AGGREGATE RESOURCES TASK FORCE

Key Points of Presentations and Meeting Transcripts

November 1998 to May 1999

Representative Tom Rukavina

Chairman

June 23, 1999

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Key Points of Presentations to the Aggregate Resources Task Force

From November 1998 to May 1999, the Aggregate Resources Task Force conducted six meetings at which 25 individuals provided information and shared experiences on topics related to aggregate resources. The key points from those presentations are summarized below. Meeting minutes, presenter biographies, and complete transcripts are also available.

November 17, 1998

Legislative History Regarding Aggregate Resources

Dr. William Brice, Director, Division of Minerals, Department of Natural Resources

- Distributed information on current events, the Ad Hoc Aggregate Committee, and information from that committee on resource supply and demand, the industry, and regulations.
- Provided the historical context for events leading to legislation in 1984 that started the DNR county aggregate resource mapping program.
- Discussed changes in the outlook on resource supply in the Metropolitan area from 1984 to the present. [Handouts]

Overview of Minnesota's Aggregate Industry

Mr. Eugene Wright, Director, Aggregate and Readymix Association of Minnesota

- Presented information on aggregate resource production, consumption, recycling, economic impact, and transportation costs.
- Projected future shortfall in aggregate production based on current 2% annual increase in consumption.
- Stated a need to maintain aggregate resource mine sites near population centers of all sizes.
- Discussed potentially significant cost increases to local governments for roads and public facilities if aggregate resources are not available locally.
- Stated a need for new mapping inventory work to identify aggregate resources.
- Stated a need to protect aggregate reserves through land use zoning.
- Stated a need for the task force to review permitting issues and reclamation guidelines.
- Stated a need for technical assistance for local government during permitting.
- Stated a need to convey to citizens and government agencies the importance of aggregate to society and of potential costs. [Overheads]

Overview of County Government's Role in Regard to Aggregate Issues

Mr. Dave Weirens, Policy Analyst, Association of Minnesota Counties

- Reviewed county government involvement with aggregate issues–its authority to regulate gravel pits under conditional use permits, tax revenue from the Aggregate Material Tax for participating counties, consumption of aggregate for county roads and the need to keep costs down, nuisance complaint resolution, and reclamation of old pits.

- Stated a need to maintain local control to effectively implement any task force recommendations.
- Requested a mechanism to conduct more inventories of aggregate resources.
- Requested a means to obtain technical assistance from the state where appropriate during the permitting process.

The Nature Conservancy's Priority Landscapes and the Need for Dialogue on Land Use Conflict
Mr. Robert McKim, State Director, The Nature Conservancy

- Provided a history of The Nature Conservancy's involvement with aggregate issues.
- Stated The Nature Conservancy's priority issue, which is the value of the remaining native prairie on the Agassiz Beach Ridges in northwestern Minnesota.
- Stated a need for scientific information and dialogue on land use conflicts, concluding that thoughtful people with good information usually develop thoughtful solutions.
- Stated the need to obtain more inventories of aggregate resources.
- Promoted private landowner incentives verses public policy to solve natural resources issues.
- Supported incentives during the permitting process to avoid native prairie.
- Stated the need to restore native prairie through reclamation.
- Asked for a review of compliance with the reclamation guidelines in the current Aggregate Material Tax.

January 27, 1999

The Role of Aggregate in the State's Transportation System
Mr. Fred Corrigan, Executive Vice President, Minnesota Transportation Alliance

- Provided information on the state's transportation system, with emphasis upon the economic impacts of hypothetical shifts in modes of transportation for aggregate.
- Outlined significant cost increases (hundreds of millions of dollars) if there is a shift from barge or rail to trucks.
- Stated that the existing road system would be overloaded if all aggregate used in the metropolitan area was brought in by truck. [Overheads]

Dwindling Supply of Aggregate Resources in the Metro Area
Mr. Jonathan Wilmshurst, Regional President, CAMAS Minnesota, Inc.

- Described the diminishing future supply of aggregate resources in the metropolitan area and potential impacts of changing transportation modes to bring aggregate into the metropolitan area.
- Provided an example of the complex technical and social issues encountered during permitting at CAMAS' Shakopee quarry.
- Stated the need to protect all the existing modes of the transportation system.
- Stated the need to identify and protect the future aggregate reserve base in order to keep the business as local as possible to minimize transportation of aggregate to users.

The Challenge of Permitting Aggregate Facilities Near Populated Areas
Mr. Don Vry, Senior Vice President, Meridian Aggregates

- Described Meridian Aggregates' experiences in permitting a quarry at Waite Park [St. Cloud], and Meridian's struggles in maintaining a rail terminal in St. Paul.
- Stated the need to protect existing transportation modes and the transportation system.
- Stated the need to map future aggregate reserves and to develop a comprehensive plan for protecting the reserves for development.
- Requested the task force to research the Aggregate Material Tax and determine if monies are being used for reclamation as the law intended.
- Stated his company is at a competitive disadvantage in Stearns County, where an aggregate materials tax is in effect, in contrast to nearby counties where it is not in effect.
- Cited situations in other states where the cost of aggregate resources has risen to the level equal to the total cost Minnesota users currently pay for bituminous laid down on the road (including aggregate resources).

Aggregate Consumption in the State Highway System
Mr. Paul Rowekamp, Geotechnical Engineer, MNDOT

- Stated a need to have local sources of aggregate because federal and state standards require ready mix concrete and bituminous be placed within 60 minutes after mixing.
- Stated that an adequate future supply of quality aggregate at a reasonable price is more likely if local sources are available and aggregate transportation costs are limited.
- Described that not all aggregate meets the specifications for all end uses, especially for concrete, and stated that just because there is a local source of aggregate, it may not be suitable for all the road building needs. [Overheads]

March 3, 1999

A Consultant's Experience with Aggregate Resource Planning
Mr. John Shardlow, President and Director of Planning; Dahlgren, Shardlow, and Uban, Inc.

- Outlined the objective of aggregate resource planning: "To ensure that the aggregate resources that are such an essential material to support the development and redevelopment of our region are available in sufficient quantities and in close enough proximity to be delivered economically to construction sites."
- Stated that mining operations are intensive, heavy industrial activities and that they are not generally compatible with surrounding residential development.
- Observed that if mining and residential development have to co-exist, for instance, near the end of the life of the operation, it is far better socially, politically, and legally if the mining operation was there first.
- Observed that the larger the land holding, the greater the opportunity for success; larger properties can provide for bigger setbacks, vertical separation of processing, options for access, etc.

- Maintained that cooperative working relationships with local government are essential for companies to operate.
- Stated that responsible, professional operators are essential.
- Stated that a strong local leadership with wisdom, vision, and courage to commit to a *long range vision* is essential.
- Maintained that under the right set of circumstances, mining operations can serve to hold real estate while market opportunities grow. When operations are finished, there is a large, contiguous, environmentally clean site available to accommodate special development, i.e., Centennial Lakes in Edina and Arbor Lakes in Maple Grove. [Overheads]

Elk River Experience Coordinating an Alternative Urban Areawide Review
Mr. Stephen Rohlf, Building and Zoning Administrator, City of Elk River

- Described Elk River's experience coordinating a comprehensive Alternative Urban Area-wide Review (environmental review) involving nine aggregate companies operating within the city limits of Elk River.
- Stated that consolidating the environmental review was cost effective for all the companies involved. Areawide review allowed the development of a comprehensive plan and a mining district overlay that considered wells, reclamation, noise, and the lowering of the roads.

Experiences in Washington County
Mr Lowell Johnson, Manager; Mr. Dennis O'Donnell, Senior Land Use Specialist/Zoning; and Ms. Ann Pung-Terwedo, Senior Land Use Specialist/Zoning; Department of Health, Environment and Land Management, Washington County

- Provided information on the growth that Washington County has experienced over the last two decades.
- Distributed a copy of the Washington County ordinance, provided statistics on the number of companies operating within the county, and a map showing the mine locations.
- Described the County's role as a long time producer of aggregate close to the metropolitan market.
- Provided information on the County's extractive use ordinance, first adopted an in 1972. In the late 1980s, the ordinance was revised in response to public concerns about aggregate mining. The current ordinance sets forth performance standards, requires a mining and reclamation plan, annual report, performance bond, specified hours of operation, setbacks, and screening among other requirements. Current ordinance provides reasonable standards and a level playing field for the industry. [Handouts]

March 24, 1999

A Township Perspective
Mr. John Prouty, Township Officer, Grand Lake Township, St. Louis County

- Described experiences with the aggregate mining in Grand Lake Township, near Duluth.
- Described Grand Lake Township's temporary moratorium on new aggregate mining.

- Described a local Aggregate Material Tax issue, whereby St. Louis County notified the township that it is the township's responsibility if the township wants to collect the tax.
- Stated the need to collect the tax for the township to repair and maintain roads damaged from the gravel haul trucks, and stated that the townships deserve the tax revenue.
- Stated that reclamation is extremely important, and spoke about a situation in which a gravel pit area has not been reclaimed. He also cited, as a good example, a reclaimed gravel pit that is now being used as a campground.

Statewide Overview of Permitting and Reclamation Requirements
Ms. Cindy Buttleman, Regional Minerals Specialist, Division of Minerals, Department of Natural Resources

- Stated that no specific state or federal mining permit is required for aggregate mining. Several state or federal permits may apply depending on the activities at the operation. In general, state and federal permits emphasize water resources and pollution concerns such as dewatering, wetland mitigation, storm water runoff, air emissions, noise, and above ground storage tanks.
- Reported that local permits generally emphasize operating concerns such as hours, dust, traffic, screening, and reclamation.
- Stated that historically, regulation of aggregate mining has been the responsibility of local government.
- Stated that environmental review in the form of a mandatory Environmental Assessment Worksheet (EAW) is required when a gravel mining operation will exceed 40 acres.
- Stated that no state or federal law requires reclamation of aggregate mining properties; however, reclamation is often required in a local permit or through a leasing agreement between a landowner and an operator. [Handouts]

Addressing Technical Issues in the Permitting Process
Mr. Nels Nelson, Vice President, Barr Engineering Company

- Described experiences from three mining sites–a gravel pit in Scandia Township, Washington County, another gravel pit area in Apple Valley, Dakota County, and a quarry near Shakopee, Scott County.
- Stated that aggregate mines operated in a responsible manner do not cause groundwater pollution problems.
- Stated that aggregate mines do sometimes impact the groundwater in other ways, such as altering the water table elevation.
- Concluded that technical issues are not as important in the final permitting decisions as political, social, planning, land use, and aesthetic issues. [Overheads]

Region-Specific Reclamation using Native Species
Mr. Ron Bowen, President, Prairie Restorations, Inc.

- Described typical costs of native species restoration, which range from $600 per acre upwards, depending upon such criteria as slope conditions and the number of species planted.

- Recommended that a minimum of 15 to 20 species be planted for restoration at each site.
- Recommended that state or county should regulate the reclamation process.
- Suggested that wetland banking be considered, since gravel pit sites often create wetlands.

April 28, 1999

Use of Taconite Industry By-products as Construction Aggregates
Ms. Ann Glumac, President, Iron Mining Association and Mr. Richard Maki, Vice President of Operations, EVTAC Mining

- Provided information on aggregates that are by-products from taconite production at EVTAC – rip rap, railroad ballast, fill material, and fine aggregate that meets MNDOT specifications for bituminous road construction. Stated that EVTAC produces and uses 1.5 million tons per year of class 5 aggregate for private roads within the mining operation.
- Stated that taconite tailings produce high quality aggregate with very high compressive strength, high angularity that provides strength and skid resistance; but stated a disadvantage when transporting it due to higher density [more weight per unit volume] than typical aggregate.
- Described the advantages of using of taconite industry by-products as aggregate, such as the more efficient use of the ore material and smaller land areas that are needed for taconite waste, and disadvantages such as the transportation obstacles.
- Stated EVTAC's need for access to viable rail transportation to move aggregate products to the markets in major cities.
- Stated the benefits to the state from additional taconite royalties would result from a longer mine life if EVTAC's marketing of materials for aggregate is successful. [Handout]

Use and Evaluation of Recycled Materials by MNDOT
Mr. Gerry Rohrbach, Director, Office of Material and Road Research, MNDOT

- Stated MNDOT's requirement that recycled aggregate materials must meet three general needs: recycled material must be of equal, or better, quality than virgin aggregate materials; recycled material must be environmentally prudent; and recycled material must be economically competitive.
- Described recycled materials that are permitted within MNDOT specifications including reclaimed asphalt, reclaimed concrete, taconite tailings, coal fly ash, waste tires, dredged river sediments, roof shingle scrap, steel slag, waste glass, and foundry sand.
- Mentioned that MNDOT is currently evaluating other waste products including incinerated sewage sludge ash and coal bottom ash.

Overview of Recycled Materials as Aggregate in the Metropolitan Area: A Producers Perspective
Mr. Chad Sauer, Vice President of Field Operations, Tiller Corporation

- Stated that Tiller is consuming 1 million tons/year of recycled materials, in addition to producing 6 million tons of sand and gravel and 3 million tons of hot mix asphalt annually.

- Described the use of asphalt millings, which are small uniformly graded pieces from grinding off the top layers of a bituminous road prior to reconstruction, to make new asphalt.
- Described the use of asphalt chunks in Class 5 products used to make road base, which underlies the concrete or bituminous layer. Asphalt chunks are made by crushing asphalt road material.
- Described recycled concrete that is derived from roadways, sewer pipes, building demolition, bricks, patio blocks, ready mix waste, and other similar materials. Recycled concrete is used as aggregate in Class 5 road base or as aggregate for new concrete.
- Stated that in 1998, almost 4.2 million tons of concrete were recycled in the seven county metropolitan area.
- Stated that there is still an annual need for 50 million tons of virgin aggregate and recycling alone will not help with future demands.
- Stated that alternative aggregate materials–taconite tailings, steel slag, waste tires, waste roofing shingles, and waste glass–are currently available in amounts that are insignificant compared to recycled asphalt and concrete.

Use of Coal Ash as Construction Aggregates
Mr. Mike Thomes, Ash Utilization Process Leader, Northern States Power Company

- Stated that NSP produces about 1 million tons/year of coal ash, with about 150,000 tons/ year of that being fly ash.
- Described the use of fly ash as a substitute for cement in concrete (15% replacement for cement in ready mix), or a soil stabilization product in aggregate base material. It meets all the specifications of these applications.
- Described the use of coal dry scrubber ash that is being mixed with agricultural lime and marketed as agricultural lime fertilizer, since it contributes the necessary plant nutrients boron and sulfur as well as neutralization potential for the soil pH.
- Stated that NSP has been investing in research to demonstrate that the coal ash products can be re-used, are environmentally acceptable, and that NSP continues to conduct research on the other types of coal ash to develop market applications. [Overheads]

May 26, 1999

Updating the Aggregate Resource Inventory in the Seven County Metropolitan Area
Dr. David Southwick, Director, Minnesota Geological Survey

- Described maps showing the distribution of aggregate resources in the seven county metropolitan area.
- Described an overlay of land use that shows that many of the aggregate resources are not available for mining due to urban sprawl.
- Concluded that the remaining available aggregate resource base is substantially lower than the 1983 Metropolitan Council estimate. The current MGS study will be completed September 1, 1999. [Handout]

Projected Construction Aggregate Availability in the Metropolitan Area: Demand vs. Estimated Resource Supply
Mr. Eugene Wright, Director, Aggregate and Readymix Association of Minnesota

- Described changed scenarios in supply and demand since the 1985 Metropolitan Council report to the legislature.
- Described an increase in consumption to 30 million tons/year from 15 million tons/year projected in the 1985 report.
- Described the increased rate of urban sprawl beyond the 1985 report predictions.
- Discussed a larger-than-projected increase in population.
- Stated a need to map aggregate resources and protect the resources per the state statute.
- Concluded by projecting a future shortfall in production within the metropolitan area. [Overheads]

DNR's Program of Aggregate Mapping for Counties
Mr. Dennis Martin, Senior Geologist, Division of Minerals, Department of Natural Resources

- Described the enabling state statute that directs the DNR to provide aggregate resource information for planning purposes to local units of government.
- Described the results of the recently completed Blue Earth County aggregate resources survey to illustrate the program.
- Described the products for Blue Earth County, which include a set of 4 map plates, a book of township maps, and a CD-ROM. [Handout]

The Aggregate Material Tax: History, Purpose, Authorized Counties, Revenues, and Allocations
Mr. Donald Walsh, Manager, Minerals Tax Office, Minnesota Department of Revenue

- Reviewed the revisions to the enabling statute, the counties collecting the tax, and the amount of tax collected by county by year from 1990 to 1998.
- Reviewed the amounts in the reserve fund for gravel pit restoration dedicated in 1998, the total dedicated, the total spent for pit reclamation, and the remaining balance. [Handouts]

The Aggregate Material Tax: A County Perspective
Mr. Tom Delaney III, Chairman, Chisago County Board

- Discussed the needs and experiences of Chisago County in dealing with growth, urban sprawl, transportation, and schools.
- Described the circumstances surrounding Chisago County's current one year moratorium on new aggregate mines. Stated the moratorium will allow the county to review and update ordinances relating to aggregate mining.
- Stated that the Chisago County Board is reconsidering imposing the Aggregate Material Tax.
- Requested that an aggregate resources inventory be conducted in Chisago County.

Aggregate Resources Task Force
November 17, 1998
Meeting Transcript
Room 112, Capitol Building, St. Paul, MN

Presentation Topics:

Legislative History Regarding Aggregate Resources
Dr. William Brice, Director, Division of Minerals, Department of Natural Resources

Overview of Minnesota's Aggregate Industry
Mr. Eugene Wright, Director, Aggregate and Readymix Association of MN

Overview of County Government's Role in Regard to Aggregate Issues
Mr. Dave Weirens, Policy Analyst, Association of Minnesota Counties

The Nature Conservancy's Priority Landscapes and the Need for Dialogue on Land Use Conflict
Mr. Robert McKim, State Director, The Nature Conservancy

Task Force Attendees:
Senator Jerry Janezich, Convener
Mr. Jerry Bauerly
Senator Leo Foley
Representative Peg Larsen
Representative Peggy Leppik
Mr. Tim Magnusson
Representative Tom Osthoff
Representative Tom Rukavina
Senator Dan Stevens
Mr. Brian Winter

The meeting was called to order by Senator Jerry Janezich, Convener, at 1:00 p.m.

Introduction and General Comments:

Senator Janezich: [I introduced legislation] last year, [and] an aggregate task force was created. It was about being concerned about the minerals, where we are headed, and the possibility of shortages, or the possibility of using some that exist that other parts of the state might not be aware of that can be used for different things. I'm hoping that most of you were part of volunteering, in some shape or form.

We will start with Tim [Magnusson], and my preference would be that we would be kind of informal. I just feel better about trying to get there and accomplish things that way. So go ahead, Tim.
Mr. Magnusson: My name is Tim Magnusson. I'm a Planning Director for Clay County up in west

central Minnesota. I have been in that capacity for almost 14 years now, and I guess, as far as aggregate is concerned, my county is split right down the middle, north, south, with the beach ridges of [former glacial] Lake Agassiz. Some of the finest aggregate material in western Minnesota comes out of our county, and we have a little bit of a conflict or a concern right now with the aggregate industry and the preservation of native prairie areas. This is probably our primary concern. The other area is that an awful lot of our material is never used by the state of Minnesota. It crosses the river, probably 80 to 85 percent heads out of state [to North Dakota].

Representative Leppik: I'm Representative Peggy Leppik. I represent Golden Valley and southeastern Plymouth. Any gravel pits that we had have long since been not only closed but disappeared, so I am here–volunteered. Someone volunteered for me, but actually, I'm really pleased to be on this, and reading over the materials, my learning curve went from zero to I don't know where, but it definitely went up. I knew absolutely nothing about this except for the many, many trips that I took to our local aggregates companies last year when we were doing some reconstruction on our house, and it was really quite an eye opener. I'm very pleased to be here if for no other reason than to learn about a problem that I didn't even know existed. [Note: In February 1999, Representative Westfall was appointed to the committee to replace Representative Leppik.]

Mr. Winter: I'm Brian Winter. I work with the Nature Conservancy Science and Stewardship Program, and I work out of the Bluestem Prairie office, which is located about 15 miles to the east of Fargo–Moorhead, in Clay County and have a real interest in basically the native prairie conservation and the aggregate issues that Tim [Magnusson] mentioned in Clay County and really across the Agassiz beach ridges on the east side of the Red River Valley.

Mr. Bauerly: I'm Jerry Bauerly. I am with Bauerly Companies and have been in the aggregates business for about 35 years or so. I have had the opportunity to serve with some of you folks in the legislature, so I have worked on the environmental side, the local government side, and business as well.

Senator Stevens: And Jerry [Bauerly] was one of my reps and a darn good one. He has a first-class company out there that knows this business forwards and backwards. I'm glad that he's on this committee. It will be fun working with him. So, I think it's an important issue because there are getting to be a lot of restrictions on mining and what can be done in the state because sometimes it inconveniences some people.

Representative Larson: I'm State Representative Peg Larson, and I serve 56B, which is southeast Washington County and includes half of Woodbury, half of Oakdale, Afton, Lakeland, Lakeland Shores, St. Croix Beach, St. Mary's Point, Denmark Township, a little piece of Hastings, West Lakeland Township and Lake Elmo. And the reason I say that is that we do have an active gravel pit in our District, the Shiely Company has one, sandstone out there. So, I'm very happy to be here.

Senator Foley: You represent a lot of people.

Representative Larson: As a matter of fact, I do.

Senator Foley: I'm Leo Foley, and I'm a Senator from District 49, which is the cities of Anoka and Coon Rapids, and to the best of my knowledge, the gravel extraction has been pretty much exhausted in that area.

Mr. Johnson: I'm Mark Johnson, [from] St. Louis County Planning, and the secretary to [the] County Planning Commission, and our single biggest, most controversial cases involve gravel pits. It's not uncommon for 125 people to come to a public hearing. So, [it is] scaring a member of the planning commission who lives on the island on Lake Vermillion [and] she never saw 125 people in a room angry at her before in her life.

Representative Rukavina: I'm State Representative. Tom Rukavina from up in Virginia, a member of the Minority Caucus in the House of Representatives.
[unknown speaker]: Just exactly how does that feel? [Laughter]
Representative Rukavina: You may find out some day. [Laughter]
[unknown speaker]: That was it?
Representative Rukavina: We are actually very happy. Yeah, we have missed all of this.
Senator Janezich: Both Representative Rukavina and I come from a mining area. We have...a great deal of our product is mined and leaves the area. We also have a great deal of our product that ends up sitting on top the ground, an overburden. And we believe it can be used for other materials, and that is part of why we both ended up being the Author [of the bill establishing the task force] in the Senate and the Author in the House.

Next, on the agenda we need to nominate a chair.

Mr. Johnson: I nominate Representative Rukavina.
Senator Janezich: Anybody else?
Representative Rukavina: You know the kind of chair I would have. [laughter]
Senator Janezich: All in favor signify by saying aye. [laughter]
Chairman Rukavina: You have an agenda, if you look in your packets. [laughter] There is an agenda. Mr. Brice, come on up here. No, I'm just teasing.

I guess we do want to talk about the one thing that Jerry [Bauerly] didn't talk about was the Department of Natural Resources, or who will be like [to be] our staffing–the keeping of minutes and writing communications, etc. Does the DNR want to comment on that?

Legislative History Regarding Aggregate Resources
Dr. William Brice, Director, Division of Minerals, Department of Natural Resources

Mr. Brice: Mr. Chairman, members, my name is Bill Brice. I'm with the Division of Minerals at DNR. In the end of my remarks, I was going to offer to help staff the task force if you would like us to do that. We have some people who have some experience in some of the inventory and in some of the environmental issues, and we would be willing to assist the committee. I suspect there are some areas that we don't have expertise in, and you may want to use House Research or Senate Research or some other folks to do that, but we certainly can do logistics, and we can do whatever the committee would like us to do to help out.
Chairman Rukavina: Thank you, Mr. Brice, and I'm just thinking to make sure that communications are always there between the members, the DNR, and the public. Thank you for volunteering, and we will accept your offer. With that, Mr. Brice, do you want to give us all a little background?
Representative Leppik: Excuse me, Mr. Chairman, I would like to back up just a little bit before we get into Mr. Brice's presentation, if we could. Because all I know about this task force is what I got in the mail, and that really wasn't that much concerning what the task force is all about, what the expectations for this group are, how long is it expected to last. I have to confess that usually when we are assigned to a task force, it is other legislators; and so clearly from the start, this is a different kind

of task force, and I would just like to have a little information about what it's all about, what the expectations are, this kind of thing.

Chairman Rukavina: Thank you very much, Representative Leppik. I think Mr. Brice can answer all of your questions. Mr. Brice, the coach, the thoughts, and Tom Bakk, Senator Johnson and myself usually carry minerals legislation for the Division of Minerals, in the Department of Natural Resources. They come to us, even though this is more of a statewide issue, as you can tell from the representation on this board, and we did carry the legislation. Mr. Brice wanted to have citizen members because of the nature of the whole issue, and it was his drafting of legislation, so I think we can answer all of your questions. If you do have any more questions, Mr. Brice would, I think his testimony here will probably answer most of your questions. Welcome again, Mr. Brice.

Mr. Brice: Thank you. I'll try. I'm not sure I'll succeed. Do you have a copy of the legislation? The legislation under the duties really describes some of the issues you will learn more about as we go through the background and presentations today. And the dates in here, just for the committee, are, the report is February 1, 2000. So I guess we are talking about a year and a few months as far as what was thought of when the legislation was put together. So, should I go back to the beginning and kind of go through what I was going to do? I think, it will probably bring out some questions about what the committee would like to do.

Chairman Rukavina: More so; it looks like we will be around until probably right before we finalize the report before the legislature [undecipherable] ask the questions leading there, but I think your presentation will probably cover most of what Representative Leppik asked, so go ahead.

Mr. Brice: As you know, Minnesota is a large producer of a number of mineral commodities: Iron ore–we have been number one in the country for years and continue to be. The second one that we are big in is peat mining, and we are number four of all the states. And then sand and gravel is number five, so we are the fifth largest producer of sand and gravel in the United States. We also produce crushed stone, industrial sand, clay, kaolin, dimension stone, and ag lime. You will hear me use the word "aggregates," and when I use aggregates, which is what this task force was set up for, we are talking about primarily sand and gravel and crushed stone, but not some of the other more specialty kinds of minerals. So, that was what we were envisioning when we got involved in this. Basically, the Division of Minerals at the DNR back quite a few years ago was ...

Chairman Rukavina: Mr. Brice, may I interrupt you for just a second.

Mr. Brice: Sure.

Chairman Rukavina: The definition of aggregate, I assume includes tailings from taconite mining and also waste from granite mining and those types of things.

Mr. Brice: Anything that it's being used for as far as construction materials; basically, for fill, sand and gravel, excuse me, asphalt, concrete; somewhere there's a box where there are four samples. Do you have those back there? You might just pass those around. Those are just samples of. No samples, those rock samples, they are in that box. I'm sorry. I forgot all about them and left them up there. The first one is asphalt [asphalt cores]. And you can see the rock that's in it. One of them has limestone in it that is basically crushed rock, and the other one has crystalline aggregate, and you can kind of tell the tan white one is the limestone one, and the multicolored one would be the crushed crystalline rock, and the same is true of the concrete. So it is whatever people use to make those sorts of construction materials, and obviously on the range, taconite tailings and lean ore and various kinds of rejects are being included in those kinds of mixes these days, so it would be included.

Senator Foley: Mr. Chairman?

Chairman Rukavina: Senator, turn around, I know who you are [laughter]. In the House, we never call senators by their last name, we just call them senator.
Senator Foley: All right.
Chairman Rukavina: We do call them by other names.
Senator Foley: Yeah, well, be careful of what you say. [laughter] I was curious to know, you indicated peat was one of the things that is considered an aggregate?
Mr. Brice: No, I'm sorry, peat is just one of our major mineral industries in this state.
Senator Foley: But you can mine?
Mr. Brice: There are several peat mines up in northern Minnesota and western Minnesota.
Senator Foley: But that won't be covered by this study?
Mr. Brice: No, it won't.
Senator Foley: Oh, ok.
Mr. Brice: Ok, so about 30 years ago the Division of Minerals was just principally a royalty accountant for iron ore production, and that was our responsibility. In the 1970s, things started to change, and we became responsible for things like mineland reclamation, environmental review, and for the first time, we got slightly involved in sand and gravel, and aggregate–crushed stone, excuse me. Two staff in our organization started to look to the future and said "there are going to be problems with supply in the future, and there are going to be more and more problems with land use –the interaction between the companies producing this material and the people who live around them." And so we put together a little report, and if you would handout that first handout called "The Status Report on Sand and Gravel." That was a report done in 1979. That kind of started a chain of events that lead up to this today. Maybe look at page 16, for example. Morris Eng, who was a geologist for us at the time, looked at the state and said there are going to be shortages in various parts of the state. Ironically, they are the North Shore, the southwestern part of the state where the conflicts are with the gravel and prairie, and then the northwestern part of the state, and then, of course, the southeastern part of the state is kind of a mixed bag. And then you can see on that map in the southeast, you get crushed stone. So I just thought that was an interesting map when I was looking through [the report], and you will find other things that are interesting about some of the environmental concerns and other things related to sand and gravel production or crushed stone.

So, that was kind of the first thing, and out of that in 1984 there was legislation passed to begin doing inventories of sand and gravel resources state-wide. The Department of Natural Resources was assigned for the first time to do non-metropolitan area inventories and the Met Council was given responsibility to do the metro area. They were also asked to do a report on the availability of aggregate and crushed stone aggregate in the metro area, and in 1985 they produced a report that basically concluded that there was more than enough sand and gravel and crushed stone in the metro area, 100-year supply, and there was really no reason to be too concerned about it all. Well, I think it's changed today, and that's really why this task force was formed, I think. And I'll come back to that in a minute.

In 1989, then Governor Perpich asked the department to put together a group of people to start to look at some of the issues related to some of the environmental issues and also a little bit on the resource issue. But also that was the time when waste disposal was starting to become much more expensive because of recycling, and reuse, and limited available space and landfills. A lot of gravel pits that weren't being used regularly were being used to dump stuff. A lot of people who work for counties

know that all of a sudden, in the state, people started dumping things wherever they could get rid of them rather than paying to have them hauled away. So, in 1989 Governor Perpich asked us to put together a report, and that's the second handout that we have over there. It's called the *Review of Regulations Regarding the Reclamation Sand and Gravel.* That's a pretty interesting report, and it looks at some of the environmental issues and also some of the regulatory issues as far as how counties manage sand and gravel operations, and it probably understated the size of the industry at the time. We tried to find out how many gravel pits there were in the state, and we found 2,000, but I think there were may be twice that many probably really out there.

Anyway, that report was done, and one of the big recommendations in that report was that there really wasn't good technical information available to the local developers and the counties to assist in reclamation of these sites. And so Cindy Buttleman, of my staff, put together a report [handout]. And this is basically a handbook that's used by quite a few local units of government to assist in reclamation of these kinds of sites. It basically gives you good information on how reclamation can occur, what kinds of things can be done, and so on. Now that was useful. In fact, that publication has been requested from all over the country, and it's being used in other states. It's being used by a variety of local jurisdictions here in Minnesota to assist in providing technical assistance for reclamation.

The next significant event–in my little list here–is the Sustainable Development Report that was done on Minerals a few years ago, and that was in 1994, and that also is a handout, and I'd like you just to take a look at that. In that report there are a number of recommendations on kind of all aspects of this issue. If you take just a second, if you'll go to page 8, bottom of page 8, there's a little discussion that goes on to page 9 about inventories and the relationship between knowing where the resource is and the land use issues that are associated with its development and the problems of close development, and so on. So that was the first recommendation that was in there that may be useful for you in your looking at things.

The second recommendation relates to taxes. That's on page 10. The Aggregate Material Tax is a tax that some counties and jurisdictions collect and some do not. It has some discussion about how the funds are spent, and there are some inconsistencies around the state on whether it is used or not used. There are some good arguments on both sides about why it's there and what it can be used for and whether people should be collecting it. For example, I heard in the last legislative session there was an addition in the tax bill to add, I believe, St. Louis County to the Aggregate Material Tax. And I heard after it was passed that St. Louis County actually is the largest single user of sand and gravel in the county [?], and so they thought it was kind of silly for them to have an aggregate tax that taxed themselves for most of the cost.
Mr. Johnson: And then restrict the use of what we could do with it [the tax monies]?
Mr. Brice: Right. So when you get into that issue, you will find that there are a lot of points of view and a number of different ways of thinking about that particular thing.

The next one that is in here is on page 12, and that has to do with environmental impacts and nuisance conditions and things like that. It's at the top of page 12, background restoration and reclamation techniques, and there's a recommendation there also.

Finally, on page 14 there's a section on recycling. And that deals with reuse of materials such as concrete and asphalt, and if you've been watching road construction lately, you know that a lot more of those materials are being recycled and reused in the new mixes than probably ever before. So those are kind of the four issues that the sustainable development group came up with when they looked at this particular issue of aggregates and mining in Minnesota. As far as Minerals involvement, through the years, we just get more and more phone calls from people who need assistance or advice or want to know where the resource is. I remember a few years ago the Water Resources Board, I'm not sure, it might have been a commission; it was a joint commission of the House and Senate looking at water issues. They held one entire hearing on ground water and pollution problems related to mining sand and gravel in the St. Croix area, and I was asked to testify at that and talk about some of the concerns. Local governments are continuing to have to deal with issues of nuisance problems like noise, dust, blasting, and reclamation, and other aspects of operations. There were, I think, a couple bills in the last legislative session related to the aggregate tax of expanding it, or including more, or doubling it, or halving it, or whatever on that issue, so there are a fair amount of things going on in that. Conversations I've had with a lot of folks deal with the fact that the resource availability that people perceived to be out there in the mid-eighties really isn't there because of the land-use issues that are associated with it. There may be lots of resource; in fact, you maybe know or don't, the largest probable gravel resource in the southern part of the Minneapolis area is under Southdale shopping center. It's a huge gravel deposit that was never mined. It was developed for other uses, and so it's those kinds of things that really limit the availability of the resource when on the surface. You say, well, we have a hundred-year supply. That's true, but is it really available? And that's becoming a bigger issue elsewhere so that's another thing that's been coming up lately.

And then finally, in the inventory area, we've done about five or six counties since that law was passed in 1985. You might say, "that's not very good progress," and I would agree with you. We really never were funded or had any ability to do the kinds of inventory that would be useful, and if you continue at that pace, we're not going to have good inventories until you know 2050 or 2080, and I'm not sure that's necessarily the right solution to this problem.

So those are some of the things that got me interested in sand and gravel. As I said, when I came to DNR many years ago, I was really into iron mining, and since then I've learned a lot about other things. I guess, I can stand for questions.

One more thing I forgot to say, as a result of all these discussions. A number of us got together in what we call an Ad Hoc Aggregate Committee, and its representatives–it's really people who wanted to participate. It's not formal, but it's representatives from the Nature Conservancy that's been involved, the local units of governments, through the counties, cities, and townships. The industry folks have been involved; the University, the Department of Transportation, and others, and they really have put together the next part of the presentation, but I have that last handout. And that's what we tried to do here. What we tried to do is provide some basic information, both about the industry and some of the issues related to it. I think everybody on the committee, of the ad hoc committee, has a point of view, and it probably isn't expressed in this report and. They may want to tell you what that point of view is at some point in the future, but our goal here in putting this together was to try to

provide basic information and an outline for what some of the issues are in Minnesota regarding the issue. And with that I would be happy to answer any questions you might have.
Chairman Rukavina: Ok, any questions for Mr. Brice. Representative Leppik, did you have any other specific questions?
Representative Leppik: Well, thank you, Mr. Chairman, I think I'm just going to keep my mouth shut and listen now.
Senator Janezich: Yeah, Mr. Chairman, I'm just curious to know. I didn't see anybody from MNDOT in here. It seems to me that they are one of the major consumers of this type of material. Are they going to be available to discuss their role in this thing at all?
Representative Rukavina: Yes, that's a very good question, Senator. We do have someone here from MNDOT.
Mr. Beaudry [in the audience]: I'm the Aggregate Engineer from MNDOT
Chairman Rukavina: Do you just want to identify yourself, sir.
Mr. Beaudry: Yes, I'm Terry Beaudry from MNDOT. I'm the Aggregate Engineer.
Mr. Brice: The Department of Transportation has been very active on this ad hoc group. They have helped put together the materials, and actually they helped do the testimony before the Governor's Task Force the last two years so they are very much involved in this and very much interested in this issue.
Chairman Rukavina: I assume there were conversations between DNR and the Department of Transportation?
Mr. Brice: Oh, Yeah.
Chairman Rukavina: Thank you, Any other questions for Mr. Brice? If not, thank you, Bill, and we will hold you to your promise of the little bit of staff keeping.
Mr. Brice: That would be fine. Thank you.
Chairman Rukavina: Ok, then members, we have the construction groups around here. Mr. Eugene Wright from the Aggregate and Readymix Association. Welcome.

Overview of Minnesota's Aggregate Industry
Mr. Eugene Wright, Director, Aggregate and Readymix Association of Minnesota

Mr. Wright: Thank you. It's a pleasure to be here.
Chairman Rukavina: Mr. Wright, come on up, and give us your spin on this.
Mr. Wright: Okay, Tony [Sertich, Senator Janezich's aide] has a handout that I had out. We were going to set this up with overheads, but it didn't work out so everybody could see. Maybe if you can follow along with the handout, we will work in that way. If it is agreeable and if you have any questions, feel free to raise your hand, and that will be fine. As mentioned, my name is Gene Wright, and I'm the Director of the Aggregate and Readymix Association, but I would like to say that the comments that I have were put together by most of the industry representative that are in this room. The Minnesota Asphalt Pavement Association has had input and individual aggregate producing members in here, so what I've tried to do is summarize an overview of the aggregate industry, try to point out to you some of the importance of aggregate to the community infrastructure, and talk about some of the critical issues as perceived by the aggregate industry. So, it's a pleasure to be here. Before I quit or stop my introductory remarks, I really would like to thank Bill Brice for putting together this ad hoc committee. He's taken a leadership position in getting the public sector, the private sector together to talk about common issues, and it's really been a productive committee and

it's really interesting to sit around where there may be different points of view and find out that the points of view are, in fact, resolvable if you get together and talk about it. So, Bill has been very instrumental in taking that leadership, so we're really pleased to be working with him on this committee, and we look forward to being a resource for information to you through that ad hoc committee.

So, if you turn the overhead or turn your handout to the next page, Bill [Brice] talked a little bit about "what is aggregate?" Well, aggregate is sand, gravel, and crushed stone.
Chairman Rukavina: Mr. Wright, may I interrupt you for just a second, just for the information for the committee. How many members do you have on the Aggregate Readymix Association? Do you know?
Mr. Wright: Yes, we have 69 producer members that are made up of ready mix concrete producers and or aggregate suppliers, and we have an additional 45 people who are associate members who are suppliers into that industry.
Chairman Rukavina: Is Mr. Bauerly part of your organization? I'm just curious.
Mr. Wright: Mr. Bauerly is a member of our association, yes.
Chairman Rukavina: Okay, thank you. [I] gotta make sure. I can put this all in perspective.
Mr. Wright: And he's also a member of the Minnesota Asphalt Pavement Association, so he's a good representative, it seems to me.
Chairman Rukavina: Right.
Mr. Wright: Yeah. As mentioned, aggregate is sand, gravel, and crushed stone. And sand and gravel–I'm not a geologist–but was left here in fairly good abundance from the glacier activity way back when, and these are natural deposits that are usually found somewhere near water, and this represents about 3/4 of the aggregate production in the state of Minnesota. In addition, there is crushed stone, and in southeastern Minnesota, we have the carbonate rock or limestone. In the rest of the state, we have granite, quartzite, and trap rock. The crushed stone usually involves some drilling, blasting, and then crushing operations. But when we talk about aggregate, it is sand, gravel, and crushed stone.

