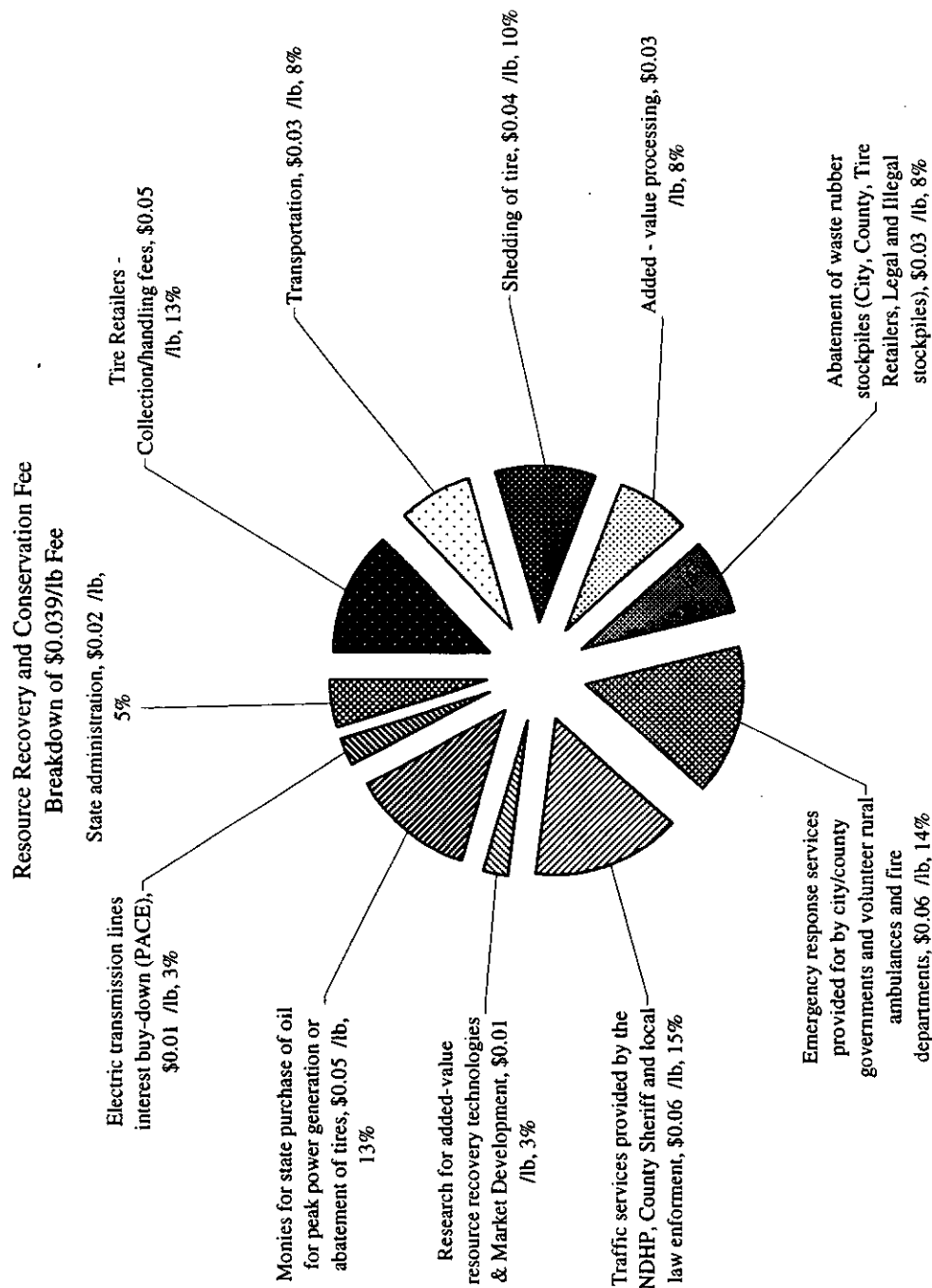
The purpose of the proposed legislation is as follows:

1. To further the common good through the responsible stewardship of resources – environmental, natural and public;
2. To assure that the life cycle of all petroleum based products, including rubber based tires, hoses and belts used in North Dakota are managed in a manner that is environmentally sound and which maximizes the economic value of recovered energy and material to the citizens of the state and our nation by permitting reuse of the constituent components of petroleum based products in industry; and,
3. To assure that the end users of traffic services, emergency response services, public resources and rural ambulance and fire departments pay for part of the cost of the unreimbursed traffic and emergency response services so as to reduce the burden on property and income taxpayers.

Resource Recovery & Conservation Act (RRC)

- *Solution - create the North Dakota Resource Recovery and Conservation Act (RRC) a unique "public/private partnership" that is comprehensive in its approach*
- Self funding
 - A RRC fee is collected at the time the tire consumer purchases a new tire, hose, belt, etc.
 - Applies to all tires, hoses, etc. (auto, truck, implement, mining, etc.)
 - RRC fee is based upon pounds with sufficient revenues for collecting, transporting, processing, remediation and financial incentives for the various stakeholders.
 - The following is a suggested breakdown of fees:
 - \$0.02 -0.05/lb to tire retailers for collecting the waste tires and the RRC fee
 - \$0.01-0.03/lb for transportation
 - \$0.03-0.04/lb for shredding
 - \$0.01-0.03/lb for technologies which recovers the constituent components of petroleum based products (tires, hoses, etc.)
 - Graduated fee in favor of those technologies which add the most value
 - \$0.03/lb for the ND State Health Department to clean up estimated 3-4 million waste tires in ND over 10 years
 - \$0.03/lb for the ND State Health Department to offset the cost of emergency response services
 - City and county emergency response services
 - Rural ambulances
 - Rural fire departments
 - \$0.02/lb for the ND Department of Commerce to finance demonstration projects or studies to determine how to maximize the material recovered
 - \$0.02/lb for the ND Department of Commerce to use to fund electric transmission projects (similar to the PACE program)
 - \$0.05/lb for the ND Department of Commerce to use to purchase oil for peak power generation, if it is in the best interests of North Dakota
 - \$0.05/lb to the ND Department of Transportation to offset costs of traffic services
 - ND Highway Patrol
 - County and city law enforcement agencies
 - Unique in creating Environmental Credits:
 - By recognizing the value of the impact of recycling on the consumption of natural resources and the concurrent avoidance of pollution by providing Environmental Credits to cities and counties who recycle petroleum based products. i.e. tires, hoses, belts, etc.
 - Unique in providing monies for the state to use to purchase the oil.
 - Under RRC, the oil recovered could be purchased by the state for use in providing a fuel supply for peak power generation if the state deemed it to be in the best interests of North Dakota citizens. The purchase price would be fixed and not subject to the market. This would allow the state to provide needed fuel to a electric utility at a reasonable cost to the utility and to all the utilities' consumers.

Resource Recovery & Conservation Act (RRC)

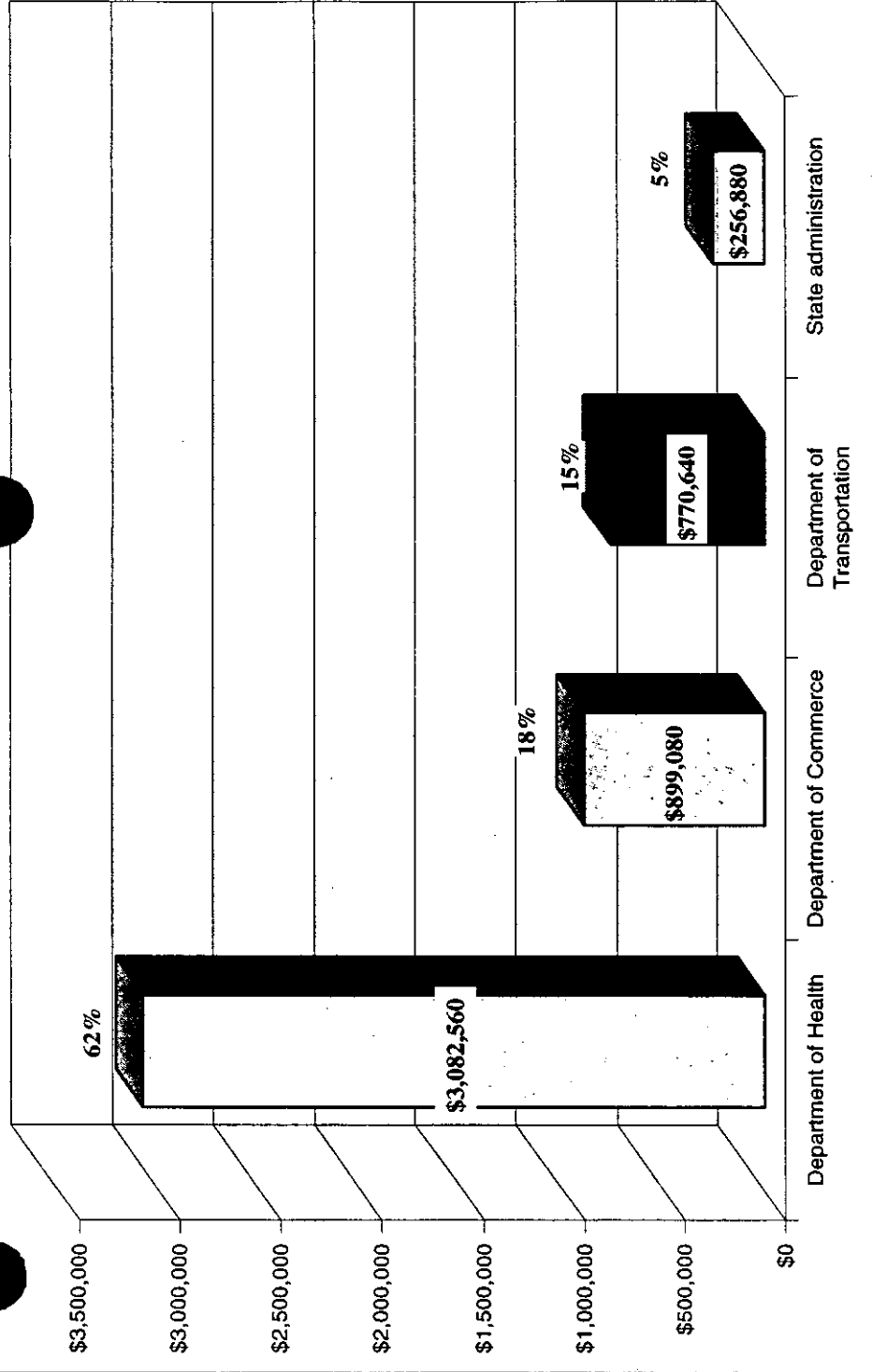


Resource Recovery & Conservation Act (RRC)