If you go to the next page, "where does aggregate get used?"–Highways, roads, and streets. And the samples that were recently passed around illustrated that concrete is 80 percent aggregate, the remaining 20 percent is a mixture of cement and water. An asphalt mix is about 92 percent aggregate and 8 percent asphalt. But in addition, aggregate is used for libraries, schools, hospitals, homes. Basically, any construction project is going to use aggregate, and it is our estimate about 70 percent of the aggregate is used to build the community infrastructure.

Next page on "Who uses aggregate?"–asphalt pavement contractors, ready mix concrete contractors, pre-cast contractors, building constructors, home owners, state and local government, and MNDOT. Again, virtually any construction project, there will be some aggregate use somewhere on that site. If you look on the uses of aggregate, about half of it, 50 percent, is used by the public sector and of that, about half is used for roads; the other half is used for other public building facilities. The 50 percent of the aggregate used in the private sector is split pretty equally between the residential market and the commercial market.

Next page, in Minnesota we're about 51.2 [million] tons of aggregate per year. This amounts to 10.5 tons per person per year of aggregate. Put down that on a daily basis, each of us in this room consumed 58 pounds of aggregate per day. This is generally a pretty startling statistic to people. "Did I go to Home Depot and buy 58 pounds of aggregate?" No, but in the scheme of all the construction projects, each and every one of us are using 58 pounds of aggregate per day. In the United States, it is 2.6 billion tons of aggregate per year. This is about 9 tons of aggregate per person per year, or 44 pounds per day. So, you can see when you take the volume of or the population and multiply that by those factors, that is the kind of volume we are talking about. Some interesting statistics: a new home will use about 120 tons of aggregate, and one mile of four lane highway will use 20,000 tons of aggregate. So, that gives you an idea of the types of volume we are talking about.

Next page, I'll talk a little bit about Minnesota. We think there are about 5,000 gravel pits and maybe 1,500 quarries. All of those are not active. We feel there are about 1,500 pits and or quarries that are active. The rest are used intermittently or no longer have operations there. There are about 1,200 producers in the state of Minnesota. They employ about 10,000 employees, and I have to say, "This includes ready mix concrete operations and asphalt operations because so many people are in aggregate and asphalt and to get an accurate number we have to look at the asphalt industry, the ready mix industry, and the aggregate industry, but about 10,000 employees." This has an economic contribution to the state economy. We think of about $1 billion, and Bill [Brice] commented that in addition to the normal corporate taxation structure, 28 counties have an aggregate tax of 7 cents per ton or 10 cents per cubic yard. This contributes an additional $2.3 million of taxation that goes into those 28 counties.

Next page, where we talk about "what is required to mine aggregate?" The first thing you have to do is, where is the aggregate located? It is a little bit like finding oil, where are you going to put an oil well? Where are you going to look for aggregate? Once you have located aggregate, you need to do quite a bit of research to find out if the volume is large enough to support bringing in an operation to go after the mining it. We have to look at the quality of the aggregate, that is there as well. So, locating aggregate and determine[ing] the volume that it is in that area and quality of the resource is the first step. After that there is permitting and reclamation guidelines that are required, and that can be a long, laborious process and with a bit of frustration. I will talk about permitting issues a little bit later. But once ... go ahead.

Representative Larson: Oh, thank you, Mr. Chairman. I just had a question about quality. What do you mean when you talk about quality gravel?

Mr. Wright: Some of the aggregate, if it is really porous, will absorb water, and you put that in the concrete and it rains, that water will absorb moisture and then when it freezes, it will break ; and that will deteriorate the asphalt or the concrete. That is one example of sometimes if you have a–if there is a high volume of or a high degree of sulfate in there, it can react unfavorably with the concrete, for example. So, you need to make sure you have products that will fit the fairly stringent specifications for concrete or asphalt pavements.

Representative Larson: Thank you.

Mr. Wright: So, once you get to permitting, and I'll comment on that later, it's clear the vegetation, trees, top soil [and], plan your buffer zone between you and the community. Put in the necessary fences and roadway, and then you are ready to start mining. In a sand and gravel operation [that] material can either be above or below the water table. In a quarry operation, that requires some

drilling and blasting and will require a crushing operation, and then the materials are sorted and blended by size.

And, finally, when a site is, when a site has been used and is depleted, the reclamation process. We want to turn the land back to a beneficial use. We don't want to leave it in a state that it doesn't look good, and part of the reclamation plan should be part of the original permitting process. Generally when a site is being depleted, the walls are terraced somewhat and then shape the worked out areas to the desired topography that you want and replace the overburden and reconfigure the overburden and revegetate it. Put it back too, so it can be used for a beneficial use. We don't want to leave it in a state that it cannot be used.

Chairman Rukavina: Mr. Wright, is this–are we talking about the present way that it is done by the Minnesota aggregate industry, or is that kind of your wish as [to] how it should be?

Mr. Wright: I think today we're–people are pretty aware of the reclamation issues, and I think we are doing a good job. I would say several years ago there may have been several cases where we weren't as responsible as we should have been. But I think today in the permitting process, almost all of the permits, they are talking about a reclamation plan.

Chairman Rukavina: The permitting process is done through the county. Is there always a reclamation and maybe someone sitting here at the table here could help us. Is there always a reclamation plan involved in the permitting?

Mr. Wright: Yeah, and I'll...Jonathan [Wilmshurst], do you...Jonathan Wilmshurst here is with CAMAS. Do you want to talk about some of the details that are in a typical permitting plan as it regards reclamation? Can you give them an overview?

Jonathan Wilmshurst [in the audience]: It varies enormously. Depends on who the agency is. Generally the more urban it is, the higher the standard of reclamation is required. The more rural it is, the lower the standard.

Chairman Rukavina: But is it done on a county by county level?

Mr. Wilmshurst: No, it can be a township or city or county.

Chairman Rukavina: A local unit of government?

Mr. Wilmshurst: Yes.

Mr Bauerly: Mr. Chairman?

Chairman Rukavina: Yes.

Mr. Bauerly: I think we operate in about 15 counties and each of those has...as you indicated. In the past a lot of them didn't even have zoning for gravel pits. So, it was just a part of agricultural use. But, now in every county that I am familiar with, there is a reclamation plan that has to be filed before they'll consider your application for a permit. How you have laid out your plan, and, in fact, you have to engineer a plan that shows every ten feet. I think. What the topography will be in the plan. Now that is not universal, but [in] at least the counties in mid-Minnesota that is the way they operate.

Chairman Rukavina: Mr. Bauerly, it seems to me that you and others in the industry would welcome some type of standardization.

Mr. Wright: I'm coming to that. [laughter]

Chairman Rukavina: And then again, they may not. [laughter]

Mr. Wright: If you'll turn to the page that says critical issues from the industry, the first critical issue I've got down is what we call "map and protect." A little bit of that is what Bill [Brice] talked about. The DNR has been charged with the responsibility to determine where is the aggregate located, and they're currently working at that but at the rate of one county per year. We would like to

see that sped up quite a bit faster. Once we know where the aggregate is located, [we] develop a plan to protect the aggregate until it can be used, and Bill talked about the Southdale site. As Woodbury sprawls, it is covering up some very good aggregate, and once it is covered by Southdale or $400,000 homes, that source of aggregate is gone. Yes, it's there. Yes, there is an inventory of aggregate, but once it has been developed for commercial or residential use, that source of aggregate is lost. So, this "map and protect" issue is, where is it and then develop a plan that it can be protected. Can that be fit in and meet all the other conflicting land-use requirements for that parcel of land? Is there a way to protect some of the aggregate [so] that it can be mined because mining is a temporary use of the land, and it can be returned to a beneficial use. So, this mapping and protecting is a really critical use.
[Unknown speaker]: Mr. Wright are there any requirements now in place in any of the counties or statewide that a developer has to do borings to determine what is under the ground where their development might go?
Mr. Wright: I can't answer that question. Can you?
Chairman Rukavina: Mr. Brice, would you know of anything?
Mr. Brice: I am not aware of anything. Lots of times, in 1984 and 1985, when we started the inventory, it was our hope that the counties would then use those kinds of inventories as a basis for saying, "You know, you've got to look at the sand and gravel here, or you ought to develop over here," but that really hasn't happened. The first chance that it has happened somewhat is in Clay County, and you can probably talk more about that than I can. Most of the time you are not required to do anything like that other than for what you are building, of course.
Mr. Rukavina: Mr. Magnusson, do you want to tell us what happened up there?
Mr. Magnusson: Well, I guess, we're talking about the prairie situation?
Mr. Brice: Yes.
Mr. Magnusson: Ok, we have a county gravel pit that is adjacent to some of the finest, I believe its dry native prairie in the state of Minnesota or, depending on who you talk to, in the United States or even in the world. Just recently we had a situation where the gravel operation is under the auspices of the highway engineer, and this pit has been in operation for any number of years. There hasn't been a lot of control on it; it doesn't expand all that often, but when it does, it has an immediate impact to some very native prairie. This year they needed to do some more expansion, and before the county board or anyone else knew it, we had taken almost three acres of prime native prairie and rolled it back so that they could utilize it [underlying gravel] for the next one and one-half to two years. We do have an LCMR project request in for 1999 which is to inventory, do an intensive inventory of the aggregate resource on our county-owned public land and some state land in that particular prairie area. So, that we can know ahead of time, we aren't fishing out there, we don't strip back prime prairie only to find that there may not be aggregate material underneath it, at least not to the degree that some people might think. So, hopefully with our 1999 LCMR grant, we will be undertaking a two-year program to do some intensive drilling, both with a rotosonic drill, to get some very deep holes, and be able to come up with quality and quantity calculations for that public land. Ultimately, we will be developing a stewardship plan for that public land to try to balance out utilization of it as prairie and aggregate potentials.
Senator Foley: Mr. Chairman, one thing. I've spent 18 years on the planning commission, and where there are developments, it is standard practice to take soil borings and to develop a topography map for the area and so forth. They pretty much have an idea as to what materials, soil or other conditions, are underneath those, but I don't think they look for specifically aggregate or anything.

There is, of course, foundation stability in the buildings and water table, whether it's high or low, and how that affects your development.
Mr. Wright: I think as a general comment that the source of aggregate is not considered when looking at any land-use requirements today. We would like it to become a priority–to look at it, and–is there a way to protect it so it can be used? So that's this whole issue, and we would like to see the DNR be able to speed up the process because at one county per year, its going to be a long-range process, and in the meantime, a lot of aggregate will be covered up.

We talked a little bit about the permitting issues, and currently you can have township, city, county, and state governing agencies, and when you start the permitting process, you may not know where to even start. Do I start at the township level, at the county level because there is a lot of overlapping of government agencies? There is an inconsistency on procedures, or on the guidelines, and so there could be some consistency that would be helpful. In many cases, the analysis of "Should a Permit be Granted" [it] exceeds the technical expertise of the planning committee, and if we could have a source of technical expertise that a planning commission would believe, that would be really helpful. A lot of the permitting issues have an overriding guideline of "not in our backyard." Yes, we know we need aggregate, but we don't want it here. We want it 20 miles away from here. So, there is a lot of the "not in my backyard" syndrome going through the permitting process.

Next page is...
Chairman Rukavina: There is [are] a lot of different things besides gravel, Mr. Wright.
Mr. Wright: Yeah, true.
Chairman Rukavina: You tell me how to get around that one, and you'll be governor next.
Mr. Wright: Yeah, right. [laughter] On the reclamation guidelines, that today is generally included in the permitting process. I think that is pretty universal. Again, how should the land be used after the aggregate is gone sometimes can exceed the technical expertise of the permitting authority, and again, the permitting authorities could use a resource, some technical expertise that was believable and ethical, that they could rely on. That would be helpful.

From an aggregate industry standpoint, a critical issue is the general education of the citizens and the government agencies. I don't think the average person understands the importance of aggregate to the infrastructure or to the region.

I'm going to talk a little bit about the negative impact on the cost of transporting aggregate. If we go to the next page, we will go into a little more detail on some of the "map and protect" issues. The "map and protect" issue in the metro area. For example, there is less than a 15-year supply of material from permitted sites. That means that we need to start finding new sites, and that is getting more and more difficult because some of the specifications from the city and county engineers and MNDOT are getting more and more stringent. So, it is getting more and more difficult to find aggregate that will meet those specifications. In the process of those specifications becoming more stringent, the ratio of useable materials that is mined vs. the unusable ratio is decreasing. We need to process more and more material to get material that will meet specifications, and that is a real issue, particularly as we start losing some of the sources of aggregate through urban sprawl.

Let's talk a little bit about the cost of trucking. It costs about 10 to 15 cents per ton per mile to transport aggregate. This means that a 20- or 30-mile haul doubles the price of aggregate, and to put that into perspective, for each 10-mile haul, a city of 100,000 people would pay $1.3 million more for the aggregate. If that 10-mile haul becomes 50 miles, now its $6.5 million extra that a city of 100,000 people would have to pay. So, if we put aggregate sites further and further from the marketplace, it has a negative economic impact that is really significant.

Bill [Brice] talked a little bit about recycling, and I'm trying to get better numbers on it. But we now think that 10-15 percent of aggregate used [of total consumption] is recycled material. For sure, there is no good material or rubble that is going to the landfills; it is being used. I think today that I can say that at least 90 percent of the recyclable material is being used, being recycled. We have a fair number on the asphalt of 20-25 percent of the asphalt [tons of recycle compared to total tons asphalt produced and expressed as a percent] is being recycled. Quite a bit of concrete is being recycled, but I can't give you a definitive number, I am trying to get a better number on it, but we know there is quite a bit being recycled, but I can't give you a number on that today.

On the next page, I tried to graphically illustrate kind of what, I think, is a couple of situations. And, in Phase I it shows a city which is the market for aggregate, and it has an aggregate operation that is in close proximity to the consuming city, but not so close that it interferes from the noise or traffic congestion. But as urban sprawl increases, the demand for raw materials, like sand and gravel, is increased, as I demonstrated. That means the aggregate operation also expands, and all of a sudden in Phase II, the aggregate operation finds itself in the city. The city decides they don't want the noise, they don't want the increased traffic, and they put so many restrictions on the aggregate operation or they will cancel a permit and that site is forced to close. The aggregate operation has to move, that means they have to relocate and find a new site, if they can find one. If the purpose to close that pit was to decrease the traffic, the demand for aggregate wasn't reduced. It will stay at least the same. So now, instead of, say, a 10- or 20-mile haul, it's a 50- or 60-mile haul, which has exactly the opposite effect of increasing the amount of traffic in the region, and you have lost that raw material that was located in the city. That is one [example] that graphically tries to illustrate one of the reasons.

If we go to the next page, I have tried to put another little illustration. This talks about the benefits to the region of an aggregate operation, and in the case that I have shown here. It shows an aggregate operation in close proximity to City A. But, like in the earlier example, through urban sprawl all of a sudden the aggregate pit is inside City A. City A decides they don't want it and the restrictions or the permitting is–they don't want that aggregate operation there. So, they may cancel the permit or put so many restrictions on, the aggregate operation is forced to move. The city was able to do that without considering the benefits [to] the region, and so there is a regional benefit that should be part of the decision-making process, but generally is not. So, that's a real issue.

Finally, if you turn to the next to the last transparency that has the graph, it, as I mentioned, the demand [in Minnesota] is about 52 million tons today. We feel that by the year 2050 that [the demand] will be about 87 million tons. From existing operations, we feel only about 50 percent of those operations will still have supplies of aggregate by the year [sic; 2000, ah] 2050. That means in

the year 2050, we need to find as much new resources of aggregate as the demand is today. That is a real challenge, but it is an issue.

Representative Leppik: Thank you, Mr. Chairman. Mr. Wright, I wanted to ask you a question on recycling. When the gravel, no concrete, is recycled, or asphalt, for that matter–can it be directly reused for the same purpose that it was used before, or does it now meet different specs and have to be used for something else?

Mr. Wright: Most of the concrete is going to get used for base material, and asphalt can be either/or. Jerry [Bauerly] or Jonathan [Wilmshurst], do you want to chime in? Feel free to do so.

Mr. Bauerly: Asphalt that is recycled is combined with some new aggregate and some new asphalt oil at a ratio of about 30 percent up to 50 percent of recycled old pavement. It is used in the lower layers and then some of the–that one chunk of asphalt that we had here said "Super Pave" on the bottom–like on [Highway] 169 in the cities here, and some other roads were just done with "Super Pave." It is made with quarry rock and all new aggregate and oil, but all of the lower layers can be used. In fact, you can use all of the asphalt that you can pick up during the year, you can use every bit of it. It is 100 percent recyclable.

Chairman Rukavina: I guess, Jerry [Bauerly], if it's 100 percent recyclable, how come we're not recycling at that 100 percent? Doesn't this thing say that we're only doing like 10 or 15 percent?

Mr. Bauerly: Because it's used in the lower layers. But the new construction, particularly in a growing area, or on a typical highway project, you will use almost all of the stuff you pick up. If you think about it, then the top 1 ½ inch is new, it cannot be recycled. But typically, you are also putting back a thicker layer than you're taking up. You only take up about 3 inches or so, and you're probably putting back 5 or 6.

Representative Leppik: Why is it that the new layer has to be new? The gravel, when you say you can use it for concrete back in the base, is it used exactly in the same way that new fresh concrete would be used?

Mr. Wright: It really affects the chemistry–other debris. They are working on getting that out of there, but right now the easiest way is to pick it up instead of bringing in raw aggregate for the base, is to reuse the concrete for the base material, rather than affecting the chemistry of the new material.

Chairman Rukavina: So, its more that the process hasn't been refined yet to use more of this in the top layers of the asphalt, let's say? It has to be more of a virgin asphalt type for the top layers because the process hasn't been developed yet?

Mr. Wright: I think both the concrete industry and the asphalt industry are doing a great deal trying to look at that material and find out how to incorporate 100 percent of it into the new material, so we don't have the restrictions on recycled material. In fact, on the way up here, our office is near International Market Square, there has been a big rubble pile of concrete there, and I saw them crushing that, and they are crushing that down into aggregate size material. I am sure 100 percent of that is going to get reused, but it will probably be reused as base material.

Chairman Rukavina: The gentleman from the Department of Transportation, excuse me, I forgot your name again?

Mr. Beaudry: Terry Beaudry.

Chairman Rukavina: Mr. Beaudry, is it, would it be MNDOT specs that would restrict the use of these materials?

Mr. Beaudry: Yes, for bituminous, I think it is 30-50 percent are [that is] recycled asphalt.

Chairman Rukavina: So, your specifications actually prohibit the recycling, to a degree?

Mr. Beaudry: Yes.

Chairman Rukavina: And I would assume the same with concrete.
Mr. Beaudry: With concrete, another issue you really have to look at is, "Did we have problems with that aggregate previously too? [Did it] D-crack or have other deterioration problems?" Those specifically will just allow more in the base, if it was a good rock where the concrete was 3-4 years old and had good performance, we would be more likely to allow that to be recycled.
Chairman Rukavina: So, not only do we have then the problem of the refining process yet having to be developed for those top layers, but we also have restrictions and specs by the different county and state agencies and that? Is that a fair statement?
Mr. Beaudry: Yes.
Representative Leppik: What percentage, or how much of concrete from demolition of just about anything, actually winds up being recycled, and how much of it is just land filled?
Mr. Wright: Most of it off the pavements was going to get reused; from buildings and materials, that is more difficult, [be]cause you have the structural steel in there to get off, and the process in that is very difficult. It is being looked at, and it is increasing, but it is not that large right now. Anyone else care to comment on that issue?
Chairman Rukavina: Yes, sir.
Mr. Wilmshurst [in the audience]: The bottom line is, I will tell you, that out of 50 million tons consumed every year, there is about 10 million tons available in the form of recycled, even if all the recycled has been used. No matter what you do to the final end uses, there is not enough recycled material available for the other 40 million tons of demand. That's the bigger issue, so I wouldn't want you to think that recycling is a solution to all of the problems. Because the way we do things right now, the amount of recycled material available, is a function of the amount of construction going on. So, if you reduce the amount of construction, you also reduce the amount of recycle materials going back. The only types of products that are not currently being recycled would be things like tear-off roof shingles, broken glass, and products like that. It would only be another million or two tons, perhaps, something of that order.
Chairman Rukavina: Senator Janezich.
Senator Janezich: I was just wondering, do we have anybody in particular doing the research to develop a way to get that other couple inches off the...I mean is there one group or is...
Mr. Wright: The National Readymix Concrete Association, the Portland Cement Association, and, Gene [Skok], I'm sure the asphalt people have the same thing?
Mr. Skok [in the audience] I was just at a meeting this morning at MNDOT where they are working with recycled material.
Mr. Wright: But the Portland Cement Association has a big active process on working on recycled material? So, it's a high priority from an industry standpoint?
Mr. Skok: Just to follow up on that, no one though in Minnesota.
Mr. Wright: Do you know of any projects that are going on?
Mr. Wilmshurst: Well, you really can't cover it today but, for example, the concrete blocks that we make, 50 percent of the cement concrete block is a combination of fly ash from power stations and ground up steel mill slag from Gary, Indiana. So, there already is a lot going on that is not generally recognized. So, I would say yes, there is a lot of research happening but not necessarily here in Minnesota.. [Another example is used] tires, for example–for years [we have been] trying to get them put back in asphalt.
Chairman Rukavina: Some of our concrete block is used slag from Gary, Indiana?
Mr. Wilmshurst: Yes.

Mr. Wright: That's true of the concrete as well. Quite a bit of that is fly ash that is left over from the power plant that is being mixed in with the concrete [be]cause that is a pozzolonic material.
Mr. Wilmshurst: Let me just tell you a little story, we have a plant in Savage, Minnesota, that we bring up limestone from Davenport, Iowa, grind into powder, send it up to the North Shore, it gets put into taconite, taconite goes to the South Shore, its turned into steel, the blast furnace slag from the steel is put on a barge and sent back to Savage, ground up and put in concrete blocks. You know, so this material is already pretty busy. [laughter]
Chairman Rukavina: All we're missing is the taconite tailings for concrete.
Mr. Wright: Precisely.
Chairman Rukavina: Mr. Johnson.
Mr. Johnson: I have a question, I'm still a little confused on the recycling, particularly of the concrete. The asphalt, you know, that rarely [is a problem;] it's been my experience that the concrete tends to just sit for a long period and often gets buried. Are you saying that there is a heavy demand for this, there's not a demand? Because, for instance, if you go look at the intersection of Hwy 4 and Martin Road in Duluth, there is a pile of crushed concrete that has been sitting there for three years.
Mr. Wright: Yeah, there is a demand for it. Chad [Sauer]? Would you like to buy that pile by the Arrowhead road?
Mr. Sauer: [In audience] We recycle everything that we receive. Most concrete, obviously, is placed in a semi-liquified state. Therefore, when we get it off of the job site we recrush it, and it is used as a sub-base. The aggregate base is a substitute to the aggregate. That normally would be a virgin aggregate. Maybe I should explain the process of how a road is built. A road is built with anywhere from 8 to 12 inches of sub-base gravel and then either a concrete slab or an asphalt multiple, the layers of asphalt are placed on top of that. Typically concrete is crushed down to a certain size, and it is used as that sub-base. Typically. So, its being reused. The [steel] rebar is being removed and that's where its placed.
Chairman Rukavina: As with virgin gravel?
Mr. Sauer: Yes, it's a replacement. It works very well at that because you need a lot of fractured faces to give it structure. As far as the asphalt recycling goes, asphalt has oil in it which is a commodity. As time goes by, and it is exposed to the environment, it dries and cracks, and the quality of that asphalt that is in there does not sustain the same qualities that it did as original. So, what ends up happening is that it is reintroduced into the asphalt where it is melted back down at a certain percentage with virgin stuff to help extend our resources as far as we can without compromising the structure of the road that is needed to support the additional weights that are required and the new MNDOT specs. So, we are trying to use it in any possible way, to either substitute aggregate or to supplement it. As you guys well know, if we are going to be replacing a road, we are either going to be extending lane 5, [or] to make it larger, wider, bigger, whatever. Therefore, whatever you are taking out, obviously some new material has to be worked in conjunction, too. I don't know if that helps explain any of the recycling process.
Mr. Wright: And that pile that is up there will eventually be used.
Chairman Rukavina: Well, good. [laughter]
Mr. Johnson: The sooner the better. [laughter] Because the Rice Lake Town Board is getting upset.
Chairman Rukavina: Any other comments?
Mr. Wright: No, but I want to thank you for allowing me to be here on behalf of all the industry representatives, and we look forward to being a resource of information for you through Bill's [Brice]

ad hoc committee. So, we are interested that you are studying it and would like to be able to give you information as you require.
Chairman Rukavina: Mr. Wright, we intend to, it was good to have you here and at one of our meetings also. Mr. Bauerly, do you have a question?
Mr. Bauerly: I was just going to follow-up on Representative Leppik's earlier question, and I kind of think I know where she was going. I think Chad [Sauer] answered it very well. But when you think of a street through your city, Representative Larson's city, and the curb and gutter is taken up to re-do the street and the sidewalk is taken up and the grading, underlayment is taken up, and the asphalt is taken up, all of those things today, for the most part, are going back into a street or parking lot somewhere. So, if they're taking up curb, gutter and sidewalk, there is, in the St. Cloud area, for example, which isn't aggregate rich, we have limited aggregate resources there, and in your communities, I would suspect the chances are very good that nearly 100 percent of that is being recycled. That is coming out of a street reconstruction project.
Chairman Rukavina: Representative Larson?
Representative Larson: Thank you, Mr. Chair. I don't know if Mr. Wright is the correct person to ask this of, but I'm just curious, the permitting process across the state obviously is very confusing. Are you permitted,? Is that in statute? Is that by rule?
Mr. Wright: It varies by the township, it can be township, city, county driven.
Representative Larson: I'll tell you why I'm asking. When I was Mayor of the City of Lakeland and we dealt with Shiely, we were told by our attorney that we could not change our permitting process or our statute when somebody is already asking. When somebody is already there, like you cannot say, "We're going to outlaw such and such a business from our town. They can't move in here," when the request has already been made. How is it that, I'm just curious, I don't know if there are attorneys in the room, how they can do that legally and put people out of business by changing the permits in mid-stream. Does anyone know what statute that is or?
Mr. Wright: I'll let Jerry [Bauerly] answer, and then I'll let Jonathan [Wilmshurst] answer.
Mr. Bauerly: I'd be happy to. Local jurisdictions change their ordinances and rules, and many times they are simply not challenged. That happens, that happens across the state a lot, that existing gravel deposits are either abandoned or restricted to the point where they are no longer viable. I think the one slide that you had in here, it's the same thing as an airport. People build up around it cause its nice hills and it looks nice and build up around it. Then when the gravel pit needs to expand to get further resources, they are denied because of public pressure, simply public pressure. Anyone who is elected understands public pressure.
Chairman Rukavina: I don't think, Representative Larson, somebody in this room correct me if I'm wrong, there is any real state oversight of gravel pits.
[Unknown speaker]: I think you're right.
Chairman Rukavina: I believe that to be true. There's no [state oversight] whether or not we arrive at that suggestion, I guess, remains to be seen. And, philosophically, I have a little reluctance to do that myself, but I think that's one of the things that this committee will be asked to look at.
Mr. Wright: And, as Jerry [Bauerly] commented, there may be so many restrictions on hours of operations. Yes, the permit is still there, but they will limit the time of operation that it makes it uneconomical to operate, so you are forced to move.
Representative Leppik: I'm just curious, Mr. Bauerly, you said they were not challenged. If some of these were challenged, do you think you would be successful in overturning them, or do you think, you know, you wouldn't be?

Mr. Bauerly: I think recently there has been some challenges, and I think there has been some success in doing that. I think there are examples where they have been challenged, but again it takes a sizeable company with a lot of resources. You know what lawyers cost.
Representative Leppik: Fortunately, I don't. [laughter]
Mr. Bauerly: So many times they're not [challenged]. And I think most of the township and county zoning ordinances are written in such a way, and they may not be all over this state, but there are still places where they are written, where you can come down on either side and not be challenged. I mean they are so gray that a board can decide either way and not be challenged.
Representative Leppik: Thank you.
Chairman Rukavina: I think one of the major problems, that if I'm listening to Mr. Wright and the concerns of the Aggregate Committee, one of the major problems in the metro area, and quite frankly, in most of Minnesota, other than northern Minnesota is, even if we were to document where this aggregate is located, you've got a public land use issue.
Mr. Wright: Yes.
Chairman Rukavina: Private land use, whereas, in northeastern Minnesota, where we are 70 [percent] to 80 [percent] to 90 percent publicly owned, you people from the cities just come up there and say, "This is our land, too, and we are going to do what we want because we've got more numbers than you. But, we've gone through all of this, you haven't. You have restricted our land use, and frankly, all of you around here, other than a few [laughter] to what we can do if it is our land, is publicly owned. Down here, there are many of us who think that these same restrictions should apply. I mean, who have white pine forests down here that thrive much better than our white pine forests, but there's no moratorium on cutting down any more trees to put in subdivisions in Woodbury.
Mr. Wright: There's no question that "not in my back yard" is a real [problem].
Chairman Rukavina: And, so I think it's a serious charge that this committee may have to still look at some type of "what did we do to stop urban sprawl," and you're gonna raise the issue of costs and everything else, and I see Senator Stevens; I know he is nodding in agreement with me over there. It's just what we may eventually have to do. So, next we will hear a little introduction, we will call on Mr. Dave Weirens, from the Association of Minnesota Counties, because I know Dave probably wants to give us a little spin on this, too. Before we begin, I was wondering perhaps the DNR could do another survey of the various particular county regulations relating to permitting for the committee. Getting them all might be a little bit difficult, but certainly getting the various county regulations and a comparison of where everybody is might be a useful thing as we get people from the industry saying one thing, and citizens perhaps saying something else. Mr. Brice, then could you get us, to the best of your ability, any State Statutes, for DNR, PCA, and then the county that you could get to that would regulate this whole issue, gravel pits, aggregate.
Mr. Brice: Sure. We should probably talk about that, but that [19]89 report, "A Review of Regulations," that has quite a variety of local regulations at that time, all the way from some very good ones to some that are almost non-existent. That might be the place to start. Getting it from all the counties and major subdivisions...[will be a big job].
Mr. Johnson: I know, in St. Louis County, when we get a letter from the DNR, we always follow it.
Mr. Brice: I know it. [Laughter]

Overview of County Government's Role in Regard to Aggregate Issues
Mr. Dave Weirens, Policy Analyst, Association of Minnesota Counties

Chairman Rukavina: Dave [Weirens], you may be able to help with that request, too.
Mr. Weirens: Well, Mr. Chair, we probably can provide some assistance to the DNR in that effort. My name is David Weirens, with the Association of Minnesota Counties. The basic authority that counties and townships apply, when they are regulating gravel pits and related operations, just under standard zoning law[s]–for counties it is found in Chapter 394, Minnesota Statutes. And, it is a very broad law that gives counties broad authority to regulate land uses within their jurisdiction under a comprehensive land use plan and through efficient controls or zoning ordinances. Most of what we are talking about here is the fact that the conditions that are being discussed make it difficult for gravel pits to operate are the fact they are allowed to operate under a conditional use permit and these place certain conditions, and I think the term is very descriptive of what they are–conditions on how a gravel pit or any particular use can operate, and it's not unique to gravel pits certainly as some members of the task force have already discussed.

The issue of "not in my back yard," of local communities being very concerned about what is behind it within their communities, and I think it's a real struggle that goes on every day of trying to find some balance between the needs of people to earn a living and to operate businesses and people who live in the community have a quality of life. And that's the real struggle that I know the counties are facing all the time when proposals come forward to do different things, and that's an issue that I don't know how you can–if this task force can solve that problem. I think we can make this the best place to live because we'll have no more problems; we'll solve them all. But I don't think we are quite there yet.

That's one of the points I just want to briefly talk about with the task force, just to provide an overview of certain primarily county issues of aggregate resources. I think it's fairly safe to say that the issues that counties bring forward on aggregate issues are very similar to what cities and townships are going to face as well. There will be some differences certainly, but I think across the board, they are going to be very, very similar to the impacts as relate to the authority to regulate the gravel pit operations that exist in the state. The fact that not only do the local governments regulate the gravel pits as the resource, but they also are very large users through the road operations, primarily. As I think, I look back, and this applies more directly to the counties as the tax issue, and the counties have some ability, at least there are 34 at this point in time have the right or ability to joint revenue gravel operations. So I think, at the local level is where all the issues come together at one place of use, of regulation, and of taxation. And I think it's very central to what this task force is going to have to discuss, is how it's manipulated at the local level.

I think there are certainly some counties that would like to have some additional technical resource at the state level to step in when they are having some trouble, but I think the bottom line is that whatever this task force ends up recommending for action is going to have to be implemented through local action by counties, cities, and townships. And I think that particular action is something that needs to be, I think, understood as you just start on this process.

I think the issues of where counties come in have been talked about in great length. With some of the comments that Gene Wright has just discussed in terms of the public works implications that I know our county engineers are very cost conscious, as are the county commissioners. The only official who is tighter with the buck than the county commissioner is the township supervisor, and they are

looking at every way they can to save some money, and wherever they can try to control costs through their public works, they are trying to do that. So that's the primary issue. The county engineers put their hat on. They are worried where the revenue is going to come from, how much it is going to cost, and how many more miles of roads can they take care of in a given year. If the cost is [x] amount per ton of gravel, not only for their gravel roads, but also providing base and subbase for the paved roads.

There are certainly issues of regulation that come to play: the reclamation and reuse of old gravel pits, the on-going conflicts that exist between gravel pits, and their operators, and their owners, and the people who live near by who are concerned about dust, who are concerned about noise, concerned about safety and security issues. There is a whole laundry list of issues that counties are faced [with] to try to regulate through their zoning ordinances. I think the issue with the gravel tax– you know it's not being applied uniformly across the entire state, due to the fact that there are five counties who have authority to issue a gravel tax or levy it, but they have not chosen to do so. I think a certain example that Mark [Johnson] had brought forward in St. Louis County where it made little sense to implement their authority, I think, it is just one of the conflicts that is out there. I think you have to recognize that if a county wants to come forward, and have the ability to levy a gravel tax, we think the purpose is laid out and makes some sense. But again, look at St. Louis County, and we know of another county. In the case of Wright County, originally [it] did have some authority to level the gravel tax, but they chose not to do it. Actually they had it repealed because they saw there was little value in that. But, I think obviously, the reason why almost half of the counties do have a gravel tax in place, it does say that there is some benefit.

Do you want to make it uniform across the entire state, have every county have the same gravel tax? I think that is a question that does need to come up as well. Across the issues of regulation and taxation, ya know–for those of you in the legislation this will be no news–I think AMC will come across very strongly in the belief that local control does, in fact, need to be maintained when it comes to the regulation and taxation of gravel as it currently exists. However, with that said, I think were there greater effort on the part of the state to have a better inventory of the location of aggregate resources, to have some quality staff that were available to work with counties as the need arose, I think the counties will look forward to having some greater ability to be aware of gravel issues and to do whatever they could to accommodate them through their planning and zoning activities. But the bottom line you always have to remember is, that if I own the property where Southdale is located, I decided 30 years ago that I wanted to build that mall there. The city of Edina is not well placed and said, "No, you cannot build that regional mall because there's a gravel resource there." You know, there is the issue of property rights as well that does need to be recognized. [To] tell your local governments to tell someone, "no, you can't do something," I think is more limit than perhaps some believe. I think we need to be aware as well that just because there is a recommendation that there are aggregate resources out there, that does not give local government the ability to say, "No, you can't build on top of that." But I think there is an opportunity for local governments to educate landowners and do everything they can through their zoning to try and limit the kind of development so that there is an opportunity to mine a quality site somewhere down the road. With those very brief remarks, I certainly will be engaged with this task force as much as you desire me to be involved and to work with you, and with the DNR, and others to make sure that we can provide you with the kind of information you need to do your job. I will be happy to answer any questions.

Chairman Rukavina: Any questions? Thank you.
[Mr. Bauerly]: Just one. Dave [Weirens], you talked earlier about gravel permits conditional use permit in a county as you do permitting. You said local governments are very restricted in what they can do to a landowner or restrictions they can place on a landowner. Is it in the purview of the county to deny a landowner the use of their property as a gravel resource? I might as well cut to the chase.
Mr. Weirens: Oh, absolutely. There is authority to do so if a gravel pit is not an authorized use within a given zone. A county can say, "No, we will not allow it because it is not an allowed for use." Certainly there is an opportunity for a landowner to come in with a variance or a re-zoning to change the zoning to accommodate that. But that is the kind of approval that they are talking about here, to change the local zoning so that a gravel pit is first, an allowable use and after that, usually most counties have a conditional use permitting process after that, they can lay out a whole range of conditions on that use. The problem faced there is that you, as the property owner, may decide that all of the conditions make it unrealistic to operate on this particular site. So yes, there is some both direct authority on the part of the county to say, "No, you can't develop a gravel pit, or you can't build a store at this site," but there are also other ways to say "Ok, our zoning doesn't allow for it, but we're concerned with X, Y, and Z issues, and we'll place these conditions on your permit." If you, as the operator, are ever deemed in violation, we can force you to change practices or to close down until you comply with those conditions. The thing to keep in mind is that zoning is a police power, a police power.
Chairman Rukavina: Ok, thank you very much. If there are no further questions, then Mr. McKim from the Nature Conservancy. Welcome.

The Nature Conservancy's Priority Landscapes and the Need for Dialogue on Land Use Conflict

Mr. Robert McKim, State Director, The Nature Conservancy

Mr. McKim: Thank you, I'm glad to be here. My name is Rob McKim. I'm the State Director for the Nature Conservancy, here in Minnesota. Fortunately I think some of my, the folks who preceded me spoke to a couple issues that I would stress as well. So, perhaps I'll be able to abbreviate some of my remarks. Specifically, though, Bill [Brice] spoke to the issues of dialogue, something we certainly subscribe to, and you will hear, I think, in my remarks today, and Gene [Wright], to address the issue of land use; things that also are of issue with the Nature Conservancy. If I might, I don't want to be so presumptuous that you are familiar with our organization. It's a national, actually, international conservation group. We've existed since the early [19]50s. We think we distinguish ourselves from some of the many other environmental conservation groups for a host of reasons. One is, we believe very strongly in "good science, good information" to guide our efforts, and we deploy what we believe to be some of the best science staff in the country. The second thing I would say, in fact, our very roots are deeply found in universities and the lives of those who started our organization. So, we think good information and good science is the key to effective conservation, and land use and many of the issues we have been talking about here today.

The other thing I would mention about the Conservancy that I find to be, and has served us very well, is that we have developed two strategies as a course of action. The first was [we are] highly decentralized. We do not try to solve problems from one location nationally. We are operating in all 50 states, but we have 250 offices, if not more than that by now, which means we are putting people

out on the ground. We are governed by local volunteer boards of trustees as is the case here in Minnesota, so that the organization merely provides a conduit for local people to do for themselves in their communities. And that can be a very different approach, as whether we are talking about Louisiana, Maine, Arizona, or Minnesota. And it's worked very well for the Conservancy, to allow us to react and be very sensitive and effective in local communities.

I guess the second strategy that I find most comfortable–frankly, it's one of the reasons that I enjoy working for the organization–is that we strive for common sense solutions, the "sensible center," if you will. We don't engage in controversial activities. We try to look for ways to work together, regardless to who those other constituents may be involved in an issue. It's one of those things I think we bring to the table here today. Let me, if I might, just mention, though, also why we're here. In terms of science, we did a review of all the biological diversity within the Great Plains, the whole biome, not just western Minnesota. And we focus, when I say good science, we focus on biological diversity. Those plants and animals are an assemblage of plants and animals that are particularly unique, which means we are going to try to focus our activities in those places where those things exist. Even more helpful is, it means we don't have to be active because those things don't exist, which often I find, to also define as clearly from others. We are very focused and recognize the niche that we serve.

Having said that, in the Great Plains, we did a review of all the biodiversity that we are aware of throughout the Great Plains. We used the best information that we could get from agencies, from universities, from knowledgeable local experts, satellite imagery, and one of the things we found emerging is that what once was the "American Serengeti" is huge, huge open grassland area that we hear so much about. We'll be hearing in the next coming years, is Lewis and Clark marked their anniversary. This large grassland complex has, of course, been greatly changed, and one of the things in terms of tall grass prairie, that particular kind of prairie, that is most lush and tall, that occurred on the eastern flank of the Great Plains is virtually gone. Ninety-eight, 96 percent, depending upon who you talk to, virtually gone, eliminated. I would argue maybe the most impacted, natural habitat on the planet, despite what we hear about rain forest, etc. Whether that's true or not, I don't know, but I'd still argue it, despite the facts. God forbid, they would get in the way, but I would like to comment–the one thing that I find most challenging about that information is that when you look at tall grass prairie, if someone would say there is only 1 percent left, I would suggest we probably shouldn't waste our time, if it were geographically dispersed equally, but it is not. It is clustered. And if there are going to be those areas of tall grass prairie conserved, it is either going to be the Flint Hills of Kansas or the Agassiz Beach Ridges in the aspen park lands of Minnesota. It will not happen in Iowa and Nebraska, and so I see it as a great challenge for us here in Minnesota to be engaged and to find good common sense solutions, to see that we fulfill what I like to see as a unique opportunity.

In terms of this forum, one thing I would like to point to in terms of, oh, the Agassiz Beach Ridges, of course, that tall grass prairie still remains because the gravel is so close to the surface, which bring me here today. Prairie and gravel come together very closely in western Minnesota. One of the things, I'd like to point to, that I hope we will find is that process for dialogue because I agree with the people who preceded me. I certainly concur and have found it to my personal experience, that when thoughtful people have conversation with good information, generally we are going to find thoughtful solutions a majority of the time, if not nearly all of the time, with exceptions, of course. The Clay

County Forum that we've heard a little bit about from Tim [Magnusson] and others, we thought was a small step, but one that was certainly very, very successful and points to the kinds of things I'm discussing today as being a prudent way to proceed.

Some of the recommendations that they came with, I'll be very brief, but some of the ones they came up with that I would like to point out we also subscribe to. We are interested in all of them, but subscribe to as being something for you to look at is to consider aggregate resources in future land use decisions. We've heard that earlier today. I certainly applaud that and subscribe to it. If we have good information, if we know where it is, it helps us make good and thoughtful decisions. Not all gravel deposits are equal–just like all tall grass prairie is not equally viable in the long term. Some are not, and we should know that so we can be thoughtful in our deliberations and discussions as to how we plan for the use of the lands that we have.

We also believe it's very important to promote prairie conservation programs with willing, private land owners. Much of what we've talked about in terms of public policy and tax today has been through permitting uses and uses of cash that come back to counties, etc. I believe that it's very important that we look for ways to provide incentives, providing a whole host of options to private land owners so they have the options to proceed in ways that are intended for good conservation, as opposed to public policy that may often provide unintended consequences. We also would support some of the recommendations, I'll just mention briefly: providing incentives through the permitting processes to avoid native prairie whenever it's possible, minimize the development of new haul roads across prairie whenever that is possible, reclamation of abandoned gravel mining sites on both private and public lands. One thing that I've learned, and we've worked very closely with CAMAS on a couple of places where they've actually done the work to help us reclaim gravel, old gravel pits on Nature Conservancy land. Don't misunderstand me. Reclaimed prairie and native prairie are not the same, but a reclaimed gravel mine next to a prairie is far better than a poorly thought out or maligned housing development, which is going to encroach on both the appropriate management of prairies. But it is also going to encroach upon the need to extract gravel from some of those places, so I would argue actually, share some concerns in certain parts of the state. And lastly, we think in reclamation, it's important to use prairie grasses for native prairie grasses whenever it's possible in those reclamations.

I hope in this task force, just a couple of things, that we get some good information. I've talked about how we base our work on science. We've heard it today about the need to do a good inventory of where the gravel resources are. I support that and applaud it very much. Good science and good information and decent information from those who have it. And then I also would think that maybe following along with the work that was done in Clay County, some guidelines for reclamation of areas used is something that would also be supported by the Nature Conservancy. And I think as we've described, and I don't need to dwell on it too much, I do think it's important to look at the gravel tax to see how it's being used, and perhaps we need to be sure that there is compliance, that the full amount is being used as is intended, for gravel pit restoration. And I also would argue that some of those should be used for mining, or research, or answering some of the questions I have raised about good information so we know where the deposits are that are most likely to produce the most gravel most efficiently, meanwhile being the least intrusive on the prairie that remains.

So, it's a...I believe the answers to this are there, but I think it will take a bit of work and a fair amount of dialogue to get there, but I applaud you for the work, and I appreciate all the efforts that will come forth from this task force, and I appreciate being here today. Thank you.
Chairman Rukavina: Thank you, Mr. McKim.

Aggregate Resources Task Force
January 27, 1999
Meeting Transcript
Room 400 South, State Office Building, St. Paul, MN

Presentation Topics:

The Role of Aggregate in the State's Transportation System
Mr. Fred Corrigan, Executive Vice President, Minnesota Transportation Alliance

Dwindling Supply of Aggregate
Mr. Jonathan Wilmshurst, Regional President, CAMAS, Minnesota, Inc.

The Challenge of Permitting Aggregate Facilities near Populated Areas
Mr. Don Vry, Senior Vice President, Meridian Aggregates

Aggregate Consumption in the State Highway System
Mr. Paul Rowekamp, Geotechnical Engineer, MNDOT

Task Force Attendees:
Representative Tom Rukavina
Senator Leo Foley
Representative Tom Osthoff
Mr. Jerry Bauerly
Mr. Mark Johnson

The Role of Aggregate in the State's Transportation System
Mr. Fred Corrigan, Executive Vice President, Minnesota Transportation Alliance

Mr. Corrigan: [The tape did not start at the beginning of his talk] a state versus local government in two ways–a declining source of aggregate material will make it more difficult to build and maintain the highway system in Minnesota–and the rising costs of aggregate material due to shipping costs. The state of Minnesota will commit an average of $650 million in state and federal funds to the state trunk highway system [annually] during the years 1999 through 2000, 2001. These funds are spent on preservation, management and operations, replacement and expansion of the trunk highway system. Increased costs due to increased aggregate costs would add significantly to a number of these categories. The declining supply of aggregate could delay or even prevent some projects from consideration. Of the $650 million in average annual trunk highway expenditures, an average of $413 million would be spent in the seven-county metropolitan region during 1999, 2000, 2001. Development pressures in the seven-county metropolitan area are impacting aggregates vis a vis with citizens' pressures to close current operations and [hindering] development of potential operations. MNDOT's trunk highway construction program is legislatively constrained by an annual budget level. Project totals for all three years of the State Transportation Improvement Plan are contained in one of the figures that I have. The highway improvement project totals are by MNDOT district and year. The highway improvement program will be increased in 2000 and 2001 primarily due to new

federal dollars. The state highway user tax distribution fund, which is the trust fund that receives revenues for motor fuels and vehicle registration user fees, also supports counties and cities over 5,000 in population. The County State Aid Highway Fund will receive $293 million in 1999. The municipal fund will receive $93 million for maintenance and construction activities. Federal funds are also available to local governments through area transportation partnerships.

While aggregate shortages will impact all areas of the state, the seven-county metropolitan region will be doubly impacted [by] the increased shipping costs from aggregate located further outside the region and the impact of adding additional trucks to an increasingly congested highway system. The metropolitan region is expected to grow by more than 650,000 people by 2020, and the number of congested miles of freeways will more than double during the same period. At the same time, less than 20 miles of new freeways will be built during those years, compared to more than 200 miles during the last two decades. To give you some idea of the impact of adding more trucks to the metropolitan freeway system, I would use the current aggregate moving on the Mississippi River from Grey Could Island in Washington County to Minneapolis as one example. That operation is currently operated by CAMAS Corporation, and I know Jonathan [Wilmshurst] is in the audience and will be speaking to you later. Currently there is about 800,000 tons of aggregate [per year] moving to Minneapolis [by barge]; and if you were to move that tonnage by truck at an average of 25 tons per truck, that would result in 32,000 truck loads that are now currently being carried on the river and would significantly impact the ability of the highway system to carry those goods. What I wanted, why I bring that issue up, is that MNDOT waterways division has taken a look at the costs of that modal shift, and I guess we wanted to say to you today that these costs would apply in a number of different factors as supplies are declining and aggregate materials are hauled further and further distances into the metropolitan area. And let me just go through some of these charts with you. [charts] Thank you.
Mr. Chair: You're welcome; thanks for the work.
Mr. Corrigan: I have to get a little closer I guess; the other side of the table maybe. My apologies [undecipherable]. [laughter]
Mr. Chair: Will these overheads be part of the package?
Mr. Corrigan: Yes, they will [trouble with the overhead projector]. We'll include them in the package. I think that the example that we wanted to go through with you–in terms, in any modal shift that occurs to more trucks again is exemplified by the barge study. And what we're trying to show is that as we add more trucks to the freeway system, the kinds of costs that will be incurred by doing, by making that shift. As I mentioned, 800,000 tons of aggregate that is moving to Minneapolis by barge now would result in 32,000 extra trucks. And that could shift to St. Paul, but typically aggregate is moved within a ten-mile radius, from the port of Minneapolis right now, so a lot of these trucks would be increased in terms of the numbers of activities.

One of the other things that is going on, obviously, is the number of projects that are taking place in the metropolitan area, the airport alone–the new runway project there will result in 80,000 tons of cement that comes up the river currently by barge. In terms of the specific costs involved with aggregate movement if we're moving 2 million tons, which was the number studied in 1996 by the MNDOT waterways office. We found that the average trip on the water was 18 miles and by truck was–they used the number of 20 miles–of 36 million ton miles by water as opposed to 41 million in ton miles by truck. If you use fuel at 93 cents a gallon, the cost to move those products by water is

$650 thousand as opposed to $641 million by truck to move the same amount in number of tons of material. I think the impact of those types of activities are such that we believe that the state's ability to maintain the transportation system in the metropolitan area would be severely hampered and may actually become impossible. Mr. Chair, that's pretty much it. I do have a lot of material on these overheads that we'll include with the back-up strategy.

Mr. Chair: Ok.

Mr. Corrigan: But I think our major emphasis is both the cost, the impact, and the responsibility the state has for actually delivering this transportation system, which is very dependant upon aggregate materials both for sub-surface and the road system and also for asphalt materials.

Are there questions?

Mr. Johnson: I assume you had cost figures in those overheads–would that be the same statewide or would they be metro area?

Mr. Corrigan: The numbers that we have shown you that the–what any shift would cost so that you will be able to see if you doubled the miles, for instance, of that aggregate was being hauled from ten to twenty miles. These numbers will show you the additional costs to carry the material and also the additional costs of having those additional miles.

Mr. Johnson: Should it cost us the same to move 20 miles of materials in Duluth as it is in the cities? I didn't see numbers that broke those down–I would assume not, but these numbers don't break it down. That's something we get all the time in the cost–a certain pit needs to be located in a certain location because of the cost involved, and I think it would be useful to get information comparing that and how far away can you get before it really gets prohibiting, also given that up north travel distances are probably a little bit more common.

Mr. Corrigan: Well, I think that you already heard that, obviously, in northwest Minnesota there are long hauls already, [for example] 50 to 60 miles away so we can get you some numbers.

Mr. Johnson: Ok.

Mr. Corrigan: We do have one company, at least one company in Duluth that does ship in material from Michigan.

Mr. Johnson: Yes.

Mr. Corrigan : And we can certainly look at that.

Mr. Johnson: That would be helpful. I assume the Port of Duluth likes that? [laughter]

Mr. Johnson: Yes, they do. It does help, and it certainly makes a great deal of sense. They did have some problems with where it was being stored for awhile, but I think they resolved most of problems.

Mr. Corrigan: Again, those are some of the costs that are currently in place in Minneapolis. The [?] the cost of the lock and dam system that has already been invested by the Corps of Engineers is somewhat in the neighborhood of $450 million and to not use those facilities, not just the modal shift of all the extra trucks in the system, but also just the facilities that are in place would be the same as the Port of Duluth. And we and the federal government have made significant investment in this facility and to not use it would [be a shame? Undecipherable].

Mr. Bauerly: Fred, your organization, The Transportation Alliance, has members from cities and counties, is that correct? As these counties–did anywhere in your organization, is there a venue for them to discuss the–on the one hand–their needs for aggregates and the construction of their infrastructure and on the other hand–they wear another hat, which is the zoning of gravel pits and quarries. Does your organization ever have that opportunity to get into that end of the discussion–weighing the two?

Mr. Corrigan: Mr. Chair, we do, to the extent that typically our membership includes both the county commissioners and county engineers as well as the city elected officials and their engineers. Typically, our key contact is with the engineer who is trying to deliver the system.
Mr. Bauerly: I see, I see.
Mr. Corrigan: We did get involved last year in the zoning issues and the perspective of the suppliers as opposed to the perspective of the local government? They are in somewhat of a dilemma in terms of some cases they are looking for revenues–local revenues–and suppliers are a candidate to supply some revenues, but I believe they do weigh that out with their need for aggregate and their responsibility to deliver the transportation system.
Mr. Bauerly: You said that they did get involved in that discussion. In what way?
Mr. Corrigan: In looking at the additional costs. That those taxes would impose on their ability to deliver transportation infrastructure. Ok?
Mr. Bauerly: Ok, so there was really no discussion about their need for the infrastructure and counties let bids for roads and have a road budget. They have a SAP road budget and a FAS road budget. And then a day after they have the road bid lettings to build these roads, they go to a zoning meeting; and they have 200 people wanting to close down a gravel pit or a quarry or not allow expansion of that. Do you know of any [?] where they get into those discussions in AMC or...[?]
Mr. Corrigan: Mr. Chairman, I've not heard that discussion specifically. I have heard it in a county where commissioners are aware of both sides of the discussions.
Mr. Bauerly: I'm sure they are. But there hasn't been any state-wide discussion that you are aware of?
Mr. Corrigan: One would certainly be willing to hold it.
Mr. Bauerly: That would be an interesting discussion.
Mr. Corrigan: Yes, it would.
Mr. Bauerly: Good Morning, Mr. Chair [Representative Rukavina walked in.].
Chairman Rukavina: Go ahead, you're doing a great job, Mr. Bauerly–he is wrapping up so, ok.
Mr. Corrigan: Yes, I think in some reason the state and this committee is somewhat in the same situation as those commissioners may be in individual counties of recognizing that there are needs to deliver and that there are limited resources to deliver those structured improvements. The state can significantly impact its ability to deliver those programs by some of those decisions you are going to be making.
Chairman Rukavina: Thank you.
Mr. Corrigan: One of the last things that I would say is that there is a lot of discussion throughout the state. I would say to you that Minnesota's transportation infrastructure is more or less complete in terms of the system, and there will be some miles added. There will be some parts of the system expanded, but that lets some lead people to believe that the next fifty years or 100 years will not be as significant in terms of rebuilding. They are building infrastructure in the state. I think what people don't recognize is that the infrastructure wears out, and a lot of it is worn out right now. So, there will be a significant reconstruction effort over the next thirty or forty years of that road system and over the next ten to twenty years of our bridge system. And that will probably increase the amount of material that will be needed over the last two or three decades.
Chairman Rukavina: Any other questions?
Representative Osthoff: Is there anybody here from the environment?
Mr. Brice: Yes, as a matter of fact, Mr. Chair, we have people from the Nature Conservancy on the Committee.

Representative Osthoff: Oh, Brian [Winter from The Nature Conservancy].
Representative Osthoff: Mr. Chairman, the bad news is they are appointing the new committee members tomorrow morning. We may be in our last meeting.
Chairman Rukavina: Well...[laughter] I don't know, I bet you're excited about that.
Representative Osthoff: Right.
[Mr. Corrigan's overheads will be attached here at a later time.]

Dwindling Supply of Aggregate Resources in the Metro Area
Mr. Jonathan Wilmshurst, Regional President, CAMAS Minnesota, Inc.

Chairman Rukavina: Ok, thank you. Mr. Wilmshurst, I didn't see you there. [laughter]
Mr. Wilmshurst: Thank you. Good morning, my name is Jonathan Wilmshurst. I'm the Regional President for CAMAS, which is an aggregate ready mix and blocks producer in the states of Minnesota and North Dakota. We produce just over 10 million tons a year of aggregates, both in the Twin Cities and in northwestern Minnesota. We have just under a thousand employees, most of those are union employees, so this is a high wage business. We have very low turnover and have many employees with thirty or forty years in the company. So, my point being these are high-quality jobs; this is not something people do out of desperation. I want to highlight some facts about our industry for you to make sure you understand. Then I'll tell you a few anecdotes, which I think illustrate some issues that society is going to be dealing with over the next twenty or thirty years. There are 10 tons per person per year consumed, which is a fairly average statistic on a national basis, so you can take any community and multiply the number of people by ten, and that is the number of tons that community is consuming every year. So for the metropolitan area that's 25 to 30 million tons every year. And for those of you not in the industry, you have no clue what 25 to 30 million tons a year is. What it is, is a full section [640 acres] 25 feet deep. So, that is a square mile of material every year [of land] 25 feet deep that is consumed every year just in the metropolitan area, [to] give you some idea of what has to be accomplished.
Senator Foley: Mr. Wilmshurst, is that–do you expect that there is going to be an ongoing thing, or is it an increase or decrease? I know it, for the record, that the DNR in their book indicates that consumption is about 8.5 tons per person, [Reclamation Handbook, 1989] but is your 10 tons a reflection of an increase in that activity?
Mr. Wilmshurst: It varies somewhat depending upon the economic activity. Right now it is probably nearer 11 tons; if there were a recession, it would probably be 7 or 8, but it is fairly consistent. And it is certainly averaging 9 or 10 tons a year. And it is just an easy number because the math is all better. [laughter]
Chairman Rukavina: Thank you very much for doing that for us.
Senator Foley: Is that ongoing, I mean?
Mr. Wilmshurst: The tonnage consumed is continuing to rise every year along with the population. So there is every indication at this point in time that there is no change in that ratio.
Senator Foley: Even with recycling of materials?
Mr. Wilmshurst: Recycling has increased as a whole total of the consumption, but the total consumption is not changing.
Senator Foley: Oh, ok. So, Mr. Wilmshurst, included in that amount is recycling?

Mr. Wilmshurst: Included in that amount is about, in the Twin Cities, and most of the recycling occurs in the metropolitan area because that is where demolition is occurring, and right now about 15 percent in the metropolitan area is recycled.
Senator Foley: Ok.
Mr. Wilmshurst: But still a recycle operation is a quarry. In all intents and purposes if you drive around town here and you a see a recycle operation, generally they are a lot more visible than the virgin operations that come out of the ground.
Senator Foley: So, 8.5 tons of virgin material and 1.5 tons in the cities of recycled material.
Mr. Wilmshurst: Right, and it's about 25 percent crushed stone and 75 percent sand and gravel of the virgin material. The population statistics indicate that in the metropolitan area there is going to be close to a million people added in the next twenty to twenty-five years. And so just simply to accommodate a million extra people, we have to rebuild Hennepin County in its entirety, every street, every house, every school, every hospital, every church, the whole lot. I mean, there are a million people in Hennepin County, so that gives you some idea again of what logistically has to be accomplished here, and that is over and above everything that currently exists and maintaining everything that currently exists.

So there is a huge amount of material moving here. That equates, as best as I can tell, to about one-and-a-half million truck loads every year that are coming into the metropolitan area, if it was all to be moved by truck. And that is about 10,000 truck loads a day during the construction season. So, I just want to help you capture what is happening on the freeways everyday if that is the mode of transportation. So, where are the trucks? Because most of you are probably hardly even aware of our industry unless you happen to live down the road from a gravel pit or a ready mix plant or the like, you know, we are surprisingly invisible. Given what is occurring and right now is elevated to a considerable extent by the fact that some material is moved by barge, some is moved by rail, and in many cases, the operations that are serving the communities' needs are serving a relatively local market, there are still many small operations scattered around the metropolitan area serving a relatively local market. And so the distance traveled by those transportation elements is relatively small.

But within fifteen years, in my opinion–I could provide you some data, I think, to back it up; many of my colleagues and competitors are in the audience here, and I think that they would confirm– that within fifteen years virtually every ton of aggregate reserves that is currently permitted will have been consumed in the metropolitan area. What that means is that beyond fifteen years, every ton of the 25 or 30 million tons of consumption will have to come from outside the metropolitan area because there won't be any left within the seven counties, certainly not within the urbanized seven counties. So, the question that I would ask is, "How do we want to do that?" Seemingly nothing radical has changed, and you could certainly argue that we are going to stop urban sprawl, and we're going to start using material more responsibly, and we're going to take the roads away and put everybody in trains. I'm not here to dispute whether that is right or wrong, but certainly right now every indication is that consumption is continuing and will continue at a rapid pace. So, in face of that, I think it would–most people would agree that barge transportation is the cheapest, safest, and least polluting means of transportation, rail would be next, and truck is last. Most of us in the industry have experienced to a degree the cost of public resistance when you want to open a new facility these days. The focus is

generally on truck traffic as being the single largest element of resistance amongst the local people, owning primarily to the safety and the noise.
Chairman Rukavina: And that is going to increase drastically?
Mr. Wilmshurst: Well, I don't see how it is not going to increase drastically given the circumstances.
Senator Foley: What presently today is the mix percentage wise of barge, rail, and truck?
Mr. Wilmshurst: I believe about 10 percent to 15 percent currently is transported by barge and rail.
Senator Foley: Barge and rail, both?
Mr. Wilmshurst: Not very much moves by rail currently. There is some crushed stone brought in by rail.
Senator Foley: But isn't most of the, Mr. Chairman, isn't most of the barge traffic going out of the area?
Mr. Wilmshurst: Most of the barge traffic is going out of the area carrying agricultural produce. About 2 ½ to 3 million tons per year of aggregate and cement is brought in by barge. Most of the aggregate comes from Grey Cloud Island which is 40 miles from Minneapolis. Most of the cement is coming from Davenport, or last year, China.
Senator Foley: And so, when the barge traffic is prohibited by [Minneapolis] parks zoning?
Mr. Wilmshurst: If you start to choke off the barge system, then they will have to find some other means of getting here.
Representative Osthoff: A follow up on Senator Foley's question–on the exportation matter, are we exporting aggregate out as well?
Mr. Wilmshurst: No.
Representative Osthoff: So, we don't have to worry about that concept?
Mr. Wilmshurst: The only aggregate leaving the Twin Cities in any appreciable amount is agricultural lime for the St. Cloud area, and that is only maybe a quarter million tons a year.
Representative Osthoff: Thank you.
Mr. Wilmshurst: That is a relatively small movement. So, now I want to give you some anecdotes, which as far as I'm concerned highlight the situation. We, my company, have a quarry down in Shakopee, which has been there since the 1960s. It is in an industrial neighborhood, the nearest home is over ½ mile away. It is on a railroad track. We have in the past moved material out by rail. There is 20 million tons of reserves in the ground remaining under our ownership, but we will be closing the operation this year. The reason we're closing it is because after spending over a quarter million dollars [$250,000] in external fees for permit applications, particularly having to do with water, understanding the impact on the ground water, the community has basically said, "You cannot satisfy us adequately–that there will be no negative impact arising from disturbing the ground water and, therefore, we don't want your operation." I understand that, and we're not here to whine about it, because as luck would have it, the real estate values in the area have risen sufficiently that we will recover our investment simply by selling the property for development. But that is 750 thousand tons a year currently in the metropolitan area and in an industrial neighborhood that is gonna have to come from somewhere else in the future. And so Shakopee may be pleased to see us go, but somebody else is not going to be pleased to see us come.
[Unknown speaker]: Mr. Chairman
Chairman Rukavina: Hold on just a second. That is, what I'm trying to say is that it is ok then to find some aggregate in Pike Township where I live for Shakopee but not for them. I can't believe that there is actually an impact on groundwater, having grown up around gravel pits all my life.

Mr. Wilmshurst: The...
Chairman Rukavina: The perception and reality?
Mr. Wilmshurst: No, there is a reality. The surface of the water table is about 15 or 20 feet below the deposit, below the surface of the ground, and so we are currently de-watering to the tune of 2 to 3 billion gallons a year, which we pump into the Minnesota River, which the DNR likes because it keeps at least one water body in the Minnesota River clean, and it makes a good spawning ground.
[Unknown speaker] Mr. Chairman
Chairman Rukavina: Just let him finish.
Mr. Wilmshurst: There are also–not too far away from our operation, there is the Boiling Springs in Savage and the fen [?] in Savage. And those are issues potentially, although all the computer models that we have paid so dearly for indicate no impact on them. The biggest single issue is on the future ability of the aquifer in Scott County to recharge fast enough to allow for future urban growth in that area to supply the cities and the counties with the water that they need to allow for future urban growth. So, that is the primary concern, and we're caught up in the politics of water rights and ownership. There is no way that we can prove that there is or is not going to be enough rainfall in the next thirty years to recharge the aquifer; and so consequently, the permit is being denied essentially on technical grounds. But you have a citizen group elected to that community leadership who is really in over their heads; and they don't understand it, and I'm sure they don't.
Representative Osthoff: Because he has to run? Thank you, I'm not a hydrologist, but my old college geology told me that the metropolitan area at the level of the river is almost like an artesian well. We drain the aquifer so much for business and buildings that it is now 25 feet deep? Is that what you said, that you were down 25 feet and you were in the water?
Mr. Wilmshurst: All I'm saying is that they–if you turn off the pumps, the water in the hole that we are quarrying would fill to about 20 feet below the ground surface, so it recharges within a number of weeks once we turn the pumps off. I mean there is plenty of water, but the question is, "can it recharge over time fast enough to replace what we are taking out and at the same time service the needs of the community?" We talked to the community about why don't they take the water we're pumping for drinking water; but the minute it is exposed to the atmosphere, you are into a much more expensive water treatment facility, and nobody is going to pay for that.
Representative Osthoff: Part of the problem, I recall, is that the Jordan aquifer is being drained so much by the metropolitan area. It is not just Chaska that is using the ground water; it is the whole area.
Mr. Wilmshurst: That may be true; I don't know. But because we are in Scott County, Burnsville and Savage and Shakopee are already struggling to meet their water needs, so there is a big debate going on about who owns the water and who has rights to the water.
Representative Osthoff: Mr. Chairman, I have another meeting that I am co-chairing, and I gotta go down and get it started, but I would like to say for the record that, this gentleman and his company are probably one of the more progressive companies that I have run into. When I chaired the Finance Committee, they made a commitment to help us with Grey Cloud Island. They have been doing some nice remediation up at the Felton Prairie, and they are one of the more progressive companies in our state. This guy is such an eager guy he became a citizen and registered to vote so he could vote in this election when everybody else wanted to stay home. So we have an interesting man here. [laughter]
Representative Osthoff: So we have an interesting man here.
Chairman Rukavina: Hopefully he voted right. [laughter]

Senator Foley: The question I would have, Mr. Chairman...
Representative Osthoff: I'll try to come back...
Senator Foley: If Mr. Wilmshurst focuses on that–if you got a problem with water and aquifer and so forth in Shakopee, you certainly must have similar problems in other areas of the state. Are we just moving from one place to another because there is no protest in the other location? Is that it?
Mr. Wilmshurst: As well as a land use conflict, there is a resource conflict. Somebody has to decide what, which resource is more valuable and, in this particular case, the consultants–we had Barr Engineering do the work–their conclusion was there was no negative impact. But the community was also able to ask more questions than the computer model could resolve. And so, ultimately they are perfectly within their rights to deny the permit.
Senator Foley: The other thing in connection with the recharge of the aquifer, it isn't possible for you to reinsert the water into the ground.
Mr. Wilmshurst: Then you get into economics; we did look into that, and arguably that is certainly doable. We had models done on that as well, but it is limited in its effectiveness. You then raise questions about injecting water back into the groundwater, and that raises a whole bunch more questions, whether you are causing any problems. The other big issue they had was their concern about nitrogen in the water, and right now it is not too bad. But there was a question as to whether by sucking, essentially sucking on the water table, you would pull in high nitrate levels from somewhere else. Essentially, who knows? I mean, I don't know.
Senator Foley: Yes.
Chairman Rukavina: I can't believe that you can't use the mining companies; certainly Mr. Brice and other members of the Minerals Division in the DNR who are here have information from that. But almost all of the communities from the Iron Range get their drinking water right out of open pits, where the aquifer has been opened up by iron ore mining, and we treat the water and, maybe some people say it is in the water, us rangers. [laughter]
Chairman Rukavina: I don't believe that it has hurt anyone up north, and it is the old adage, not in your back yard, but it seems to me that there is already proof in the northern part of the state that you can remove this water, the aquifer recharges, and that certainly open water. I mean I can't believe that you just can't put that water into their system and treatment plant and treat it like we do up north and drink it. And, as a matter of fact, doesn't the community of Minneapolis –don't they get their water out of the Mississippi River? [undecipherable]
[Unknown Speaker]: Mississippi River, Yes.
Mr. Wilmshurst: That is a very nice segue into my next little story here, because I don't want us to get hung up on a debate on water, but...
Chairman Rukavina: Go ahead.
Mr. Wilmshurst: But in the city of Minneapolis–there was a recent article in the Star Tribune talking about how the Minneapolis Park Board has employed consultants to review the future for the Upper Pool in Minneapolis there. And the conclusion is, I went to a meeting the other night, that the preferred, although it doesn't say by whom, but the preferred plan, nevertheless, is that all of the industry on the upper Mississippi be removed. I'm not quite sure how or where or anything like that, but they want to turn that into park space and residential and light industrial uses. And if that would happen, that eliminates the viability of the upper Mississippi pool for commercial navigation, because right now there are 2.5 million tons going into the Upper Pool. The Corps of Engineers will only maintain the dam system for a million tons or more. The city controls about 750,000 tons.
Chairman Rukavina: Is that the area above Coon Rapids or wherever?

Mr. Wilmshurst: Above St. Anthony Falls. Right by NSP's plant.
Chairman Rukavina: Yes, that's it. Ok.
[unknown speaker]: North Minneapolis, it doesn't really extend beyond.
Mr. Wilmshurst: No, it is not navigable beyond the plant, city dock. Anyway, if that would happen, that would eliminate two ready mix plants, one block plant, two cement terminals, and an aggregate distribution yard, from our industry's activities. Again, the question is, "how is that going to be accomplished in the future?" I guess those are all activities where the majority of their output is going to the downtown area. So, in the future that material would have to come into the downtown area by other means. And you are basically left with truck because it is not feasible to rail material into downtown Minneapolis. You are into the–just the same issues, that you are using the river. Because the railroad tracks and the river run side by side at that point. We think, again I'm not whining about it, I'm not here to ask you to help our business or our company or our industry, but I think society has some real problems in the future if some of these issues go unattended to.
[Unknown speaker]: Mr. Wilmshurst, is that your handout here on that plant? Is that from you or?
Mr. Wilmshurst: It is not from me, but it is from the newspaper, and that is the one I'm referring to. Over in St. Paul–St. Paul has a similar issue with an asphalt plant off of University. There is an asphalt plant, a recycle yard, and a rail import terminal that is bringing in aggregate from St. Cloud; and the neighborhood wants them out, and it is reasonable–likely that [it] will close. Last year we closed our Lakeville operation beside 35W because we ran out of reserves. This year we will close Shakopee, as I told you, and in two years we will close our Maple Grove operation because we will run out of reserves. That is two million tons per year that will be gone from the supply stream. I think my colleges in the back here could probably tell you some other operations that they know about that will be drying up. So, really what I want to bring before you is to highlight the fact that we have a lot of local decisions being taken, which are going to have significant regional impact if they continue in ignorance or indifference to the regional issues, that will have some significant ramifications on society in the future if we don't address it in some form or fashion.
Chairman Rukavina: Maybe Representative Osthoff can help us to know who the plan was from?
Mr. Wilmshurst: Well, it is just the Park Board.
Chairman Rukavina: Just the Park Board?
Mr. Wilmshurst: They said we want to go to the Park [Board].
Chairman Rukavina: Ban that river barge traffic on the Minneapolis River there?
Mr. Wilmshurst: Well, they don't want to ban it, but what they want to do would lead to its elimination.
Representative Osthoff: Excuse me, Mr. Chairman–I would think you would want to have this conversation with Representative Kahn. It is her river front, she thinks. [laughter]
Chairman Rukavina: But I think that you support her on the green corridor over there in St. Paul. It has to go somewhere.
Representative Osthoff: The green corridor is the railroad traffic that goes to north of Lake Street there.
Chairman Rukavina: Well, whatever it is called, on that river front–wasn't there a specific name for that, too?
Representative Osthoff: Oh, I didn't support her, Mr. Chairman. I beat her up over it, so you have the wrong guy. [laughter]
Chairman Rukavina: Ok, well, I can believe that somehow.

Mr. Wilmshurst: So, the primary concerns I want to leave you with are: 1) the preservation of a bulk transportation system beyond just simply relying on trucks. When we are spending as much money as we are on mass transit, car pooling, and everything else, it seems ludicrous to be closing down bulk goods transportation systems which are just going to exasperate that whole problem.
[Unknown speaker]: Mr. Chairman?
Representative Osthoff: Jonathan, you know the barges are a federal issue. The Corps of Engineers are the folks that subsidize barge traffic–you know, I don't think they even pay the tax for the gas anymore. I used to work for the railroad for twelve years, so my intention is to say that you have to subsidize barges at the expense of the railroads all the time. Now, you are doing it at the expense of trucks even. I'm a teamster guy, too, sir. Frankly, when we talk about the lock and dam at Alton, IL, and fixing things up like that and paying for it with our federal dollars so barges can flow through freely and haul that farm to market grain back and forth to Russia, we have done our fair share for the barge companies in this state.
Senator Foley: But the issue here is that there is a plan by the Minneapolis Park Board to restrict, prohibit possibly, barge traffic over there, which means they have to find a way...
Representative Osthoff: Minn Rap [?] would have something to say about it, the feds got a lot to say about it.
Senator Foley: But it is an unanticipated consequence of the upgrading or improving or whatever you're talking about of the river front, moving it from commercial industrial to some type of residential and park type of thing. You can look at that as this gentleman has indicated. There is no clear saying that we are going to stop barge traffic from going into the Upper Basin, but the fact is that if the city stops the usage that they are covering, the effect would be the same because there isn't enough other traffic to justify continuing to operate that [the lock and dam system]. So that is the issue.
Representative Osthoff: Mr. Chairman and Senator Foley, you are not going to see me defend the city of Minneapolis. Sir?
Representative Osthoff: [For] twenty-five years I tried to stay on this side of the river because I don't think those people have their heads screwed on right ever. [laughter]
Chairman Rukavina: Ok.
Mr. Wilmshurst: I'm not here to ask for help. All I'm here to do is tell you what I see when I look into the future. And I'm not sure it is what we want from a societal perspective. I am a tax payer too, and I don't like the trucks on my street either. Anyway, point number two would be to protect–we need to somehow figure out a way to keep our business as local as possible to the end use if we want to minimize the impact as far as truck traffic is concerned. We need to identify future reserve base and inform local decision makers of the regional contacts of that resource base that they have in their community because a lot of times, Shakopee could care less in a regional perspective. And you argue, why should they? But there will be a regional impact.
Senator Foley: Mr. Chairman, Mr. Wilmshurst, it seems to me that the idea of identifying sources of supply regardless of where they are and looking at that in the long term are critical in the transportation aspects of that would be secondary. I think you have to consider all of the elements; it seems to me that you have already talked about the impact you're stressing on the water; but the fact the water, the development, if we can't locate aggregate, we can't transport it into specific areas [then] maybe we shouldn't be developing in those areas, too. Those people aren't paying the true cost of development in Scott County, in my judgement.

Chairman Rukavina: Senator Foley, we will be. If you look at the schedule we have lined up, we are going to be discussing those issues. A number of those issues you just brought up [will be discussed] at later meetings. I think that the DNR people have put together some real good issues for us to look at over in the coming months. It is just a draft schedule, but we are supposed to have a report by the end of the year.
Senator Foley: It is a very ambitious schedule because of the things that we didn't anticipate, I think, when we got involved.
Chairman Rukavina: Exactly.
Mr. Johnson: Mr. Chairman?
Chairman Rukavina: Go ahead, Mr. Johnson.
Mr. Johnson: I would agree [that] keeping the aggregate local and how do you value? I'm sure the people of Shakopee view it [as a] real concern, but the questions still weren't satisfactorily answered. Now I [have] seen communities where that was really not true. How would your companies strike that balance between the local concerns and legitimate regional needs? I see the problem; I don't see the solution.
Mr. Wilmshurst: We do pretty well as a company, but nevertheless there are, [even] if you do a brilliant job, the reserves will only last so long. So, the issues are still going to be there sooner or later–it really boils down to an education process. Most people have no clue what their personal impact is on the economy or the environment. That goes way beyond the aggregate industry.
Mr. Johnson: Although sometimes they don't care. For instance, St. Louis County has the permitting–that you can't get a permit over the counter, and one person complained and the next, but the permit was granted. This saved $100,000 for the reconstruction of Penoseau [?] Road and her [the complainant] response was, "that isn't much money." [laughter]
Mr. Wilmshurst: The arguments we can make as far as economics are irrelevant. By doubling the cost of our materials in the cost of a building, nobody notices. You are never going to persuade anybody based on that, but if you start to talk about the logistics involved of opening up new operations and truck traffic, then people care about that. They're in a big hurry, and people will come to meetings for that.
Representative Osthoff: I thought that aggregate resources belonged to all of us, not just transportation or construction. At some point we can have a conversation about that, I guess. What do they do in Europe? They're fully developed. Where are they getting their aggregate from?
Mr. Wilmshurst: In the country of Holland, there will be no virgin aggregates mined after the year 2003, at all. Although they are mostly below sea level already, I can understand why they don't want to go any deeper. Most of the material is being imported. A lot of it is coming from the west coast of Scotland or Norway, by ship, mostly delivered into the major coastal ports and then distributed from there.
Representative Osthoff: If I could, and maybe you folks would ask this: On a bigger picture, are there other states or other areas that have huge sums of deposits that each individual locality or state wouldn't have to quarrel over it if we made some decisions on a state and federal level?
Mr. Wilmshurst: Well, Brian [Winter] is aware that a lot of the material mined up on the Felton Prairie is going to North Dakota because eastern North Dakota basically is a big mud hole. So it has already happened to them, to a degree.
Mr. Magnusson: One person's mud is another person's black dirt. [laughter]
[unknown speaker]: This guy should have gone to Moorhead with you.

Mr. Johnson: Yes, Jonathan, I'm just curious; I know that on some of your operations, you don't de-water. Is that like the Felton, you essentially are not de-watering there?
Mr. Wilmshurst: We are only de-watering now at Shakopee.
Mr. Johnson: It is not possible to take the reserves out by not de-watering?
Mr. Wilmshurst: It is very practical to do that for a sand and gravel operation. It is impractical to do that for a crushed stone operation because you end up having to drill and blast under water, which is a fun project on its own; but then you are trying to recover 15 ton boulders that you can not even see.
[unknown speaker] Ok.
Mr. Wilmshurst: You can do it. They do it on phosphate mines in Florida, but they do five million tons a year and have massive drag lines and things people in Minnesota think belong on the Iron Range, not in Shakopee.
[unknown speaker] Ok.
Mr. Wilmshurst: It is economically unviable, I think.
Chairman Rukavina: Mr. Wilmshurst, I would just love to drive one of those 220 ton production trucks down Shakopee's main street. [laughter]
Chairman Rukavina: I think I could keep it on the road, too.
Mr. Wilmshurst: Put someone else's logo on the door, though.
Representative Osthoff: Thank you, Mr. Chairman, maybe you can explain to me–the permitting part and the local government part, the stuff you hate because that is your expense, and that is what ties you up. So, then I think you would advocate for a statewide permitting process so that one agency would be a one-stop shopping. But then I hear you say that you want to keep it local. I don't quite understand where you are going.
Mr. Wilmshurst: Well, it is always going to have to be a local decision ultimately. But the point is that local decision makers are having to make decisions which are very technical in nature, and the city staff does not have that technical knowledge. Certainly, some states already have that mechanism in place for essential technical review board, which in many cases is what the local politicians are saying. You know, they would appreciate that. They can hide behind it. We work hard with the communities and for as much as it might be a pain in the neck to have to go spend years getting a permit, the fact of the matter is, and MNDOT will refer to this later on, once you're in, you're in, and you are sitting pretty nicely. So, what is your worst enemy can be your best friend, from a competitive standpoint.
Representative Osthoff: So, the devil you know is better than the devil you don't know.
Mr. Wilmshurst: It is a reality. Local politics and local permitting is a reality. I am not saying that we will ever get away from that or that we should. But again, if it supersedes, if you have local issues superseding regional issues, then I would submit that becomes an issue.
Representative Osthoff: Mr. Chairman, part of my difficultly is that I heard people say, "Well, we gotta get all these local people out of it. They are driving us nuts. You know the permitting takes forever." Then if three people show up at the city council, they vote no. So, I thought that something like the EQB or some state agency would do it and make one-stop shopping because they do have the expertise through state agencies to decide whether it affects the groundwater or whether you are destroying a last remnant of native prairie or whatever. But every time I hear you guys say it, you still want to dance with that dolly down at the local end down there because you think you can get more out of them. But yet I sit on a task force, as all of you do and say, "this is a serious issue; what are we going to do about it? And to just say–well, go to locals"–then what are we meeting for?