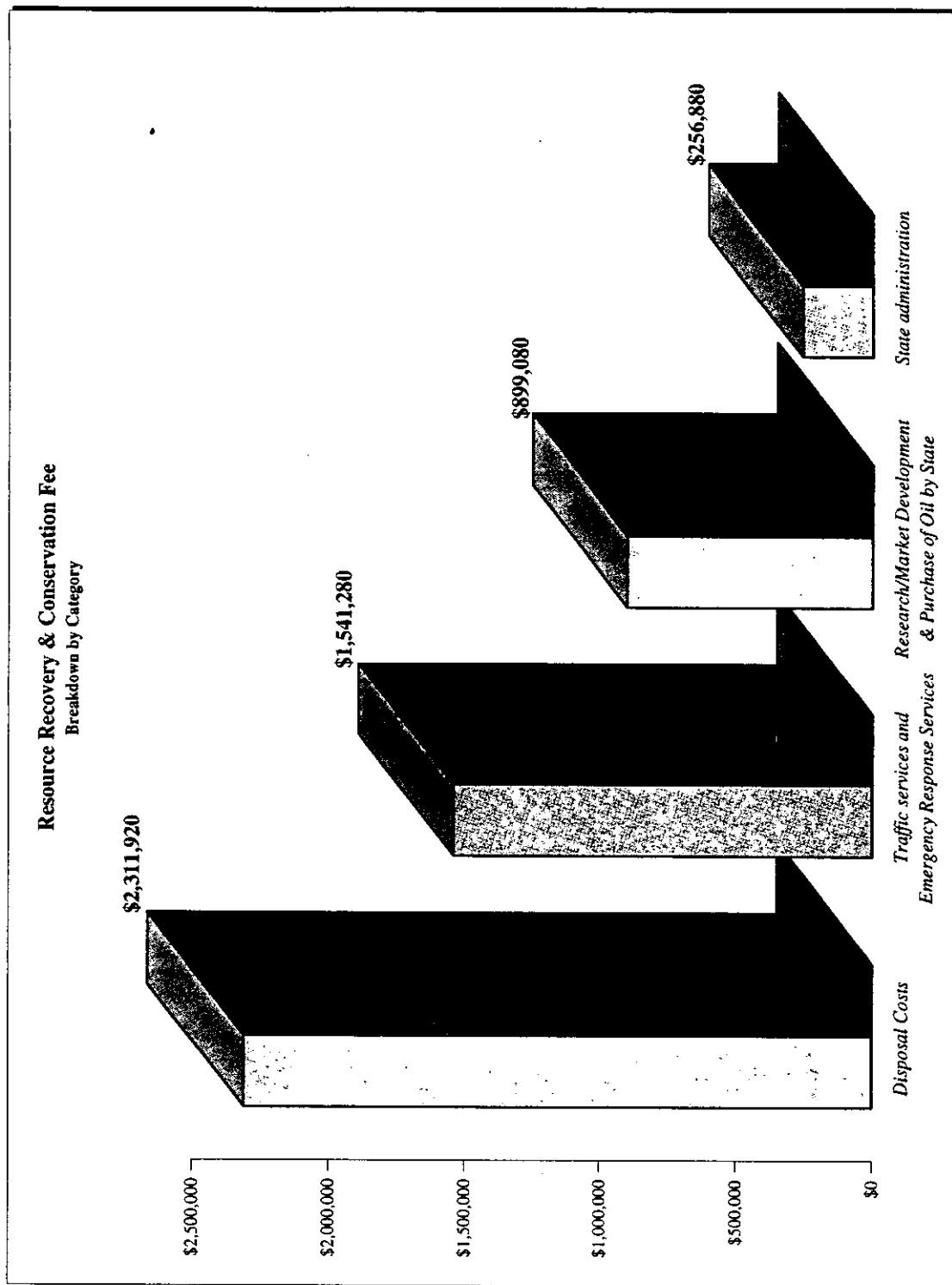
Proposed Distribution of RRC Fees

| Responsible Agency | Purpose/line item | Upset Price Dollars | Total Dollars | \$/Waste tire | % |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------|---------------|-------------|
| Disposal Costs | | | | | |
| Department of Health | Tire Retailers' Collection handling fees | \$642,200 | | | |
| | Transportation | 385,320 | | | |
| | Shredding of tire | 51,336 | | | |
| | Added - value processing | 385,320 | | | |
| | Abatement of waste rubber in Oklahoma (OK) County Tire Retailers, Legal and Illegal stockpiles | 385,320 | | | |
| | Total for Disposal | | \$2,311,920 | \$3.60 | 46% |
| Traffic Services and Emergency Response Services | | | | | |
| Department of Health | Emergency response services provided for by city/county governments and volunteer rural ambulances and fire departments | \$770,640 | | | |
| Department of Transportation | Traffic services provided by the Oklahoma Highway Patrol and local law enforcement | 770,640 | | | |
| | Total for Traffic Services & Emergency Response | | \$1,541,280 | \$2.40 | 31% |
| Research/Market Development & Purchase of Oil by State | | | | | |
| Department of Commerce | Research for added-value resource recovery technologies & Market Development | \$128,440 | | | |
| | Abatement of tires | 642,200 | | | |
| | Electric transmission lines interest buy-down (PACE) | 128,440 | | | |
| | Total for Research/Market Development & Purchase of Oil by State | | \$899,080 | \$1.40 | 18% |
| Tax Commissioner | State administration | \$256,880 | | | |
| | Totals | | \$5,009,160 | \$7.80 | 100% |
| Waste Tires Generated Yearly in North Dakota | | | | | |
| | | 642,200 | | | |

Resource Recovery Fee Breakdown by State Agency



Resource Recovery & Conservation Act (RRC)



Resource Recovery & Conservation Act (RRC)

Traffic Services Fees Proposed Distribution Breakdown by County

| County | Rank | Cumulative Volume of Traffic 2005 to 2010 @ \$1.20/tire | Yearly Average | County's Percentage | Running Total | NDHP (Cumulative @ \$0.40/tire) | County Sheriff/ Local Law Enforcement (Cumulative @ \$0.80/tire) |
|-------------|------|------------------------------------------------------------------|-------------------|------------------------|------------------|------------------------------------------|------------------------------------------------------------------------------|
| Cass | 1 | \$2,713,517 | \$180,901 | 21.86% | 21.86% | \$904,506 | \$1,809,011 |
| Burleigh | 2 | 1,494,376 | 83,425 | 17.29% | 39.15% | 2,167,125 | 934,250 |
| Grand Forks | 3 | 1,298,453 | 86,564 | 10.46% | 43.60% | 432,818 | 865,635 |
| Ward | 4 | 1,082,112 | 72,407 | 8.75% | 52.35% | 362,037 | 724,074 |
| Morton | 5 | 537,041 | 35,803 | 4.33% | 56.68% | 179,014 | 358,027 |
| S Stark | 6 | 427,914 | 28,538 | 3.45% | 60.12% | 142,638 | 285,276 |
| Stutsman | 7 | 405,770 | 27,051 | 3.27% | 63.39% | 135,257 | 270,514 |
| Williams | 8 | 338,508 | 22,567 | 2.73% | 66.12% | 112,836 | 225,672 |
| Richland | 9 | 335,663 | 22,378 | 2.70% | 68.82% | 111,888 | 223,775 |
| Rolette | 10 | 267,682 | 17,545 | 2.13% | 70.95% | 89,227 | 178,454 |
| Barnes | 11 | 222,854 | 14,857 | 1.80% | 72.77% | 74,285 | 148,570 |
| Ransom | 12 | 211,135 | 14,076 | 1.70% | 74.47% | 70,378 | 148,764 |
| Walsh | 13 | 211,135 | 14,076 | 1.70% | 76.22% | 51,497 | 140,757 |
| McLean | 14 | 167,496 | 11,154 | 1.35% | 77.57% | 51,489 | 111,538 |
| Trail | 15 | 154,490 | 10,299 | 1.24% | 78.81% | 51,497 | 102,994 |
| Pembina | 16 | 154,496 | 10,294 | 1.24% | 80.06% | 48,866 | 102,938 |
| Mercer | 17 | 146,597 | 9,773 | 1.18% | 81.24% | 48,866 | 97,731 |

Resource Recovery & Conservation Act (RRC)

Traffic Services Fees Proposed Distribution Breakdown by County

| County | Rank | Cumulative Monies collected between 2005 to 1/20/06 @ \$1.20/hr. | Yearly Average | County's Percentage | Running Total | NDHP (Cumulative @ \$0.40/hr.) | County Sheriff/Local Law Enforcement (Cumulative @ \$0.80/hr.) |
|-----------|------|------------------------------------------------------------------|----------------|---------------------|---------------|--------------------------------|----------------------------------------------------------------|
| Benson | 18 | 129,170 | 9,646 | 1.15% | 82.30% | 47,723 | 95,446 |
| Bottineau | 19 | 125,434 | 8,362 | 1.01% | 83.40% | 41,811 | 83,622 |
| Mountain | 20 | 124,986 | 8,332 | 1.01% | 84.41% | 41,862 | 83,324 |
| Ransom | 21 | 112,250 | 7,483 | 0.90% | 85.31% | 37,417 | 74,834 |
| McHenry | 22 | 110,333 | 7,356 | 0.89% | 86.20% | 36,778 | 73,555 |
| Dickey | 23 | 103,694 | 6,913 | 0.84% | 87.04% | 34,565 | 69,130 |
| McKenzie | 24 | 98,514 | 6,568 | 0.79% | 87.83% | 32,838 | 65,676 |
| Pierce | 25 | 86,580 | 5,772 | 0.70% | 88.53% | 28,860 | 57,720 |
| Wells | 26 | 85,698 | 5,713 | 0.69% | 89.22% | 28,566 | 57,133 |
| Sargent | 27 | 81,438 | 5,429 | 0.66% | 89.87% | 27,146 | 54,292 |
| LaMoure | 28 | 80,594 | 5,373 | 0.65% | 90.52% | 26,865 | 53,730 |
| Sioux | 29 | 80,522 | 5,368 | 0.65% | 91.17% | 26,841 | 53,682 |
| Emmons | 30 | 76,609 | 5,107 | 0.62% | 91.79% | 25,536 | 51,073 |
| Cavalier | 31 | 76,218 | 5,081 | 0.61% | 92.40% | 25,406 | 50,812 |
| Nelson | 32 | 68,628 | 4,575 | 0.55% | 92.95% | 22,876 | 45,752 |
| Foster | 33 | 66,383 | 4,426 | 0.53% | 93.49% | 22,128 | 44,255 |
| Dunn | 34 | 63,261 | 4,084 | 0.49% | 93.98% | 20,420 | 40,840 |
| Bowman | 35 | 60,108 | 4,007 | 0.48% | 94.47% | 20,036 | 40,072 |

Resource Recovery & Conservation Act (RRC)

Traffic Services Fees Proposed Distribution Breakdown by County

| County | Rank | Countywide Value | Countywide Percentage | Ranking | Cumulative | Countywide Enforcement |
|---------------|------|------------------|-----------------------|---------|------------|------------------------|
| Adams | 36 | 2,802 | 0.46% | 94.99% | 19,009 | 38,018 |
| Eddy | 37 | 3,307 | 0.40% | 95.33% | 16,533 | 33,066 |
| Lawrence | 38 | 3,996 | 0.39% | 95.71% | 15,980 | 31,959 |
| Griggs | 39 | 2,993 | 0.36% | 96.07% | 14,965 | 29,930 |
| Kenyon | 40 | 2,987 | 0.35% | 96.42% | 14,610 | 29,219 |
| Kidder | 41 | 2,922 | 0.35% | 96.79% | 14,610 | 29,219 |
| Golden Valley | 42 | 2,752 | 0.33% | 97.46% | 13,760 | 27,519 |
| Adams | 43 | 2,752 | 0.33% | 97.46% | 13,760 | 27,519 |
| Heidelberg | 44 | 2,718 | 0.33% | 98.12% | 13,589 | 27,178 |
| Steele | 45 | 2,718 | 0.33% | 98.12% | 13,589 | 27,178 |
| Logan | 46 | 2,618 | 0.32% | 98.44% | 13,269 | 26,478 |
| Oliver | 47 | 2,433 | 0.29% | 98.74% | 12,167 | 24,334 |
| Burke | 48 | 2,366 | 0.29% | 99.03% | 11,828 | 23,656 |
| Golden Valley | 49 | 2,253 | 0.27% | 99.29% | 11,263 | 22,526 |
| Divide | 50 | 2,181 | 0.26% | 99.56% | 10,803 | 21,806 |
| Sheridan | 51 | 1,856 | 0.22% | 99.78% | 9,281 | 18,562 |
| Billings | 52 | 1,659 | 0.12% | 99.90% | 4,797 | 9,594 |
| Slope | 53 | 840 | 0.10% | 100.00% | 4,200 | 8,400 |
| Totals | | 862,167 | 100.00% | | 38,276,766 | |

Resource Recovery & Conservation Act (RRC)

Emergency Response Fees Proposed Distribution Breakdown by County

| County | Rank | Cumulative Monies collected between 2005 to 2020 @ \$120/hre. | Yearly Average | County Percentage | Running Total | Emergency response services provided for by city/county governments and volunteer rural ambulances and fire departments |
|-------------|------|---------------------------------------------------------------|----------------|-------------------|---------------|-------------------------------------------------------------------------------------------------------------------------|
| Cass | 1 | \$2,713,517 | \$180,901 | 21.86% | 21.86% | \$2,713,517 |
| Butte | 2 | 1,401,376 | 93,425 | 11.29% | 33.14% | 1,401,376 |
| Grand Forks | 3 | 1,298,453 | 86,564 | 10.46% | 43.60% | 1,298,453 |
| Ward | 4 | 1,086,112 | 72,407 | 8.73% | 52.35% | 1,086,112 |
| Morton | 5 | 537,041 | 35,803 | 4.33% | 56.68% | 537,041 |
| Stark | 6 | 427,914 | 28,528 | 3.45% | 60.12% | 427,914 |
| Stutsman | 7 | 405,770 | 27,051 | 3.27% | 63.39% | 405,770 |
| Williams | 8 | 338,508 | 22,567 | 2.73% | 66.12% | 338,508 |
| Richland | 9 | 335,663 | 22,378 | 2.70% | 68.82% | 335,663 |
| Rolette | 10 | 267,682 | 17,845 | 2.16% | 70.98% | 267,682 |
| Barnes | 11 | 222,854 | 14,857 | 1.80% | 72.77% | 222,854 |
| Ramsey | 12 | 217,130 | 14,475 | 1.75% | 74.52% | 217,130 |
| Walsh | 13 | 211,135 | 14,076 | 1.70% | 76.22% | 211,135 |
| McLean | 14 | 167,308 | 11,154 | 1.35% | 77.57% | 167,308 |
| Traill | 15 | 154,490 | 10,299 | 1.24% | 78.81% | 154,490 |
| Pembina | 16 | 154,406 | 10,294 | 1.24% | 80.06% | 154,406 |
| Mercer | 17 | 146,597 | 9,773 | 1.18% | 81.24% | 146,597 |