Chairman Rukavina: Well, no, we are not saying that, and I don't hear anybody saying that. Representative Osthoff, you notice we have handed out–Mr. Olson at the DNR did a real good job of putting down a lot of different subjects we are going to address. If you notice that last one, the month of December when we are required to, or October I should say, November in the last couple of months is going to be a major discussion after we have gone through a process here. What should we do? Should we have a statewide? Is there a need for a comprehensive statewide policy on an aggregate issue? That is what we will determine. Now, personally, coming from an area where we have no local decisions because you won't let us because for whatever reason we, I lean...
Representative Osthoff: You can make all the decisions.
Representative Rukavina: I don't get to make any of the decisions.
Representative Osthoff: How did I get so much power?
Chairman Rukavina: Your constituents tell us all the time that we are cutting down the last virgin forests or this and that even though it is not a virgin forest anymore. So I kinda, my sympathies right now lie with leaving it locally. But, maybe I'll be convinced otherwise because you know me, Representative Osthoff, I look at everything with an open mind and see the big picture. [laughter]
Senator Foley: Mr. Chairman, if I may, you make it sound like I have some power here; none of us do. We are in the minority on this side.
Chairman Rukavina: I know, Senator Foley.
Representative Osthoff: I just want to tell you that I am in my 25th year in the legislature, and I have never been approached by one of my constituents that live in my district that says "the guys on the Range are all a bunch of Neanderthals," but I will tell you, all of those people in Minneapolis say it all the time. [laughter]
Senator Rukavina: Right, those people in Minneapolis say to me that the people in St. Paul are a bunch of Neanderthals, Representative Osthoff.
Representative Osthoff: And we like it that way.
Chairman Rukavina: Are we concluded then, Mr. Wilmshurst? Any other questions? Thank you very much.
Representative Osthoff: Mr. Wilmshurst, for the record–You know Jonathan [Wilmshurst] has gone out of his way as a company executive to work with both the Met Council and with the legislature and local units of government. All too often when we bring someone up here that is fighting to keep an industry going, we beat the daylights out of them. I personally want to recognize the long conversation we had on a boat one day looking at eagles nests and protecting some of the environment on the Mississippi River and how committed you and your company are to it. You know, you are going to get beat up probably in the next year and a half as this group meets or not meets, but I want to tell you I am very pleased to meet somebody like you that has a company going in the directions that are, what I think, both industry good and environmentally good.
Mr. Wilmshurst: Thank you for those comments.
Chairman Rukavina: Thank you, Mr. Wilmshurst. Ok, then Don Vry from the Meridian Aggregates. Welcome to the committee, Mr. Vry.

The Challenge of Permitting Aggregate Facilities Near Populated Areas
Mr. Don Vry, Senior Vice President, Meridian Aggregates

Mr. Vry: Thank you. Good morning, Mr. Chair and members of the committee. First of all, I would just like to say that my name is Don Vry. I am Senior Vice President of Meridian Aggregates Company. We operate 35 rock operations in the western U.S. from Minnesota basically to California.

I bring a little different perspective because what we are talking about here, we have seen happen in other cities, and we have seen the rock resources migrate away. If you look at the Denver Front Range, when they decided to build a new airport at Denver, we railed 3.3 million tons of rock out of Wyoming into the Denver market to take care of that airport because there wasn't sufficient rock in the area. If you look at the Dallas market, we are running three, ninety-nine car trains a day into the Dallas market out of Oklahoma because of the same thing. They were geologically challenged; they didn't have good rock to start with. They used up what they did have, and it moved out rapidly.

Minnesota has been blessed, blessed in many ways. First of all we have great quality of life here. But we are blessed because of the way the glaciers deposited sand and gravel here. We have a natural resource that many states don't have. If you look across the western U.S., our price for asphalt laid down on a road is cheaper than most people are paying just for the rock. Think of that, we are paying less for a road in place than most people are just paying for the rock. We are also an unknown industry, the aggregate industry.

We all have to tell a quick little story, so I'll tell one. I was in Montreal on Monday of this week. The reason I was in Montreal is I was meeting with the Canadian National Railroad, and we were trying to do some business with them. I had to get through customs, and in the process of going through customs, the customs agents asked me what I was doing in Canada. So I explained that we had business with the Canadian National Railroad, and I had a sales meeting with them. The customs agent didn't think that was adequate. He said, "Explain to me what you are doing." I said well, we are trying to sell rock to the Canadian National Railroad. Well, I got this blank look on the face of the customs agent, and I knew I was going downhill fast. I sat there for fifteen minutes trying to explain what our business was to this customs agent.
[unknown speaker] Did he strip search you? [laughter]
Mr. Vry: Thank goodness, no. Finally we resolved it. I explained I was an engineer, going to work and help the CN build tracks. When we got to that point he said, "Fine, leave." So, if I can't explain to a customs agent, I hope I can do a better job with your committee. I wanted to tell you today how the aggregate industry relates to your constituents. Some of you have already heard from Fred Corrigan, and I want to tell you about Meridian experiences in the aggregate industry in Minnesota. Our own story is similar to Jonathan's [Wilmshurst]. Then I wanted to tell you about land use conflicts, and these are going to be some of the same conflicts that you have already heard about with the barges and the rail, except we are the rail guys, and Jonathan [Wilmshurst] is the barge guy. Transportation has a profound and enduring effect on a nation and its people and the lives of people. Transportation affects the economic well being, the cultural development, and our social and recreational habits. The ability of your constituents to drive to work, to drive to play, to jump into their cars and go to the hospital, if they have to, is directly impacted by the availability and the congestion of the transportation system. This is why our issue affects your constituents.
Chairman Rukavina: Mr. Vry, could you give us just a little information? How big is your company in Minnesota?

Mr. Vry: We have two operations in Minnesota, one in Stearns County and one in Yellow Medicine County. About 3 million tons of production, so...
Chairman Rukavina: Mostly rail?
Mr. Vry: We do 50 percent by rail and 50 percent by truck. I wanted to tell you a little about Meridian's experiences in Minnesota, and I thought I would use our Stearns County operation as an example. We bought a quarry in Stearns County in Waite Park from the Shiely Company in St. Paul. We bought it in 1985. It had adequate reserves. We looked for more reserves. We wanted to have a larger tonnage base than what we had. In 1987 we tied up the land. We started the permit process, and that process concluded in 1998. So eleven years into the process, we had gone through two council elections and new council members. We had gone through the environmental process twice. We had been defeated at a council level, and we had challenged it to a district court. We had lost here. We challenged it again and won. We then defended the challenge to the Minnesota Supreme Court, and we won there. We then came back and had to again apply for our mine permit in Waite Park. After ten years, enormous amounts of time on my part, our employees' parts, and the people of St. Cloud, because at every hearing we showed up at, we had 600 people show up at the hearings in support of us. We spend over $5 million a year in the St. Cloud area. We have over 200 vendors that we do business with, so we are a dynamic economic force in the area. After all that, Meridian had spent $800,000. We got our permit. Our permit is for 52 acres. It permits enough rock to supply the metro area for two years, after ten years of battle and $800,000. Now who in their right minds is going to keep doing this? We need to ponder that for a minute.
Chairman Rukavina: While we are pondering that, maybe you should tell us why they opposed it.
Mr. Vry: Good question.
Mr. Johnson: I worked for county government for thirty years, and nobody ever showed up with 600 people. That is impressive, no doubt about it. So, there had to be some really big reason, either a housing development or something why they opposed you. I would like to hear it.
Mr. Vry: Ok, 600 people came from St. Cloud area because we do business in the St. Cloud area. We were permitting in the city of Waite Park. We probably had 25 people from the city of Waite Park. It is basically a residential community with not much business, so our economic impact on the city of Waite Park is primarily the people that we employ there. The big issue was we had housing developers come in and draw beautiful pictures of 300 homes and say this is the tax base those will generate. They didn't address the issue of what the services were going to cost. They didn't address the issue that the bedrock was at the surface, and they couldn't get city sewer and services into the issue. They said tax base. The council listened, and the tax base issue was there. We are, and again I open our operations up to any member of this committee; we are a class operation. You are welcome anytime, anywhere to visit a Meridian operation. Our opposition took 1,500 flyers and showed pictures of school children choking to death on the dust and spread them out amongst the neighbors.
Representative Osthoff: Sounds like Minneapolis was up there.
Mr. Vry: So, that was the kind of battle you go through. You really have to batter yourself down to do that. Did that answer your question?
Representative Osthoff: Mr. Chairman, it gives me the issue. It makes me wonder in my mind, where the St. Cloud council is coming from, based upon some of the things that you said.
Mr. Vry: It was Waite Park, not St. Cloud. And I need to defend Waite Park a little bit, because actually what happened in this process was we originally [were] part of the town of St. Cloud, and in the middle of this process we were annexed into Waite Park. So, the issue got dropped into their laps with probably three years of work and educational process with the town that they weren't privy to.

So we actually started over in the middle of it. They did the best they could with the information they had when the project got dropped in their laps.
Representative Osthoff: Was Mr. Bauerly your representative during this process? It has to be close.
Mr. Bauerly: It was Representative Daler. It has got to be close, for ten years it has to be close.
Mr. Vry: Wrong side of the river, I'm afraid. It was a good battle. It is a good site. It is a state- of-the-art site. It has noise berms built around it, anything outside of our site meets residential noise standards. Anything for dust meets residential standards. We didn't build it to an industry standard; we built it to a residential standard. We did it better than you would expect us to do, and that is we what faced. So, you need to understand, if we are out state and we are fighting those battles, God knows what the guys in the metro are fighting. It has got to be a terrible thing. At the same time that this is going on, and we saw all this happening, we're paying an aggregate tax in our county. Not only am I fighting an $800,000 permitting battle, but I'm also paying an aggregate tax that some of our competitors in the neighboring counties aren't paying. So, I have a competitive disadvantage on those issues, and then I have a personal issue.
Chairman Rukavina: A tax as you sell it?
Mr. Vry: It is a tax as it goes across the scales.
Chairman Rukavina: So, you are not putting money up front?
Mr. Vry: I am not, no. But it is still yearly out go, that in an industry that 50 cents a ton may make the difference between making a profit and not making a profit. Seven cents is a dramatic impact on that 50 cents. The other issue with the aggregate tax is that 10 percent of what I pay into aggregate tax goes into a reclamation fund, and it goes to Stearns County. To date, since we have purchased that quarry, I have paid $84,000 into that reclamation fund; and I have yet to see a dime spent for any reclamation. I have a personal issue with that because I don't like paying into a fund for things that don't happen. So we have spent a fortune on permitting; we got a discrepancy in the tax issues, and now we get into the mode of transportation. I apologize for rambling on a bit but...
Chairman Rukavina: That's ok, we helped you do that.
Mr. Vry: We have a rail yard in St. Paul. It is on the old Burlington Northern shop site, near the Maxim Steel site. The city of St. Paul is going to spend $250,000 cleaning up the Maxim Steel site; obviously it needs to be done. Their goal is retail and commercial shops. If they put retail and commercial shops right next to our rail site–about ten years ago they built housing on the other side of the street from our site–we will be sandwiched between retail, commercial, and housing; and that site will no longer be viable.
Representative Osthoff: Excuse me, are you the Oak Creek sand lot on Minnehaha?
Mr. Vry: We are just behind them. We are on a piece just behind them. What happens is, I don't know any other rail site for this metro. We have worked with many of the concrete manufacturers. We have worked with asphalt people. There aren't convenient rail sites left, so we are losing rail. We are losing barges, and we are losing aggregate reserves.
Representative Osthoff: If I could, Mr. Chairman. Under the state plan, under hazardous waste and the handling of it, that corridor for the railroad is still designated as a hazardous waste site. I don't see how they can get you out of there. Now I represent the area just north of that, and I used to represent that area as well. I'm one of those old enough to know what that corridor is designated, and most folks don't. We just did the Minnehaha Corridor Study last night, where we are going to realign Pierce Butler Road, and I informed the railroad that there are certain things they can't have there and

[that] can't happen. Having tank farms and stuff are still allowed under State law, and certainly your place would be allowed as well.
Mr. Vry: Well, I had a little bit of an interest in that because I lease from the Burlington Northern. The Burlington Northern representative had told me from the neighborhood pressure [that] they probably would not renew my lease.
Representative Osthoff: Well, we will have a talk at some point. Why don't you get in touch with me?
Mr. Vry: That would be outstanding.
Representative Osthoff: I can't...for the mayor–he likes me to.
Mr. Vry: Thank you.
Chairman Rukavina: See, our ramblings can actually have some good agreement. I have learned a lot.
Mr. Vry: Really, I am here, too, today to do a couple of things: To offer our companies services to show you what aggregate operations are like. I am here to offer my services, to answer any questions anytime this committee might have questions. I'm here to ask for your help. Existing sites really need protection of some sort. You need to preserve what you have, so you can protect the transportation system for your constituents. We need to map the future reserves so that someplace in the comprehensive planning process we take that into account. Right now if you look at a comprehensive plan, there are very few that include the mineral reserves in the ground as part of that comprehensive plan, and [we need to] recognize the need for that. I am asking that we consider that the transportation modes need to be maintained. And that is really all I had. Thank you.
Representative Osthoff: I have chaired the Transportation Committee for four years. I got too many miles of road in this state. We don't mind maintaining, but we do have to do some realistic turn back [and] start abandoning some of these road systems. You don't need a whole lot of aggregate for the county townships stuff because they are mostly gravel roads anyhow. And they run around with their blade and pick and little metal shed, and we ought to get rid of some of those townships. There are too many of them, Mr. Bauerly. But before we make a commitment [to] that, yes, we are going to maintain status quo on our transportation systems. You have to understand that some of us think we have too many miles to begin with.
Mr. Vry: But I was asking to maintain the modes of transportation. Don't eliminate the option of barges; don't eliminate the option of railroad, so we don't have...If the aggregate reserves move out 100 miles and our only option is to put it in trucks, your constituents are going to notice.
Chairman Rukavina: Mr. Vry, you realize, of course, there are a lot of hypocrites in life. And you know, people don't want those railroads behind them. It is our job to look at what is best. If those have to be taken into account and environmental factors, too, because rail is, I think, an environmentally sound way to move things. That, I would assume, is the reason why light rail is being considered for moving people. And to eliminate the transportation of aggregate by rail and go to truck, to me, is an environmental issue, too. I know Representative Osthoff's concern for the environment.
Representative Osthoff: Mr. Chairman, for the record, I have spent twelve years with the Milwaukee Railroad. My community was raised in a railroad community off Rice Street, in case you don't understand.
Chairman Rukavina: Representative Osthoff, I know you did. You told me you worked for the railroad. I'll never forget.

Representative Osthoff: One of the things we're talking about was the Frogtown shops. It was a repair shop that was highly polluted. It is going to cost us $50 million to remediate the brown fields up there. It is a long way a coming. Everybody knows that is not going to happen in our lifetime, but we're making plans. We had a big fight down at the Maxim site when we started talking about it, and what we didn't know was that in those metal sheds, there were probably 500 employees working down there for different companies. He is on the other side of the tracks, so I assume he would have been a part of the argument when we get to that part of the site. Nobody is going to throw these people off their property. The [St. Paul] Port Authority has pledged to relocate and help them maintain them. He has a difference because he needs the stockpile product. We are amendable to making sure that companies are not thrown out of our city.

Mr. Bauerly: Mr. Chair, Representative Osthoff, to quote you from the House floor one time, "I take umbrage with your remarks that township roads and county roads are gravel." We do have– I live on a township road–it is blacktop and they actually do plow it, and we do have mail delivery where I live.

Chairman Rukavina: Indoor plumbing? [laughter]

Mr. Bauerly: We have lights...

Chairman Rukavina: Any road you live on, we expect to be fully covered and taken care of, being the business you're in, sir. [laughter]

Mr. Bauerly: Mr. Chair, if I still have the floor? I think it is important, Representative Osthoff, to notice that in most of Minnesota, particularly in the fastest growing dozen counties or so, in suburbia, out 50 to 75 miles, 100 miles, there is more demand for those kinds of services. County roads, they're demanding to be paved, hard surfaced. Township roads–townships are blacktopping their roads or paving their roads each year. So, the demand, well I agree with you, there are too many miles of road in the state highway system, and you know that as well as anyone here. But, the simple matter of fact is that each of those small arteries, and collector roads, more and more people are living on and are demanding them to be upgraded, and with bike paths along side of them, and things like that for safety and for good reason. So, we talked earlier about the demand. It is no surprise to me that this one book that we got says there is a 2 percent or so increase in aggregate needs each year. So, even though there are too many roads that are in the state trunk highway system, there are still–we pave in excess of a hundred developments each year, in the counties that we work in. So all of those new developments require aggregates. And they are blacktopping those roads, and they are putting in curb and gutter and [this is] out in those rural counties. So, I just wanted to point out that roads are not going to go away.

Representative Osthoff: Mr. Chairman, if I could. I'm glad that Mr. Bauerly takes umbrage because he and I have a difference of opinion of how this works around here, ok? You know, the problem is we are having population shifts within our state, and the corridor from St. Cloud to Rochester is a hot corridor. We all know that. But southwest is losing people; north is losing people; we are not getting a massive new growth in our state. I think it was 2.5 percent in the last 10 years. What we are really seeing is the shift of people from one part of the state to another. So, we don't need to say because we are getting all this new growth that we need all these new roads. We need to do a better part on management of where development should take place, I believe. Mr. Opatz [Representative], on the House perspective at least, I thought was moving in the right direction of having some kind of plan for the tri-county area up there where you live. Not withstanding that, we have all been through that.

Senator Foley and others know that we get the farm-to-market argument, and then we won't put in any money for the bridges anyhow. So, I don't know why we keep the roads up, because some of those farmers are going to come out of their yards and go right into the creek someday because the bridges are going to cave in. And yet, we still don't come to realistically say we have to stop something somewhere, because we need to do the new things you are talking about, because we can't afford to keep doing them. If that means that we say, "No more aggregate," or we say, "No more bridges," or something somewhere along the line, we have to as the guardians of tax dollars do the responsible thing here, Mr. Bauerly. And that is to say, "Enough already."

Senator Foley: Mr. Chairman, I'd like to respond to that. I tend to share your concern, but I think that there is no penalty for somebody to move out. I was at a meeting in Mankato just two weeks ago. We flew back, and it is all developed to Minneapolis and St. Paul. You can look [at] it the same way, going from St. Paul to Rochester or to Duluth. People who are developing those areas in Sherburne County and Benton County and so forth are not paying the cost of those things. We're paying it down here. I just think that it is crazy. The Governor is talking about metered ramps; I sit at a metered ramp every morning. While somebody from St. Cloud or Foley or Becker or one of those places comes through mainstream Highway 10. It takes me an hour to an hour and a half to go what is normally a 25-minute drive because we have facilitated this urban sprawl. I think that if you are going to build roads and [with] these other problems in the rural counties that we have got to make sure that you are willing to pay for those.

Senator Foley: Mr. Chairman, a question for the actual speaker... [laughter]

Chairman Rukavina: Before I let you speak, I have to respond to my two urban colleagues that...

Representative Osthoff: Good thing that there are not six of us here.

Chairman Rukavina: On the record, that if we block the roads off, we could starve you people out in two days. So all resources–all wealth comes from the land, and that is exactly what we are talking about here. You know the Serbs used that method in Sarajevo. Over there and being a Croat, I learned from them. So, give us the tanks and our national guard armory just for a week and you folks down here will realize we give you your jobs; you don't give us ours.

Representative Osthoff: Ok with that, sir?

Chairman Rukavina: No, because it is the truth, all wealth comes from the land. And the people that sit down in the cities, and I know one of them, making $300,000 a year selling junk mail wouldn't be able to sell junk mail if my loggers didn't cut down trees to make the junk mail in the first place. All wealth comes from the land. There would not be a job in the Twin Cities if this aggregate wasn't coming in from somewhere, if miners weren't mining, loggers weren't logging, and farmers weren't farming. And that is the basis. Phyllis and you can talk all you want about how you give us wealth, but we give you much more, because without us there are no jobs in the Twin Cities.

Senator Foley: But we are trying to distribute the cost. That is why I raised that issue about Shakopee or Scott County putting a person out of business in the aggregate. Because those people down there want to develop that, and they don't want to pay the cost of that development. And part of the cost is having some of these mining operations in your area.

Representative Osthoff: Exactly.

Chairman Rukavina: Representative Osthoff, don't get me worked up this early in the session.

Representative Osthoff: I have to teach you the formalization of capital theory some day so you can make statements like that.

Chairman Rukavina: No, you can't argue that.

Representative Osthoff: You can make money with money. Eh?

Chairman Rukavina: Sure you can. You can, that's true. Taking over some aggregate business and reselling it. And taking their pension fund and using it to make some more money and putting them all out of work. I know how that works. Mr. Vry, we do ramble don't we?
Mr. Johnson: Mr. Chairman, may I ask my question. The tax issue is really important. One township in St. Louis County wants to do a tax. I am concerned with the discussion on the use of the reclamation money. Have you ever seen that money actually used for reclamation anywhere?
Mr. Vry: I believe the counties I work in do. Stearns County has [the] aggregate tax and Yellow Medicine doesn't. So, I will tell you a little bit about aggregate tax, and then I'll answer your question. In Yellow Medicine County, the county commissioners talk about having aggregate tax, and they were kind enough to invite me in to talk to them. We spoke very candidly about it and the answer is, "Why does it make sense for a county to enact a tax where they tax themselves to build roads?"
Mr. Johnson: But that was removed last year.
Mr. Vry: This is Yellow Medicine County and [they] never voted on that tax.
Chairman Rukavina: I think it was. That the tax on townships for their own aggregate was removed.
Mr. Vry: Anyway, so we were kind enough that the county commissioners listened. And we did well, and we don't have a tax down there. In Stearns County they have not used it [for reclamation]. I believe in the northwestern part of the state it has been used for some of the demonstration projects up there, and the CAMAS folks may have been involved. They would be better to ask about that.
Chairman Rukavina: During the meetings, one of the aggregate producers in St. Louis County raised a counter issue that instead of doing an aggregate tax, have part of the sales tax revenue go towards it. Would that work more efficiently?
Mr. Vry: I guess from a taxation standpoint, as a producer, I would rather see whatever we do be consistent across the board, so that I don't compete with somebody across the county line that has an inherent economic advantage over me. If your sales tax would get us there, then perhaps. I am very adamant in my belief that if I am paying a tax for something, then it should go to what it is dedicated for, and I would want to see where that money was going and make sure it was earmarked.
Chairman Rukavina: Because what the townships have been saying is that, "Ok, you can have a gravel pit here, but you are then keeping us from having that housing, like in Waite Park." They are being denied that tax base, so that is why they are interested in getting some revenue, because they don't believe they are getting enough revenue from your gravel pit.
Mr. Vry: The right answer to that is they don't have to provide police service for us. They don't have to provide city water and sewer for us. They don't have to provide all those services for us.
Chairman Rukavina: You don't have parties in your pits? [laughter]
Mr. Vry: We really don't.
Mr. Bauerly: Mr. Chair, also Mr. Johnson, what I am seeing is most of the counties, that we operate in at least, are changing the zoning on those gravel pits to a commercial zoning. The real estate tax sky rockets, from an agricultural tax, $50 an acre, to commercial property tax for the number of acres that are in your gravel pit. I think that is generating a lot more tax for that jurisdiction than an agricultural land would.
Representative Osthoff: Chairman Rukavina, maybe the members can help me, but I would think whether it is in the jurisdiction of this committee in the final recommendations, to make any recommendations on taxes in gravel taxes and sales taxes, might be a little out of our bounds, but maybe not.

Chairman Rukavina: I don't think so.
Representative Osthoff: Mr. Chairman, can I ask you a question? I'm kinda new to this, you guys gotta understand that, I remember when fencing off mines and gravel taxes were the hot issues in this place twenty-two years ago, ok. But I thought when I would listen to people in those days, like up in Felton Prairie and up in that area, those county guys wanted a tax because the North Dakota guys were taking it across the border, and they wanted to get some money for it. They were kinda doing a self-defense thing. So, we have a hodge podge of taxes and tax ideas. It sounds like to me, and that is kinda what you are saying, is that–could we have a uniform one so if there is going to be a tax, then make everybody pay it, so there is not an unfair, competitive disadvantage. But then what will happen, I suspect, is that we will get into shale and rock versus gravel versus sand [be]cause legislators protect their own little neighborhood, and tax the guy around them. The "don't tax me, tax the guy behind the tree" concept. So, when you suggest that, and I think that is what you are suggesting is that, try to be a level playing field here, if there is taxation.
Mr. Vry: Yes.
Representative Osthoff: I just want to caution you that, that is another bag of worms when it gets to the legislative perspective. I can help defend the people up in Felton because they want to save the beach ridges, or whatever they call it. Yet, we still know we need to have that material at some point, somehow, if it is possible. Yet, when we get down into Mankato, which is kinda sitting off the river down there, they just want to shut the place down. So that local legislator will carry some prohibitive tax or taxes to help do that. So, you are asking to open up two cans of worms at the same time, by saying, "make it level," because it really never gets level. I've been with taxes too long to know that. It still isn't fair because we are doing it at a local level. So, you're really gonna have to–as an industry–give some thought to that. And what you want to recommend to us, to have us recommend.
Chairman Rukavina: Well, we will be discussing the tax issue, I guess but whether it is strong...
Representative Osthoff: Mr. Chairman, can I ask you a question? And this was your baby quite frankly, this bill at least in the House perspective. I thought we would talk about all the issues around aggregate and make recommendations about all of them. Why would we just limit ourselves? The legislature, the Senate, the House, and Governor can ignore everything we say, but if we are going to thoroughly do this, as we have outlined on your tentative schedule, I wouldn't limit us to anything.
Chairman Rukavina: Well, I was asking for recommendations, not stating.
Representative Osthoff: Well, tomorrow the next guy may recommend something else. Today I am recommending we keep an open mind.
Chairman Rukavina: As always, Representative Osthoff. Thank you, Mr. Vry. Then Mr. Rowekamp from the Department of Transportation.

Aggregate Consumption in the State Highway System
Mr. Paul Rowekamp, Geotechnical Engineering, MNDOT

Mr. Rowekamp: Good Morning, Mr. Chairman and members of the committee. I am Paul Rowekamp, and I am the manager of the Geotechnical Engineering Section of the Minnesota Department of Transportation. Hopefully, this morning I can discuss with you the owners' perspective of some of the aggregate issues that we discussed. The Department of Transportation is very concerned about aggregate issues, including availability and cost of future supplies. We are a very large consumer of aggregates for use in concrete roads, bituminous roads, and the base courses below these roads, which can be as much as three feet thick.

On lower volume roads, used by counties and townships, the actual travel surface is likely to be either aggregate, crushed rock, or gravel. Aggregates are also consumed to produce concrete for bridge structures, roadway median barriers, and drainage pipe. Aggregate is far and away the largest component by volume and weight of our pavement, and bridge[s] and infrastructure. In Minnesota alone, we discussed earlier there are many thousands of miles of roads and more than 19,000 bridges. All of these are built from aggregate.

How much aggregate does MNDOT consume? Well, to give you an idea, one mile of four-lane highway uses approximately 20,000 tons of aggregate. MNDOT alone uses approximately 5 million tons each year, which is about 10 percent of the state's total production, at a cost of roughly $18 million a year.

If we include the aggregates used for city and county roads along with the MNDOT use, the total use is approximately 25 percent of all the aggregates produced in the state. Roughly 13 million tons, at a cost of nearly $50 million. When spending this amount of money, we want to ensure strong competition. We also want to make sure that we have high-quality materials available at a low cost. As we discussed, with an aging infrastructure, this becomes an even bigger issue. We need to make sure that we have a future supply of high-quality, low-cost materials.

There are several important factors that can affect the availability and the cost of aggregate. Due to its weight, the delivery price of aggregate is highly dependent on haul distance. When aggregate must be transported long distances, the cost rises rapidly. Trucking costs are approximately 10 to 15 cents per ton per mile. Therefore, a 20-30 mile haul can double the cost of processed aggregate. Long haul distances affect not only the price of aggregate but also impact the environment, safety, and cause damage to existing roads. Therefore, locally available sources are very attractive.

When aggregate is mixed with portland cement [for concrete] or asphalt to make bituminous, it quickly becomes a perishable good. National and state specifications for both bituminous and concrete require that the material be placed within 60 minutes after the completion of mixing. If bituminous and concrete suppliers aren't available locally, whether in downtown Minneapolis or in a rural community, we may not be able to meet national standards for the delivery of these materials. Hence, we can't forget that both concrete and bituminous in an unhardened state are perishable goods. The loss of local suppliers would also likely result in less competition and longer haul distances. Both of these factors can have a significant impact on material prices. A 10 percent increase in aggregate prices for transportation projects alone would cost the taxpayers approximately $5 million a year. Without additional funding or revenue sources, without increases in the gas tax, this cost would quite simply result in less lanes of roadway being repaired or rehabilitated somewhere in the state.

New specifications also affect aggregate availability and cost. Transportation agencies have had an affect on the aggregate industry due to specifications, [needed] to build long-lasting roads and bridges. We use specific aggregate sizes in the high-quality, durable materials. Aggregate is not just aggregate. Simply just locating aggregate sources on a map does not mean they will meet our quality requirements. By far, the largest tonnage of aggregate is used in the construction materials for concrete, bituminous, road base, and railroad ballast. Aggregate materials in this size range are, therefore, more valuable than finer or coarser materials. Unfortunately, this limits potential aggregate

use from the glacial outwash deposits because the ratio of gravel to sand is too low. There is more sand than gravel in some of those deposits. The chemical characteristics of the aggregates also influence their value. In western Minnesota many gravel deposits contain shale that glacials carried here from Manitoba. The shale is of such poor quality that it can cause deposits to be unsuitable for use in highway construction. New products such as high strength and high performance concrete are now being used for roads, bridges, and buildings. Our new requirements for concrete pavements will likely limit the number of available sand sources or may increase processing costs. MNDOT has also adopted the use of new high performance, bituminous mixtures, using nationally developed Superpave specifications. These new specifications require higher-quality aggregates and aggregates produced to tighter tolerances.

MNDOT does a lot of aggregate testing. Many different tests for freeze-thaw, expansion, soundness, and durability are carried out in our central labs and district labs. This research has clearly shown that recent specifications enhancements will provide significant improvement in pavement life and durability. But they will also limit the number of potential aggregate sources that can meet these rigorous requirements. Another issue that involves transportation...

Representative Osthoff: Mr. Chairman, I'm trying to understand what you're saying to me there. That sounded good, but what were you trying to tell me? You did a test. You now think that you can make it last longer, but for some reason it is going to screw up the aggregate base. What did you just say to me there?

Mr. Rowekamp: What I am trying to get across is that with our new higher performance specifications, that will limit the number of sources available that may meet those enhanced specifications.

Representative Osthoff: Are those specifications to federal regulations?

Mr. Rowekamp: Some federal and some internal [?]. For instance, in the bituminous industry the Superpave specifications are the national specifications.

Representative Osthoff: Is the testing thing up? I see Jon [Wilmshurst] is giving you this information up in [19]94.

Mr. Rowekamp: To some degree, a lot of it was developed through a national program, Strategic Highway Research Program, which started in maybe 1993.

Representative Osthoff: Are we mandated to follow the Strategic Highway Research ideas? Or is that just something you've adopted?

Mr. Rowekamp: We've adopted it due to excellent performance.

Representative Osthoff: So, the industries, whether it be MNDOT or whatever, that belongs to this group are self-setting their own rules?

Mr. Rowekamp: Well, the federal research developed new ways of producing bituminous mixtures and developed new research that showed new combinations of materials, and higher- quality materials, will produce longer life. State agencies decided to adopt those new standards.

Representative Osthoff: And could I ask, sir, the folks that put this new theory together, who funds that group? The industry?

Mr. Rowekamp: No, my understanding is that the Strategic Highway Research Program is funded through the federal government.

Representative Osthoff: Thank you.

Mr. Bauerly: Mr. Chair, if I might interject, along that same line. Would it be fair to say in addition to limiting the number of [re]sources–in other words, some of the [re]sources in Minnesota no longer

would qualify for Superpave, for bridge super structure, that kind of thing? In addition to that, would you say that the new mixes require more rock?
Mr. Rowekamp: I actually can't give a very good answer to that. Depending [on] where the material comes from, I guess. I'm not positioned to say whether they would require more rock or not.
Mr. Bauerly: Our experience is that it does require more rock. Particularly, the Superpave mixes and the asphalt mixes require more rock so it would further exacerbate the need for and not only limits the number of resources it could come from but also increases the need for rock.
Representative Osthoff: Mr. Bauerly, you and I heard the same thing, I think. And that begs the question by citing that [then] the only good place to do that would be in the middle of the Felton Prairie. But they are limiting our options by making these decisions.
Mr. Bauerly: Mr. Chair, I don't know if everyone in our company would agree with me, but I would support what they are doing. But that doesn't eliminate those same sources for lower layers of a road. It is basically the wearing surface, and the construction industry is trying to improve their product, and this is a way to do it. By Superpave, it is a more durable wearing surface.
Representative Osthoff: As usual, by improving, it is costing us more.
Mr. Bauerly: That is correct.
Representative Osthoff: Mr. Chair?
Senator Foley: I don't think that is necessarily true. I think that what we have done through the years, and MNDOT has said that they have a life of fifty years for concrete, and thirty years for asphalt and certain other things. But, as a matter of fact, they have never been able to live up to those goals; and the roads, bridges, and so forth have deteriorated quicker. To my way of thinking, by using higher quality of material and higher mix, they're more likely to have a longer life, and the overall cost may be cheaper because it is done right in the first place.
Representative Osthoff: Mr. Chairman, Senator Foley, you may be absolutely right. But then that begs the question, "At what cost to the environment, and to our state, do we have to pay to get there?" And if by designating a certain kind of material, they didn't designate where we've got to take it from, basically. We don't know, in fact, if that designates all the critical habitat areas that I might be concerned about, or whether it just opens up some part that we don't care about. They are driving us without us knowing it. Now that may be fine for some folks, but I get nervous about that.
Senator Foley: I would agree with that, but I do think that is the reason why this study is here and why we need to look at what inventory we have and figure out based on that. Because it doesn't make sense to build roadways that only last twenty-five years when, with a little improved materials, they could last fifty years. It would have less impact on the environment that way, I would think. That is something that the study would look at.
Representative Osthoff: Mr. Chairman and Senator Foley, I don't think that we agree with basically what you said. But if the price for that is to take the last remnant of natural native prairie we have, then the price may be too high for me.
Chairman Rukavina: I would agree with that, but we may very well have to ship it in from some other state rather than to do that.
Representative Osthoff: I agree. For those who don't know, I have been the main author or co-author of every gas tax bill that comes to the House. So, I am not sympathetic that we need more money to do a better job, but I do that because there are other things that I don't want to do harm to.
Chairman Rukavina: Maybe this is an issue we can talk about, put on the agenda, because I'd be curious to have input from the industry, too. I would think that if, in fact, your rules or your adoption of these rules and new standards, it may very well, extend the life of the actual driving surface–but,

you know, the more you shake, screen, crush and move rock, the more it is going to cost. And is the cost economically and environmentally both a lot more than what the gain is on the extension of that?
Representative Osthoff: The other thing, Mr. Chairman, is that I do think that we have to–this isn't a transportation committee–but I do recognize, I recall, the bridge over 694 and 94 in the northwestern suburbs up there the roadway. County Road 18, at the time, was never open[ed], and that bridge sat there vacant for a number of years, and then MNDOT tore it all down and replaced the whole top of it. There is all kinds of evidence of bridges functioning perfectly well that have only a short life, but they are tearing them down and replacing them with something bigger, or better, or different. I am not quite sure what has happened on that, but I do think that we have to look more carefully at what we are doing.
Chairman Rukavina: Well, you have brought up some interesting issues. Senator Dille, welcome. And while he is here, Senator Foley moves the minutes of the last meeting and there aren't any additions or corrections. All those in favor signify by saying aye.
All: Aye.
Chairman Rukavina: All those opposed. [Gavel] Ok, go ahead then.
Mr. Rowekamp: Another issue that involves transportation agencies and aggregate supply is recycling. [The] MNDOT is a strong promoter of recycling roadway materials. Virtually no existing payment is wasted or land filled from roadway reconstruction projects. The existing pavement may not be used 100 percent in the new pavement surface, but the materials are reused whether for the base, which I mentioned earlier could be again up to three feet thick, or as part of the surfacing on a different, maybe a lower volume project. Or, it could be used, much of it is used, in commercial bituminous applications. Current specifications also allow the use of recycled materials in our new Superpave bituminous mixtures. Recycling alone won't solve all of our future supply problems. Future traffic forecasts are requiring thicker pavements and deeper bases below the pavement. There simply isn't enough high-quality recycled material available to meet all of these needs.

In summary, MNDOT is very concerned about maintaining sufficient supplies of aggregate for our future projects. Our infrastructure depends very heavily on the use of aggregate, and not just any aggregates will do. We need high performance material to meet our new demanding specifications to produce long-lasting pavements and bridge structures. To continue to serve our customers, we need to ensure a future supply of high-quality, low-cost materials.
Chairman Rukavina: Mr. Rowekamp, early on in your presentation, basically what you told us is there is always going to have to be, because of this perishable product–which you told us, that I never realized and the other members didn't–that we are always going to have to have that resource and some type of industrial facility within probably a half hour or so of downtown Minneapolis and St. Paul. Have you participated, meaning MNDOT, in some of these meetings we heard about today? Does MNDOT take an active role in going out to Shakopee or wherever, and get involved in that and say, "Wait a minute, this has to be here because of standards, federal standards we have to meet." We need to have a close resource maybe, but not the aggregate itself, but certainly the asphalt or concrete facility. And when these city complaints start and public forum start to close some of these things down, have you and are you going to take an active role in this?
Mr. Rowekamp: I believe so, yes. I believe that would be part, I'm not personally involved in a major corridor project, but that certainly would be an issue that could be brought up and discussed at those meetings.

Senator Foley: Mr. Chairman, Mr. Rowekamp, one of the things that I've observed through the years was a portable facility for the generation of asphalt, blacktop or whatever you call it, or concrete mixture. Are those things still in existence, and are those things a viable alternative when you are constructing a highway through? I realize that isn't going to help the people constructing a building and so forth.

Mr. Rowekamp: They are in existence. It certainly still is viable. But certainly still a problem that comes with that is–you'll need space somewhere along the right-of-way or close to the project to set up that operation. You will no doubt be trucking aggregate, water supplies, cement, and other supplies from one location to another, re-establishing it there, and then mixing it there. It can be done, if there is room available. In the metropolitan area it is very difficult. There simply isn't room to stockpile, in many cases, that kind of material and the equipment that is needed.

Chairman Rukavina: Ok, any other questions? We have a schedule in front of us before we adjourn. And this is just a draft of some ideas. You'll notice we have got it February through October. If anyone else has any other things they want to discuss, contact us and we will get it on the agenda.

Mr. Johnson: Mr. Chairman, I just wanted to comment about the comments of groundwater given earlier. That is an issue that does come up a lot on gravel pits, and those DNR Waters are working on expedited waters permitting for de-watering. So we want to hear more about that or would that broaden?

Chairman Rukavina: That could be included, Mr. Johnson, in our February discussion where we talk about permitting and environmental review, and maybe mix that in and have the DNR give us information on that, too.

Mr. Johnson: Well, that...let the DNR in because they have gravel pits on their property.

Chairman Rukavina: Mr. Olson from the DNR has been gladly and willingly doing the legwork on all of this, and I appreciate this. I want to publically thank him for his hard work because he has done all of this. I am certainly not bright enough to do anything anywhere near this. I get help from him, and I want help from you folks. Is that dangling the bait, Jerry [Bauerly]? Any suggestions from you then and Mr. Johnson? We will discuss that somewhere along the line here where it is appropriate.

Mr. Bauerly: Mr. Chair, I'd like to–and maybe I don't know where that fits–maybe in February, it is appropriate. I would really like to hear from the Association of Minnesota Counties and the League of Cities. I think it would be interesting to hear their perspective on how they wear the two hats. One is as a purchaser, as an owner of these projects, and secondly, as the final say in the zoning of the plans that build them. I'd really be curious to hear.

Chairman Rukavina: In April I think, Jerry, [Bauerly] when we are in there with the Statewide Standards, Region Specific Reclamation Rules and then we have Maintain Final Land Use Decisions with Local Government. We can have Mr. Olson work that presentation in by maybe the Township Association, Association of Minnesota Counties, and one of those organizations. Should we bring in the League of Minnesota Cities?

Representative Osthoff: You all have far more expertise than I do, but I know they put up temporary facilities when they do big construction projects. Is that going to be part of the permitting thing as well?

Chairman Rukavina: Yes, maybe the construction agency could, but I would imagine that you do have to get a permit for a temporary facility, too. Maybe we could hear about that as well in that April discussion, the permitting process itself. And what everything requires permitting, Mr. Olson,

whether it is a temporary batch plant or what. Ok? Any other questions? When you are in the minority, you really have nothing to do, so I am really grateful to have something to do. [laughter]
Chairman Rukavina: Besides throwing bombs, I want to have something to do, Representative Osthoff.
Representative Osthoff: I think that you better go tell Speaker Sviggum that you would like the honeymoon to be back on because tomorrow morning they are re-appointing this task force with our membership.
Chairman Rukavina: But this task force has an equal number of Republicans and Democrats, I believe.
Representative Osthoff: But if you want to be re-appointed you better go and apply, Sir.
Chairman Rukavina: Ok, is that what you are saying. Thank you. Anything from the audience? Mr. Olson?
Mr. Olson: Mr. Chair, you had a question about the meeting dates and times. Perhaps after session would be better?
Chairman Rukavina: Yes, while we are in session here we will try to have a monthly meeting, but is there a better time?
Representative Osthoff: The Environment Finance meets at 10:00 a.m. every day, three, four days a week and will be five days a week so, 10:00 a.m. is really hard for me.
Chairman Rukavina: Would an afternoon session, after session meeting be a problem for you folks from the business end of it?
[Unknown speaker]: Well, they can get a day's work in.
Chairman Rukavina: Mr. Brice, do we gotta pay you overtime? If we get you time and a half or anything, can that be worked out?
Mr. Brice: They haven't paid me overtime in about twenty years.
Chairman Rukavina: Got a bad union? You're in that management level. Ok, well, we will talk about that then. After session is over would people prefer to have it back in the day then, and for those of you driving long distances what is your preference? Maybe an evening meeting or after 5:00 p.m. or 6:00 p.m. Is it too late for you?
Mr. Magnusson: It makes it a little difficult. If you had it in the morning, I could drive down the night before. If you had it in the evening or late afternoon, I would just spend the night here and go back the next morning.
[unknown speaker]: No, the most helpful thing would be to have them scheduled in advance far enough so that we can potentially schedule other things while we are down here. So, if we know when this meeting is going to occur, then it would be helpful.
Chairman Rukavina: It may be difficult, because we never know about session and what is going to happen.
[unknown speaker]: If we had two days in a row instead of one day every month, for someone to come down one night, they can get in two days. Then they don't have to come down every month.
Chairman Rukavina: Well, that is a good suggestion, too. Mr. Olson will see if we can work that out. Thank you. Meeting is adjourned then. [Gavel.]

Aggregate Resources Task Force
March 3, 1999
Meeting Transcript
Room 500 South, State Office Building, St. Paul, MN

Presentation Topics:

A Consultant's Experience with Aggregate Mining Planning
Mr. John Shardlow, Dahlgren, Shardlow, and Uban, Inc.

Elk River Experience in Alternative Urban Areawide Review
Mr. Stephen Rohlf, City of Elk River

Experiences in Washington County
Mr. Lowell Johnson, Mr. Dennis O'Donnell, and Ms. Ann Pung-Terwedo, Washington County

Task Force Attendees: Chairman Tom Rukavina
Representative Bob Westfall
Senator Dan Stevens
Mr. Jerry Bauerly
Mr. Mark Johnson
Mr. Tim Magnusson

The meeting was called to order by Chairman Tom Rukavina.
Chairman Rukavina: I guess we want to welcome our newest member to the committee, Representative Bob Westfall from up in Clay County, is it?
Representative Westfall: Clay, Wilkin, Ottertail.
Chairman Rukavina: Up in that northwest area–I think he has a special interest in this, so welcome him to the committee. Bob [Westfall] replaced Representative Leppik.
Representative Westfall: I'm going to try to.
Chairman Rukavina: So, we will start, for all of you citizens in the audience, since all of you are [here]. We just want to note the best argument against unicameral legislature is the senators never show up on time. Remember that when they bring up a unicameral legislature, sometimes they never show up at all, which may be the case today; but we are going to get moving here. Representative Larson told me that she would try to get up here shortly, and, unfortunately, she and I have to go back to her committee. She has a long list of bills today, real controversial bills, like the runway expansion for the commuter airports around the metropolitan airport or the Twin Cities International Airport. Some of you township people who are here, you know, we have the annexation bill coming up and several others. We apologize we didn't know that when we scheduled these meetings, and that is going to be one of the problems, so we will just get moving with the agenda.

The first thing we do have on the agenda today is Mr. John Shardlow, President and Director of Planning for Dahlgren, Shardlow and Uban, Inc. Welcome. Why don't you just identify yourself, Mr. Shardlow.

A Consultant's Experience with Aggregate Resource Planning
Mr. John Shardlow, President and Director of Planning; Dahlgren, Shardlow, and Uban, Inc.

Mr. Shardlow: I'm John Shardlow, President and Director of Planning for Dahlgren, Shardlow, and Uban, Inc. I am a consultant to a number of local units of government around the state of Minnesota. I have also been a consultant to a number of members of the industry in seeking permits, so I have been involved in this process on both sides of the table, if you will. I have been asked to talk with you today about kind of what, I believe, are some of the keys to successful aggregate resource regulation and mining and reclamation in the Twin Cities metropolitan area. I am going to show some examples to you from some slides. We tried to lower the lights so that you could see those better. I don't know if that is still possible, but we just do the best we can. I am not going to give you a big introduction except to say that I have been involved in this process from both sides of the table, and I've been involved as a representative of local units of government when we have had the opportunity to do it right. I've had the opportunity to be involved when we were stuck with situations where we had to make the best of some things and when we have had the opportunity to do it right in a cooperative working relationship and sometimes when that wasn't the case. I think there are lessons to be learned from both of those.

So, let me start out by stating what, I believe, is the objective of what this process is about. From my perspective, [it] is to ensure that aggregate resources, which are such an essential material to support the development and redevelopment of our region, are available in sufficient quantities and in close enough proximity to be delivered economically to construction sites. So, I would suggest that, that objective speaks both to volume and also to the cost of material. I think the problem is not going to be rocket science to anybody. The problem is that really because of the spreading development pattern in the region, there is a lot of development that is occurring that [is] either covering up resource or simply extending residential development and extending those who may be opposed to the harvesting of that resource, if you will. There are a couple of examples that I would like to share with you. One, is the one I was involved in, in the city of Apple Valley [overhead]. The second is one in Maple Grove. This is one of those rooms where there is nowhere you can stand and not block somebody, and I'm a pretty small guy so I won't block too many. In the case of the City of Apple Valley when I got involved–this is a map of the city of Apple Valley, and what is shown on the map is, as of about 1989, where the active ownership and operations were in the city of Apple Valley.

Just to kind of orient you, this [oblique photographs] is County Road 42, Cedar Avenue right through the center of the community here, so most of the existing operations at that time were north of County Road 42. It was Fisher Sand and Gravel, and McNamara had an asphalt plant, and there was another existing plant to the south. Now, I am just going to take you on a quick orientation. This is the very extreme north end looking to the south. This is Galaxy and 140th Street and part of the development. Part of the pit was actually an abandoned pit to the north, so this is looking to the south and the east. This is where Fisher's operation was at that time. So I am just going to take you and kind of orient you. This is now back at the corner of County Road 42 and Galaxy looking off to the north and east, so this shows where the Fisher operation was at that time. You can look up to the north and see where residential development, basically the development of the community, had grown around where that operation was. Proceeding further to the east, rather this is the northern portion of the Fisher pit. This is an area where Fisher had assumed ownership, but this had actually been

abandoned. Someone had mined it, in fact, over-mined it, and abandoned it. This then is further over to the east. This is the eastern-most section of the northern portion of the mining, and this is the McNamara operation. This actually illustrates where they had gone below the grades on their end-use plan and [had] yet to reclaim it. But that gives you a picture of the development of the operations on the area to [the] north of 140th Street. You can see that the city had grown right up to this edge. So, one of [the] things that was an objective to the city of Apple Valley was to figure out a way in which they could close the operations north of County Road 42 and consolidate them south of County Road 42. What, I think, are some good lessons learned:

- Obviously, where there was opposition and concerns–in terms of hours of operations, and noise, and dust, and so forth–are the logical places where you have residential immediately up against those edges.

- One of the lessons to be learned here in this whole business is being able to plan for the mining operations and being able to plan for the interfaces or the edges between the mining operations and the adjacent residential. This shows [oblique photographs] the relationship that existed at that time between a residential plat and the mine face right to the side. There literally was no way in which there could be anything other than just some end slopes put back in here to try and make that work. At the time, working with the city and the landowner, we actually looked at the price of purchasing all those homes, taking them off, mining it to make the edge better and putting it back in. Even though it wasn't a politically acceptable solution, it would have actually made economic sense to do that. But, obviously, this is what you want to try and avoid. So, we worked with the city, amended the comprehensive plan, and worked with the land-use concept that called for the reclamation of this area, basically everything north of County Road 42. This is that edge that I was showing you. Basically, that all had to be put in permanent open space, as a change of elevation between that residential area and the development that would proceed to the side. So that is just a closer look at that. If you look down at the area closer to County Road 42, that was intended to be a light industrial plan use development, there is actually some development occurring there. If you are familiar with the area, this is where one of the Dakota County Government Centers is located. It has been developed.

- Considerations about surface water management. There was [a] need to do some ponding in this area, so that was part of the plan as well; but most of the focus of this effort was consolidating everything south of County Road 42. So I am going to give you just a quick little review, kind of moving around this area. There was an existing operation, Model Stone, located in Lakeville and Apple Valley. So, this is down in the extreme southeast corner of Apple Valley, looking to the north. This is Apple Valley. The Lakeville border is right here, so this operation extended in ownership into Apple Valley. But it was one of the latter phases of their mining, and they intended to mine over to approximately this location. This is roughly the location of County Road 46, 146th Street.
- Dakota County also had a barrow pit in the middle of this area with no end-use plan; and at the time this was done, they essentially weren't using it except that they had small jobs, small highway projects. This is where they were going out and mixing the sand for their maintenance trucks, but again, no end-use plan for this area. At the time we got involved,

there was also a piece of ground that was owned by the Seed Family Trust that was then purchased by the Kraemer folks and had been subleased at this time to Barton Sand and Gravel. This is really quite a significant hole. It is difficult when you are looking at it from a helicopter like this. You can't really understand the significance of the depth here. But driving along on County Road 42, you have absolutely no awareness that that was going on.

- So, a big part of what we were trying to do was pull together all of those operations, coordinate the operations, and also design, not only the operations but, the end-use plan in such a way that they could be mutually compatible. I'm not going to go over all of this. These were the objectives that were set forth in that project and adopted by the city. Essentially one of the big issues for the city of Apple Valley was to phase out all of the operations north of County Road 42 and then stage all the mining operations in the project area so that they were compatible with the existing and proposed surrounding land uses. A lot of what the city had in mind, and, I think, the city should be credited with having the vision to take a long-term view here. We saw the opportunity to create a very high-valued area, with a chain of lakes. In coordinating the reclamation of the land as we went along, so that we could ultimately not only improve the water quality of the surface [water in] the community but also create this chain of lakes and design an end-use plan in such a way that it created very high-value real estate. So the operations, just to recall, this Model Stone [Company] facility mostly in the city of Lakeville was going to extend their operations to the north here. The entire plan was to berm the entire perimeter of the operation and landscape it heavily in the very beginning. Start at the center of the area and make sure that [they] were always working where they had vertical separation between the pit and surrounding properties. Locating the hot mix plant and the ready mix plant in the base of the pit as far as possible away from the adjacent land uses after building in stockpiles of overburden and providing seed on that so that it provided maximum separation and noise barrier. Basically, what we ended up doing was [to] design it in such a way that the operation expanded incrementally. All of the material was conveyed back to the central processing place. But the key [to] the success of this effort was that we were mining it and reclaiming it incrementally. The reason why the city wanted this stage to be completed first is that there was existing residential located right here and residential in nearby Rosemont as well. So they wanted to make sure that the resource was recovered but that it [was] reclaimed and that the land was reclaimed before they moved onto another area. So the Kraemer Pit was given the opportunity to expand up to County Road 42 and grade down so that the slopes were better. The McNamara Pit was able to eventually expand in this direction, but the whole concept here, and I won't go into it in great detail, is the incremental and staged mining and reclamation and development so that there was never the entire area opened up into mining. I think that is an important concept to keep in mind, the idea of mining an area, mining it efficiently, locating operations in an efficient way, and staging the reclamation of the land incrementally. So this goes through the sequence that is provided for. In that process, you can see that at this point, the southern eastern most lake has been created on the Model Stone [Company] property, and the northwestern most lake has been created on the westerly portion, and as that continues out, finally everything is completed on this, completed on that side, essentially mining themselves out of the pit, while creating the end-use character of the land. That shows the shape of the land, shows the roadway system that is created, identifies where there are a couple of key bridge crossings that need to be in

place and again this looks, coordinated with the city of Apple Valley, was done in an EIS and then coordinated with their comprehensive plan. So when all was said and done, with the exception of the lakes themselves, all of the land was useable; all of the land was taxable. There was a large central park in this area, a chain of lakes which created a high amenity for the development, a good deal of private lakeshore property around the perimeter. All of the city storm water drainage was conveyed through a series of ponds, both on the north when that was reclaimed, discharging into this end of the lake, a settling pond and into what became a progressively cleaner lake until it discharged into Lakeville. So it ended up substantially improving the quality of the water as it left the city of Apple Valley.

So, that is a quick review of the Apple Valley consolidated end-use plan.

This [oblique photograph] is a view of Maple Grove, where I have been involved for the past several years, initially as a consultant to the landowners and subsequently as a consultant to the city. This is Trunk Highway 169 and the joint stretch of I-94 and 694 heading off to the north and the west. So you look to the north and west over what is approximately a 2,000 acre area that has been in [mining] operation for pretty close to thirty years.

To give you a sense of the scale of this area, I'm just going to move a little bit to the north over the interchange that is immediately to the north of I-94 and look off to the west. You could fit the whole city of Hopkins into this mining area. It is a vast area, and again, has been operated for a long period of time. Again Trunk Highway 169 here and looking off to this area, it starts to give you a feeling for just how vast this area is. It is another example of a situation of where you really don't understand that it is there until you get out into it. Because there is significant berming and hills along the freeway, the area is simply so large that there really is no reason to go into the center of it unless you have business that is within the gravel mining area.

Again, just another view of the interior, and then I'll take you to some [views] along the perimeter. This is looking to the west. This is where 494 and 694 diverge, with 94 heading up through (to) the north and west. This is the Weaver Lake intersection up here. You can start to see that area where some of the frontage along the freeway has been mined out and is getting ready to be developed. This is the Zachary interchange, which will be redeveloped and, in the near future, to support a new project, which is currently under construction right now, which is the Arbor Lakes Project. This is the confluence of 494, 694, and 94, which, I believe, to be one of the highest valued pieces of real estate in the state of Minnesota, given the high visibility and approximately three and half miles of freeway frontage in front of that development.

This is sliding a lit bit further to the north and the west, the Weaver Lake Road interchange I-94, looking at the existing development pattern there, as it existed in about 1994. There has been development that has extended down in this location. This side right over here, which, I think, a little bit closer view of, I guess not, maybe I'll come back to that, was where the new Maple Grove Community Center has been built. There are some areas in this Shiely operation, now CAMAS. There has been–there is one edge here where CAMAS is in the process of reclaiming it and going to the end use. There is a Rottland proposal here. It is this edge, that you wouldn't be surprised to know, that has been a little bit controversial with the surrounding property owners. There is some

concern about doing what you would really would want to do from a land use planning stand point in terms of making those slopes work, so some of the land there is being used for that buffering and sloping that might be put to a better use. It could have been done better had it been thought about initially.

This [oblique photograph] is another example of a mining operation that pre-existed the more recent end-use planning. This is just a view in the center of the site, which one of the concepts for this area as the western portion part of Maple Grove gets reclaimed and redeveloped, their operations will move into the western area and consolidate their operations, perhaps use the land a little bit more efficiently, but here is still a great deal of land to allow that to occur. This is the view just to the west, looking out across the eastern portion of the gravel mining area, again giving you an education of how vast that area is.

I want to turn from just kind of orienting you to these project areas to talking about some of the planning processes that have been undergone here. It is what, I think, are some of the keys to success. About the middle 1980s, the city of Maple Grove was concerned that this Maple Grove area could be over mined, and so they initiated a planning process and brought the operators and the city into a process with a gravel mining task force and essentially set some maximum elevations that the mining was limited by. Essentially, that was so that the property could be served by gravity sanitation sewer and gravity storm sewer. But, fundamentally, the city wanted to realize a plan for the gravel mining area that was equal to its potential.

Again, I'm not going to take your time today to go through all the planning process that was undertaken there. It was very involved; we did an Alternative Urban-Wide Area Review [AUR] which is an alternative to an EIS. The entire scope of this project would have required six EIS's. All of that was consolidated into an AUR. This is the ground water recharge area for that whole portion of Hennepin County, and so all of the water had to drain in ponds before it drained into the groundwater lakes. A lot of planning [was] given for the roadway system for land uses, and so forth, and ultimately the comprehensive plan for the city of Maple Grove was amended in conjunction with that environmental review to facilitate the staged development of the property, basically from the west to the east in an organized fashion.

Again, I'm not going to go into a lot of the detail, but I think what is important to understand is because this was done right, because the land wasn't over mined, and because it planned and the environmental review was conducted properly, there is an opportunity available for the landowners and the city to realize very significant benefits. This Arbor Lakes project is resulting in the investment of literally hundreds of millions of dollars in Maple Grove. There will be a new main street in this area, a new location for city hall; there is a new main street retail area, city hall location, and many, many housing units in the area. The city is putting its city hall in the middle of this area, to literally be the heart of its city. They are creating–some of the lakeshore in this area will be urban plaza with an amphitheater and walk ways–a lot of opportunity available to the city because it has been done correctly.

Let me quickly move from that discussion of theses two examples to talk about what, I think, is a problem or a challenge that faces this committee and others. This is a depiction of the Twin Cities

growth management strategy. As you probably know, the area that is shown here in gray is the developed portion of the region. The area in dark green is permanent agriculture both in Dakota and Scott counties and then permanent rural in Anoka and Washington counties. Essentially the planning process of the Metropolitan Council is about right now attempting to facilitate the orderly transition of urban area into this yellow area.

A couple of years ago, I was involved in doing a study for the Builders Association of the Twin Cities, in which we analyzed that yellow area, looked at it, and worked cooperatively with the Metropolitan Council to try and figure out which of those areas would be the best to develop and the pattern for that development. We looked very closely at the area that could be served by our existing and planned waste water treatment system in the region, and identified the area, essentially 550,000 acres surrounding the developed portion of the region. We looked at that area and identified those portions of it had already been developed with the Pine Bend refinery and other industrial areas that would not be available for residential development, which was clearly the home builders concern. There also was a fair amount of land that had already been occupied by regional and state parks in the area, which has consumed some of that acreage. In addition, there was about 122,000 acres in that area that were wetlands. But, as we looked at the area and started to analyze its development potential, we realized that the area wasn't undeveloped at all. In fact, as you traveled around, I apologize for the slides in the Minnesota November here, but as you travel around that yellow area, literally around the entire fringe of the metropolitan area, what you found is, in fact, it had been developed in large lots. If you had ever been in public hearings when you attempted to do sand and gravel or quarrying operations in proximity to residential, you know that, that is a problem.

So as you look at this area, and again I'm not going to take a great deal of time, we actually hand measured all of those parcels. We traced all of those plats into the computer, so we could have a clear and accurate understanding of exactly how much land had been consumed by large lot residential and put that together with the wetlands, and the industrial, and so forth. What you can see is that outside the developed portion of the region, there is already significant constraints, not only urban development, but I suggest the opening and the operation of mining operations. If you think about it conceptually the location, where you would like to put sand and gravel operations, would be in that yellow area. It holds land; it is in close proximity to where development is going to [be] occurring, but the problem is that a lot of that land is already spoken for. Again, not to go into a lot of detail, but this is just a summary of how many acres were consumed by those various needs.

The other problem is that the universe doesn't end at the end of the yellow area, and outside that area, there are now 41 communities that have waste water treatment plants that are drawing from the outside in. So, one logical thought would be, if you can't do it in the yellow area, just go outside the yellow area. And what you find is, when you get outside the yellow area, and, in fact, outside the seven-county metropolitan area, in fact, there's in many cases more urban development and at greater densities than there are inside the area that is being proposed for urban development. So that, to me, is the challenge, and, I think, there is a certain amount of urgency in order to put policies in place that would protect those areas for sand and gravel operations.

Let me just quickly close by giving you some summary comments. The Apple Valley consolidated end-use plan. I think what was important about that is that the mining activities north of County

Road 42 preceded the residential development, so even though when it got to the end of the life of the pit, there was some concern that people knew that they moved into the area recognizing that it was a mining area. The only area where there was a rub was the area where there had been residential on both sides. Clearly a key to the success was the cooperative working relationship between the city and the operators that did allow them to phase out the operations north of County Road 42. When I talked about the operations south of County Road 42, again, I can't overestimate that cooperative working relationship between the city and the operator. They really were focused on seeing if they couldn't come up with a win-win.

The other thing that is a key to success is that it is a large area. We are talking about approximately 1300 acres. There is no substitute for having enough land, so you can locate the operations far enough away from the perimeter and also have the opportunity to vertically separate the operations and the busy parts of it from the perimeter.

Another key to success, I think, was the phased reclamation, and that is something that hasn't been done as much as it should be, where you actually mine an area and reclaim it as you go, so that the area that is being mined is kept manageable. With respect to Maple Grove, here is a project that harvested the resource for thirty years. I would argue to the immense economic benefit of the region, while preparing the land for an end-use plan that is going to consist of about three and a half million square feet of commercial. Seven million [square feet] plus office, five million three hundred eighty [thousand] square feet office, approximately five thousand housing units plus an extensive community parks system, a town square and trails, literally doubling the taxable value of that community within 8 percent of its land area, so by doing it right creating very significant benefits both to the landowner and to the city.

Again, the keys to success, the operations predated much of the communities development. This is a very large area. There were literally no neighbors, with the exception of that one edge that I talked about on the north and that long-standing cooperative working relationship, and the trust that existed between the city and operators. I would also suggest that the city had the wisdom to do the gravel mining plan at the right time. Had they not done that in the mid-eighties, they may have over mined some of the areas and precluded some of these opportunities. We staged the reclamation and coordinated it with the comprehensive plan. The operators were committed to the community. There are plenty of chances along the way when [they] could have sold off parcels along the freeway and done it incrementally. Instead, they held the land when they could realize the highest value. They were unwilling to sell it off in pieces.

A couple quick summaries of lessons learned from my perspective. Mining operations are intensive, heavy industrial activities that are not generally compatible with surrounding residential developments. And if they do co-exist, for instance, near the end of the life of an operation, my experience is that it is far better socially, politically and even legally, if the operation was there before the residential was there. Clearly, it is a buyer-beware situation. If someone decides to build a house immediately adjacent, they have the opportunity to understand what is going on and make their own investment decision. Clearly from my perspective, the bigger the piece of land, the bigger the opportunity for success, bigger setbacks, more vertical separation of processing, options for access,

and so forth. Cooperative working relationships between the local units of government and the operators is essential. Responsible professional operators is key.

Finally, strong local leadership with the wisdom and vision and the courage to commit to a long-range vision. This isn't ribbon cutting, this is something that takes, in many cases, twenty to thirty years to realize, and in the case of Maple Grove, it is a good example of that. Finally, under the right set of circumstances, mining operations can serve the whole real estate while market opportunities grow. When the operations are finished, there is a large continuous environmentally clean site available to accommodate special developments. Some good examples of that would include Centennial Lakes Development in Edina and now more recently the Arbor Lakes Project in Maple Grove. I went through that as fast as I could, Mr. Chairman. I'd be happy to answer any questions that anyone may have.

Chairman Rukavina: You did a really good job, Mr. Shardlow. Any questions?

Mr. Johnson: I would hope that once again that we would be able to have copies of the overheads?

Chairman Rukavina: Can you make that available?

Mr. Shardlow: Yes

Chairman Rukavina: For yourself, personally?

Mr. Johnson: Yes, I'd like that. Last month we had some problems with the overhead, and he was going to produce those overheads for us since he couldn't show them.

Chairman Rukavina: Let me ask you; I'm puzzled. I'm from rural Minnesota...that anybody would buy a house next to a gravel pit. Knowing that it was there in the first instances as you were showing us, what do they [think]? Does the real estate agent tell them that the pit is closing shortly?

Mr. Shardlow: Nobody is ever out there.

Chairman Rukavina: How do they get to that point? Wasn't the city involved with their planning and zoning saying you really can't sell there yet? Or?

Mr. Shardlow: What it was is that the city didn't have anything at the time that kept it from being developed. There was easement over the land. It was basically land that was available. Willing seller, willing buyer. People went in and planted it. The worst case that I was showing was at the time there wasn't an operation there. It hadn't been reclaimed. It was basically an area that had been mined. There were trees along the back lot line, and then it sloped off into nowhere. We did do some analysis of the property values in that area. One of the things that we wanted to check was to see if there actually was any indication that there was an adverse effect on property value from those houses that were closer to the pit. In fact, there wasn't. In fact, we didn't find any examples of people not investing in their property. There were people pulling permits to do expansions of their property and so forth. It didn't keep them from showing up at meetings and being crabby. The fact of the matter is that once you are there, and it seems like a good idea at the time, but as things go on, it did become more and more of a problem. It is one of those things if it has been thought about. There is nothing about the pattern that was going on there about areas developed and areas being mined that could work. It is just that the way it was done didn't work. So if it had been mined and reclaimed and a berm and some screening had been moved over to where the mine face was, it could have been done much more compatible. It is a matter of mining right up to the edge, developing the residential, and pretending that here is no interface between the two, which is what we sought to do differently on the south side of County Road 42.

Chairman Rukavina: Now in both instances when you are reclaiming, I assume that you are also losing some millions or whatever cubic yards of material as you are making a commitment to wrap it

up early or whatever that you actually don't over mine. As you say, because it would have been over mined to get more material out, but did they make it up on the other end with the higher valued land then?

Mr. Shardlow: I think in Maple Grove they certainly will. In the case of Apple Valley, they ended up taking a great deal of resource out. They definitely completely re-contoured that whole 1300 acres and reduced it very significantly and mined down into the ground water, so there was a significant amount of resource taken out of there.

Chairman Rukavina: But what I'm asking is, "could a lot more have been taken out had not for the ..."

Mr. Shardlow: You could still go another 800 feet down into the ground if you want to, but you would end up leaving the land with no productive use whatsoever. I think that is always the balance; that is the balance of the planning process of figuring out how the land gets left.

Mr. Johnson: Do you have a solution on protecting areas that are for gravel, that limits development? What would be your solution? Obviously, there are areas where there are five- acre lots–didn't do it because people on five-acre lots are likely to complain as much as people on one-acre lots.

Mr. Shardlow: Well, I haven't actually thought about the solution yet. I was just [undecipherable]. I think that when you get out into those areas that are out beyond the developed areas, there has got to be an opportunity through zoning, for operations to be opened, either through a conditions of use permit or whatever. I think that it would be incumbent upon those counties and those townships to have provisions in their comprehensive plan that would recognize the need to harvest the resource before development occurs. So however that happens from a policy standpoint, I think that we need to be sure that is protected.

Chairman Rukavina: Do you see this as a role for the state, or is this an issue for a local government and counties and cities?

Mr. Shardlow: Some of my best friends are local officials, but I think that there is very little incentive for local elected officials to take a hard stand for aggregate resources. It is easy to assume that there is plenty of it out there and let somebody else do it, and this isn't a good place for it. I don't think that there are more people in local government that really have–really understand the economic impact of this problem or have a perspective to understand the threat to that resource to our region and the impact economically. So I think it is always a matter of how heavy handed the state is and how the state interacts with local units of government, but I do think that [absence] some pretty significant nudging at this point, it won't happen.

Chairman Rukavina: Any questions?

Representative Westfall: I think that up in my particular county, in Clay County, I think that my elective officials, as I read them, see it from the other direction. They are behind the aggregate resource folks pretty strongly. But what we are trying to do up there is trying to equalize the balance or the scale between aggregate resource mining and prairie preservation. Some of the other special resources. A lot of it depends on where you are and how much resource you have.

Chairman Rukavina: Ok. If there are no other questions. Thank you very much. That was very enlightening. And you will try to get us a copy of your slides, your overheads

Mr. Shardlow: Do you want copies of the slides or prints of the slides?

Chairman Rukavina: I think just the overheads would be ok.

Mr. Shardlow: Just the word slides would be easy to do.

Chairman Rukavina: Ok, that would be great because I was trying to write some of those great pearls of wisdom you had on the screen there, and I wasn't keeping up very well.
Mr. Shardlow: They are all copyrighted.
Chairman Rukavina: I assume that. That is why we asked for permission to get them. Thank you. Senator Stevens is here with us so that gives us quorum. With that, Senator Stevens moves the minutes of the previous meeting. Are there any discussions of those minutes? If not, all in favor say, Aye. Aye... Opposed–No. Motion prevails. Next we have Steve Rohlf, a gentleman from Elk River who has been really in the thick of gravel permitting for a lot of years. Somehow he has managed to get through it without losing his hair as I have, or turning very gray either. So maybe he can share with us how you did it.
[Chairman Rukavina had to leave the meeting. Jerry Bauerly takes over as Chair.]

Elk River's Strategy for Mineral Development
Mr. Stephen Rohlf, Building and Zoning Administrator, City of Elk River

Mr. Rohlf: Mr. Shardlow is going to be a hard act to follow. I agreed with just about everything he said, with one exception. That is, we would appreciate it if the state wouldn't butt into gravel mining in Elk River. They have screwed enough stuff up. No offence to anybody, but we can handle it. I am not going to pawn myself off as an expert on gravel mining. I'm anything but. Anything I do know about the industry, I've had miners teach me, as I've had to regulate it. What I did have happen in Elk River was in 1992. My city council called me to a meeting and told me to get a handle on gravel mining in the community.

In 1978 the city of Elk River consolidated with the township of Elk River, making the new city limits 44 square miles–quite a large city. Of that, there were nine gravel companies operating within the new city limits. They owned or leased approximately 10 percent of the city land base. One fortunate thing was that it was a fairly continuous area. I scratched my head for a while, and about six months later the council asked me what I did with this process, and I said I was on top of it, and then I decided that they weren't going to forget about it, so I had better do something. Five of the gravel pit mining companies at the time were looking at Environmental Impact Statements for expansions, phased, and connected actions. What we ended up doing was talked all nine gravel companies into doing a joint voluntary EIS and paying for it. The benefit to the city was obvious. Instead of looking at one mine at a time and getting a piece meal review of the environmental and other issues, we had a comprehensive review all at once of the entire mining area. The benefit to the miners was sharing the cost of that environmental review. The benefit to me was doing one Environmental Impact Statement versus five, which would have been a lot of work. That Environmental Impact Statement went through the typical issues, land use, ground water, noise, air quality, the whole gambit.

Some of the issues particular to Elk River. We had a regional landfill that had contamination from the original cell. We were very concerned about the wash operation actually causing the lateral migration of that contamination to speed up. That was one specific issue. In the droughts of the late 1980s, we had several residential wells that were stressed by wash operations. We did a whole mining area pump test and were able to get good data from the entire area at once because of the cooperation of the nine different gravel companies. Also, another issue was transportation, the re-routing of roads. There are mines on both sides of several roads, so we had a zero transportation plan,

a final reclamation plan that deals with those issues. Another issue that is not always obvious, but you have one mine that will mine out, and you have another one, and you think that they will mine the strip in between them. But one might be 100 feet deeper than the other one so the final reclamation plan is not meant to be to the last five or ten feet even, but it [is] close enough to where it will blend in from one mine to another, very similar to the reviews [that] were done in Maple Grove and Apple Valley. [It was] the final thing we did in Elk River, so we had the Environmental Impact Statement done. The city still did not have any control over the gravel mining operations. The miners were operating under permits that were issued by the county a number of years prior. We actually talked them into submitting themselves to the city's conditional use permit process, allowing us to put stipulations on their operations. The carrot to get them to do that–the win-win so that it was a benefit to both the city and the miners–was we took the entire gravel mining area that was covered in the Environmental Impact Statement, and we put an overlay zone on that property, minimal excavation overlay zone. This did several things; it got the miners to submit themselves to our conditional use permit process, so we had something to say about how they operated, and it also put future purchasers of property surrounding these areas on notice of the intent for them to be mined. That is pretty much what we did. It worked well.

I have a couple things. There is controversy surrounding gravel mines being adjacent to residential areas, and I hope CAMAS doesn't mind me bringing them up as an example, but they had one that was particularly controversial. It was a mine that had been started by another company a number of years before that. A lot of residents already lived there, and now the mine was going to [be] re-activated, so it was kinda like the houses were there first, in a way. What we did, when you get to a public hearing and you have to sit in front of a microphone at a podium, it is kinda an intense setting, specially for a resident who is not used to that situation. If you have to voice their views at a public hearing, what we did was a series of neighborhood meetings that went over issues. We sat around a table with a cup of coffee, a lot more friendly atmosphere. We worked through these issues with CAMAS and the neighborhoods; and when we finally did get to the public hearing in front of the city council, one neighbor showed up versus the hundred that were at the initial meeting, and that person was in favor of the mine. There was a lot of give and take with the neighbors. They saw the mine as a benefit because of some of the things that were happening associated with that. One of those things was the acquisition by the city of approximately eighty acres of rare threatened dry oak sub-type forest that happened to be the highest elevation, the most drastic elevation changes in five counties that the city saw the right to preserve. Add to that, the city did not require CAMAS to lock that property up. The city decided that preserving that property was for the good of all. All should pay, and we actually purchased it from CAMAS.

Finally, I'm running late here, but as far as specific regulations, there are a few of them you can't put a specific regulation on. Noise is one. Our permits, when we did go through the conditional use permit process, noise was one of them that was a little open ended. We try to deal with the noise on the front end, but we always have that clause in there that says "or additional measures as needed." As Jerry [Bauerly] knows, noise can bounce around, miss the first house and hit the second house. It is a hard one to figure, so I've always [undecipherable] mining companies that were always willing to adjust to that.

And finally, I'd say that the one issue that has been a real frustration to the city of Elk River, the only issue we haven't been able to really get a handle on, or set a proper condition on to alleviate a problem, is traffic. It is not from the mining companies, what it is–a lot of the miners sell to independent haulers. Those haulers are paid by the run. They are barreling down the road to get that extra one [run] in. It is out of the mining companies control, and the only thing I can think of is police enforcement. But it is dangerous. You get a fully loaded truck moving fast down a road and they don't stop on a dime with a load of gravel on there.

Again, I think that if it was in the mining companies control, we would have that one resolved, too. We have had a lot of cooperation back and forth with the mining companies in the city of Elk River. We have had a lot of joint projects, where the mining companies have stepped forward to see that roads get asphalted and improved, and a lot of mining companies are stepping forward to see what they can do back for the city. I was a little bit flattered that the mining companies actually asked me to come here today because I've felt we were fairly tough on them. So, I think that if you look at it as all business and so [undecipherable] business–just make sure that they do it in an environmentally sensitive way. Be consistent and fair. I guess that is the best business can ask for. I do see a different corporate attitude over the last 10-15 years. I think that mining companies want to do things right, the ones I'm dealing with anyway, so that is it unless you have any questions.

Mr. Bauerly: Great, Steve. Questions?

[unknown speaker]: How do you deal with the dust control issues? Noise, dust, and traffic –that kind of thing.

Mr. Rohlf: My attorney is here, and I'm going to plead the fifth on that one, so–I've always wanted to say that. We try not to use chemical retardant; we try to do it with water. Typical dust issues are not stockpiles. It is whenever you have equipment moving out. Neighbors are real good. We got a policy–we give out the miners' phone numbers, and they call them first, instead of me. They get an immediate response; and if they don't, then I get involved. It has been really good. If they have an issue, they know that they can call the operator, and he knows if he doesn't do something, that it will get to the city, and the issue is resolved. But mainly you don't need to water the entire gravel mine. Can I add one more thing, Chairman Bauerly?

Mr. Bauerly: Sure, go right ahead.

Mr. Rohlf: Having an overall comprehensive plan, that Mr. Shardlow brought up, is essential. Especially if you have a large area that is continuous–that has the resource. We did one step in addition to that. There is the overall plan, and we also starting requiring–we have a yearly license, and with that comes an inspection from the city at least once a year, and mostly it is multiple times, where we sit down with the miners and go through their pit and have them reclaim what is physically possible to reclaim that year–whatever is not in the way of their haul roads or stockpiles, not in the way of their operation. The net result of that, even if you do phases–five year phases or whatever–we are getting things done each and every year that it is possible to do it. The end result is that, I think, we have more production in Elk River of gravel now than we did five years ago, and we have less exposed area. That kind of goes along with your issue of dust and not leaving it sit there if it doesn't have to.

Mr. Bauerly: I might add that their permit is based on how any acres that you have open. So, the cost is proportional to the number of acres you have open. So, it behooves the operator to reclaim it.

[unknown speaker]: What is your fee structure then?

Mr. Rohlf: Help me out, Jerry. [laughter]

[unknown speaker]: Bob Gerald said it was too high...
Mr. Bauerly: Like a $1,000 an acre. Is that it?
Mr. Rohlf: No, about $20 an acre. It is going to go up to $1,000 an acre....[laughter]
Mr. Bauerly: I thought it seemed like it was. [laughter]
Mr. Bauerly: Other questions? If not, thank you very much.
Mr. Rohlf: You bet. Not that it is not interesting, but....
Mr. Bauerly: Some very creative solutions to some neighborhood issues. Ok, now we have the folks from Washington County, Lowell Johnson and Dennis O'Donnell.