Resource Recovery & Conservation Act (RRC)

Emergency Response Fees Proposed Distribution Breakdown by County

| County | Rank | Cumulative Response Fees (RRC Act) | County Response Fees | County Response Fees as % of Total Response Fees | County Response Fees as % of Total Response Fees |
|-----------|------|------------------------------------|----------------------|--------------------------------------------------|--------------------------------------------------|
| Benson | 18 | 125,434 | 8,362 | 1.01% | 83.40% |
| Bottineau | 19 | 125,434 | 8,362 | 1.01% | 83.40% |
| Mountain | 20 | 125,434 | 8,362 | 1.01% | 83.40% |
| Ransom | 21 | 112,250 | 7,483 | 0.90% | 85.31% |
| Deerfield | 22 | 103,694 | 6,913 | 0.84% | 87.04% |
| Dickey | 23 | 103,694 | 6,913 | 0.84% | 87.04% |
| Deerfield | 24 | 86,580 | 5,772 | 0.70% | 88.53% |
| Pierce | 25 | 86,580 | 5,772 | 0.70% | 88.53% |
| Well | 26 | 81,438 | 5,429 | 0.66% | 89.87% |
| Sargent | 27 | 81,438 | 5,429 | 0.66% | 89.87% |
| LaMoure | 28 | 80,522 | 5,368 | 0.65% | 91.17% |
| Sioux | 29 | 80,522 | 5,368 | 0.65% | 91.17% |
| Emmons | 30 | 76,218 | 5,081 | 0.61% | 92.40% |
| Cavalier | 31 | 76,218 | 5,081 | 0.61% | 92.40% |
| Nelson | 32 | 66,383 | 4,426 | 0.53% | 93.49% |
| Foster | 33 | 66,383 | 4,426 | 0.53% | 93.49% |
| Dunn | 34 | 60,108 | 4,007 | 0.48% | 94.47% |
| Bowman | 35 | 60,108 | 4,007 | 0.48% | 94.47% |

Resource Recovery & Conservation Act (RRC)

Emergency Response Fees Proposed Distribution Breakdown by County

| County | Rank | Cumulative Monies Collected between 2005 to 2020 @ \$120/tire | 3 Yearly Average | County Percentage | Running Total | Emergency response services provided for by city/county governments and volunteer rural ambulances and fire departments |
|---------------|------|---------------------------------------------------------------|------------------|-------------------|---------------|-------------------------------------------------------------------------------------------------------------------------|
| McIntosh | 36 | 57,028 | 3,802 | 0.03% | 94.93% | 57,028 |
| Eddy | 37 | 49,598 | 3,307 | 0.40% | 95.33% | 49,598 |
| Townier | 38 | 47,939 | 3,196 | 0.30% | 95.71% | 47,939 |
| Griggs | 39 | 44,896 | 2,993 | 0.36% | 96.07% | 44,896 |
| Renville | 40 | 44,800 | 2,987 | 0.35% | 96.41% | 44,800 |
| Kidder | 41 | 43,829 | 2,922 | 0.35% | 96.79% | 43,829 |
| Grant | 42 | 42,448 | 2,886 | 0.34% | 97.39% | 42,448 |
| Adams | 43 | 41,279 | 2,752 | 0.33% | 97.46% | 41,279 |
| Hettinger | 44 | 41,156 | 2,744 | 0.33% | 97.79% | 41,156 |
| Steele | 45 | 40,766 | 2,718 | 0.33% | 98.12% | 40,766 |
| Logan | 46 | 39,718 | 2,648 | 0.32% | 98.44% | 39,718 |
| Oliver | 47 | 36,500 | 2,433 | 0.29% | 98.74% | 36,500 |
| Burke | 48 | 35,484 | 2,366 | 0.29% | 99.02% | 35,484 |
| Golden Valley | 49 | 33,788 | 2,253 | 0.27% | 99.29% | 33,788 |
| Divide | 50 | 32,710 | 2,181 | 0.26% | 99.56% | 32,710 |
| Sheridan | 51 | 27,844 | 1,856 | 0.22% | 99.78% | 27,844 |
| Billings | 52 | 14,390 | 959 | 0.12% | 99.90% | 14,390 |
| Slope | 53 | 12,600 | 840 | 0.10% | 100.00% | 12,600 |
| Totals | | \$12,415,150 | \$827,677 | 100.00% | | \$12,415,150 |

Introduction:

Good Morning, my name is Ervin Lee.

I want to thank **Senators Kresbach, O'Connell and Seymour and Representatives Froseth, Ekstrom and Kerzman** for their willingness to put their names and support behind this legislation. It is now a study resolution.

The reason for asking this committee for a do pass on this proposed study is because of a project I got involved in about five years ago. The photo below shows a beta plant built on a farm. The plant can take waste rubber and recover the energy and material contained in the waste rubber in an economical and environmentally friendly manner.



Photo of Jack Johnson and Travis Maddock of NDSU before the 10 ton plant.

The process heats shredded tires and a chemical catalyst to relatively low temperatures to recover the oil, gas, carbon and steel products used to manufacture the tires. No combustion is involved, so very little pollution and no harmful byproducts (pollution) are generated. The equipment used in the process was adapted from "off-the-shelf" parts commonly seen on North Dakota farms and rural communities. The recovered materials are of such high quality they can be marketed with little or no further refining.

Delta's depolymerization process recovers energy and material from one 20 lb waste rubber tire.

- 1.1 gallon of oil (a #4 or #5 fuel oil)
- 7.2 pounds of Delta Black (a carbon black reinforcing agent)
- 3 pounds of steel
- 4 pounds of gas

It is a goal of Delta Energy to manufacture these systems in North Dakota. This goal is shared by several people who have been involved in this project, including the sponsors of this study.

To accomplish this we needed to change the existing paradigm from one where waste petroleum based products are thrown away to one where they are recovered and reused by:

1. Develop a legislative solution for the waste tires generated throughout North Dakota;
2. Ensure the solution contributes to the sustainability of local communities while contributing to the national agenda by:
 - a. Being environmentally and socially responsible,
 - b. Being economically viable,
 - c. Contributes to paying for traffic services, and
 - d. Contributes to the economic well-being of county and local governments while addressing the rate of increase in property taxes;
3. To further the common good through the responsible stewardship of resources – environmental, natural and public; and,
4. To assure that the life cycle of all petroleum based products, including rubber based tires, hoses and belts used in North Dakota are managed in a manner that is environmentally sound and which maximizes the economic value of recovered energy and material to the citizens of the state and our nation by permitting reuse of the constituent components of petroleum based products in industry.

Overview of need for study:

1. **Currently N.D. does not have a program in place to handle the disposal of waste tires, nor, to clean up tire piles. See, attached exhibit "A".**
2. **N.D. waste tire flow and current disposal policies do not encourage the recovery of the energy and industrial materials contained in rubber tires**
 - a. There is approximately 640 thousand+ generated yearly in N.D.
 - b. Between 2005 and 2020 ND will generate over 10 million tires. See, attached exhibit "A"
 - c. Where will these tires go? The photo below shows a stockpile of 3-4 million tires in California.

Photo of tire pile of approximately 4+ million in Stanislaus County, California

Do we need these in North Dakota?
Current practices have potential for creating such stockpiles.



3. Waste Tires are environmental/health hazards:

a. Tire Fires

- i. Hurts property values
- ii. Causes air pollution, etc.
- iii. Places huge demands on emergency response services
- iv. What if the tires above start on fire? What will that look like?



The adjacent photo shows the tires above after they were struck by a lightning bolt

Fires such as the shown involve the use of public resources. i.e. taxpayer dollars. .

The fire cost Stanislaus County and the state of California approximately \$20 million to clean up. They are suing the owners of the property. The owners are corporations, and, thus, there is the potential that they will have no personal liability for their actions.

4. Waste tires have other public costs:

- a. Operating and maintaining landfills
- b. Picking up and disposing of waste tires thrown away by individuals. on streets, alleys, etc.
- c. Cleaning up illegal tire dumps (\$1.00-\$2.00/tire)
- d. Public health costs of fighting the mosquitoes which carry the WNV

5. Waste tire disposal rates are uneven and do not provide for a level playing field for either the consumer or tire retailer.

- a. In ND. disposal rates for a car tire vary from \$2.00 to \$6.00/tire depending upon the dealer.
- b. The problem is some dealers pay for "proper disposal" while others do an end run around the system.
 - i. Thus, disposal costs can range from \$0.75 to \$1.50/ tire.
 - ii. Tire jockeys presently dispose of tires in a manner most cost effective to them, leaving the problems of clean up, fires and health to the local, county and state governments.
 - iii. Tire consumers are not getting what they paid for.

6. Determine whether there is a need for state legislation that complements the Federal Government's National Agenda for:

a. Energy Security:

- i. Reduce U.S. dependence on foreign oil by encouraging the local production of oil and gas from petroleum based products
- ii. Create alternative energy supplies to meet the growing demand for electricity

b. Conservation of Natural Resources:

- i. Reduce consumption of natural resources through the use of technologies and processes that permits the reuse of the petroleum used to manufacture goods (tires, hoses, plastic bottles, etc.)
- ii. A tire requires large amounts of energy and resources
 1. Crude Oil – 22 gallons
 2. Refined Oil – 7 gallons
 3. Natural Gas – 0.6 gallons
 4. Water – 3 gallons
 5. Electricity – 14 kWh

c. Environmental:

- i. Reduce and prevent pollution through the use of public policies which rewards state and local governments who promote recycling programs that “save natural resources and avoid pollution” by having “environmental credits” available for states to use to help local industries meet the unfunded mandates established by the Federal EPA i.e. “A rational tree-hugger approach”
- ii. Tires – pollution is generated in the extraction/refining of resources required to manufacture 1 tire
 1. Carbon Dioxide – 143 lbs/tire
 2. Sulfur Dioxide – 0.2 lbs/tire
 3. Nitrous Oxide – 0.02 lbs/tire
 4. Mercury – 0.0000158 lbs/tire

d. Public Health:

- i. Protect humans and animals from diseases, such as the West Nile Virus, by removing waste (tires and plastic bottles) from the waste stream