Experiences in Washington County
Mr. Lowell Johnson, Manager; Mr. Dennis O'Connnell, Senior Land Use Specialist/Zoning; and Ms. Ann Pung-Terwedo, Senior Land Use Specialist/Zoning; Department of Health, Environment and Land Management, Washington County

Mr. [Lowell] Johnson: Mr. Chairman, I'll simply introduce the land specialist from Washington County. They are going to make the presentation today.
Mr. Bauerly: Ok.
Mr. [Lowell] Johnson: I am Lowell Johnson. I am program supervisor for the Department. Mr. Dennis O'Donnell is a land use specialist, and Ann Pung-Terwedo is also a land use specialist. Dennis will give you a historical perspective of the development of our county ordinance and a kind of brief overview of the content of that land use. I believe Ann's portion of the presentation is going to focus on current operations and how we manage the day-to-day operations.
Mr. Bauerly: Ok, great.
Mr. O'Donnell: Good afternoon. Washington County, I am not sure if all of you know, is in the seven-county metro area and is on the eastern edge of the metro area–bounded on the east by the St. Croix River, the Mississippi River on the south, Ramsey County to the west, and Chisago County to the north. The county's population has been increasing at approximately a 30 percent growth rate for the past ten years, ever since 1960. We expect the next decade's growth to replicate and increase by another 30 percent. That has made Washington County either the fastest or one of the fastest growing counties in the state. The current population of the county is approximately 190,000 people. The county is quite scenic with abundant natural resources, with many wetlands in the area, steep sloped areas, with the wild and scenic St. Croix River on the east; and in the southern part of the county, there is a significant agricultural resource. The median family income in Washington County is the highest of any in the metro counties. The geology of Washington County is such that there is an abundance of the sand and gravel resource. As a result, we have numerous mining operators, ranging in size from small "mom and pop" operations to large facilities, such as the Shiely Company or CAMAS, and Barton Sand and Gravel. Both have two or three large facilities in Washington County. Our staff and the county board has always recognized the importance of the agricultural resource and its importance not only to Washington County but also the metropolitan area.

Washington County is a key provider of sand, gravel, and crushed rock to the metropolitan region. The county first adopted a mining ordinance in 1972. That ordinance was general, and we really did not get very involved in regulating existing operations. Most of our existing operations did exist prior to 1972, so we are really only looking at the new operations that were coming on board. In the late 1980s, partially as a result of the residential growth that occurred in Washington County in close

proximity to mining operations or along their haul roads and also because of some questionable mining practices by some of the mining operators, we were repeatedly flooded with complaints about several mining operators. Complaints about truck traffic significantly increasing, mining over property lines, noise, dust, gravel on the public roads, breaking windshields when it [the gravel] would kick up on the cars, drainage and groundwater issues were all common issues that we would hear. After investigating some of these complaints, they were indeed valid. Some of the small mining operators, having ten, maybe fifteen, truck trips a day all of a sudden expanded to 200 or 300 trips per day. So, there was some validity to those complaints. As a result, the public demanded that Washington County take some additional steps to regulate these facilities.

So, in 1989 we set forth an effort to totally revamp our mining ordinance. In order to do this, we felt we needed the help of the mining industry players themselves because we felt it was important to understand the industry if we were going to try to effectively regulate them and [be] in cooperation. Most of the industry representatives were supportive of our efforts–maybe "most" is an exaggeration. There were a few that supported it anyway. But they realized that there was a need for all operators to have a set of reasonable standards to operate under so they would be continually under the threat of curtailing their operation by the county or other local governments close to their facilities.

Secondly, most of the industry players felt it was important to have a level playing field, so that all operators, no matter what community they were working, were under the same regulations–that no one had a competitive advantage. We initially formed a sub-committee consisting of a couple of our Planning Commission members, our staff, a couple of the industry representatives, along with their legal people, one county board member, and two citizens that lived in close proximity to some of the problem mining operations. It took us approximately one year to update that ordinance.

When we were doing it, we had two primary goals in mind: (1) we wanted to develop an efficient permitting process, while at the same time providing for adequate public input, and (2) we wanted to set forth performance standards and operating conditions that must be met by all mining operations that would address the nuisance issues and the environmental concerns that are common with mining operations. The ordinance was drafted to allow mining in our agricultural districts and our industrial zones. Our agriculture districts aren't–they are certainly not all agricultural. We use that term, but it certainly filled up. There are numerous residential developments ranging in size–plots ranging in size from ½ to 10 acres. So, it is not like we're dealing with open agricultural fields. The mining operation must be at least 20 acres in size and not considered prime agriculture land–those were two performance standards that we insisted on. Our permit is valid for five years, and at the end of the five-year period, the mining operator must renew it. Every year they are to submit an annual report to us so we know just what they're doing and where they are mining. Our ordinance was written so that both the existing operators and any new operators did have to come in for a conditional use permit.

We set forth in great detail what must be submitted as part of the application package, including a reclamation plan which John [Shardlow] talked about. It is of the utmost importance. Part of that application requires that we require two-foot contours as well as soil borings that would show the depth of the groundwater and the limits of the aggregate resource itself. We clearly indicated that we will be following the Environmental Quality Board rules that require an Environment Assessment Worksheet for any pit over 40 acres and an Environmental Impact Statement for anything over 160

acres. So, we had numerous operations that fall under the EAW category and a few that fall in the EIS category as part of our ordinance that we set forth a number of operating standards. We do require setbacks from property lines–a 50-foot setback from property lines, 100 feet from platted residential areas, 100 feet from roads, and 200 feet from any existing houses that are not occupied by the owner of the mining operation. There is no science to these numbers. Certainly people on our committee and the public felt that they just were not large enough, that there should be greater setbacks. The industry argued that if we increase those setbacks that we [were] wasting a lot of aggregate. So, these were the compromise figures that we came up with. We do require some minimal fencing around the perimeter to keep people out and to have them posted with warning signs.

We limit the hours of operation to 7:00 a.m. to 7:00 p.m., Monday through Friday, but we do allow for extended hours in times of flood or an accelerated work schedule where people are working 24 hours a day to get a road done. We do limit blasting to between 8:00 a.m. and 5:00 p.m. We also require screening. We do have substantial berms that we require to be built around the perimeter of the property to screen the view from the road as well as from any property line. We limit the depth of excavation–try to keep it 10 to 20 feet above the groundwater that we minimize any groundwater concerns. If there is mining into the groundwater, we do have extensive environmental review into that particular operation. We have noise standards, simply saying that you must meet the state and federal noise standards. And we will require, if there are any complaints at all, the mining operator to hire an independent testing firm to measure those noise standards. We also regulate fuel storage. We really don't encourage any fuel storage on the property; but in some cases, it is necessary. And if that is the case, we require a double containment type system. We also allow the mining facilities to have processing equipment such as the wash plant, crushing equipment, and, in some circumstances, asphalt plant. If these type of facilities are included, they must be on a parcel at least 40 acres in size and located at a bottom of the pit and screened from the road and property lines.

Recycling is a big thing. We do allow recycling, however, we did not want any of these pits to turn into a demolition landfill, so we did put a limit on the amount of recycled materials that could come in. We limited that to a two-year amount of material that could reasonably be recycled in that two-year period. So, we could keep a handle on that.

As far as the application package, I did mention that we required the detailed reclamation plan, which would include the final contours and a general development plan. We want to make sure the site is a useable form after mining. We did have some mining operations or pits that were more or less abandoned. They didn't go tax forfeited, but they were not being used, and they posed some safety issues. They were eye-sores and a nuisance to children. There was quite a bit of partying going on in some of these. After a great deal of work and expense, most of those areas have now been reclaimed and redeveloped. The land values in Washington County are so high that the property owners realize that restoring the property makes economic sense.

Also, we require a bond to cover the cost of restoration. We require an engineer to review the reclamation plan and provide us with figures. We review that with the Soil and Water District and have bond posted to cover 125 percent of that restoration cost. As a result of our new ordinance implementation, a number of complaints about mining operations from area residents have

significantly decreased. Most of the mining operators become very easy to work with and are willing to make operational changes to gain more acceptance with the community. There was one performance standard that we did have in our ordinance before it got to the County Board, that one of the sub-committee form[ed]. The public was demanding that all the trucks be covered when they leave the pit because of the number of broken windshields and the amount of gravel on the roadway. Industry, of course, didn't care for that idea too much, and we knew it was going to be a problem to enforce, especially since these pits are using independent contractors, and some of them will be coming in from out of the county and won't have tarps to cover the equipment. I think it woke up the industry and said, "Hey, we got to do something about this," and, I think, now they are very careful about loading the trucks and are careful about wiping off the back end of the trucks to make sure there is no spilled gravel on the ledges of the truck. So, the spirit of cooperation will certainly need to continue if mining and other land uses are going to co-exist in a growing county like Washington County. With that, Mr. Chairman, I can answer any questions you may have.

Mr. Bauerly: Great, very interesting. Senator?

Senator [unknown speaker]: Mr. Chairman and Mr. O'Donnell. If this is something Ms. Terwedo is going to cover, go ahead and say so. I assume Washington County has a soil survey completed where you can identify your areas–that will probably be most likely to have mining in the future. Because I think you bring up two points, your rapid growth in the county out there, the fact that much of this land will be developed, and at the same time, we're going to have quite a need for aggregate in, as you said, with proximity to the seven-county metro area. So, what steps would Washington County be taking to see that prime aggregate areas are not covered over with housing or developed in some other manner? Are you taking those steps...?

Mr. O'Donnell: Well, we do have a soil survey, and we do know where the aggregate resource is. A good portion of those areas are under permit by CAMAS and [undecipherable]. They have shown us their plans, and they do have a 20 to 25-year supply in some of those areas. It seemed several years ago there was more of a concern about protecting areas, and then the Metropolitan Council came out with a study; and that kind of seemed like there was enough aggregate material in the Twin City metro area anyway. So, other than allowing mining with a conditional use permit, we haven't done anything else to protect those areas. Several years ago, like I mentioned, we did look at the possibility of having a mining [undecipherable] excavation overlay district and pinpointing those areas and setting them aside for mining. But there are politics involved in that, and it didn't get off the ground. But we have looked at that possibility.

Mr. Bauerly: Any other questions? Yes?

[unknown speaker]: What do you think of the role the state, county or township has in the various jurisdictional review of gravel pits?

Mr. O'Donnell: I think the county has a major role because it is a region-wide resource, but I think the county is a little more local than the state would be and could look at the needs and concerns a little more closely. We also have the staff to implement something like that. The impacts of mining go beyond a certain or a certain township. You know, the truck driver goes a long ways, and groundwater contamination can go across property lines. A number of impacts cross property lines, but I think the county is a good level of government to try to control that anyway.

Mr. Bauerly: Yes?

[unknown speaker]: You said your hours of operation were 7:00 to 7:00, with exceptions. How do you sort out when the exceptions occur, especially when that neighbor calls you and says, "Gee, these guys are running at 3:00 in the morning!"

Mr. O'Donnell: We really kind of default to the township on that, left it up to the individual townships. [laughter]
Mr. O'Donnell: We didn't want to get the calls. The county is a good place for it, but for hours of operations–let the townships handle that. I think there is some standard that you have to meet in order to operate around that, and it's in times of flooding. Like in Stillwater, where they're trying to rebuild downtown, and they're working 24 hours a day. So, they need to haul material 24 hours a day. If we see a need like that–you know, there is a legitimate reason if it's open longer.
[unknown speaker]: Additionally, does your county collect the gravel tax, as allowed by the state of Minnesota?
Mr. O'Donnell: Yes.
[unknown speaker]: Do you have any problem in doing that?
Mr. O'Donnell: Well, that's a whole different department so we just–when we review our annual pit permits–we make sure they pay the gravel tax. We don't get too involved in that.
[unknown speaker]: I'm just curious if you have any operators that think that somebody is not paying their fair share?
Mr. O'Donnell: It's a hard thing to measure.
[unknown speaker]: Just a follow-up to that, you said earlier on that, some of these abandoned pits had been restored. Does Washington County use some of the gravel tax for restoration of pits that have not been restored by other operators?
Mr. O'Donnell: I assume that we probably would if the properties went tax-forfeit. But these abandoned sites that I still use the term "abandoned" are still on the tax rolls and are still owned by someone, so we have never used the gravel tax for this.
[unknown speaker]: So, that's how you interpret it? That if it were tax-forfeit to the county, then you would use the gravel tax proceeds to...
Mr. O'Donnell: I think we'd certainly look at that opportunity anyway.
[unknown speaker]: On one of the other issues, setting the bond level–it seems you go through a lot of work in setting that. Have you thought about doing some sort of automatic formula where it is related to total acreage, slope, and you plug in these numbers, and this is what you pay. If the pit operator complains, then you would do the fair thing–the more complete study.
Mr. O'Donnell: Well, we have looked at that closely, and it kind of appeared to us that $3,000 an acre several years ago was what it was coming in at, of disturbed area. Some operators were saying we could do it for less than that, and in other cases it may well be more than that if they didn't leave the top soil on the site. It is really a variable type thing, so we like to look at each case on an individual basis.
[unknown speaker]: What is your fee schedule for your regular permit review?
Mr. O'Donnell: We only charge $450 right now for the conditional use permit and $100 a year for an annual report.
Mr. [Mark] Johnson: That's $50 higher than us for a conditional use permit, that's St. Louis County. [laughter]
Mr. O'Donnell: The cost of living is higher down here. [laughter]
Mr. Bauerly: Thank you very much. We appreciate it. It was very good. Ann, welcome.
Ms. Pung Terwedo: Thank you. It seems as though Dennis really covered quite a bit of the information. I didn't read his report before we got here. So, I will just briefly go through just a little bit about our operations in Washington County. Then I have the ordinance here, too, that I can pass out.

Mr. Bauerly: Great.
Ms. Terwedo: So, you can bring that home with you. [Ordinance is passed out.] Again, as Dennis [O'Donnell] has highlighted, we do have fifteen mining operations in Washington County. They range anywhere from 30 acre "ma and pa" type of organization up to the CAMAS Shiely Mine [overhead] which is located down here on Grey Cloud Island, on the Mississippi River. Again, in looking at Washington County, we see the metropolitan area as it is expanding eastward toward the St. Croix River. We do have some large cities–Woodbury, in this area, which is about the size of a township; we have the city of Stillwater; and we have the areas of Forest Lake and Forest Lake Township in the northern portion of the county. Again, in looking at our mining operations, we are pretty much located in the unincorporated areas. A majority of the land in these areas–a lot of the land down in Denmark Township is still in agriculture. The majority is agriculture uses. To the northern areas where we do have large lots, 10-acre sub-divisions, a lot of natural wildlife areas, and a number of state parks that are up in this area. With our mining operations, again, we do require every five years that the operator come in to review his permit. At that time, they do go through a public hearing at the county level, and we do notify residents pretty much within a half-mile radius of that area. So, again, within that five-year span, we do get an updated plan of what they're going to do with the property, depth of excavation, reclamation plan so we keep abreast of what's going on and what's happening with them. At that time, too, it also gives us a chance to hear from the neighbors and try to resolve any issues that may come up. On an annual basis then, city staff does require a report from them. That report requires that they send us the amount of aggregate they did take out of the pit in a given year, and then we do take that report and look at the actual permit and the original plan submitted to us. So, we do have an idea of the location they're drilling within that framework of their operation and just keep a follow-up on what their activities were for the year. We also do an annual inspection out there, once or twice a year, to see what they're doing, where their crushing machines are, where the washing machines are located, if they've got any. And we also do talk to town board members and any local issues that may come up. So, it really does take an effort by the county and towns to work together with the operations–to make those operations work within the environment that they are working in. Again, in looking at the county, we do have some expansion areas down in West Lakeland, Lakeland areas, that will be expanding in the next year or two. We will be going through, again, the EAW process as we further move into new areas. One area, in particular, in Lakeland we do have an area of–sort of 2 ½ acre lots around this operation. So, we will be working very closely with the general area in trying to lessen those impacts on the expansion of the mining operation.
Mr. Bauerly: Just a question about you–you talked about, as you review these pits each year and get a report from the operators. How do they report recycled material that is brought into the pit, the natural gravel, sand and gravel that is in the pit. You bring in the recycle. Do you charge a gravel tax on any of the recycled coming in, or is it only the virgin aggregate that is?
Mr. [Lowell] Johnson: I think the tax is only on the material leaving the pit. We haven't been real specific on the amount of material being taken in, but we make sure there is not a lot of unprocessed material out there. It hasn't been a problem, yet. It's usually coming in and being recycled quite quickly and going back out.
Mr. Bauerly: I guess my curiosity, though, is how you figure your gravel tax. It is only the virgin material, I assume? So, the operator would have to provide the virgin material. That portion of it that is recycled material, and then is that how it works?
Mr. Johnson: Yes.

Mr. Bauerly: Ok, thank you. Questions? Ok, thank you very much. We appreciate it. Anyone else that cares, from Washington County, to add any further comments that you have?
Mr. O'Donnell: No.
Mr. Bauerly: Thank you very much. I don't know about the other committee members, I found today's information very enlightening. Extremely enlightening. So, we appreciate it. [We are] trying to get some sense of what is done in different counties and different areas of the state and I think that is what our goal is. You have been very helpful. Any announcements that we should make, David [Olson]?
Mr. Olson: I don't think so, other than...I think there are more people in the audience here who believe there are some issues here, and we're going to work on getting legislators....
Mr. Bauerly: Holding the meeting in the evening–I mean I wouldn't mind having an evening meeting. Maybe what we can do is just continue. We tried this 3:00, and with committee deadlines, I mean it is just that time of session. I do understand that they do not have a lot of control over their schedules either. Today they probably didn't know that they had bills that they had to present and things like that. So, in defense of the legislators, it is probably somewhat unavoidable this time of the year. I guess my hope would be is that they would spend the time to go through the materials that you provided and listen to the tape if they need to, to get up to speed on some of these things. Because I think this information, to me at least, has been extremely helpful, and I would think to them as well. So, I think all we can do is continue to try to work with the time and maybe re-survey them. Right now we have a meeting tentatively scheduled for March 24, the next meeting, and I think the only thing we can do is try to be as insightful as we can. As far as their possible–what committee deadlines there are, if there are further bill deadlines that they need to meet at that time. But, as was scheduled, we might try to meet either early morning or late afternoon and do the best we can to accommodate their schedules. So, we'll try to work with that, and there is some potential field trip dates that are scheduled for after the session is out in June and July. If session is out in June–they tell me it will be, but–and it should be, but if it isn't, we'll have to adjust it as well.
Mr. Olson: I think the Metropolitan field trip will be quite easy to do. We also have to poll individual legislators and committee members on what they are interested in seeing in out state Minnesota. Depending on where you go in the state there is....
Mr. Bauerly: Ok, so any input you have on those things, please let David [Olson] know and/or the committee through Representative Rukavina. With that, thank you very much for your attendance and for your information, those of you who presented. I thought it was excellent. Thank you.

Aggregate Resources Task Force
March 24, 1999
Meeting Transcript
Room 300 South, State Office Building, St. Paul, MN

Presentation Topics:

A Township Perspective
Mr. John Prouty, Township Officer, Grand Lake Township, St. Louis County

Statewide Overview of Permitting and Reclamation Requirements
Ms. Cindy Buttleman, Regional Minerals Specialist, Division of Minerals, Department of Natural Resources

Addressing Technical Issues in the Permitting Process
Mr. Nels Nelson, Barr Engineering Company

Region-Specific Reclamation Using Native Species
Mr. Ron Bowen, Prairie Restorations, Inc.

Task Force Attendees: Mr. Jerry Bauerly, Acting Chair
Senator Steve Dille
Senator Jerry Janezich
Mr. Mark Johnson,
Mr. Tim Magnusson
Mr. Brian Winter

The meeting was called to order by Mr. Jerry Bauerly, Acting Chair, at 3:15 p.m.

Mr. Bauerly: We heard the House got called into session so we don't know when they'll arrive. They are debating something like wolves, I think I heard.
[unknown speaker]: That's the right group then. [laughter]
Mr. Bauerly: You know how that can be. So, I think we'll try to get right at it, and hopefully we'll get some Senators and eventually the House members to join us as well. I think it is important to point out that testimony isn't lost on this small group. We are taping all of this, and there will be transcripts. We will be considering everything that is presented as well as debate any conclusions in the committee. So, with that, John Prouty from the Grand Lake Township is with us today. Welcome. [He is from] up in St. Louis County.

A Township Perspective
Mr. John Prouty, Township Officer, Grand Lake Township, St. Louis County

Mr. Prouty: Well, it is good to be down here. I will try and give you a little of my foresight about gravel–what I know and what I don't know. For those of you that don't know where I'm from, [pointing to map] Duluth is here and I am about 17 miles north up [Highway] 53. This is Grand

Lake, this is the Grand Lake Township. It is a double township, Solway is just to the south of us, Solway and Grand Lake are two of the largest gravel areas in our area.

To me, it's a...whatever ya gotta do, it's the worse of two evils. Gravel goes out of our township, [and] Solway's Township, and it goes to Duluth. There are two ready mix companies in the area and both of them supply all the concrete for Duluth. One is over in Superior, and the concrete comes out of our township to go to Superior for all of their concrete works. Any time they've got gravel, it almost all goes down into Duluth and all of the surrounding areas. Up around the Fish Lake area and in the Lakewood area, up in here, there is very little gravel. That is more swampy area; and if they need any road work done, anything up there, the gravel has to come out of the townships that have it.

For those of you that have been around, I was a kid back in the 50s when a gentleman supervisor from Grand Lake Township, Earl Hanson, came down to the legislature and pushed to get a gravel tax because he could see then all the gravel going out of our township because its one of the better gravel areas. At that time, the legislature passed a bill that allowed for the taxing of gravel in the metropolitan surrounding area, but the outstate was not included in it. Now it is getting to the point where people see that, in fact, it should have been statewide back then.

The tax on the gravel serves two purposes, as far as I'm concerned. It helps keep up the roads in the areas that we're in. When you got 200-300 trucks running over a road hauling anywhere from 10-25 yards of gravel at a time, you are tearing up roads. There ain't no way you're going to get away from it and who is responsible for the roads but the townships and the counties. We feel that is one way we can work back to get that. Another way is, I know in our area there is a lot of gravel pits. They are hidden by trees, but reclamation is something that has to be enforced. We've got some that were dug out 20 years ago, and you got ponds and piles of dirt here and there. It looks terrible. It's no good for real estate tax for anything. It is just crap, so to speak, and I think that these gravel pit owners need to put a little of that back in and reclaim that land.

We got a lot of land in our township that has been dug out, one in particular. The owner of that one reclaimed and he has a really nice campground set up there. This is the thing that needs to be done, so that land can be useful for the future generations. A lot of it in our area when they take it out, it's water. Well, it's nice to have a nice pond there, whatever, but clean up around it, reclaim it, and it can be sold or reused for other purposes.

In my instance, I was from a township that was another 25 miles north of Grand Lake. I served on the town board up there as a supervisor for six years. In that township we had...literally our gravel came from the next township because we had no gravel there. So, I have worked with all the townships in the area and it's a real headache. It's a real headache with gravel pits, some people don't want them at all; but if you don't have the gravel, then you're not going to build the roads. You're not going to do anything. It's got to be a compromise between business people and townships and the whole works to get this thing on an even keel so everybody comes out a winner. Basically, that's about it. If anybody has any questions or anything? I'm not used to doing this.
Mr. Bauerly: That's fine. What questions do folks have? Yes, go ahead, Mark.
Mr. Johnson: Well, one of the issues in south St. Louis County is the township gravel tax. You know, there is only one township that does it. Do you have thoughts on individual townships doing a

tax or more of a regional tax, including the administrative problems? You know, you have the haulers talking about the fairness of that.
Mr. Prouty: The townships deserve the tax. As far as implementing it, that's a problem. Once gravel is hauled out of that township, it is a non-renewable resource. Taconite area, as Jerry knows, they got the taconite tax up there. Once that stuff is hauled away, the only thing we got is the bucks and the big hole in the ground. If they can't reclaim it and do something with it, it ain't worth nothing. You know, I think the townships deserve something for what they're losing. I know in our township alone, we probably lost 600-800 acres of land that the gravel is all removed from, and there is nothing left there. I know some of the companies that have upwards of 2,000 acres that they've purchased just for the sole purpose of future gravel.
Mr. Bauerly: Any other questions? Yes?
Mr. Magnusson: Does your township or do the townships in St. Louis County have any township ordinances that deal with the mining of gravel?
Mr. Prouty: There is...some of the townships have planning and zoning, and they control it. In our particular township we don't have a planning and zoning board anymore, and it is controlled by St. Louis County. And Mark happens to sit on that, so...Mark and I know each other, back and forth....
Mr. Johnson: Not only that, his office is on the same block as mine.
Mr. Prouty: I got a business in downtown Duluth too, so...
Mr. Johnson: So, he stops me at 4:30 on my way home. [laughter]
Mr. Prouty: I've been on the township for three years because I had lived in Northland. I sold my home and moved down to Grand Lake and built a new home down there. They kind of recruited me to run for the board down there, so I was just newly elected down there.
Mr. Bauerly: As you zone those gravel pits and get the permits...do you require reclamation bonds with those?
Mr. Prouty: There is now. There is now, but it is the previous ones that...
Mr. Bauerly: Yeah, those old ones.
Mr. Prouty: Right now, Grand Lakes Township has a moratorium on gravel pits and I think its [undecipherable] to the first of August. The board has already voted to, at that time, implement a gravel tax.
Mr. Bauerly: That would be county collected and given to the township?
Mr. Johnson: That's one that wanted the...the problem is with the way the law is. You know, the county can do or individual townships can do the tax. So, right now, because the county elected not to do the tax, it would be up to each township to collect. There is some concern that, on a township level, it is very difficult. Apparently the township government doesn't have....
Mr. Prouty: Wait, wait. The township government doesn't have money. You know, we only get paid when we go to the meetings and we put in a lot of gratis time. Well, if we got to do the calculation on everything we're going to hire somebody to do that kind of work. If that is the case, then it is going to have to come out of that tax for implementation.
Mr. Bauerly: Ok. Yes?
Mr. Magnusson: I have a question for Mark. Why has the county opted not to administer the statutory gravel tax?
Mr. Johnson: Well, they...some of their reasons are that, of course, we're a very large county and the auditor looked at what we would get for that, the cost of administration, as well part of the gravel was estimated at 40-50 percent public works projects. In effect, taxing ourselves. So...

Mr. Prouty: That is one thing that I have a little problem with, too. If the county comes in my township and hauls gravel to the next township and we don't get nothing. [laughter] But when we come to buy Class 5, then we got to pay the county for the Class 5. We got to pay for the county to come in and take the snow off of our roads, but we get no recourse on it. That can be a...I know there is a little bump there but, in my opinion, we're kind of getting stuck on the short end because the county is one of the biggest users of gravel, as far as road work, and I can't get blacktop on my roads. [laughter]
Mr. Johnson: Two St. Louis County Commissioners are over at the State Capitol. You could work on them, too. [laughter]
Mr. Bauerly: Ok, any further questions? Yes?
Mr. Winter: So, when the county has chosen not to implement the tax, the township collects it and administers it?
Mr. Prouty: We're going to have to...The way it is now, we're going to have to collect and administer the taxes. We had a chance to get in earlier and the county elected not to do it. So, we had to wait around until we could get in on our own. But they have allowed certain townships in the county to collect a gravel [tax] now. Not all townships...that's the other thing too.
Mr. Johnson: Yeah, only in Representative Murphy's and Representative Huntley's districts. Those townships were put in.
Mr. Prouty: Yeah. We were the ones...cause basically, we're the large townships that supply gravel and that's why we got Huntley and Murphy to give this. I mean it's going out, like I said, every day those trucks are running down that road in front of my house, trucking that gravel down the highway just as fast as they can go. Last year when they talked about implementing the tax, Solway Township and Grand Lake Township abuts, they put the tax in Solway and not in Grand Lake...where you know everybody is going to be hauling out of Grand Lake instead of Solway. So, we have to come together and work it together, otherwise, they're just going to be trucking across your line and keep moving. Take it from where you don't have to pay for it. The old saying is....
Mr. Johnson: How about Kenosha? [laughter]
Mr. Prouty: Stuck on something there, too.
Mr. Bauerly: Ok, well thank you.
Mr. Prouty: I didn't know when I was elected that I was going to be put on the...they call it "play wax" in the Pike Lake Area sanitary district and I ended up on the board for that too. [laughter] If there ain't no more questions, I guess...
Mr. Bauerly: Ok, thank you very much.
Mr. Prouty: At least, I could do something.

Statewide Overview of Permitting and Reclamation Requirements
Ms. Cindy Buttleman, Regional Minerals Specialist, Division of Minerals, Department of Natural Resources

Mr. Bauerly: [I] Appreciate it. That is interesting. Ok, Cindy, Cindy Buttleman, Minerals Specialist, from the DNR.
Ms. Buttleman: Thank you.
Mr. Bauerly: Welcome, and thank you for coming. Do you want to use the overhead or do we want to turn that off?
Ms. Buttleman: Turn it off for now, and I'll use it in a few minutes.

Mr. Bauerly: Ok...[It is] a little easier to hear for everyone.
Ms. Buttleman: Well, Mr. Chairman and members of the task force, for the record my name is Cindy Buttleman and I work for the Department of Natural Resources in the Minerals Division. Today I'd like to present a summary to you on the permitting and reclamation requirements for aggregate mining in Minnesota. To this point, you have heard about permitting and reclamation from several different perspectives. What I'd like to do this afternoon is give you an overview on how it all fits together. The information and data that I will be presenting to you comes from data that I have collected over the last 10 or 12 or maybe even 15 years working for the DNR on aggregate questions. In that time I have had the chance to chair several statewide task forces and committees on aggregate. I have been project manager for several projects on aggregate, dealing with public involvement and collaboration. I also have some on-the-ground experience with reclaiming gravel pits using partnerships. So, it is from that experience that I have the information that I am going to deliver to you now.
Mr. Bauerly: Great. I think you ought to chair this committee. That's what I think.
Ms. Buttleman: No thank you. [laughter] I will be using hand outs or I mean overheads. If you would like copies of the handouts, I can start them over here. [handouts passed out] Just as a little refresher, aggregate materials are mixtures of sand and gravel, and crushed rock. There is a distinction I want to make here, between sand and gravel and crushed rock. Sand and gravel, as most people know, is a loose surface deposit of sand and gravel materials that is mined using shovels and draglines and loaders. It is...the most common type of aggregate mining operation you see in Minnesota. A very gross estimate on the number of sand and gravel pits in the state is about 4,000. This is in contrast to crushed stone which is actually a bedrock material that is mined from the earth using hardrock mining methods, like blasting, and it is crushed and broken into smaller pieces that then goes in the aggregate materials market. The resulting excavation on the ground is called a rock quarry, and there are 1,500 rock quarries in Minnesota.

Now, if you look on...aggregate mining is a very common occurrence across the state and, in fact, aggregate has been or is currently being mined in each of the 87 counties in Minnesota. If you total up the number of gravel pits and the number of quarries, there are about 5,500 statewide. Now, I want to caution you in this number. This number 5,500 is an estimate on all of the gravel pits and quarries, that includes the active facilities and the inactive. So, in a given year, the number of active facilities is much lower than that, just so you understand that number there.

Now, moving on to the regulations side of things...Sand and gravel, pits and quarries are regulated in the same way across the state. In general, state and federal permits are mainly concerned with water resource concerns and pollution concerns. The types of activities that might come into the purview of a state or federal permit are dewatering, wetland mitigation, storm water runoff, air emissions noise, above ground storage tanks, that sort of thing. In general, local permits such as those issued by county, township, and municipalities emphasize operating concerns like hours, dust, traffic, screening, and reclamation.

Now, taking a closer look at the state and federal permits, I want to start out by stating that there is no specific state or federal mining permit that is required by aggregate mining. We have state permits...state mining permits that apply to taconite and iron ore and peat mining, but there is no state mine permit for aggregate. However, there are state permits and federal permits that do apply if

certain activities are taking place at those facilities. For example, from the DNR, if water is being appropriated for a wash plant or if it is necessary to dewater the pit, then an appropriation permit from the DNR may be required.

Likewise, the Pollution Control Agency has permits for storm water treatment. They are concerned about water quality, air emissions, noise, and storage tanks. The Army Corps of Engineers may require a 404 permit if there are activities proposed in wetlands. The Wetlands Conservation Act of 1991 also requires wetland mitigation, and then finally, the MSHA and OSHA rules apply for safety.

Local permits historically...The regulation of gravel mining has been the responsibility of local government rather than the state. This is typical in Minnesota and in the upper Midwest. This sort of approach has allowed localities to design a permitting program that meets their own local needs. In general, as I said earlier, these local permits, county, township, and municipality, generally consider things like noise, dust, hours of operation, traffic, and reclamation. As time...
Senator Janezich: Mr. Chairman?
Mr. Bauerly: Yes.
Senator Janezich: So, Cindy, John [Prouty] could require for the township reclamation of anything mined?
Ms. Buttleman: Yes, that is my understanding.
Senator Janezich: Ok.
Ms. Buttleman: This approach has evolved into differences in the way townships and municipalities and counties regulate the industry. If you...what I've listed here are just the potential jurisdictions that might apply. There are 87 counties and 1,800 and some townships, and 854 municipalities in the state. Each of those jurisdictions could choose to regulate aggregate mining. They don't all regulate, but they could choose to. That's just the way it is set up in Minnesota.

So, you might be wondering how many do regulate and I don't really know. I think that is a very difficult question. I can give you some estimates and some guesses. It is really difficult to pinpoint because, as John and others have pointed out, every year it is a different situation. There are new ordinances, there are amendments, there are moratoriums that come into play. So, it is really difficult to keep current on what is happening. There also, to my knowledge, has never been any detailed studies or comparisons about local regulations.

So, the information that follows here is just some general information that comes from the DNR and MNDOT over the last few years. It is based on informal surveys with counties on, you know, do you regulate or don't, how many pits do you have, and so on. It is very informal data. But from most surveys, we think there is approximately 57 counties or so that regulate gravel mining, or aggregate mining. They can regulate it in a couple different ways. I have listed just three here. Some counties have a specific mining ordinance and last time you heard from Washington County and they passed out their mining ordinance. Other counties consider gravel mining or aggregate mining as a permitted use and will issue a conditional land use permit with special conditions that might apply to reclamation, for example.
Mr. Prouty: One of the big things is...the townships were so close together but there are so many because they are small areas. If everyone has their own ordinance...they can all be different. That is a

big problem because then you are fighting your neighbors. You know, if everything is put together as one then everybody meets the same requirements.
Ms. Buttleman: Thanks. Finally, another approach that is used in some places is that aggregate mining may be regulated within a shoreland zone according to a shoreland zoning ordinance but lands outside of that shorelands zone may not be regulated.

Our best estimate is that approximately twenty counties do not regulate aggregate mining. Another estimate is that forty counties have townships or municipalities that regulate in addition to the counties. That is speaking to the point that John just raised. These are some ways in which the permits...some of the ways in which all of these various permits can vary. I am talking about, you know, the municipal, the township, the county, the state, and the federal permits. The size of the proposal that triggers one of these permits can be different. You can expect that it is different for all of these various permits. The term of the permit–is it for a year, is it for five years, is it for life of the mine? That can vary. Whether bonding is required or not required can vary. How public hearings are handled–whether they are required or not and at what point. The party who holds the permit–is it the landowner, is it the operator, is it the contractor, is it the sub-lessee? It gets complicated quickly and some permits are very specific on who should hold the permit.

Another variable is whether a mine plan is required and if it is required, what sort of plan is it. What detail is included in that plan. Reclamation is another variable. It can be required but in different degrees, and the standards can vary quite a bit from one permit to another. Whether maps are part of the whole permitting process is a variable. And what sort of reporting–is it an annual reporting or, you know, a written report or a site inspection.

That is sort of the quick overview on permits but it wouldn't be complete unless I said a little something about environmental review. This...environmental review precedes permits, and it applies to new project proposals that are coming on line or expansions of existing projects. It is required in the form of a mandatory EAW (Environment Assessment Worksheet) when an operation is proposed that will exceed 40 acres in size to a mean depth of 10 feet. An Environmental Impact Statement (EIS) is required for aggregate mining if the operator will exceed 160 acres. The [state] government is not responsible for doing this review, it is local government. It is most often a county planning office, but it could also be township or municipalities that could also be the responsible unit. In a typical year there may be 5-15 proposals that trigger environmental review. And just some numbers from last year–there were ten EAWs and this year there have been three so far. I understand there is an EIS that is in the works also for aggregate mining this year.
Senator Dille: Can I interrupt? I have a question.
Mr. Bauerly: Senator Dille.
Senator Dille: Yes, how much does an EAW cost?
Ms. Buttleman: I think there is no...the responsibility for preparing the EAW is the local unit of government that is spelled out in the law. But the proposer has to supply the appropriate information to the responsible governmental unit. So, if the proposer can supply all the information it may be a minimal cost, but if they have to go out and collect information or get a consultant or whatever there could be some costs. I am sure there are others here that could speak to that with more knowledge.
Mr. Bauerly: Yes, Tim?

Mr. Magnusson: Some counties, like Clay County–we do have an environmental review ordinance where the ordinance actually lays out the cost of an EAW on the proposer. So, any county staff time, reproduction time, mailings, whatever are costs that are incurred. I'd say an EAW would probably run in the neighborhood of $1,000, possibly $1,500.
Mr. Johnson: Mr. Chairman?
Mr. Bauerly: Mr. Johnson.
Mr. Johnson: One of our area consultants, I think, typically bids when he does an EAW for someone, of around $3,500.
Mr. Bauerly: We have someone that probably could tell us what it costs in St. Cloud.
Mr. Vry: I'm Don Vry and I represent Meridian Aggregate Company and we just permitted an additional 52 acres up in St. Cloud. That process took 2 ½ years, the EAW alone took 1 ½ years, and it cost us $750,000. So, that is probably the other way to look at it. But somewhere between $750,000 and $1,000. [laughter]
Mr. Bauerly: Quite a range.
Mr. Magnusson: Apparently it depends on whether you have a consultant do it or public staff doing it. [laughter]
Mr. Bauerly: Does that answer your question, Senator.
Senator Janezich: Yes, thank you.
Ms. Buttleman: Ok, moving on to reclamation. This is just sort of a standard definition of reclamation: the purpose of reclamation really is to just leave the mining area in a safe, non-polluting condition that has some future land value. That is pretty generic.

I just want to emphasize again that there is no state law or federal law that requires reclamation for aggregate mining. However, many of these permits, local permits that I just mentioned, many of them do now require some kind of reclamation. It can be variable from one place to another, but many now do require it. As we heard last time, land values really drive reclamation, especially here in the metro area when the value of the land post-mining is very high for redevelopment. You know, reclamation can become sort of a non-issue because of that land value driving the process. In outstate areas and places where the land pressure is not as great, reclamation generally involves leveling and contouring and establishing a vegetative cover. Whatever you're doing, whether planning for a sub-division or just planning for a wildlife habitat, when you are finished mining, planning on the front-end will give you the best and most successful and cost-effective results.

It has been my experience that one of the most challenging and expensive sites to reclaim is an abandoned gravel pit that has overgrown. You have to go in and...it is not only expensive but when you reclaim it, the results may not be as good as if it had been planned in the beginning. Most of us understand or have some....it is kind of logical to think that reclamation occurs at the end of the mining operation and, in fact, that does make a lot of sense.

I just wanted to mention though that more and more often these days, companies are following a practice that is called "progressive reclamation." That is an approach where you mine in sequence, where you mine to completion an area, you reclaim it, and then move ahead to the next area. It is a great concept and when it works, it works well but it is not always going to be the appropriate practice and reclamation method. It depends on the quality of the deposit, the market demands, and so on, if it can really follow progressive reclamation techniques.

Interim reclamation, I just wanted to mention...on occasion interim reclamation is required, especially if the pit is open only temporarily and there is a safety or an erosion concern. Sometimes some minimal sloping will be required and some seeding, just to stabilize that area until it is opened again.

Then, finally, I just wanted to briefly mention some other considerations for reclamation and permitting, and I guess in my head it seems to make sense to try to look at these things...active versus inactive and depleted. So, for active pits, and my estimate is that there is approximately 1,500 active sand and gravel pits now across the state. Some special considerations that make it difficult is that you are dealing with mobile operators in addition to permanently sited facilities. That is sort of two different scenarios that the permitting and reclamation process has to deal with.

Also, you have situations often occurring where you have multiple operators working out of the same pit, maybe at the same time, or maybe at different times. So, that poses an interesting question about who should hold the permit and who is responsible for reclamation. Then, in a lot of these facilities, you have short periods of activity followed by long periods of inactivity and that is a difficult situation sometimes to deal with in terms of reclamation.

The next one here is that in Minnesota on every type of public ownership there are gravel pits or quarries. In some instances, the permitting and reclamation standards are applied differently to public land than they are to private ownership.

Then, I just wanted to mention these two last ones quickly. A lot of times material is put up into big stockpiles on these sites and the storage of those materials is sometimes as important as having the site available for mining. So, if you have a site that has a lot of stockpiles in it of marketable material, it is difficult to get too far in reclamation but you know you need to have these storage facilities too. That is something that factors into the equation as does the fact that on many of these sites the reserves are unknown. There isn't a real good knowledge of what is there, and the market conditions can change such as what was not marketable material a few years now can become marketable in the years ahead. With the inactive pits–and, I'm guessing, there is roughly 2,500 inactive or depleted sand and gravel pits in Minnesota–the problem there is that no one is there anymore. The responsible party was never identified so funding and leadership to reclaim the most important of these abandoned or inactive sites, there is no one there to really do the work. Of course, these sites often become the scene for unauthorized activity and, probably you've all seen these places around, you know, the beer parties and old refrigerators, 4-wheelers, and so on. That is not always a good thing to see. They are costly to reclaim and they are less successful often times when reclamation does occur. That is all I have to say.

Mr. Bauerly: That is very good. It is a lot of information. What questions do folks have? Mr. Johnson.

Mr. Johnson: Cindy, do you see a state role on reclamation? It seems to me that you do have a number of companies...we found in St. Louis County is that one of the ways it works in reclamation is that we have, for instance, one company in Grand Lake who did not properly reclaim the pit. We have informed them that they won't get another pit anywhere in St. Louis County until the other pit is reclaimed. That seems to work. If you have that...if, for instance, MNDOT would actually check where he is getting his gravel from and was more aggressively involved in making sure that on their road projects pits are reclaimed, that would be a big help.

Ms. Buttleman: I knew this question would come up. [laughter] I don't really have an opinion that I'd like to put on the table at this point. I guess my role in coming today was just to try to pass on some of the experience and information that I have been able to collect over the last few years and whether the state has a role or not is up to some other group to decide.
Mr. Bauerly: You dodged that one real well. [laughter]
Mr. Prouty: One thing about St. Louis County is it's a large county so when somebody comes in to take gravel it isn't like down here from Hennepin to Ramsey to whatever. Ya know, it's a stone's throw, but out there if you can't get another gravel pit in the county, you are almost shut down completely.
Mr. Johnson: It can be persuasive.
Mr. Winter: Mr. Chairman?
Mr. Bauerly: Brian [Winter]..
Mr. Winter: I do have an opinion, and I think reclamation really is in the best interest of all citizens. I mean when you listen to John [Prouty] talk about destroyed land values, when you listen to unauthorized activities, if you think of the industry...those that choose to be good stewards of the land, that do the reclamation, have a higher cost of business. So, it is sort of an unfair competitive advantage to those that choose not to be good stewards of the land. So, it seems to me that there is a role for statewide reclamation standards for this type of activity.
Mr. Bauerly: Any other thoughts or questions? Thank you, that was very well done...appreciate that information. Nels Nelson from Barr Engineering.

Addressing Technical Issues in the Permitting Process
Mr. Nels Nelson, Barr Engineering Company

Mr. Nelson: Mr. Chairman, my name is Nels Nelson. I do work for Barr Engineering Company, but I am not here as a representative of Barr. I was asked and I am appearing personally. Beyond that, certainly not as a representative of any of the plants for whom I have worked over the past 15 years. I don't have any particular ax to grind on this. I have worked for both sides. I have worked for watershed districts, for the City of Hanover, and I have worked for the City of Lakeville. On the other side, I have worked for CAMAS and Barton Tiller Corporation, Dunnick Brothers, Hard Drives. Outside of that, I have also worked for a number of companies on the Iron Range, so I know what real mining is like too. [laughter]
Mr. Bauerly: The gravel pit operators take offense to that. [laughter]
Mr. Nelson: I think I am trying to assist them. [laughter] I make a distinction here between land use activities or land use permitting and environmental permitting. What I am here to talk about is environmental permitting. I have a few overheads. Since I am on my own time, I didn't memorize any presentation so I will be reading along with you. What I'd like to do, once I've figured out how this works, is to give you a brief overview of my view of the issue. I'll give three case studies and just tell some war stories, and then have a little...my conclusions.

Again, such as they are. I feel a little hesitant because of knowing that you have other people here that I have worked for and with, Dennis O'Donnell and John Shardlow. So, if I say something that contradicts them, I hope someone will stop me right in mid-stream.

Let's work off here. [overhead] The typical issues that we get into...I'm going to learn this sooner or later...from an environmental standpoint are noise, traffic, dust, [as opposed to air pollution] odor [from asphalt plants], groundwater drawdown, and groundwater...there should be a second bullet there...groundwater runoff in the end use plant, visual impacts, sometimes historical resources, and wetland impacts. All of those that Cindy [Buttleman] talked about earlier. However, in contrast to other high impact...what I would call high impact environmental activities, we don't usually see health risk assessments. Those $300,000 studies that, for instance, North Shore...that other people have to do...that refineries have to do. Air toxics are usually not a big issue. Water toxics–we don't get into that very much. Hazardous waste issues - the industry does not create a great amount of hazardous waste, in my experience. Major air emissions–it is usually simply particulates, and those are usually relatively easily controllable. Groundwater contamination–in contrast to a lot of industries, there is not a major threat here, and the industry typically does not produce a large amount of waste water. The waste water that is produced is relatively easily handled through simple sedimentation. There may be exceptions to this, but that is my experience over the years. One of my first experiences in this field was up in New Scandia Township. This was with Dennis O'Donnell, who I believe was here, was he not? [From] Washington County?
Mr. Bauerly: Yes, Washington [County].
Mr. Nelson: Dennis [O'Donnell] called me in because they were starting EAW's and I think the EAW is a very good tool for flushing out the environmental concerns that are pertinent to a permit issue. In that case, something that had come up...the PCA had done a sample of the affluent from the scrubber. They had an air scrubber on their asphalt batch plant, and the asphalt batch plant apparently was acting as a sort of mini-refinery. It was heating up the asphalt and the volatile PAH's that could come off were being captured by the air scrubber, so these were polynuclear aromatic hydrocarbons, some of them are carcinogenic and they were coming out in the scrubber. The scrubber was going into, simply, a small pond and then being recycled. This water was going around and around, and they said, "Whoa, this contains some things that should not be in the groundwater." We came in and studied that.

Now, let's see if I can...what we found though was that the neighborhood was in an uproar and people having found this problem were beginning to sample their own wells. They would go with the mason jar and sample the well and carry it in to a laboratory and try to get an analysis and the parts per billion or fractional per billion, parts per trillion range not knowing that typically this is an extremely difficult task to undertake with any accuracy. So, we had people going out and sampling their own wells and their swimming pools...somebody thought that the sheen that they saw in their swimming pool must be PAH's from this pit from the scrubber and as we examined it, it turned out that the methods that have been used were very prone to false positives. [that] The ground water flow direction in most cases was opposite from where these people were finding these suspected ground water carcinogens, and that the entire theory did not seem to be very sound. We recommended that the orderly progress would be to do good sampling at Barton's own well, then move out and do some monitoring if it was found at a distance.

I attended a couple of very heated hearings, but I think another issue if you look at the location here [overhead map] this is up in new Scandia Township; you have down here at the bottom is Big Marine Lake; Owen Lake; you have a golf course over here; you have a number of very nice rural residences; you have university professors; people who have moved out here and did not like truck traffic had a

vision of what their neighborhood should be like; and, I don't blame them, and I don't think that the County Planning Commission is looking forward to having this issue on the table; and while the science may not have been good, in my opinion, it was reflecting local concerns; however, I think the issue was more of a land use planning issue than a science issue. I made myself very unpopular by standing up and saying "Sorry, I don't think there's a science issue here. I think there's a land use issue." By then it was too late. The fat was in the fire.

Another project that we had was John Shardlow came, and I imagine he told a little bit about Apple Valley Ready Mix. I hope he did. I thought this was a good project; frankly, it was modeled on what was done up in Maple Grove, where they had a comprehensive gravel area plan. Here we had a consortium of miners working together with the city trying to make a 1300 acre mining plan, and again I am going to say my experience has been mainly in the seven-county metro area where the regulation typically is a lot more stringent I think. That's been driving a higher level of professionalism among the mining companies. So the consolidation that the "mom and pop" operation simply aren't going to be around, similar to the "mom and pop" landfills that we used to have–you don't have that any more–this consolidation and professionalism is occurring. In Apple Valley we had ground water lakes being proposed. This was down in southern Apple Valley. Lakeville's down here; [overhead map] Empire Township's over here. There's a big area, a couple square miles, and we did not put together this plan, but we did the environmental analysis of what the water quality of these lakes would be, what the ground water flow would be, what the dust erosion would be, what the general environmental impacts across the board, doing the technical side of it. In general, it's going to be a very high value residential development when it's done.

I think it was a very good job of laying out a plan. It did not make everybody happy; however, there was an existing development down here, the Valley Park, and those people would have been just as happy if this had been turned into residential development.

The EIS went fairly well, I thought. We had good reviews from the Department of Natural Resources, Pollution Control Agency, the Metropolitan Council, the County, just about everybody. When we got into the hearing, we had issues from those people in Lakeville. They were concerned about traffic, which I think is a reasonable concern. They were concerned about land-use compatibility–their children would be out there–they were afraid that they would get run over by trucks, etc., although this was a county highway, if any of you have been in Apple Valley know what County Hwy. 46 is like nowadays. The number of trucks on their four lane urban street, and then I think there were also issues of property use, property value and intercommunity relationships. Ultimately, I think it's going ahead. John [Shardlow] probably knows better than I do. We just did the technical analysis, but I was impressed that again it seemed like the land use issues, here we had one community with one land use, and another community with another land use plan, and Lakeville could not get much traction in the process because they were simply next door so they finally had to threaten, I believe, a lawsuit, and through a series of settlement processes there were setbacks, redo, and again there are people here who probably know more about what's going on down there now. Again, I'll say that I believe that the technical issues were not as important as the land use planning issues.

The final one I'd like to talk about is down in Shakopee, and I think maybe Jon Wilmshurst talked about this or Bob [Bieraugel], I don't know who talked about it. The scars are already healing on this one. I made a mistake here. I told CAMAS that I didn't think that the Environmental Impacts of this would ever justify doing an EIS. I was wrong. The apparent issues that we had were vibration, because there were nearby sensitive manufacturing areas [and] groundwater use. There's the Savage Fen and Boiling Springs in the Eagle Creek Trout Stream, and this required a great deal of dewatering to make this project work. Also groundwater use, whether this is a scarce resource; it was right next to some city wells. But again, I'll say that land use compatibility–there was a vibrant developing area down there in Scott County. This is right plunk in the middle of that area. Traffic, and again property values, and property use. Is this the highest and best use? Is the city going to get something except a hole in the ground when they are done? These are not environmental issues, per say, they are more esthetic, political, and land use, but they certainly played a role, I think. But my scope was the upper one. In terms of vibration, I think it was easily demonstrated that CAMAS could scale back the delay rates of the blasting, that reduce the vibrations to acceptable levels–that's fairly simple.

Groundwater use–that was harder. When we originally started in on it, we did some ground water modeling. Now this is a later version, but this is something of what it looked like. It was a huge groundwater cone that was going to be drawn down. And that would have affected the Savage Fen, at least in theory. We proposed, after a lot of searching, that while we were mining out here, we would refill the old quarry over here, and have an impermeable wall between them, which would have produced a groundwater mound here, [overhead map] and a draw down here, so these are contours of draw downs so a negative draw down is a mound and a positive draw down is a hole in the groundwater. That was sort of a clever approach to it. I thought it would wind up actually nebulating the ground water levels in these two basins. We can adjust the predicted impact over at the fen, and the Boiling Spring in Eagle Creek to any desired level.

I had at first thought you are never going to get this past the DNR, Jeanette Leete, and Evan Drivas, and those people. The guardians of the Fens are not easily convinced that you can do something, and so we went in and before we started the EAW, before we did anything, we went in and talked to the DNR and said here we go. That sort of like "hit us." If this doesn't work for you, it's not going to work for us at all. Evan Drivas took our models, and we ran them and tested all the assumptions. It was thorough review. When we got through with them, my feeling was man, if we have gotten past the groundwater people at the DNR, if they are convinced that this is a good plan, if Jeanette Leete thinks it is a good plan, you know, let's go.

Well, that wasn't half of the story, unfortunately. We got into the permitting; we did the EAW, but we found that the people down there, that there were people on the Dean Lake Homeowner's Association who were afraid that we were going to suck Dean Lake dry. Although we predicted that the impacts would be no worse than they had been, there were two independent DNR studies that showed that the quarry had not had an impact on Dean Lake.

There was some last minute technical objections raised. In my opinion, those were not significant issues, but they raised enough of an issue that the city, I'm sure, was in a very difficult position because of the conflicting land use issues. The city was in a position to order an EIS which basically put a huge burden on the project, and I think it's being delayed now. I said, "Boy if we can convince

the DNR, there is no issue." So admittedly, this is a limited sampling and there are places where we've got major issues, but I'll tell you my upside down conclusions here. One is that it is primarily a land use and political issue. In general, it has a relatively low environmental impact. This is not the same as a hazardous waste site. It is not the same as a refinery. It's not the same as even a major highway, in my opinion. The level of typical environmental impacts. Now that's not to say that you don't have reclamation issues, or you don't have fen issues at times, but in general, compared to say a new taconite mine, we're just not in the same ball game. In terms of land use and politics, you may be way above that.

From an environmental standpoint, that's my personal conclusion. In some cases there are important technical issues. I thought that Savage Fen issue was one, and there are other cases like that. But in many cases, I think, technical discussions are reflections of other concerns. We've gotten ourselves sometimes into a situation where you've got a permitted mine and it's already zoned for this or it's already permitable. We can't deny the permit, so since we can't talk about that, let's talk about vibration from the trucks or something. When actually, I think land use planning, reclamation planning at the beginning could have forestalled some of these issues and saved a lot of time spent at the later end. So, with those personal conclusions again, not reflecting any of my clients or my company, I will be glad to answer any questions.

Mr. Bauerly: Senator Dille

Senator Dille: Well, Mr. Chairman, Nels Nelson, sounds sort of Scandinavian. I'm just wondering about the property value issue. Is there some good empirical evidence research work that's been done to show what the impact of a gravel pit would have on local property value?

Mr. Nelson: The only evidence that I'm aware of was done in the Apple Valley Ready Mix project. A consultant was hired to evaluate property values of homes adjacent to gravel mining with comparables away from gravel mining. And also to evaluate the number of building permits, the amount of improvement that was done. And in that case, that consultant came to the conclusion that there was not a significant difference, that for whatever reasons, I didn't do that study, but it wasn't a huge issue. Now that was in Apple Valley where development was going hard and strong.

Senator Dille: Is that report available to the public or is that something that you would typically use when you are in public hearings to try to explain to people that perhaps you don't have to be as worried about this as you think you are?

Mr. Nelson: It's often cited, gravel mining permits. I've seen it cited a few times since we did that project. I've got a copy of it here if you want me to get the citation.

Senator Dille: Well, a few years ago we had the University of Minnesota do a study on the impact that feedlots have on nearby property value because everybody in the countryside figures their property value is going to heck in a handbag if somebody expands their livestock production system near them. But the research came back from the University that based on their findings in two counties that the bigger the feedlot and the closer you are to it, the more your property is worth. [laughter] So this study is often cited by farmers when they want to expand. [laughter]

Mr. Nelson: I can imagine, though. That social science I don't know too much about.

Mr. Winter: I'll make a comment, just to clarify a little bit. I agree probably in general, aggregate mining doesn't have as big of an environmental impact as some of the other operations. I guess that would be out there, but as with everything, it is very site specific, and if that mine is going to be located on the last remnant of tall grass prairie in a given area and going to destroy that resource, then it has a huge environmental impact, in my opinion.

Mr. Nelson: Clearly, but if it's in a cornfield, then probably it's not the same issue. We have the trout lake reserve down in Fairbault where we are starting to plan now for restoration impacts down there. So I'm aware of that, but I think if you were talking about statewide and in general, I think the issue is more planning, preplanning, and inventorying the reserves and determining ahead of time whether you are going to have townhouses in a big row around an area and then at the last minute try and have a [undecipherable] permit through. Don't do that.
Mr. Bauerly: Any other questions? Thank you, Mr. Nelson.
Mr. Nelson: You're welcome.

Region -Specific Reclamation Using Native Species
Mr. Ron Bowen, President, Prairie Restorations, Inc.

Mr. Bauerly: Mr. Bowen.
Mr. Bowen: Hi, I am Ron Bowen from Prairie Restorations Incorporated, and I will speak to the issue of restoration, with the other experts here, with all the details you have had. Our experience over roughly 20 years, has been [undecipherable] really hundreds of sites, restoring gravel pits and some rock quarries and, of course, many other situations. We have worked very specifically at the Lakeland CAMAS pit. We have done some work restoring old abandoned gravel pits for the DNR and the Nature Conservancy up north in northwestern Minnesota on the Beach Ridge of Glacial Lake Agassiz as well as some work at the Ladysmith Copper Mine in Wisconsin and a little bit of work up in the northeast part of the state on taconite mines.

I've got just a few pictures I'm going to show. I haven't made a good photo documentation of our work in gravel pits. I wish I had. I could show you what can be done, but I know that at least Brian [Winter] can attest to the work that we have done at Nature Conservancy sites where we've restored, and I think Cindy [Buttleman] as well, where we've restored, pretty much long-time abandoned gravel pits and made them into, I think, a valuable resource. Taken something that's really been rather neglected and turned it back into something of value.

I wish Senator Dille was still here. I would like to address the question of real estate value because I really believe that a small investment really in restoration can provide really good dividends to the owners of these properties. These operators really ought to take the step to restore because they will have a resource that is far, far more valuable in the end than what expenses they incur to do the work.

Let me catch the lights a little bit and we'll run through these pictures. I've only got nine slides. [slides] This won't take very long, not even long enough to dose off. What I've got is again just a couple different sites across the state and again you would never know for the most part that these are restored gravel pits. They vary from the silica sand mining site down near St. Peter on up to the northwest. This is, in fact, a restored site, and again it looks for all the world like natural landscape unless you're really a botanist or a plant person and you get out there and evaluate the plant community. I think Brian [Winter's] concern about destroying remnant prairies is certainly a very, very big concern, but in many cases these gravel pits were put into places that were already cornfields and range land or degraded natural environments, and, in fact, once they are done can be restored to something that is as good or better than what was there prior to the beginning of mining.

So again, we look at sites like this, and we try to turn them back into a mix of wetlands and native grasslands, and in some cases woody plantings, but they can have very significant wildlife value.

Here's a little wetland. This is actually up at St. John's College, where as you go along the freeway, you turn into St. John's, there is a large restored prairie there. Some of that was mined out years ago, and you can see, like in the foreground here, they have made a small wetland, which now has water in it. This was during construction. Again, large areas of wetland and native grasslands has been restored and really enhance the environment.

Here again, a restored site. This is a Unimin Mining [site] and I don't know if that has been discussed at all, but the Unimin Mining site is the large frac sand operation down near Kasota, and where they are extracting large blocks of basically sandstone and then restoring certain parts of it to native prairie. Part of that, and this is sort of a tangent idea, but part of that permit required that Unimin Mining do some restoration on some degraded remnant [prairie] adjacent to their mine site so that their permit not only does it require restoration of the mine site itself, but it also requires some active restoration of adjoining fairly good quality in some areas and degraded quality in others but adjoining grassland and native remnant prairie so Unimin has taken that on and done a nice job with it, about 165 acres of intensive restoration work.

And we do this in a variety of ways, and we don't need to really get into all the techniques, but I think the question will come up anyway, relative to cost. Many of these sites, if it is at the tail end or if it is an interim, progressive restoration, many of these sites, the operators have a great deal of equipment sitting there, and they have operators there every day and so much of this work can be done by the owners or operators. A lot of the expenses can be kept down. The soil basically is open and bare. They've got dozers and backhoes and front end loaders, and everything else, so they can do an awful lot of the preparation, and what they need is somebody to come in with some seed and a tractor and maybe a drill, or maybe a broadcasting device and probably some follow up mulch and so on. In some cases, the Lakeland Pit that CAMAS has, they did bring in quite a bit of topsoil from adjoining farm fields and so they actually, I think, they owned this land, but they actually mined some of that top soil to put back on their side slopes, and again, I wish I had some photos of that. That's a very large sand and gravel operation as probably many of you know, and we've done that in roughly three acre increments along the side slope mostly in the east wall of that gravel pit, and now have very nice prairie there.

Again, I think in the long range when that pit is eventually mined out and abandoned, I think that will add greatly to the real estate value and the planning for that site. They will never build on those slopes. They are far too steep. You can hardly stand on them, but ultimately they will provide a wonderful natural part of the landscape. So again, we do a variety of kinds of plantings, and in some cases more intensive than others. When we are doing wetland restoration in these pits, sometimes we will actually get out and do some hand planting of various species. More typically, it is a relatively straight forward process, and often time a process that we are still learning a lot about. So we find signs like this that the Ladysmith Mine in Wisconsin, where we are doing a whole series of test blocks; see, we didn't just plant those little squares that way for fun. These are a whole bunch of different seed mixes, seed matrixes if you will, then put into a very planned out grid work system so that we can evaluate these mixes for success or failure.

And, in fact, that kind of work is going on. We have a project with the DNR up in northwest Minnesota for this coming year, where we will do four different seed mixes and evaluate some of the stuff at one of the big Felton sites, again it's a CAMAS site, I believe. Is that right?

Again, one needs to look at nature and say, "What are the species that really grow on these sand dunes, these barren sand areas," and replicate those species and bring them into these pits, and a lot of times, you will find that you really don't need very much topsoil, maybe none. You can plant the floors of these pits that are really subsoil sands and gravels and make things grow there with very little enhancement, meaning very little fertilizers or anything else, if you choose the species properly, species that grow in those environments anyway. You can be very successful. So again, just evaluating these mixes, and we find, of course, we specialize in work almost solely with native plant materials. When we are doing restoration work in these lean soils, these native plants are really the ones that succeed the best.

Again, just the various test plots, and I think the final shot is up north. This is in one of the taconite mines; I believe this is near Eveleth, and I'm not sure who this was done for, but this is a site, where again, obviously, you can see it has not been fixed yet. But it goes through the process here, where we create a wet area with woody plants. This is up north, so we're not focusing on prairie so much as we are the woody plant materials.

And we try to move forward with a long-range plan, meaning maybe 50-year plan of restoring appropriate native vegetation. So it's doable, and to get to the question of cost, I think in the case of the sand and gravel operation, where you've got again the equipment pretty much on site, you have to buy seed, and maybe you have to buy a company like ours to come in and put the project in the ground. It's probably a $6[00], or maybe a $700 on the low end per acre cost. And on the high end, depending on the seed matrix, you can get pretty jazzy with these things, or you can be more basic. It could be a $3[000] or $4,000 an acre cost if they really wanted to do a nicer job. But, you know, in terms of regulations, and I think with the state or the county or the township ought to expect is at least a matrix of maybe four or five grasses, and it would be nice if they could include a matrix of ten or fifteen wildflowers or forbes, legumes, and so on, to give the diversity and stability to the soil that you really need. So, it's kind of a, you know on the low end maybe, a 15 or 20 species mix, not so unlike what's now happening with the CRP plantings. Current rounds of CRP are being awarded to people who provide a broader mix of species rather than a mono crop. And we have learned over the years, that this is the better way to go. So, I think, that you know, again, if the state, township, county people would regulate the restoration process, it would be very beneficial.

I think it would enhance the value of the land rather than take something that has been pretty much mixed up and degraded and bring it back for relatively minimal investment–bring it back to a level that more than recaptures that investment. So the return on that investment is, I think, almost a no brainer and at that point they have something that they can market as residential, recreational, wildlife, whatever, and get a lot more out of it. Again, that's about all I have to say.

Mr. Bauerly: Thank you. Any Questions? Senator Foley.

Senator Foley: Mr. Chairman, tell me, how close do you return things to their former state versus enhancing it or being below what it was in the past?

Mr. Bowen: Well, you have to understand where I come from, and, I think, a lot of people I speak for, a minority, but still quite a lot of people who look to natural plant communities as the model, and so we aim it at that, and in the natural...
Senator Foley: What does that mean?
Mr. Bowen: Well, that means a remnant prairie, a pre-settlement prairie let's say had 250 or 300 species of grasses, flowers, you know everything on it. So that's kind of our goal. How close to that do we come? We can easily establish 50 species. We can, if we want to work hard at it, spend more money, make it to 100 species. Can we make it to 300? No. Can we replicate a true remnant? No. We cannot do that, and so that's why they are so invaluable, and we can't lose what we've got and expect that we can just come back in and fix it 100 percent. That isn't the state of the technology and probably never will be, but we can bring it along. You know, as I said, a 20 or 25 or 30 species mix is a start; I mean, that's 10 percent of what was there so we're not getting too far, but it's surely better in our view than restoring it to a smooth brome-alfalfa mix or some exotic mix [undecipherable] with 3, 4 yellow sweet clover–those sorts of things which become very problematic, I think, to our native plants and almost like planting purple loosestrife only doing it in a gravel pit. So we can go part way there, but we can't get all the way. That's the answer to your question.
Senator Janezich: I guess, Mr. Bowen, we've come a long way, though.
Mr. Bowen: Yeah, we have. That's right. Even just twelve years ago, say when the first round of CRP sign ups was really under way, they were primarily specifying switch grass plantings, one species, not even really a native grass, but the varieties of switch grass that were being planted could almost be called non-native varieties. They came from other parts of the country.

Now, we're planting much more diverse mixes, more local sources of seed material so that the genetic origin is better, species mix is better–we've come a long way. We continue to go that way every year.

And so again this is a market niche for us that, of course, would be nice to see the gravel pit restoration process really get started in earnest. And, it would support, I think, a continuation of the technology that we need to have to develop our restoration process from there.
Senator Foley: Mr. Chairman,
Mr. Bauerly: Was it a follow-up, Senator?
Senator Foley: Well, yeah, I'm curious to know what in the restoration process in the slope control you talked about the fall off that, it seemed to me that would be as important as what you planted, in many ways if you want to make something useful.
Mr. Bowen: From a technical point of view, those are challenging issues that the slopes are steep a lot of times and the side slopes of these pits, they are dangerous to work on, and normally we blow a straw mulch, like you see along the highway. In some situations where you have more of a concentrated flow, maybe it comes this way and this way, you have to use erosion blankets. Again, you've seen these things. There are technologies that kind of step up starting with blown straw, going to a light blanket to a heavy blanket to a permanent grid that you put in the soil that's like a permanent, non-degrading plastic grid, and plants grow through it, but it holds soil, and these all escalate the cost and actually quite significantly.

Now do we really need to do this on a big scale? Not typically; normally the blown straw is what we do, and that's where it stops. And so that adds $300-an-acre cost to the process, if you have to do

that. And again, at the bottom of a gravel pit, you wouldn't need to, on the side slopes, yeah, you would probably.
Mr. Bauerly: Mr. Winter.
Mr. Winter: Thanks, Mr. Chairman. Ron [Bowen], I appreciate your point of view on the native prairie versus reconstructive prairie, and I would just like to reiterate that because if the first thing that comes up in the issues I've been involved with where it's graveling versus native prairie conservation is well, let's mine it and then we'll restore it back to native prairie, and I just think that it really needs to be understood that reclamation is great, it's essential, you wind up with a far better place. You get native species out there, but you do not get native prairie back, and that's really important to understand. There are many species that are lost, and then you may have started with dry prairie, but in removing the material, you now have a wetter site so the species you will get to restore back on that site are going to be wet prairie species so you do have a very dramatic sort of shift in the system and a big loss of species diversity. I appreciate your view on that. You are in the restoration business, and that's good.
Mr. Bowen: There are other unknowns, of course, things like soil mycorrhiza, which are these tiny little filamentous roots that we know very little about, really, but are learning more and how they colonize these very sterile sites and how long that takes and where those colonize really even come from in terms of whether there are spores that float through the air or whether they come in from the outside or whether we introduce them.

In going back, I think, to your question, you know there are other elements of restoration relative to insects, small mammals, reptiles, etc. in soil mycorrhiza that one can explore, and we could get very complicated about this. We work on the touchy, feely, stuff that you can see really easy, the plants, the wildflowers–everybody likes that. You start there and you go on, and again, there are certainly practical limits to what the gravel industry should be affording in this case.

You know, I don't know how far they can go with it either, but on the other hand, I do think very sincerely, they will recoup their investment up to an obvious limit. But in a place like Apple Valley, like we saw where the land value is very high, they could recreate a preserve almost there that would have great esthetic character with native grasses and wildflowers, and I think really elevate the value of that real estate. Maybe it depends upon where you're at, too, you know; northwest Minnesota is different from the metro.
[Mr. Bauerly, Acting Chairman, left the meeting. Senator Janezich took over as chairman.]
Senator Janezich: Mr. Bauerly, before he had left, I'd asked him because he does the... he'd said that with everyone whenever he goes in now, he has to have a plan for restoration and post a bond, gets it all done now, which probably is the right way to do it. Mr. Johnson?
Mr. Johnson: A couple of questions. One, it doesn't seem that you have any trees growing. Is there any problems inherent with growing trees? Because in northeastern Minnesota you have tree cover...often time I'll bring it back to trees but we've seen extensive failures in that. Also, do you have experience in using it as...gravel pits as wetland mitigation sites?
Mr. Bowen: I think the true question...we should say again, for the record here, I am a forester. Actually I was trained in forestry at the University. I practice more prairies than forests but I know trees very well.

I think one of the problems that we have with forest restoration is that the process is so long and drawn out and we tend to look at things in a more shorter window. Even to get people to think in ten year windows is difficult. But with trees you need to be talking in one hundred year windows. I think we would see many of those northern gravel pits and taconite sites really become reforested, and we can encourage that process by working more with early successional species. Often times another mistake that has occurred is that people come into an open area and they want to restore it so they plant sugar maples which is a late successional plant and the sugar maples die. They need to start out with aspens and some of the...even sumac and those early successional woody plants and make way for the later ones later.

So, that is part of the issue and the wetland mitigation thing, I really believe there is value and in some cases, gravel operators could sell wetland banking, if you will. They have created it and they have some value there. Now maybe they don't know about that, maybe that is an education issue that there is value in these wetlands and they might be able to put those out into the market and use them as a saleable product, if you will. This is an idea that people are doing anyway. They are actually going out and creating wetlands and selling it to developers who need mitigated wetlands. So, the developer can come in and, if it is within a certain distance of his development, can come in to this person and actually five acres of wetland and it works as a wetland credit for his or her development. So, it could be that some gravel operators could be doing this. I am not sure of all the politics but I would think it is doable.

Senator Foley: Mr. Chairman, Mr. Bowen, when you encounter any of those and probably not with the aggregate, but is any of that material that is brought to the surface hazardous or radioactive or any of those other kinds of problems that occur, like up in Jerry [Bauerly's] area?

Mr. Bowen: As many times as I've taken a break and sat on rocks in those pits, I sure hope not. [laughter] Big problem! No, I don't think so. I mean obviously there are a lot of people who spend all day of their work days in these pits and we don't see that. We see very sterile clean materials really that come up. There is no organic, meaning there is no roots or dead material, it is just basically granular pieces of rock, whether they are big or little. But, no, I don't see any hazardous material come up in mining.

Senator Foley: But we do have some areas of highly, I don't know, radioactive that you could very well be bringing up. Do you do any tests to determine whether...

Mr. Bowen: We don't in the restoration process. I would think the mine operators might but we don't. In our process we simply work with the top few inches of soil, in the process of preparing it and seeding it. So, again, we don't address that issue.

Sometimes we do soil tests, in the Lakeland Pit we actually did do any number of tests out there and we did add some fertilizer to that site...to the bottom of that and to the side slopes. It was fairly minimal, slow release type fertilizers, and really just to kind of get things started–with no intent of going back and adding fertilizers on a perpetual basis, so it was kind of a one-time deal. But, no, I really can't answer that question.

Senator Janezich: We need a motion to approve the minutes. Does someone want to do that?

Senator Foley: I would move.

Senator Janezich: Ok, Senator Foley moves to approve the minutes. All those in favor signify by saying aye.

Everyone: Aye.

Senator Janezich: Opposed? [No one opposed.] Did you guys read them?
Everyone: [laughter] Of course.
Senator Janezich: Just checking. It looks like Wednesday, April 28, I think Representative Rukavina has down here from 3:00-5:00, and on Wednesday, May 12, from 3:00-5:00. All at the Capitol. Anybody else have anything? No, we're adjourned. Thank you.

Aggregate Resources Task Force
April 28, 1999
Meeting Transcript
Room 300 North, State Office Building, St. Paul, MN

Presentation Topics:

Use of Taconite Industry By-products as Construction Aggregates,
Ms. Ann Glumac, President, Iron Mining Association and Mr. Richard Maki, Vice President of Operations, EVTAC Mining

Waste Product Utilization at Minnesota Department of Transportation: Use and Evaluation of Recycled Materials
Mr. Gerry Rohrbach, Director, Office of Material and Road Research, MNDOT

Overview of Recycled Materials in the Metropolitan Area: Producers Perspective
Mr. Chad Sauer, Vice President of Field Operations, Tiller Corporation

Use of Coal Ash as Construction Aggregates
Mr. Mike Thomes, Ash Utilization Process Leader, Northern States Power Company

Task Force Attendees:

Representative Tom Rukavina
Representative BobWestfall
Representative Tom Osthoff
Mr. Tim Magnusson
Mr. Mark Johnson
Mr. Jerry Bauerly

[Note: The tape recorder failed–these meeting summaries are based on notes, overheads, and submitted testimony.]

The meeting was called to order by Mr. Jerry Bauerly, Acting Chair.

Use of Taconite Industry By-products as Construction Aggregates
Ms. Ann Glumac, President, Iron Mining Association and Mr. Richard Maki, Vice President of Operations, EVTAC Mining [Information from notes.]

Ms. Glumac gave an overview of the taconite industry and of taconite mining and processing. She stated that the taconite industry contributes $1.5 billion to the state economy, producing two-thirds of the iron ore needed for our nation's steel production. The scale of mining is large, with 138 million tons of crude iron ore processed and an additional 93 million tons of overburden moved in 1998.

Mr. Maki described aggregate products from taconite production by-products at EVTAC in the last decade. EVTAC has marketed rip rap, railroad ballast, fill material, and fine aggregate for

bituminous road construction. He explained in general terms where these products are derived from the taconite processing flowsheet. Taconite produces high-quality aggregate with very high compressive strength, high angularity that provides strength, air voids to bituminous and friction for skid resistance; but taconite has a density of 3.1, which is a disadvantage when transporting it. He noted that EVTAC produces and consumes 1.5 million tons per year of class 5 aggregate for private roads within the mining operation. He described the advantages, (such as the more efficient use of the ore material and smaller land areas are needed for taconite waste,) and disadvantages, (such as the transportation obstacles to marketing), to the use of taconite aggregate by-products.
[Questions:]
Mr. Johnson: What can the state task force do or what should the state task force do?
Mr. Maki: EVTAC needs access to viable rail transportation to move aggregate products to the markets at major cities.
Mr. Maki: The state will receive benefits from additional taconite royalties that would result from a longer mine life if this marketing is successful.
Mr. Bauerly: Do these products meet MNDOT specifications?
Mr. Maki: Yes, they do.

[Overheads of Mr. Maki's presentation.]
Description of the iron formation and mining process

- Drill hole data
- Slope of ore body
- Slate and Cherty Layers
- Difference between the Eastern and Western End

Types of Products and end uses

- Mine waste rock (Low magnetic iron)
  - Crushed and sized to different Class A grades
  - Higher density than granite quarries
  - Railroad Ballast
  - Class V road or fill material
  - Rip Rock
  - Large, 25 tons each, rock for breakwater (Safe Harbor)

Plant Tailings

- Washed silica material with fractured surface
  - Fill material, drains well
  - Bituminous wear coat: high friction, high resistance to wear
  - Dam construction material at the mine sites

Approximation of Annual Volumes

- EVTAC Mining @ 5.0 MM of pellets annually
- Coarse Tailings @ 2.5 MM tons
- Waste Rock @ 2.0 MM tons

Advantages of using taconite industry by-products for aggregate

-Utilization of Waste rock and tailings result in longer life to the existing taconite plants
-Cost of stripping or exposing the good ore is reduced. Economics of mining is a result of stripping ratio (the amount of overburden and waste material to be removed to uncover and mine a ton of crude oil)
-Use existing mine sites
-Old mine waste dumps could be used improving land values but this does not help reduce cost as much as selling waste rock as it is removed
-Reduces land areas, which are required for waste materials
-Reduces future reclamation costs

Disadvantages of using taconite industry by-products for aggregate

-Location: Transportation from the mines to the user is the largest obstacle in marketing the materials
-Need to utilize back haul and unit trains
-Rock generally has higher density or more tons are required per unity of volume
-Operational plan has to be able to facilitate the loading of waste rock on commercial transportation; truck or rail

Use and Evaluation of Recycled Materials by MNDOT

Mr. Gerry Rohrbach, Director, Office of Materials and Road Research, MNDOT
[Information from overheads and notes]

Mr. Rohrbach described MNDOT's requirements for recycled aggregate materials must meet three general needs:

1) recycled material must be of equal or better quality to virgin aggregate materials;
2) recycled material must be environmentally prudent;
3) recycled material must be economically competitive.

Recycled materials that are permitted within MNDOT specifications include reclaimed asphalt, reclaimed concrete, taconite tailings, coal fly ash, waste tires, dredged river sediments, roof shingle scrap, steel slag, waste glass, and foundry sand. He explained the applications for each of these materials and gave some estimated consumption figures. Mr. Rohrbach also mentioned the waste products that MNDOT is currently evaluating, including incinerated sewage sludge ash and coal bottom ash.

Background

The economic and social costs of landfill space have brought about a need to develop engineered uses for waste and by-product materials. Many such products are looked upon as material to be used in the transportation infrastructure. Some materials have high-value engineering properties when used in the appropriate applications. The large volume of materials used in highway construction provides a logical first step in creating applications and specifications of the broader construction market. The key to using waste and by-product materials in the transportation infrastructure is finding applications that:

1. Technically provide equal or better engineering properties than current materials.
2. Environmentally pose no potential hazard to the surrounding ecosystem.
3. Economically compete in the marketplace on an equal basis with current materials.

MNDOT has maintained a proactive stance in supporting the use of waste and by-product materials. MNDOT has issued a technical memorandum, which establishes guidelines for evaluating waste and by-product materials relative to environmental acceptance. MNDOT is able to substantially recycle waste and by-product materials that are created by construction and maintenance activities. Asphalt and concrete are regularly reclaimed as pavement or base materials. The following are some of the waste and by-product materials presently being used or assessed for use by MNDOT.

Waste Products We Use

•*Reclaimed Asphalt Pavement.* Reclaimed asphalt pavement makes up to 1.5 million tons of waste generated every year. This amount can be utilized quite thoroughly in road construction applications, such as hot mix asphalt aggregate where 1 million tons are used, cold mix asphalt aggregate (100,000 tons), granular and sub-base aggregate (350,000 tons) as well as embankment and engineering fills.