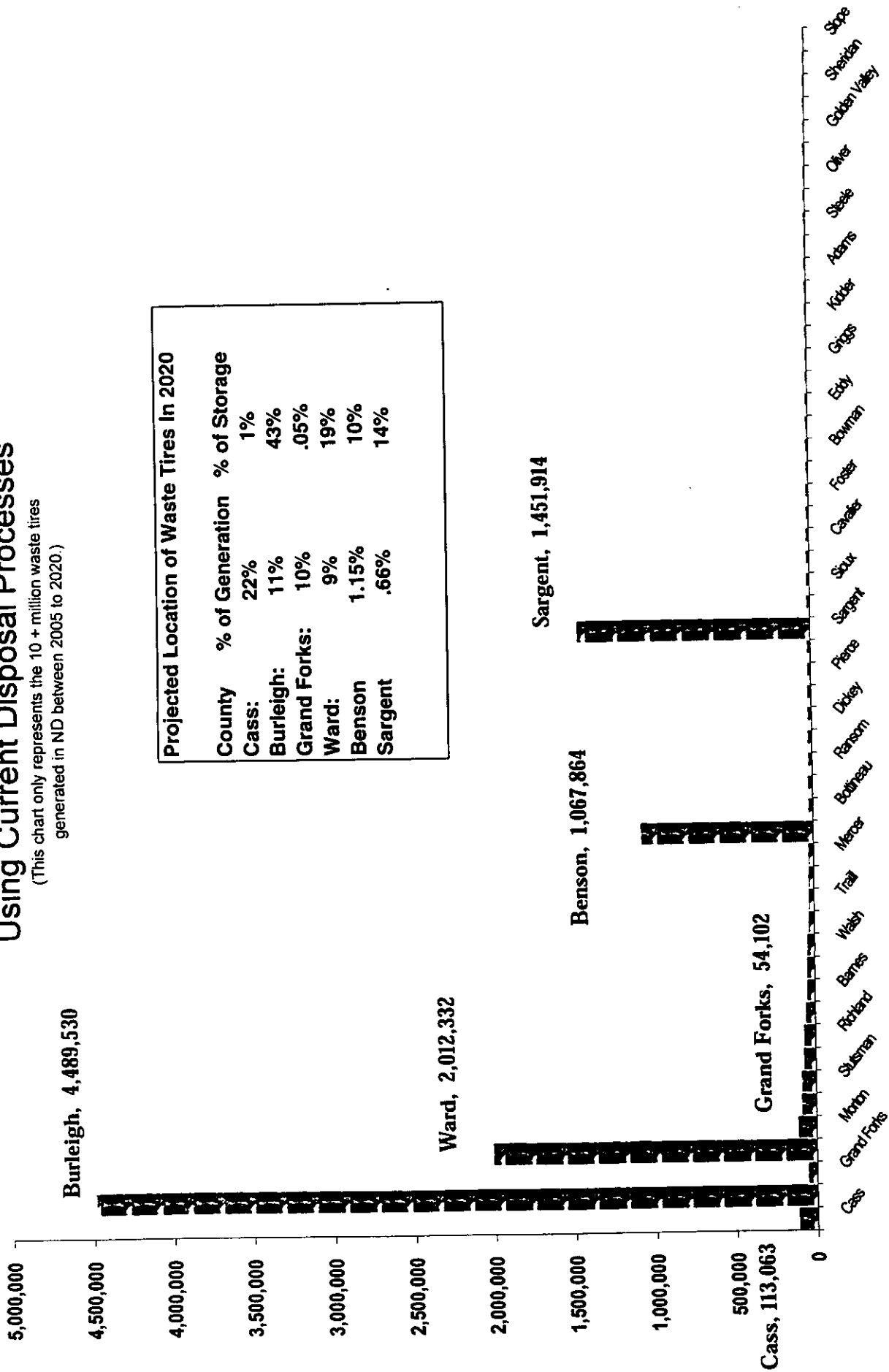
e. Economic growth:

- i. **There is a potential for North Dakotans to do all the manufacturing, assembly, installation and service of these machines.**
- ii. **It is Delta Energy’s goal to outsource its manufacturing – not to China – but within the state.**
- iii. **Reduce state, county and city budget deficits:**
 1. By establishing a user fee which reduces the indirect costs associated with vehicle traffic, etc. borne by state, county and local governments

THANK YOU!!

Projected Location of Waste Tires in 2020 Using Current Disposal Processes

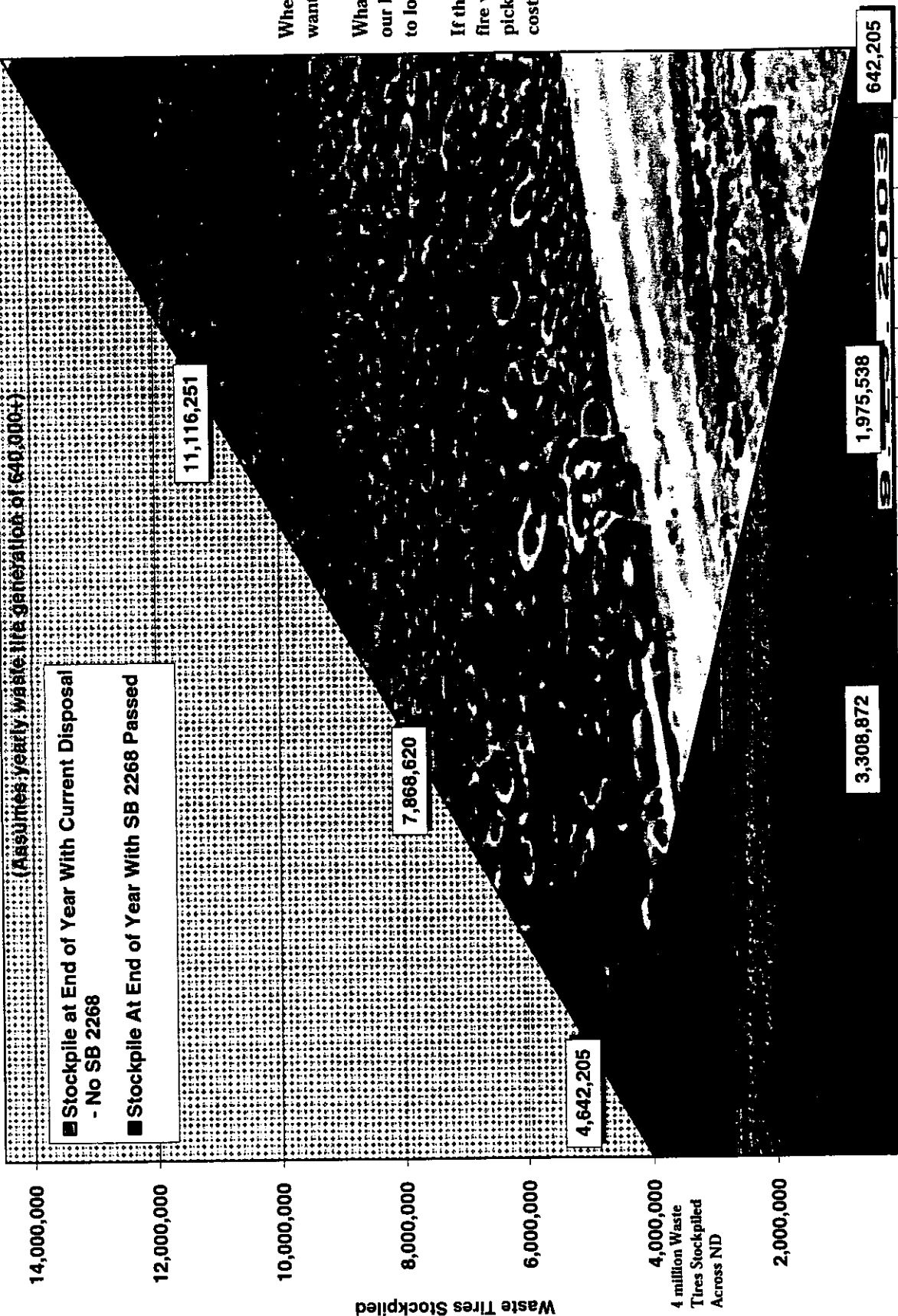
(This chart only represents the 10 + million waste tires generated in ND between 2005 to 2020.)



| Projected Location of Waste Tires In 2020 | | |
|-------------------------------------------|-----------------|--------------|
| County | % of Generation | % of Storage |
| Cass: | 22% | 1% |
| Burleigh: | 11% | 43% |
| Grand Forks: | 10% | .05% |
| Ward: | 9% | 19% |
| Benson | 1.15% | 10% |
| Sargent | .66% | 14% |

Projected Cumulation of Waste Tires In North Dakota

2005 to 2020



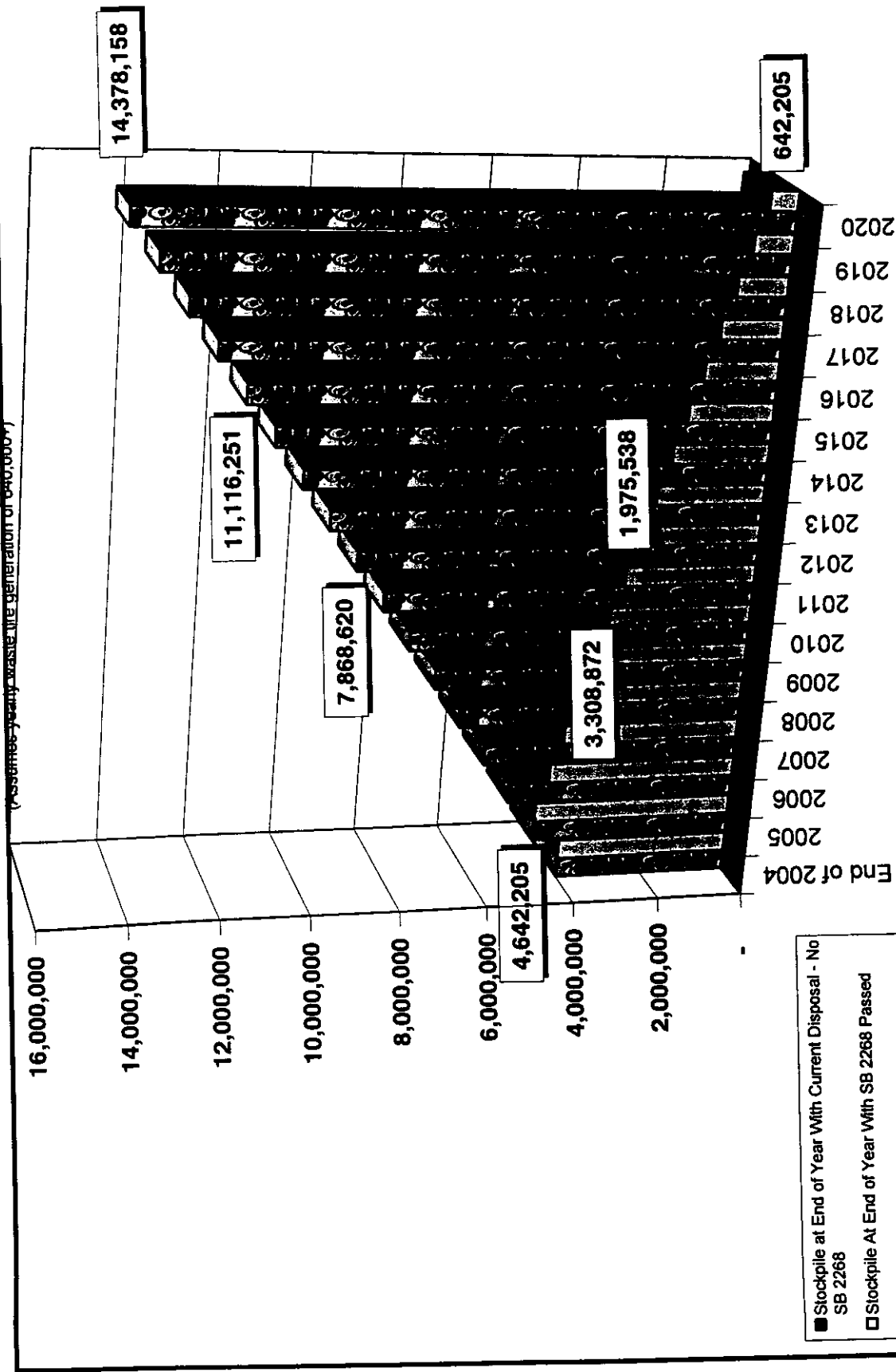
Where do we want to be?

What do want our landscape to look like?

If there is a fire who will pick up the costs?

Projected Cumulation of Waste Tires In North Dakota 2005 to 2020

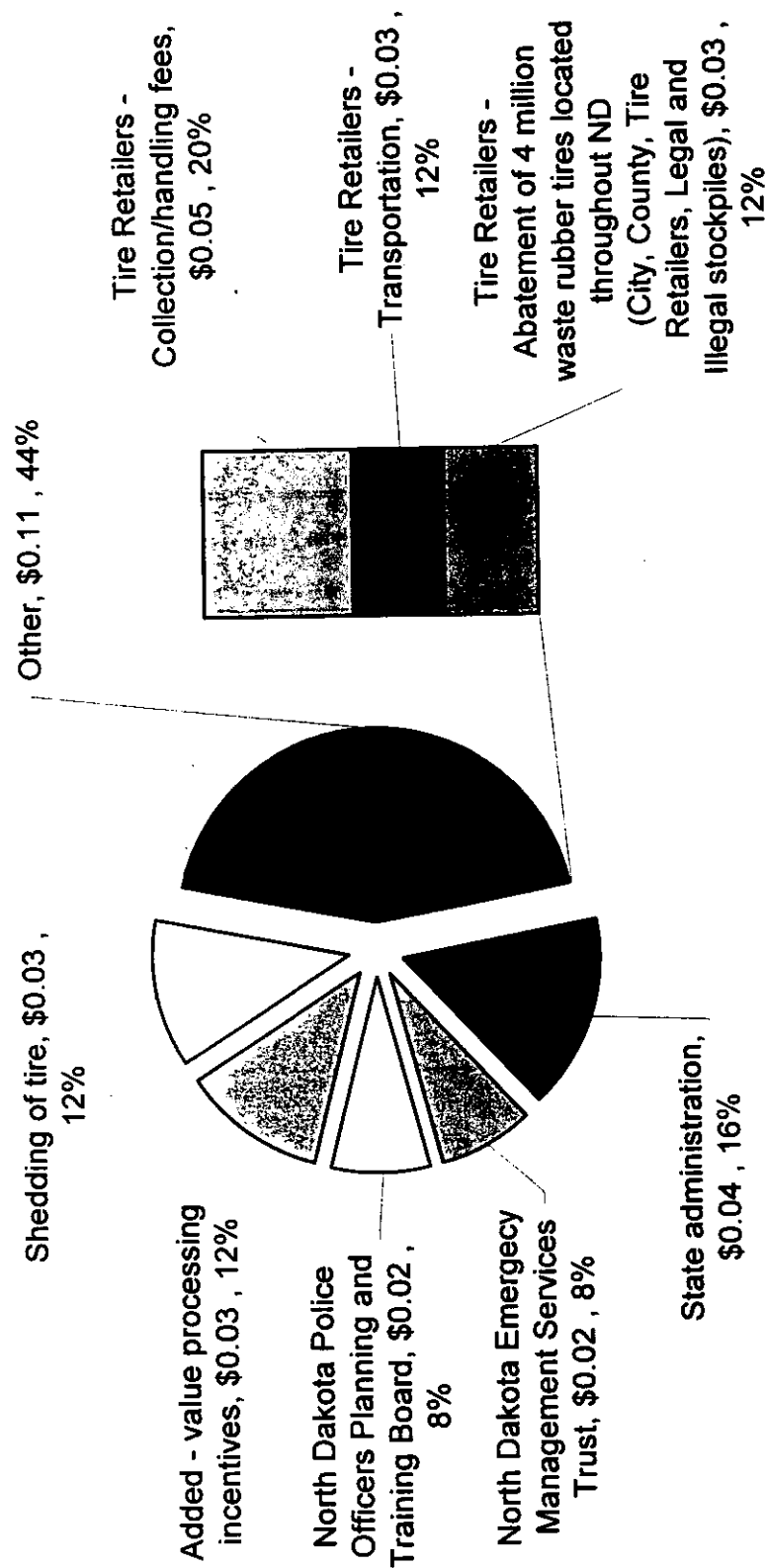
(Assumes yearly waste tire generation of 640,000*)



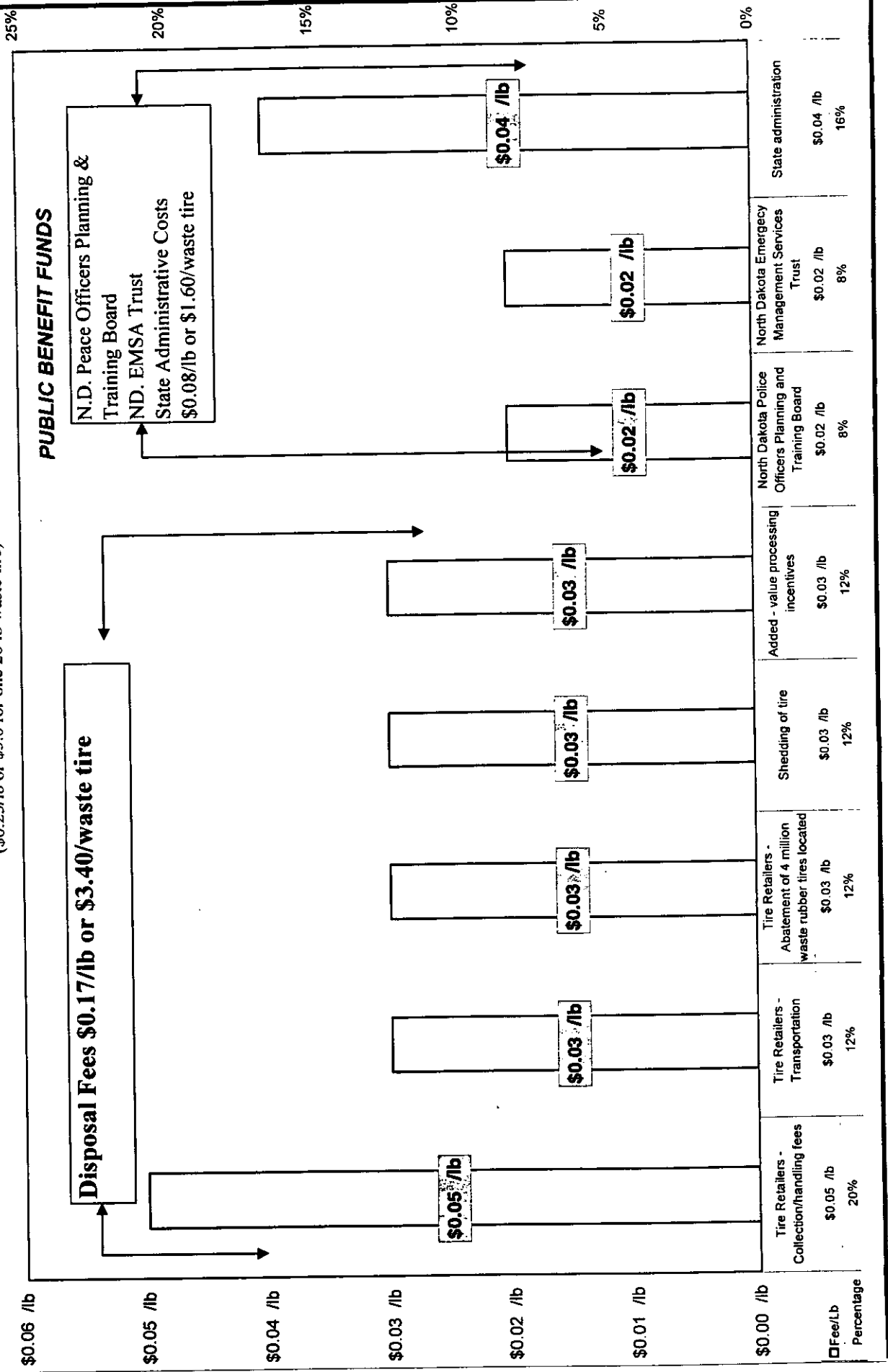
Distribution Schedule of Resource Recovery Conservation Fees

| Purpose/line item | | Line Item Dollars | Total Dollars | Dollars per waste tire | % of Purpose |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------|---------------------------|---------------------------|
| Disposal Costs | | | | | Disposal Costs |
| Tire Retailers | Tire Retailers - Collection/handling fees | \$642,200 | | \$1.00 | 20% |
| Department of Health | Tire Retailers - Transportation | \$385,320 | | \$0.60 | 12% |
| | Tire Retailers - Abatement of 4 million waste rubber tires located throughout ND (City, County, Tire Retailers, Legal and Illegal stockpiles) | <u>\$385,320</u> | | \$0.60 | 12% |
| | Total for Tire Retailers (Collection/transportation/abatement of existing tire piles) | | \$1,412,840 | \$2.20 | 44% |
| Resource Recovery of Energy/Material From Waste Rubber | | | | | |
| | Shedding of tire | \$385,320 | | \$0.60 | 12% |
| | Added - value processing incentives | <u>\$385,320</u> | | \$0.60 | 12% |
| | Total for Resource Recover of Energy/Materials From Waste Rubber | | \$770,640 | \$1.20 | 24% |
| | Total for Disposal | | \$2,183,480 | \$3.40 | 68% |
| Public Benefit Services | | | | | |
| Tax Commissioner | North Dakota Police Officers Planning and Training Board | \$256,880 | | \$0.40 | |
| Tax Commissioner | North Dakota Emergency Management Services Trust | <u>\$256,880</u> | | \$0.40 | |
| | Totals For Public Benefit Services | | \$513,760 | \$0.80 | 16% |
| Tax Commissioner | State Administration | <u>\$513,760</u> | | \$0.80 | 16% |
| | Totals for state administration | | \$513,760 | | |
| | Totals | | \$3,211,000 | \$5.00 | 100% |
| Waste Tires Generated Yearly In North Dakota | | 642,200 | | | |

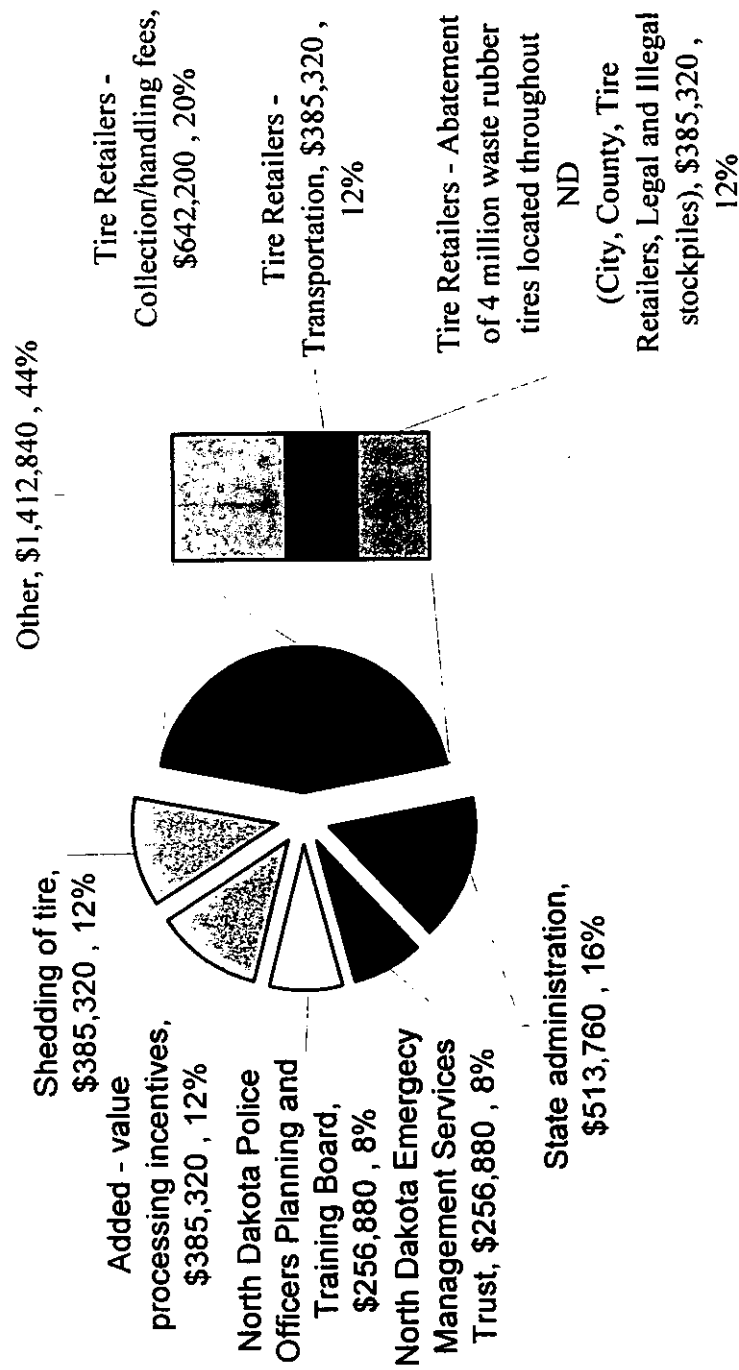
Resource Recovery Fee Distribution of \$0.25/lb RRC Fee



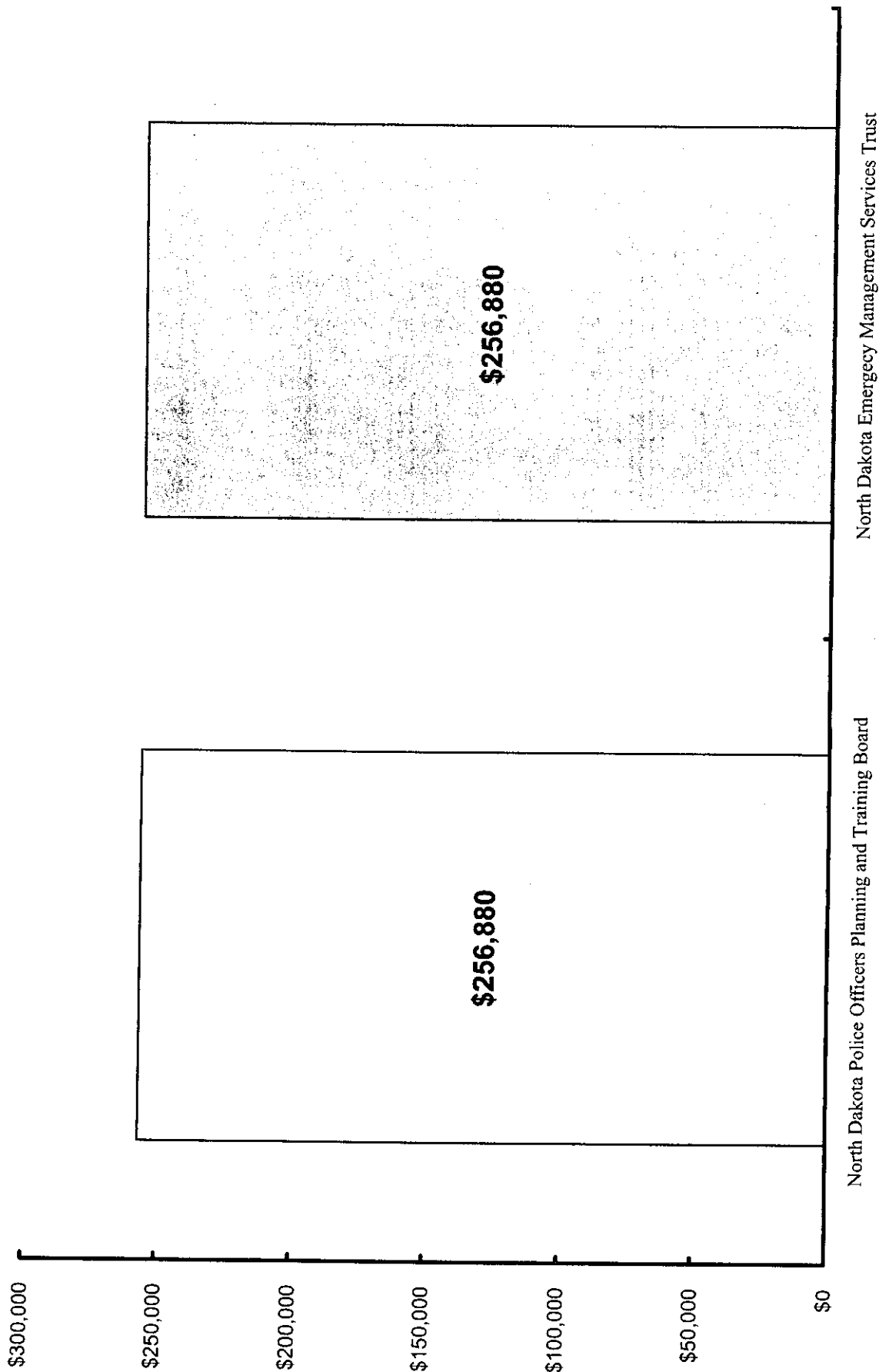
Resource Recovery and Conservation Fee (\$0.25/lb or \$5.0 for one 20 lb waste tire)



Distribution of \$3.2 Million In RRC Fees Collected Each Year



Public Benefit
 Traffic Services and Emergency Response Service Fees
 \$0.06/lb or \$1.20 for each category
 Total \$2.40 per 20 lb tire



North Dakota
Waste Tires Generated by County
(2005 to 2020)

| County | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | 131,097 | 132,422 | 133,748 | 135,073 | 136,399 | 137,724 | 139,155 | 140,586 | 142,016 |
| Heigh | 70,524 | 70,925 | 71,327 | 71,728 | 72,130 | 72,531 | 72,801 | 73,071 | 73,341 |
| Grand Forks | 66,545 | 66,746 | 66,947 | 67,149 | 67,350 | 67,551 | 67,638 | 67,726 | 67,813 |
| Ward | 57,427 | 57,287 | 57,147 | 57,008 | 56,868 | 56,728 | 56,652 | 56,576 | 56,501 |
| Morton | 26,272 | 26,514 | 26,756 | 26,997 | 27,239 | 27,481 | 27,695 | 27,909 | 28,122 |
| Stark | 22,220 | 22,230 | 22,240 | 22,250 | 22,260 | 22,270 | 22,276 | 22,282 | 22,289 |
| Stutsman | 21,452 | 21,417 | 21,382 | 21,348 | 21,313 | 21,278 | 21,230 | 21,182 | 21,133 |
| Williams | 18,556 | 18,437 | 18,317 | 18,198 | 18,078 | 17,959 | 17,831 | 17,703 | 17,574 |
| Richland | 17,715 | 17,686 | 17,657 | 17,628 | 17,599 | 17,570 | 17,539 | 17,508 | 17,476 |
| Rolette | 13,687 | 13,743 | 13,798 | 13,854 | 13,909 | 13,965 | 13,976 | 13,987 | 13,997 |
| Barnes | 11,574 | 11,572 | 11,570 | 11,568 | 11,566 | 11,564 | 11,577 | 11,590 | 11,603 |
| Ramsey | 11,591 | 11,562 | 11,533 | 11,505 | 11,476 | 11,447 | 11,400 | 11,353 | 11,306 |
| Walsh | 11,621 | 11,545 | 11,468 | 11,392 | 11,315 | 11,239 | 11,146 | 11,054 | 10,961 |
| McLean | 8,973 | 8,942 | 8,912 | 8,881 | 8,851 | 8,820 | 8,781 | 8,743 | 8,704 |
| Traill | 8,263 | 8,239 | 8,214 | 8,190 | 8,165 | 8,141 | 8,110 | 8,079 | 8,049 |
| Pembina | 8,254 | 8,228 | 8,202 | 8,177 | 8,151 | 8,125 | 8,094 | 8,063 | 8,033 |
| Mercer | 8,151 | 8,071 | 7,991 | 7,911 | 7,831 | 7,751 | 7,687 | 7,623 | 7,559 |
| Benson | 7,101 | 7,147 | 7,192 | 7,238 | 7,283 | 7,329 | 7,377 | 7,426 | 7,474 |
| Bottineau | 6,839 | 6,803 | 6,768 | 6,732 | 6,697 | 6,661 | 6,613 | 6,565 | 6,516 |
| Mountrail | 6,492 | 6,497 | 6,502 | 6,508 | 6,513 | 6,518 | 6,518 | 6,517 | 6,517 |
| Ransom | 5,834 | 5,836 | 5,838 | 5,840 | 5,842 | 5,844 | 5,847 | 5,850 | 5,854 |
| McHenry | 5,787 | 5,782 | 5,776 | 5,771 | 5,765 | 5,760 | 5,755 | 5,750 | 5,746 |
| Dickey | 5,536 | 5,514 | 5,492 | 5,470 | 5,448 | 5,426 | 5,414 | 5,402 | 5,389 |
| McKenzie | 5,391 | 5,352 | 5,313 | 5,275 | 5,236 | 5,197 | 5,164 | 5,131 | 5,099 |
| Pierce | 4,575 | 4,576 | 4,577 | 4,577 | 4,578 | 4,579 | 4,561 | 4,543 | 4,526 |
| Is | 4,783 | 4,745 | 4,707 | 4,669 | 4,631 | 4,593 | 4,547 | 4,501 | 4,455 |
| gent | 4,258 | 4,252 | 4,247 | 4,241 | 4,236 | 4,230 | 4,229 | 4,228 | 4,227 |
| LaMoure | 4,466 | 4,435 | 4,404 | 4,372 | 4,341 | 4,310 | 4,269 | 4,228 | 4,186 |
| Sioux | 4,096 | 4,121 | 4,147 | 4,172 | 4,198 | 4,223 | 4,221 | 4,220 | 4,218 |
| Emmons | 4,187 | 4,171 | 4,154 | 4,138 | 4,121 | 4,105 | 4,069 | 4,033 | 3,997 |
| Cavalier | 4,391 | 4,327 | 4,263 | 4,198 | 4,134 | 4,070 | 4,022 | 3,974 | 3,926 |
| Nelson | 3,603 | 3,601 | 3,599 | 3,596 | 3,594 | 3,592 | 3,585 | 3,579 | 3,572 |
| Foster | 3,637 | 3,621 | 3,605 | 3,589 | 3,573 | 3,557 | 3,525 | 3,492 | 3,460 |
| Dunn | 3,435 | 3,405 | 3,374 | 3,344 | 3,313 | 3,283 | 3,248 | 3,214 | 3,179 |
| Bowman | 3,177 | 3,178 | 3,179 | 3,179 | 3,180 | 3,181 | 3,166 | 3,152 | 3,137 |
| McIntosh | 3,142 | 3,122 | 3,102 | 3,081 | 3,061 | 3,041 | 3,016 | 2,991 | 2,967 |
| Eddy | 2,669 | 2,662 | 2,655 | 2,647 | 2,640 | 2,633 | 2,616 | 2,600 | 2,583 |
| Towner | 2,666 | 2,637 | 2,608 | 2,579 | 2,550 | 2,521 | 2,505 | 2,489 | 2,472 |
| Griggs | 2,557 | 2,529 | 2,501 | 2,474 | 2,446 | 2,418 | 2,389 | 2,359 | 2,330 |
| Renville | 2,425 | 2,410 | 2,396 | 2,381 | 2,367 | 2,352 | 2,342 | 2,331 | 2,321 |
| Kidder | 2,548 | 2,515 | 2,483 | 2,450 | 2,418 | 2,385 | 2,347 | 2,309 | 2,270 |
| Grant | 2,531 | 2,488 | 2,446 | 2,403 | 2,361 | 2,318 | 2,275 | 2,232 | 2,190 |
| Adams | 2,365 | 2,334 | 2,302 | 2,271 | 2,239 | 2,208 | 2,181 | 2,155 | 2,128 |
| Hettinger | 2,432 | 2,391 | 2,350 | 2,310 | 2,269 | 2,228 | 2,192 | 2,155 | 2,119 |
| Steele | 2,190 | 2,179 | 2,168 | 2,156 | 2,145 | 2,134 | 2,128 | 2,121 | 2,115 |
| Logan | 2,202 | 2,185 | 2,167 | 2,150 | 2,132 | 2,115 | 2,098 | 2,082 | 2,065 |
| Oliver | 1,995 | 1,984 | 1,973 | 1,961 | 1,950 | 1,939 | 1,925 | 1,911 | 1,896 |
| Burke | 2,024 | 2,001 | 1,978 | 1,954 | 1,931 | 1,908 | 1,882 | 1,857 | 1,831 |
| Golden Valley | 1,856 | 1,845 | 1,834 | 1,822 | 1,811 | 1,800 | 1,785 | 1,769 | 1,754 |
| Divide | 2,006 | 1,964 | 1,922 | 1,880 | 1,838 | 1,796 | 1,757 | 1,718 | 1,678 |
| Sheridan | 1,562 | 1,545 | 1,528 | 1,511 | 1,494 | 1,477 | 1,463 | 1,449 | 1,436 |
| Willings | 815 | 807 | 799 | 791 | 783 | 775 | 765 | 756 | 747 |
| Pe | 705 | 699 | 693 | 687 | 681 | 675 | 668 | 661 | 654 |
| Totals By Year | 642,205 | 643,231 | 644,257 | 645,283 | 646,309 | 647,335 | 648,065 | 648,796 | 649,526 |

North Dakota
Waste Tires Generated by County

(2005 to 2020)

| County | 2014 | 2015 | (Assumes 1 waste tire per man, woman child per year) 2016 | 2017 | 2018 | 2019 | 2020 | Cumulative waste tires |
|----------------|---------|---------|--------------------------------------------------------------|---------|---------|---------|---------|---------------------------|
| | 143,449 | 144,880 | 146,234 | 147,588 | 148,943 | 150,297 | 151,651 | 2,261,264 |
| Burleigh | 73,611 | 73,881 | 74,050 | 74,219 | 74,389 | 74,558 | 74,727 | 1,167,813 |
| Grand Forks | 67,901 | 67,988 | 68,038 | 68,088 | 68,138 | 68,188 | 68,238 | 1,082,044 |
| Ward | 56,425 | 56,349 | 56,241 | 56,133 | 56,025 | 55,917 | 55,809 | 905,093 |
| Morton | 28,336 | 28,550 | 28,744 | 28,938 | 29,133 | 29,327 | 29,521 | 447,534 |
| Stark | 22,295 | 22,301 | 22,313 | 22,325 | 22,336 | 22,348 | 22,360 | 356,595 |
| Stutsman | 21,085 | 21,037 | 20,977 | 20,917 | 20,857 | 20,797 | 20,737 | 338,142 |
| Williams | 17,446 | 17,318 | 17,190 | 17,062 | 16,935 | 16,807 | 16,679 | 282,090 |
| Richland | 17,445 | 17,414 | 17,375 | 17,336 | 17,296 | 17,257 | 17,218 | 279,719 |
| Rolette | 14,008 | 14,019 | 14,021 | 14,023 | 14,025 | 14,027 | 14,029 | 223,068 |
| Barnes | 11,616 | 11,629 | 11,638 | 11,647 | 11,657 | 11,666 | 11,675 | 185,712 |
| Ramsey | 11,259 | 11,212 | 11,161 | 11,110 | 11,060 | 11,009 | 10,958 | 180,942 |
| Walsh | 10,869 | 10,776 | 10,688 | 10,600 | 10,512 | 10,424 | 10,336 | 175,946 |
| McLean | 8,666 | 8,627 | 8,586 | 8,545 | 8,505 | 8,464 | 8,423 | 139,423 |
| Traill | 8,018 | 7,987 | 7,944 | 7,901 | 7,857 | 7,814 | 7,771 | 128,742 |
| Pembina | 8,002 | 7,971 | 7,939 | 7,907 | 7,874 | 7,842 | 7,810 | 128,672 |
| Mercer | 7,495 | 7,431 | 7,398 | 7,365 | 7,333 | 7,300 | 7,267 | 122,164 |
| Benson | 7,523 | 7,571 | 7,624 | 7,677 | 7,729 | 7,782 | 7,835 | 119,308 |
| Bottineau | 6,468 | 6,420 | 6,376 | 6,333 | 6,289 | 6,246 | 6,202 | 104,528 |
| Mountrail | 6,516 | 6,516 | 6,513 | 6,511 | 6,508 | 6,506 | 6,503 | 104,155 |
| Ransom | 5,857 | 5,860 | 5,856 | 5,852 | 5,848 | 5,844 | 5,840 | 93,542 |
| McHenry | 5,741 | 5,736 | 5,729 | 5,722 | 5,715 | 5,708 | 5,701 | 91,944 |
| Dickey | 5,377 | 5,365 | 5,349 | 5,332 | 5,316 | 5,299 | 5,283 | 86,412 |
| McKenzie | 5,066 | 5,033 | 5,011 | 4,989 | 4,968 | 4,946 | 4,924 | 82,095 |
| Force | 4,508 | 4,490 | 4,464 | 4,438 | 4,412 | 4,386 | 4,360 | 72,150 |
| s | 4,410 | 4,364 | 4,310 | 4,256 | 4,202 | 4,148 | 4,094 | 71,416 |
| rgent | 4,226 | 4,225 | 4,234 | 4,244 | 4,253 | 4,263 | 4,272 | 67,865 |
| LaMoure | 4,145 | 4,104 | 4,063 | 4,022 | 3,980 | 3,939 | 3,898 | 67,162 |
| Sioux | 4,217 | 4,215 | 4,214 | 4,212 | 4,211 | 4,209 | 4,208 | 67,102 |
| Emmons | 3,961 | 3,925 | 3,882 | 3,839 | 3,796 | 3,753 | 3,710 | 63,841 |
| Cavalier | 3,878 | 3,830 | 3,787 | 3,744 | 3,700 | 3,657 | 3,614 | 63,515 |
| Nelson | 3,566 | 3,559 | 3,556 | 3,552 | 3,549 | 3,545 | 3,542 | 57,190 |
| Foster | 3,427 | 3,395 | 3,359 | 3,323 | 3,288 | 3,252 | 3,216 | 55,319 |
| Dunn | 3,145 | 3,110 | 3,073 | 3,037 | 3,000 | 2,964 | 2,927 | 51,051 |
| Bowman | 3,123 | 3,108 | 3,094 | 3,080 | 3,066 | 3,052 | 3,038 | 50,090 |
| McIntosh | 2,942 | 2,917 | 2,887 | 2,858 | 2,828 | 2,799 | 2,769 | 47,523 |
| Eddy | 2,567 | 2,550 | 2,534 | 2,518 | 2,502 | 2,486 | 2,470 | 41,332 |
| Towner | 2,456 | 2,440 | 2,428 | 2,417 | 2,405 | 2,394 | 2,382 | 39,949 |
| Griggs | 2,300 | 2,271 | 2,237 | 2,202 | 2,168 | 2,133 | 2,099 | 37,413 |
| Renville | 2,310 | 2,300 | 2,293 | 2,286 | 2,280 | 2,273 | 2,266 | 37,333 |
| Kidder | 2,232 | 2,194 | 2,154 | 2,114 | 2,075 | 2,035 | 1,995 | 36,524 |
| Grant | 2,147 | 2,104 | 2,061 | 2,018 | 1,976 | 1,933 | 1,890 | 35,373 |
| Adams | 2,102 | 2,075 | 2,053 | 2,030 | 2,008 | 1,985 | 1,963 | 34,399 |
| Hettinger | 2,082 | 2,046 | 2,012 | 1,978 | 1,945 | 1,911 | 1,877 | 34,297 |
| Steele | 2,108 | 2,102 | 2,096 | 2,091 | 2,085 | 2,080 | 2,074 | 33,972 |
| Logan | 2,049 | 2,032 | 2,009 | 1,987 | 1,964 | 1,942 | 1,919 | 33,098 |
| Oliver | 1,882 | 1,868 | 1,854 | 1,840 | 1,827 | 1,813 | 1,799 | 30,417 |
| Burke | 1,806 | 1,780 | 1,761 | 1,742 | 1,724 | 1,705 | 1,686 | 29,570 |
| Golden Valley | 1,738 | 1,723 | 1,710 | 1,697 | 1,684 | 1,671 | 1,658 | 28,157 |
| Divide | 1,639 | 1,600 | 1,564 | 1,528 | 1,492 | 1,456 | 1,420 | 27,258 |
| Sheridan | 1,422 | 1,408 | 1,399 | 1,390 | 1,382 | 1,373 | 1,364 | 23,203 |
| Wings | 737 | 727 | 717 | 708 | 698 | 689 | 679 | 11,992 |
| pe | 646 | 639 | 632 | 625 | 619 | 612 | 605 | 10,500 |
| Totals By Year | 650,257 | 650,987 | 651,452 | 651,917 | 652,381 | 652,846 | 653,311 | 10,345,958 |

North Dakota
Waste Tires Generated by County

(2005 to 2020)

(tire per man, woman child per year)

| County | Average Waste | County's % of Generation | County's % of Waste Tire Storage |
|---------------|---------------|--------------------------|----------------------------------|
| | 141,329 | 21.86% | 1.09% |
| Heigh | 72,988 | 11.29% | 43.27% |
| Grand Forks | 67,628 | 10.46% | 0.52% |
| Ward | 56,568 | 8.75% | 19.40% |
| Morton | 27,971 | 4.33% | 1.08% |
| Stark | 22,287 | 3.45% | 0.86% |
| Stutsman | 21,134 | 3.27% | 0.81% |
| Williams | 17,631 | 2.73% | 0.68% |
| Richland | 17,482 | 2.70% | 0.67% |
| Rolette | 13,942 | 2.16% | 0.54% |
| Barnes | 11,607 | 1.80% | 0.45% |
| Ramsey | 11,309 | 1.75% | 0.44% |
| Walsh | 10,997 | 1.70% | 0.42% |
| McLean | 8,714 | 1.35% | 0.34% |
| Trall | 8,046 | 1.24% | 0.31% |
| Pembina | 8,042 | 1.24% | 0.31% |
| Mercer | 7,635 | 1.18% | 0.29% |
| Benson | 7,457 | 1.15% | 10.29% |
| Bottineau | 6,533 | 1.01% | 0.25% |
| Mountrail | 6,510 | 1.01% | 0.25% |
| Ransom | 5,846 | 0.90% | 0.23% |
| McHenry | 5,747 | 0.89% | 0.22% |
| Dickey | 5,401 | 0.84% | 0.21% |
| McKenzie | 5,131 | 0.79% | 0.20% |
| Pierce | 4,509 | 0.70% | 0.17% |
| ls | 4,464 | 0.69% | 0.17% |
| gent | 4,242 | 0.66% | 14.00% |
| LaMoure | 4,198 | 0.65% | 0.16% |
| Sioux | 4,194 | 0.65% | 0.16% |
| Emmons | 3,990 | 0.62% | 0.15% |
| Cavalier | 3,970 | 0.61% | 0.15% |
| Nelson | 3,574 | 0.55% | 0.14% |
| Foster | 3,457 | 0.53% | 0.13% |
| Dunn | 3,191 | 0.49% | 0.12% |
| Bowman | 3,131 | 0.48% | 0.12% |
| McIntosh | 2,970 | 0.46% | 0.11% |
| Eddy | 2,583 | 0.40% | 0.10% |
| Towner | 2,497 | 0.39% | 0.10% |
| Griggs | 2,338 | 0.36% | 0.09% |
| Renville | 2,333 | 0.36% | 0.09% |
| Kidder | 2,283 | 0.35% | 0.09% |
| Grant | 2,211 | 0.34% | 0.09% |
| Adams | 2,150 | 0.33% | 0.08% |
| Hettinger | 2,144 | 0.33% | 0.08% |
| Steele | 2,123 | 0.33% | 0.08% |
| Logan | 2,069 | 0.32% | 0.08% |
| Oliver | 1,901 | 0.29% | 0.07% |
| Burke | 1,848 | 0.29% | 0.07% |
| Golden Valley | 1,760 | 0.27% | 0.07% |
| Divide | 1,704 | 0.26% | 0.07% |
| Sheridan | 1,450 | 0.22% | 0.06% |
| Wings | 750 | 0.12% | 0.03% |
| ope | 656 | 0.10% | 0.03% |
| Totals By Yea | 646,622 | 100.00% | 100.00% |

Good Morning, my name is Ervin Lee.

I want to thank you for the opportunity to meet with you, explain the reasons why I drafted S.B. 2268, and, then to ask you for a do – pass on this vital piece of legislation.

I want to thank Senators Kresbach, O'Connell and Seymour and Representatives Froseth, Ekstrom and Kerzman for their willingness to put their names and support behind this legislation. Since, my spouse, Kari Conrad, is a freshman legislator and has been asked to support or sign onto several different bills, I can personally appreciate the faith and willingness of these legislators to introduce and support a major piece of legislation – that is S.B. 2268.

I am a lawyer in Minot, ND. I am a graduate of UND. I farmed for several years before becoming an attorney. One of the lingering effects from farming was the fun in producing physical products – such as grain.

I also am an entrepreneur. Throughout my law practice, I have found myself intrigued by the potential of finding a product which could be manufactured here and exported outside of the state.

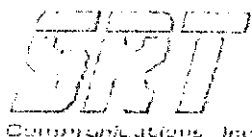
On our farm at Berthold ND we have built equipment that will reprocess the waste tires back into re-usable by-products of gas, oil, steel, and carbon reinforcing material.

This bill is good for North Dakota is several ways.

1. This is a long term solution to a hazardous waste problem
 - a. It will be able to support the clean up an environmental problem that is growing in the state/nation. (New York has this type of tire disposal fee.)
2. This solution provides a level playing field for all retailers and eliminates the incentive to use inappropriate disposal techniques.
 - a. Tire buyers will be paying a standard fee across the state. Tire pricing will show true costs and not profits hidden in the disposal fee.
3. There is funding for a programmatic solution to abatement issues that is long term in nature and therefore manageable
 - a. Tires will be fully disposed of which removes the liability issues for the tire suppliers. In some tire fires the tire suppliers were liable (serial numbers on the tires traced back to the suppliers) for some of the cleanup costs because the tires had not been properly disposed.
4. This bill provides an incentive to find the "best use" for waste rubber.
 - a. SB 2268 is designed to encourage the development of technologies which can extract the oil, gas, carbon black from waste rubber.
5. It would bring a new industry into North Dakota which will be able to produce commercial products from waste rubber that in the past have not be economical to produce. Jobs will be created to operate this equipment.

6. It would bring a new manufacturing company to North Dakota that would be constructing this equipment (see picture) which will be sold to the nation and other countries.
 - a. The plant can process approximately 300,000 tires per year.
 - b. In the US there is over 290 million waste tires generated yearly.
7. This potential company when in full production would employ 30 to 50 people and would have annual sales ranging from \$30-\$50 million. In addition, it would be obtaining many of its component parts from various companies around the state.
 - a. We want to outsource our manufacturing within ND. Whether it be in Williston, Dickinson, Newberg, Bismarck, Jamestown or Minot. We believe the infrastructure is in place to try a distributed manufacturing approach.
8. Potential to reduce net energy costs for the state and nation.
 - a. Recovery of the energy and material contained in a waste tire will save approximately 11 gallons of crude oil.
 - b. For ND – this means 119,000 barrels of crude oil per year.
 - c. For the US – this could mean a reduction in the need to import 75 million barrels of crude oil per year.
9. Potential to recover a major source of energy.
 - a. Our process recovers 1.1 gallon of a # 4 or 5 oil per tire – a refined oil.
 - b. In ND this means about 12,000 barrels of refined oil per year.
 - c. For the US this means about 8 million barrels of refined oil per year.
10. Potential to reduce greenhouse gases
 - a. Approximately 143 lbs of CO2 is generated in the extraction, transporting and refining of the oil, coal, iron ore, etc. needed to make the rubber, carbon black and steel contained in tires.
 - b. If the energy and material contained in ND were recovered this means a reduction of CO2 of 348,000 tons/year.
 - c. For the US this could mean approximately 11 million tons of CO2/year.
11. Provides funding for
 - a. Emergency Management Services
 - i. Rural ambulance services
 - b. Law enforcement training
12. Has the support of
 - a. Burleigh County
 - b. Grand Forks County
 - c. Ward County
 - d. Minot City Council
 - e. Jamestown City Council
13. Has the support of the City of Moorhead, MN
 - a. Moorhead is willing to assist in having a similar bill introduced in the Minnesota legislature so that there will be parity in disposal fees and policies between the border counties.

Thank you, I will be happy to answer any questions you may have.



Services

Web-Mailbox Tools

- ▶ Check Mail
- ▶ Compose

- ▶ Addresses
- ▶ Folders
- ▶ Search
- ▶ Message Center

- ▶ Options
- ▶ Help

- ▶ Empty Trash
- ▶ Logout

Status Descriptions

- ☐ Unread
- ☐ Read
- ☐ New
- 📎 Attachment
- ◆ Replied
- ✕ Deleted

Previous

To: "Ervin Lee" <ervlee@srt.com>, "Ervin Lee" <leelawoffice@srt.com>
Subject: SB 2268
CC:
Date: Tue, 08 Feb 2005 21:55:12 -0600
Status: 3 (Normal)
From: "Duane Erickson" <lesystems@srt.com>

Reply-to: "Duane Erickson" <lesystems@srt.com>

Attachments: default.htm image001.jpg

default.htm

Ervin, This is what I sent to each of the Senators,

Duane

Senator

I am the engineer and builder of the equipment that will reprocess the waste tires back

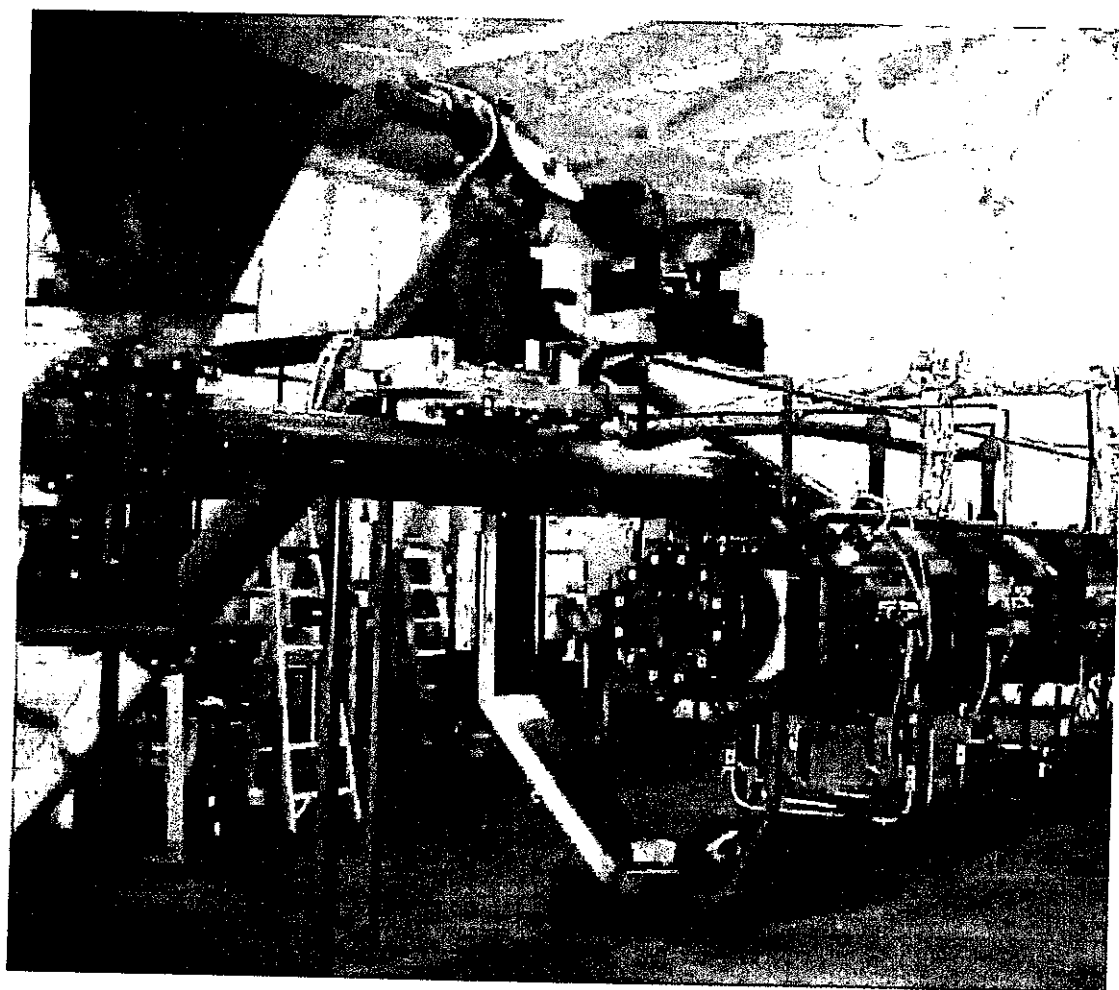
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3. Tires will be fully disposed of which removes the liability issues for the tire sup
4. It would bring a new industry into North Dakota which will be abl
5. It would bring a new manufacturing company to North Dakota that wo

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Please approve SB 2268. It's good for North Dakota.

Respectfully,

Duane Erickson





Testimony of Dave MacIver
President, Greater North Dakota Chamber of Commerce
Presented to the
Senate Appropriations Committee
February 9, 2005

SB 2268

Mr. Chairman and members of the Senate Appropriations Committee, my name is Dave MacIver, and I am the President of the Greater North Dakota Chamber of Commerce. I am here today representing a coalition of a number of associations, many of which are in this room to urge you to oppose Senate Bill 2268.

We oppose this bill for several reasons. First, as we understand it, this bill would make North Dakota the nation's leader for tax on rubber-based products; plus, it puts a tax burden on the citizens of North Dakota in the amount of over ten million dollars. This bill would effectively hurt many North Dakota businesses, especially in towns near our borders. Tire service and tire retailers are not going to be able to compete with out of state retailers with such a drastic shift in cost of tires.

For the committee's information, the following is a list of costs that the consumer would have to pay in North Dakota for new tires:

- A typical passenger car tire weighs 20 lbs.; Additional cost at \$.25/lb = **\$5.00-\$6.25 / tire**
- A typical pickup tire weighs 35 lbs.; Additional cost at \$.25/lb = **\$8.75 / tire**
- A large semi-truck tire weighs up to 105 lbs.; Additional cost at \$.25/lb = **\$26.25 / tire**

Information obtained from Iowa DNR website: <http://www.iowadnr.com/waste/recycling/tires/facts.html>.

We are also concerned that tire service stations and tire retailers of all sizes would be burdened with keeping a data base of how much each tire weighs in order to determine the appropriate amount of tax. This would be cumbersome and difficult to manage for these businesses, as there are hundreds of different weights, and these weights would change with each new tire depending on chemical makeup, size, and performance. Also, this bill would mandate that the businesses keep track of weights for each belt and hose that they sell. This would be extremely costly as many of these businesses carry thousands of different items, with each item having a different weight.

This bill would mandate that any tire service or tire retailer shall accept waste rubber from the customer. It is our understanding that there has not been a problem for customers to get rid of tires, as businesses see this as a service they need to provide, otherwise, they would lose customers. Mandates are bad for business as they take away choice, add cost, disrupt the free market economy, and cause unintended consequences.

Lastly, we believe the current recycling system is working just fine without such legislation. Tire retailers are currently paying about \$1.50 to \$2.00 per passenger car size tire to have them recycled. Some retailers pass this cost on to the consumer. The recycled tires are chipped and sold to power generation companies to reduce their use of other energy sources. By adding a tax when purchasing new tires, this bill would be taxing the rubber-based products at the point of sale and then at the end of the product cycle when disposing of them.

Thank you, Chairman Holmberg and members of the Senate Appropriations Committee, for this opportunity to discuss the issues surrounding SB 2268. We urge a **DO NOT PASS** for SB 2268.

I welcome your questions.

The following associations are members of a coalition that oppose SB 2268:

Associated General Contractors of North Dakota

Bismarck/Mandan Chamber of Commerce

Greater North Dakota Chamber of Commerce

Lignite Energy Council

North Dakota Automobile & Implement Dealers Association

North Dakota Farm Bureau

North Dakota Farmers Union

North Dakota Motor Carriers Association

North Dakota Retail & Petroleum Marketers Association

Testimony

Senate Bill 2268

House Natural Resources Committee

Friday, March 4, 2005; 10:15 a.m.

North Dakota Department of Health

Good morning, Chairman Nelson and members of the House Natural Resources Committee. My name is Wayne Kern, and I am director of the Division of Waste Management for the North Dakota Department of Health. I am here today to provide testimony in support of the Senate amendments to Senate Bill 2268, which provides for a Legislative Council study of waste rubber recycling and remediation in North Dakota.

On February 3, the Department of Health testified before the Senate Natural Resources Committee in opposition to Senate Bill 2268 as it was originally introduced. The department identified a number of concerns regarding the bill and indicated that a simpler, less resource-intensive and more workable approach was needed to address the matter of waste tires and other waste rubber through legislation. The bill was subsequently amended to the version before you today.

The Department of Health supports recycling and reuse of solid waste. The study provided in this bill could identify cost-effective recycling and alternative use opportunities with respect to waste tires and other waste rubber in the state.

The management of scrap tires and other waste rubber is a significant solid waste issue. Improperly managed waste tires can blight the landscape and lower property values. They also pose significant public health, safety and environmental concerns. Improperly managed waste tires increase the potential for disease transmission and fires that can result in significant land, air and water pollution.

In North Dakota, waste tires represent a small portion of the total annual waste, estimated to be less than 2 percent by weight. Despite this low percentage, waste tires present unique challenges. The largest landfills in North Dakota do not dispose of whole tires because they are bulky and difficult to bury. Although many tires are sent to legitimate processors or permitted disposal sites, illegal stockpiles have been found in ravines, fence rows, rented warehouses and ditches, creating environmental and liability issues for property owners, tire generators and political subdivisions.

By: Wayne Kern
Pg 2 of 2

In summary, management of scrap tires and other waste rubber is a significant solid waste issue. The Department supports the study provided for in this bill and future legislation that would enable a practical and workable approach to further address this important matter.

This concludes my testimony. I am happy to answer any questions you may have.