•*Reclaimed Concrete Pavement.* Minnesota uses about 300,000 tons per year of reclaimed concrete pavement. The main application is aggregate base. Other applications include sub-base, hot mix asphalt, embankments and engineering fills, and pipe bedding aggregate. (Some concrete is also recycled back into portland cement concrete pavement.)

•*Taconite Tailings.* Taconite tailings generated by the mining industry can be used in several applications in road construction, and it often performs better than the aggregate normally used. MNDOT uses taconite tailings primarily as aggregate in hot mix asphalt and granular base as well as in pipe beddings, granular base, and concrete.

•*Coal Fly Ash.* Coal fly ash is generated from coal burning electrical plants. Some fly ashes are suitable for use as cement substitutes. Other coal fly ashes are not acceptable for this use but may be utilized in soil stabilization and is being evaluated. Also, mixing coal fly ash in cold mix asphalt aggregate is currently being evaluated.

•*Waste Tires.* Approximately four million tires are discarded annually in Minnesota. The majority of waste tires collected are burned as tire derived fuel (TDF). Waste tires have been used experimentally in hot mix asphalt. Waste tires are also used in engineering applications such as embankment and engineering fills. In sub-grade applications, the performance of tires has been superior to previous designs. However, in hot mix asphalt, the inclusion of tires has had mixed results.

•*Dredged Sediments.* Dredged sediments are generally used in embankments and engineering fills. They have also been used in bituminous and concrete, and for maintenance sand.

•*Roofing Shingle Waste.* Forty-five thousand tons of shingle scrap is generated each year in the Twin Cities metropolitan area alone, and most of it is landfilled. MNDOT has experimented with the use

of shingle scrap in hot mix asphalt since 1990 and now allows up to 5 percent to be used, according to the 1995 specifications. Mixing the shingle scrap into granular base or sub-base is also being evaluated. The test sections have performed well and will continue to be monitored by MNDOT.

•*Steel Slag.* There are approximately 20,000 tons of steel produced annually in Minnesota. Slag is permitted in hot mix asphalt aggregate. However, the use is currently monitored due to the variation in engineering performance.

•*Waste Glass.* MNDOT is using 500 tons of crushed glass annually in road construction. Experiments were started in 1992 in Sibley County. The crushed glass is usually mixed with granular base or sub-base aggregate. Subsequent tests done in several counties has resulted in glass being added to our aggregate base specification–with the glass making up 10 percent of the volume. Using crushed glass for bedding and backfill is also being considered.

Waste Products We Are Studying

•*Incinerated Sewage Sludge Ash.* Twenty thousand tons of sludge ash are generated every year in the metropolitan area. MNDOT is examining its potential use in hot mix asphalt.

•*Coal Bottom Ash.* Coal bottom ash is another waste product produced in the coal combustion process, and every year 150,000 tons are generated in Minnesota. MNDOT's use of coal bottom ash is currently limited to evaluation purposes as a granular base and sub-base aggregate.

Overview of Recycled Materials as Aggregate in the Metropolitan Area: Producers Perspective
Mr. Chad Sauer, Vice President of Field Operations, Tiller Corporation [Submitted written testimony]

Mr. Sauer: Good afternoon, Mr. Chairman, members of the Task Force, and members of the audience. My name is Chad Sauer. I work for the Tiller Corporation, which is the parent company for Barton Sand and Gravel Co. and Commercial Asphalt Co. We employ approximately two hundred fifty people seasonally in the seven-county metro area. Barton produces in excess of six million tons of sand and gravel annually, while Commercial Asphalt produces just short of three million tons of hot mix asphalt annually. Recycling totals between both companies exceed one million tons.

There are many products being recycled today in an effort to preserve and extend our natural resources and to protect the environment by preventing the once common practice of land filling. It may come as a big surprise to many that asphalt and concrete were being recycled before it became the popular thing to do. They are the largest volume of products recycled today.

The two main products recycled today are asphalt and concrete.

First, I would like to talk about asphalt recycling. Recycled asphalt is typically found in two forms: millings and chunks. I would like to talk about the millings portion first and get back to the chunks later. Millings are created when a milling machine grinds the asphalt, with sharp carbide teeth, into

small uniformly graded pieces. Milling is required when a partial reconstruction is needed. These pieces are readily acceptable for recycling through an asphalt plant and back on the road. For example, according to the Minnesota Asphalt Pavement Association, asphalt recycling began in the 1960s, but wasn't viewed as an economical solution with the abundance of virgin aggregates and the low cost of oil. It wasn't until the oil embargo of the 1970s that people within the asphalt industry realized that the aggregate, and especially the oil within the asphalt, was a valuable commodity that could be economically reused. The first successful job using recycled asphalt took place in 1976 within the city of Maplewood. MNDOT, partnered with C.S. McCrossan, Inc., successfully blended 20,000 tons of reclaimed asphalt with virgin aggregate and oil. The amount recycled steadily increased each year. By 1979, MNDOT alone recycled 132,000 tons of reclaimed asphalt at a cost savings of $676,000. By comparison, there were approximately three million tons of asphalt reclaimed and reused in asphalt mix production within the State of Minnesota in 1998, at an estimated aggregate and oil savings of $24 million. To put that quantity into perspective, if you laid the three million tons out it would equal 320 miles of 32 foot roadway, twelve inches thick, or a distance from St. Paul to East Grand Forks.

The other form recycled asphalt can take is asphalt chunks or RAP (recycled asphalt pavement). Chunks are created when a complete reconstruction of a roadway is needed. Typically, a front-end loader or other piece of heavy equipment breaks up and removes the pavement. These pieces vary in size and require further processing. It is estimated that there are an additional three million tons of chunks received annually. Asphalt chunks may be crushed down for use back into an asphalt plant but are typically used in conjunction with recycled concrete.

Recycled concrete comes in many forms. The most common recycle stock comes from roadway removal, sewer pipe, ready mix washouts, reject block, building demolition, patio blocks, and brick. I'm sure I missed some, but you get the picture. Recycled concrete is commonly used in two ways. It is primarily used for an aggregate base commonly referred to as Class 5 recycled. Aggregate base is a very important part of the road building process. It is the main foundation that supports all activities such as asphalt or concrete paving. Aggregate base is created when concrete, asphalt chunks, and other recyclable products are crushed and blended together. The reinforcing rebar, mesh, wire, and other iron found within the concrete is removed during the crushing process with the help of magnets. The iron removed is then sent off so that it can be recycled. The second use for recycled concrete is as a coarse aggregate. This use is uncommon due to the high demand for use as an aggregate base and the stringent guidelines adopted by MNDOT. Concrete recycling began in 1980 with less than 200,000 tons being processed. In contrast, by 1998, almost 4.2 million tons were recycled in the seven-county metro area alone, and it is estimated that there are an additional two million tons recycled outside the metro.

Finally, I would like to talk about other products that the highway industry has attempted to recycle. There are basically five products that have been tried: taconite tailings and slag waste, waste tires, waste roofing shingles, and waste glass.

The use of taconite tailings and steel slag has been tried in the past on a very limited scale. They are primarily used to supplement virgin aggregates in asphalt and concrete production, but they are more commonly found on the iron range. The use of steel slag has shown promise due to its hardness, skid

resistance, and high specific gravity, but it isn't used in the metro in high volumes due to the high transportation costs.

Another product that has been tried is the roofing shingle waste. This product is typically shredded for use in asphalt production. Interestingly, the cement that is used to bond the roofing granules to the shingle is very similar to the asphalt cement used for bituminous asphalt. However, even though waste shingles have an oil value, there isn't any aggregate that can be reclaimed.

The next product that has been tried to be recycled by the highway industry is waste tires, or commonly referred to as crumb rubber. The used tires are typically shredded into small scraps and introduced into an asphalt plant. This is just another form of landfilling, for the crumb rubber has no aggregate or asphalt value. There have been some studies done that crumb rubber adds elasticity to the asphalt mix but more analysis is needed.

The last product that is being tried is waste glass. Waste glass is typically crushed for use as an alternative aggregate source. It has been tried in asphalt production and has been mixed with base gravel. In 1999, MNDOT adopted a new specification for recycle production. It is called Class 7 and allows up to 10 percent of reclaimed glass to be added.

As you can see, there are many different products being recycled by the highway each year and in tremendous quantities. Not only have we been able to completely recycle products within our own industry but have made attempts to recycle products generated by other industries. Even though every viable resource is recycled, when you consider that there are in excess of 50 million tons of virgin aggregate produced annually, recycling will never be able to offset the need for producers to open and permit virgin aggregate sites.

Thank you. I can attempt to answer any questions that you may have at this time.
Mr. Johnson: Are there barriers in MNDOT specifications to use of recycled materials?
Mr. Sauer: No. All the recycled material available is being used.
Mr. Bauerly: Is there increased use of recycled material?
Mr. Sauer: As more roads are being replaced, then more recycled material becomes available, but the overall ratio of recycled to virgin material needed stays about the same.

Use of Coal Ash as Construction Aggregates
Mr. Mike Thomes, Ash Utilization Process Leader, Northern States Power Company [Information from overheads and notes]

Coal ash is the 4th largest non-fuel commodity available in the U. S., with about 100 million tons available. NSP produces about one million tons per year of coal ash, with about 150,000 tons per year of that being fly ash. NSP has been investing in research to demonstrate that the coal ash products can be re-used and are environmentally acceptable. Fly ash can be used as a substitute for cement in concrete (15% replacement for cement in ready mix), or as a soil stabilization product in aggregate base material. It meets all the specifications of these applications. [Chemical analyses were presented to show that the coal fly ash meets all regulatory guidelines.] Coal dry scrubber ash is being mixed with agricultural lime and marketed as ag-lime-fertilizer, since it contributes the

necessary plant nutrients boron and sulfur as well as neutralization potential for the soil pH. NSP continues to work on the other types of coal ash to develop market applications.
Audience question: Does NSP burn waste tires at your Stillwater generation facility?
Mr. Thomes: No. Waste tires are burned at the Ashland facility.
Mr. Bauerly: How do you deal with sulfur emissions and the ash from scrubbers for sulfur?
Mr. Thomes: Wet or dry scrubbers are used to collect sulfur, and these scrubbers produce fly ash. The fly ash from wet scrubbers at this time must be landfilled, since it is in a liquid form that is too costly to dry.
[Overheads.]
The U.S's 4th Largest, Non-Fuel Commodity

Commodity	Annual Tonnage	Aggregate Uses
Fly Ash	150k	Cement Replacement Soil Stabilization
Dry Scrubber and Baghouse	320k	Cement Repl., Stabilization, Ag-Lime, L.W. Aggregate
Wet ESP-Scrubber	270k	None?
Bottom Ash	150k	Road Base, On-Site Construction
Slag	80k	Sand-Blast and Roofing Granules

970,000 Tons Per Year

FLY ASH

Cement Repl.:	Must meet ASTM-C-618 Benefits to fresh and hardened concrete ~15 percent replacement in ready-mix
Soil Stabilization:	Must comply with MPCA Permit SW-532 Stable working platform, reduce swelling Increase support capacity Stabilized aggregate base? Cold, In-Place Asphalt Recycling?

Dry Scrubber

Cement Repl.:	Blended ash (***"Pozzolite"***) Steam-cured concrete products
Soil/Waste Stabil.:	Must comply with MPCA Permit SW-532
Ag-Lime - Fertilizer:	MPCA Permit pending (SW-510) Must comply also with Dept. of Ag. License 38 percent CCE, 0.1 percent Boron, 5 percent Sulfur
Light-weight Aggr.:	Concrete products

("2KF") MPCA "Letter Approved"

BOTTOM ASH & SLAG

Bottom Ash: Must comply with MPCA Permit SW-505
Candidate for "most" MNDOT Class 5 Uses,
but, 80-90 pcf
marginal "test" durability
generally too well graded
MNDOT has **NOT** approved Class 5 designation

Slag: Must comply with MPCA Permit SW-356
Highest value uses: - asphalt roofing granules
- sand-blasting grit

1998 Coal Budget Summary by Plant and Supplier Preliminary
(Thousands of Tons)

Plant	Antelope	Black Thunder	Peabody		Jacobs Ranch	WRI	Big Sky	Test Coal	Pet Coke	Total
			No Antel	Rochelle						
A S King	600	100	470			350		50	180	1,750
Black Dog				780				50		830
High Bridge			700					50		750
Riverside			1060					50	60	1,170
Sherco 1 & 2	300	2400	990		600	340	750	80		5,460
Sherco 3 (NSP)						2,250				2,250
Total	**900**	**2,500**	**3,220**	**780**	**600**	**2,940**	**750**	**280**	**240**	**12,210**

Notes: Peabody Total 4000

COAL/ASH CHARACTERISTICS AND MINERALOGY

LOW RANK COALS

Minerals:
- Clays (Alumino-Silicates)
- Carbonates (Calcite, Dolomite)
- Sulfides/Sulfates (Pyrite, Gypsum, Barite)
- Chlorites
- Quartz

Organically Bound:
- Ca, Si, Mg, S, Fe, Mg, ...

FLY ASH

Glassy Phase Alumino-Silicates ("Pozzolans")

Crystalline Minerals:
- Lime, Portlandite, Periclase
- Quartz
- Anhydrite, Alkali Sulfates
- Tricalcium Aluminate (C_3A)
- Alite (C_3S)
- Belite (C_2S)
- Ferrite Spinel, Hematite
- Mullite, Mellilite, Merwinite

CEMENT
~~COAL/ASH~~ CHARACTERISTICS AND MINERALOGY

CEMENT RAW MATERIALS

~~LOW RANK COALS~~

Minerals:

- Clays (Alumino-Silicates)
- Carbonates (Calcite, ~~Dolomite)~~
- ~~Sulfides/Sulfates (Pyrite,~~ Gypsum, ~~Barite)~~
- ~~Chlorides~~
- Quartz
- Hematite (Fe)
- Bauxite (Al)
- COAL ASH

~~Organically Bound:~~

- ~~Ca, Si, Mg, S, Fe, Mg,.....~~

CEMENT CLINKER

~~FLY ASH~~

~~Glassy Phase Alumino Silicates~~

Crystalline Minerals:

- **Lime,** ~~Portlandite,~~ Periclase
- ~~Quartz~~
- ~~Anhydrite,~~ Alkali Sulfates
- **Tri-Calcium Aluminate (C_3A)**
- **Alite (C_3S)**
- **Belite (C_2S)**
- ~~Ferrite Spinel, Hematite~~
- ~~Mullite, Mellilite, Merwinite~~
- Gypsum

RCRA ELEMENT CONTENT – COAL (in ppm)

	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
"Typical" PRB Coal (1)	1.0	N/A	0.4	3.8	2.7	0.06	0.5	N/A
NSP Coal (2)								
-King	0.5	217	<0.3	3.8	1.6	0.07	0.3	<0.3
-Metro P.C.	0.4	274	<0.2	3.1	<2.0	0.08	0.3	<0.3
-Sherco 3	0.8	232	<0.4	4.4	2.5	0.08	0.3	<0.5
"Typical" Western U.S. Soil (3)	5.5	580	N/A	41.0	17	0.05	0.2	N/A

1. EPRI TR-104868 (assume PRB Coal at 8800 BTU/lb)
2. NSP Analysis (ave. Of 1/98 and 2/98 samples)
   - King data is Coal + **Coke**
   - Metro P.C. is Arith. Ave. of BDS, HBR, RIV 6+7
3. USGS, 1992

RCRA ELEMENT CONTENT – KING ASH (in ppm)

	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
Estimated Average (1)	7.0	3039	<4	53	<22	1	4.2	<4
Measured								
-King Fly Ash	25	3292	0.8	88	54	0.8	11.5	<1
-King Slag	5	5648	<0.4	76	<20	<0.5	2.1	<1
MPCA Site Response "Tier 1"								
-Soil Reference Values	12	2300	26	24000 (as Cr3)	400	0.7 (inorganic)	174	174
-Soil Leach Values	14.6	822	3	1,000,000 (as Cr3)	525	1 (as HgCl)	1.5	2.5

1. Element content measured in 1/98 and 2/98 Fuel, allocated to 7.14 percent ash

METAL SOLUBILITY – FLY ASH (in micrograms/liter)

	As	Ba	B	Cr	Hg	Mo	Se	S	V
Sherco Fly Ash - Dry (1)	<1	1397	391	135	<0.3	118	8	483,330	11
King Fly Ash -									
Dry Ash (2)	<10	1130	119	170	1.1	1619	40	491,000	479
Hydrated Ash (3)	<10	252	1124	115	<0.25	1510	70	288,000	860
SW-532 Use Limits	500	20,000	6,000	1000	9	300	160	2,500,000	500

1. Ave. of 10 samples, April 1997
2. Sept. 1996 Tests, ave. of "East" and "West" EPA 1312 Methods
3. King samples mixed with water and allowed to "hydrate" for 24 hours

Aggregate Resources Task Force
May 26, 1999
Meeting Transcript
Room 300 North, State Office Building, St. Paul, MN

Presentation Topics:

Updating the Aggregate Resource Inventory in the Seven-County Metropolitan Area
Dr. David Southwick, Director, Minnesota Geological Survey

Projected Construction Aggregate Availability in the Metropolitan Area: Demand vs. Estimated Resource Supply
Mr. Gene Wright, Director, Aggregate Readymix Association of Minnesota

DNR's Program of Aggregate Mapping for Counties
Mr. Dennis Martin, Senior Geologist, Division of Minerals, Department of Natural Resources

The Aggregate Material Tax: History, Purpose, Authorized Counties, Revenues, and Allocations
Mr. Donald Walsh, Manager, Minerals Tax Office, Minnesota Department of Revenue

The Aggregate Material Tax: A County Perspective
Mr. Tom Delaney III, Chairman, Chisago County Board

Task Force Attendees:

Chairman Tom Osthoff
Senator Leo Foley
Mr. Tim Magnusson
Mr. Mark Johnson
Mr. Jerry Bauerly

Updating the Aggregate Resource Inventory in the Seven-County Metropolitan Area
Dr. David Southwick, Director, Minnesota Geological Survey

Dr. Southwick: [The tape did not start at the beginning of his talk.] Apparently in Dakota and Washington counties. This is true, both sand and gravel and crushed rock. A small part of less densely developed northwestern Anoka County may also be underlain by good quality gravel [overhead]. We'll know more about that in a little while. Gravel of lower quality underlies tracks of undeveloped land down in Scott and Carver Counties, and there are only a few small tracts that are potentially developable in Hennepin and Ramsey County. Undeveloped tracks that contained near surface bedrock suitable for aggregate manufacture are restricted to southeastern Dakota County and southern Washington County, and it is virtually certain that the 1999 assessment of aggregate availability will be substantially lower than the 1983 estimate was, but it would be premature to comment on the extent of that reduction at this time. We will have our final conclusions in September. Thank you very much.

Chairman Osthoff: Thank you, Dr. Southwick. Forgive a neophyte here, but twenty-one borings by CAMAS. You call that twenty-one sites, so are they just doing one in twenty-one different places, or are they doing five in one potential field?
Dr. Southwick: It's one in twenty-one different places. We're trying to get a scattering of new information in places where the existing information is very sparse.
Chairman Osthoff: Thank you. Any questions of any members?
Mr. Bauerly: Yes, is there any equivalent research being done on the Wisconsin side?
Dr. Southwick: Not to my knowledge.
Chairman Osthoff: So we don't really know what the resources might be right across the line.
Dr. Southwick: We do not at this point. That would be under the purview of the Wisconsin agencies and geological surveys, and [undecipherable] while I'm in contact with those people, I don't know specifically of any work that is going on in that area.
Chairman Osthoff: Any other members? Dr. Southwick, thank you very much for coming. We look forward to your report, sir.
Dr. Southwick: Thank you.

Projected Construction Aggregate Availability in the Metropolitan Area: Demand vs. Estimated Resource Supply
Mr. Eugene Wright, Director, Aggregate and Readymix Association of Minnesota

Chairman Osthoff: Anyone want to help with this stuff? All right, next up on our agenda is Gene Wright from the Aggregate Readymix Association. Is Gene here? And does everybody on the task force have the biographical notes of the speakers so I don't have to tell you their background? And welcome to the committee, sir, and who, if anyone, you represent, please.
Mr. Wright: My name's Gene Wright, and I'm the director of the Aggregate and Readymix Association, and the Aggregate and Readymix Association is a trade association representing the aggregate industry and the ready mix concrete industry. When I went to the one great university in the world at Iowa State, they told me in speech that you should have eye contact when you do something, and this arrangement is difficult. So you people back here, I apologize to, and I'll try to get some eye contact with you.
Chairman Osthoff: Not so important up here. We're not dealing with money.
[laughter]
Mr. Wright: One of the things...
Chairman Osthoff: You have to look us in the eye when you want money, that's all.
[laughter]
Mr. Wright: I'm doing that all the time. As a director of a trade association, that's about 50 percent of the job. One thing I'd like to comment on: One, the importance of what David [Southwick] talked about, this locating the aggregate resources so we know where they are, and that information be in the hands of the decision makers, so they may elect to have land use and cover up a resource, but it's important that they know about it. What I'm going to do today is talk about the importance of this finding out where is the aggregate, and maybe a little bit in the planning process that can be put into the decision-making process.
Chairman Osthoff: Now, you don't have to stand, sir.
Mr. Wright: I'm going to be using transparencies.
Chairman Osthoff: Ok.

Mr. Wright: The other thing I'd like to do is–I'm relatively new to the industry so if there are questions or comments from the audience they feel need be added, it won't offend me if anyone has a point to add on a specific issue. And if you have questions, as we go, fire away, and let me know that.

Chairman Osthoff: They got to come through me, first, sir. We're on the tape.

Mr. Wright: Oh, ok, all right. Well, direct the questions to Representative Osthoff, and then they can come to me. As I mentioned, we're the Aggregate and Readymix Association. We have about 120 members that are made up of producer members that are actually in the production of ready mix concrete or are producing aggregate. About two-thirds of the members represent that group. The other one-third are people who supply in to that industry. One of the things I want to talk about–this is a review for some of you. The use of aggregate presently in Minnesota is 51.2 million tons of aggregate, and that's about ten and a half tons per person per year, and on a per day basis, each of you people use fifty-eight pounds of aggregate; and you didn't stop by Best Buy or Menards to buy it, but in the day-to-day consumption, each of us is going through that fifty-eight pounds of aggregate per day. I thought it was interesting to know that a new home uses about 120 tons of aggregate, in a new home, and that's conservative, possibly on the low end. One mile of four-lane highway uses the 20 thousand tons of aggregate. So you can see the numbers add up pretty quickly. Last I checked, the housing starts in Minnesota were 25 thousand starts, so take 25 thousand annually times that 120 tells you how much aggregate is just going into residential housing market.

The use of aggregate, everybody in the construction industry uses aggregate, but the most important thing, 50 percent of the aggregate is used by the public sector and half of that in the public sector is for city streets, county roads, and pavements. So 25 percent of the aggregate totals is used for streets, roads, and highways. The other 25 percent in the public sector is fire stations, libraries, other public buildings. So the public sector has a real vital interest in aggregate since that's consuming 50 percent of the demand. The other 50 percent is split about equally between the residential sector and the commercial sector.

Several months ago I had talked to you people about the critical issues, and the one we want to talk to here today is *map and protect*, and maybe *map and protect* is the wrong terminology. We say map and get that information out to the decision makers, so they know there's a valuable resource; so it is entered into the decision making process. When people are looking at urban sprawl and land use issues, they know that they're on top of a valuable resource. So that's the critical issue we are addressing today.

Some of you had seen this chart, and the reason we're concerned is aggregate issues [are a finite] have a finite amount of material that's available, and I mentioned we're about 51 million tons of aggregate used annually now in Minnesota. That's projected to grow to about 88 million tons in the year 2050. From currently existing sources, from the sources that exist today, over that 50-year period, that's going to drop down to about 30 million tons of aggregate [that] will be available in the year 2050. So that means between now and 2050, we have to come up with 50 million tons of additional sources of supply for that aggregate, and that is equivalent to the amount that we're using today, so today we're using 50 million tons of aggregate. As sources are depleted, and as our usage goes up, we need in this 50-year period to find another 50 million tons of aggregate on an annual basis for source of supply, so it's a really critical issue.

To talk maybe a little specifically about the Metro area, you've heard three years about that Met Council report–David [Southwick] referred to it as [19]83 and [19]84 [year of report citation], and the report I had said [19]85, so it was somewhere in the early [19]80s that the Met Council issued the report, but they said there were about three billion tons of aggregate available in the Metropolitan area. Consumption they estimated at 15 million tons, and you don't have to be a road scholar to figure out that's about a 200 year supply. Unfortunately, that study did not take into consideration urban sprawl or the land use. The chart that David [Southwick] showed you.
Senator Foley: Mr. Chairman, there Foley, Mr. Wright.
Chairman Osthoff: Yeah?
Senator Foley: How much of that is exported and how much is imported, or as far as the use in the Metro or in the state of Minnesota?
Mr. Wright: I'm going to take a stab, and then I'll ask anybody from the audience to put in that, but it's my opinion that the Metropolitan area is an importer of material. The state of Minnesota, I think, is close to break even, but with maybe a slight bit of export. Does anybody here care to comment on that?
Senator Foley: Mr. Chairman and Mr. Wright, where does it originate then? I mean, then, if it's imported.
Mr. Wright: From...for...in the Metropolitan area some is coming from St. Cloud, some is coming from Mankato/or New Ulm, Mankato area into the Metropolitan area.
Senator Foley: [undecipherable] from Minnesota
Mr. Wright: Yeah, but it's from Minnesota, yup, precisely. This is the map that David [Southwick] showed of urban sprawl that goes back to the '80s. You can visualize what it would be now. Yeah, I mean, you look at Apple Valley, you look at Eagan, you look at Woodbury, and that black section is really growing rapidly, so the urban sprawl has happened pretty rapidly, and that doesn't mean that urban sprawl shouldn't happen, but we would like to include the information that we're talking about here today, be entered into that. So, the Met Council study didn't take into consideration urban sprawl that would [be] going to take place. They had sources of supply that are being covered up. If there were a bomb, or hit the Twin Cities, and you could level out Southdale and Woodbury and Apple Valley, those numbers are probably pretty accurate, but I doubt if we're going to get rid of Southdale and go after the aggregate underneath Southdale. They also did not take into consideration the quality, and David [Southwick] mentioned on that. All aggregate is not created equal. Some of it is really good, and MNDOT has increasing specifications so the quality of the aggregate as it becomes an issue, and the other issue that did not take into, which is kinda important, and I didn't put it on the chart, is the size of the deposit.

It has to have a critical mass to be large enough to afford the investment to go in and mine that material. So those three things weren't taken into the Met Council. So we today think the estimate is more likely. There's about 500 million tons of resource available in the Metropolitan area. We're using pretty close to 31 or 32 tons of aggregate per year in the Metropolitan area. Even though I went to that one great university, you'll have to forgive me. That 15-year supply should be 16.6-year supply, but it's a 16-year supply if you do the mathematics on that.
Chairman Osthoff: Mr. Wright, I'm a University of Minnesota Alumnus. My doctor went to that one great university. [laughter] I'll let you get away with it for awhile.
Mr. Wright: Ok, that might not be a factual statement, then.
Chairman Osthoff: You played on the one great football team they had down there.

Mr. Wright: Precisely. What does all this mean? It means each year we need to develop about 15 million tons of new aggregate source in the Metropolitan area to come into that. And to put that into square meters or square yards or acres, that's 640 acres, about one square mile of land that has at least 20-foot depth of usable aggregates [undecipherable] so each year, we have come up with a square mile of aggregate supply to meet the demand for the Metropolitan area. So if you plat out the area on the maps that David [Southwick] had showed you, somewhere each year we need to come up with one square mile of land.

And why is it important that material be relatively close to where it's used? It costs about 10 to 15 cents per mile to transport aggregate so it's fairly expensive to transport it. Twenty to thirty mile haul about doubles the cost of aggregate, and for a city of a hundred thousand people, for each ten-mile haul, that's $1.3 million per year extra money for the aggregate. For each ten-mile haul, you're looking at more than a million dollar extra cost for the aggregate that any city or county could use, so
Chairman Osthoff: May I ask you an unrelated question?
Mr. Wright: ummm,ummm
Chairman Osthoff: What is the price of aggregate in relationship to CPI been lately?
Mr. Wright: To what?
Chairman Osthoff: In relationship to CPI. What has the cost been in relationship?
Mr. Wright: I don't know that. Can anybody help me?
Chairman Osthoff: It's your industry. You should know that.
Mr. Wright: I know that, but I don't.
Mr. Wilmshurst: Sightly higher.
Mr. Wright: Oh, Ok, slightly higher.
Chairman Osthoff: And, is that explainable by some reason other than inflation went up lower? That your costs are higher?
Mr. Wright: [undecipherable] I need some help from the audience again on that.
[unknown speaker]: That's all right.
[unknown speaker]: Due to the demand versus supply situation.
Mr. Wright: I'll get some more information on that for you.
[unknown speaker]: Depends on who owns the sources.
Chairman Osthoff: Go ahead.
Mr. Wright: As I mentioned, the cost of aggregate is about $5 a ton, and if you looked at 10 million tons of material, that's about $50 million. Now, if the average haul for aggregate is ten miles, which is about where we're at, you're looking at about another $10 million. So, the total cost of aggregate, of [undecipherable] is about $60 million with that ten-mile haul. If that increases to 50-mile haul, which it can, or could possibly, happen as we get further and further out and we start getting urban sprawl, that would increase to $50 million for that 10 million tons of aggregate. So now you're up to $100 million, so your price of aggregate went up by an amount of $40 million. So you can see the cost of aggregate is relatively low in quantity, but the cost of transportation goes up pretty rapidly for each ten-mile haul, so it has a significant financial impact.

The other thing I wanted to comment on is about the regional resources, and I showed you this before [overhead], but in the center there's an aggregate operation and a city, and that city is responsible for the permitting, responsible for the hours of operation, and how that aggregate operation will work, but that aggregate operation is really a regional source of supply. It has a regional implication; yet the

decision making process is in the hands of the city, and it's important, I think, that the city know that they have a regional resource, and hopefully in their decision-making process that they can put that into their logic when they make the decisions so they don't put so many restrictions that they'll be forced to close down. And that's one of the real issues we have here. How can we get the decision makers the information and let them know the importance of the regional resource that's there so they put that into their decision-making process?
Mr. Bauerly: Mr. Chair.
Chairman Osthoff: Mr. Bauerly.
Mr. Bauerly: Mr. Wright, you said that a city may deny a permit. That would also be true of a township or a county or a planning zoning board. Is that not correct?
Mr. Wright: Precisely. Any, and it's a step. You can be township, county, city, and many times we have to go through each one of those [undecipherable] to get the permit through the system so it's a viable operation. But, what's important on the chart I was showing you is that it's a regional resource, and a lot of the decisions are looked at locally, so that's the real issue.
Chairman Osthoff: Can I bounce it back to you, sir? I'm in my twenty-fifth year in the legislature, and the city of St. Paul plants are all in my district. Nobody from your industry has ever talked to me about this issue until Jonathan [Wilmshurst] did. And I met Jonathan [Wilmshurst] over a park down at CAMAS. So you need to tell your industry that if they want folks to be aware of what zoning ordinances and city councils can do on a metropolitan-wide basis, you need to talk to us.
Mr. Wright: Yeah, that's one of the reasons I'm here, as the director of the association.
Chairman Osthoff: I don't mean just us. I'm talking about all the legislators.
Mr. Wright: No, that's a real issue. I don't deny it. From our P.R. standpoint or our education of our industry, that's a critical issue for us. That's one of the things high on my priority because lot of people you talk [to] about aggregate, and it's "what's that?" And most people don't know they're using ten tons of aggregate per year. And if they didn't have aggregate, the results, the negative results of what might happen from that issue.
Chairman Osthoff: Let me tell you an example. I get my neighbors [to] call me all the time [be]cause Anoka trucks, and all the trucks from all over the suburbs are driving through our District and want to know why?
Mr. Wright: Yeah
Chairman Osthoff: You understand why city councils do things or townships do things, when there's nobody talking to any legislators about what kind of an issue this is.
Mr. Wright: I agree with you totally. It's a critical issue for us, and like I said, that's the reason I'm here, and have a job to address that issue.

One final comment, I'd like to talk about is we've had quite a few of these meetings, and the attendance has been fairly sparse [?]. For those of us in the industry, that's kind of frustrating, and I don't know if you guys can get among yourselves if there's something we should be doing differently on getting a better turnout.
Chairman Osthoff: Let me explain to you. Are you the one who sent me the nasty note saying I should ...
Mr. Wright: Nope, I'm not guilty on that. [laughter]
Chairman Osthoff: I should have saved that one, but you know when you're in Finance Committees, you start at 6:00 in the morning and you go until 2:00 in the morning, and coming to these meetings aren't where you're at. You know, and two of these, I think, at least, were, I was

during the budget talk, and I know [Representative] Rukavina was, and that's why it's a bad time during the budget session to have meetings.
Mr. Wright: Comment: But I didn't write the note. I'm not guilty of that one. [laughter]
Chairman Osthoff: I'll probably retrieve it. I put it on my computer, I think. [laughter]
Mr. Wright: Ok, that's all I had, and I want to say "thank you," and if there are any calls, give us...
[unknown speaker]: Yes sir, [undecipherable]
Mr. Wright: And if there are any questions, I'll try to field them with the help of the audience.
Senator Foley: Mr. Wright, one of the obvious things I can see here is that with people moving out and developing it's kind of like you indicated over Southdale area, that was a major resource before the industry, but those people are really not paying the true costs of that land by developing over something. If it were gold or something like that, maybe the people...the mining would continue, but people look at aggregate or gravel or whatever you want to call it, it's something different so the core cities are losing population to go out, and were really allowing the people to develop in many of those areas, and they're not paying the true cost of the land and the other impact that they have on the environment.
Mr. Wright: I agree with that, and I think it gets back to what was mentioned before. We, as an industry, need to do a better job on public relations, education the [undecipherable] about that valuable resource. If it were gold or plutonium or that sort of thing, they might be worried about, but the fact that it's aggregate, no one cares about; and the other real issue that we have to address is aggregate as a percent of the total construction cost is relatively small so if it doubles, yeah, it's still a million dollars a year, as I mentioned, for that city of a hundred thousand for each extra ten-mile haul. It's a million dollars, but as a percent of the total construction cost, it's not that big, so we need to do the job of education, and so we need to address that pretty quickly not only with the legislators but with the general public.
Senator Foley: When you talk, Mr. Chairman, Mr. Wright, when you're talking about MNDOT use, highway bridge construction, and so forth, how much of that is new material and how much is recycled?
Mr. Wright: Most of it that goes into the concrete is new. The sub-base, there's quite a bit of; that's recyclable. All the recyclable material that's available is being used.
Chairman Osthoff: That wasn't in your numbers, right?
Mr. Wright: No
Chairman Osthoff: You lost a good lobbyist when Bauerly left us.
Mr. Wright: I know that. [laughter]
Chairman Osthoff: I learned more listening to him talk than I did from all the other Transportation Committee meetings I chaired. But he's gone now, so nobody's talking to us.
Mr. Bauerly: Mr. Chair
Chairman Osthoff: Mr. Bauerly
Mr. Bauerly: I'd sure be happy to talk to you. [laughter]
Chairman Osthoff: About which subject?
Mr. Bauerly: This one. Mr. Chair, if I might, I think the point that Senator Foley is making is a good one, and, I think, that what's happened over the years is, I remember when county budgets were over 50 percent roads. The transportation, or the road and bridge fund, was over 50 percent, and I remember the very year that in Benton County, it changed, because I know a county commissioner lived in our house that was very upset when it changed from that to something else. And now, actually, it's a smaller part of their budgets; and with the urbanization, I think, the connectivity is

gone. The county boards, and, I think, this is true of cities and townships, these aren't necessarily their number one priorities. They have a whole plate full of issues that they need to deal with, and as a result, we have this issue that is very silent.

But the reason for this task force is that aggregate is being covered up across the state. And various zoning and county and city officials are siding with these developers and these developments, and these people that live in these developments, at the expense of the aggregate resource. And, I think, it's very short sighted, and, I think that, I understand, at least that's the charge that I think we're here, to try to find some balance in that.

Chairman Osthoff: Well, as I said to Senator Foley, instead of giving all the green acres [undecipherable] these metropolitan guys, we ought to assess them for the gravel they're sitting on, and maybe they wouldn't develop it so fast.

[unknown speaker]: Mr. Chairman...

Chairman Osthoff: We'd get hung up if we'd try, I suspect.

[unknown speaker]: Mr. Chairman...[laughter]

Mr. Johnson: I agree, it's important to get out there and educate, but what is also the industry doing about the behavior of operators? It's one thing to educate [undecipherable], but it's really hard. You're not going to have a county commissioner or township official side with an operator when they see trucks running stop signs, speeding, not doing dust control, exceeding hours of operation. The worst thing here, basically, the good operators, but what is the industry doing?

Mr. Bauerly: We've been partnering with the Pollution Control Agency in an effort to get all the operations permitted so they're operating as good citizens, to address that. And, because we've been cooperating with them to try to make the permitting system a bit simpler for the person to understand, because the permitting system really requires spending $20 [thousand] or $30 thousand to go get a consultant to fill out the permitting, when the information shouldn't be that difficult, so we've got it down where you didn't have to hire a consultant. So we're trying to get everybody permitting and in good compliance. It's a continual education process. We have signs at every yard on how to load aggregate correctly so your windshield won't be broken, how to clean the side of the truck off correctly–just good operating procedures, and it's a continual education process, but that's one of the charters of our association.

Mr. Johnson: I think there was one time we were getting complaints about an operation north of Duluth. Me and the county commissioner went up there, pulled behind the township community center, which was adjacent to the pit, and sure enough there were wide turns sweep trucks going into. As soon as we stepped out into the open, where clearly a guy in a suit is clearly visible and out of place. Those turns got a whole lot sharper, and those stops and my idea of perhaps having mannequin commissioners, just [undecipherable] [laughter]

Mr. Bauerly: Education is one of our prime [undecipherable]; we're a four-legged stool, and one of those legs is education, to address that specific issue.

Chairman Osthoff: In ARM what has been the trend? Are there more people in business or less?

Mr. Bauerly: Fewer, there's both in the Readymix side, on the aggregate side, the big people are buying up the smaller people, and

Chairman Osthoff: Greater demand but fewer independent companies.

Mr. Bauerly: Yes.

Chairman Osthoff: Jonathan [Wilmshurst] will own it all, soon

Mr. Bauerly: He still has competition, last time I looked, but it's getting so complicated just from the permitting process in aggregate operation that the "mom and pop" type of operation is really difficult. It puts a very big strain on them, to be in compliance, and to be good citizens, and to address good operating procedures if you're a "mom and pop" size operation. It's really getting to be a complex industry.
Mr. Magnusson: Mr. Chair, if I might, as far [as] operations are concerned, I guess, up in Clay County, one of the things that we've run into is we have fairly large operators that do a lot of...their transportation is done by leased trucking, you know, so they're not directly owned by the company, and that, I think, is where we see a good number of problems. Where I'm not sure exactly how the drivers of leased vehicles are getting paid, but the speeds they run and the things that they can do almost make you think they are running out of , being paid by the load, because they can be the ones who tend to create some problems.
Mr. Bauerly: And most of the aggregate is hauled by independent truck operators.
Mr. Magnusson: And as we go to privatization, folks, there will be fewer and fewer government people doing it. There will all be some leased or contractual truck drivers. [laughter]
[**unknown speaker**] We will not make this issue get better, I suspect.
Chairman Osthoff: All right, thank you very much.
[unknown speaker]: Thank you very much.

DNR's Program of Aggregate Mapping for Counties
Mr. Dennis Martin, Senior Geologist, Division of Minerals, Department of Natural Resources

Chairman Osthoff: Next, Dennis Martin is on the agenda from DNR, talk about DNR's Program of Aggregate Mapping of the Counties. And we can move the mic back in there, and he knows where to put it. We got to watch the clock because we have some more people to go yet. All right. Welcome to the committee, and would you identify yourself for the tape, please.
Mr. Martin: Yes, my name is Dennis Martin. I'm a geologist with the Department of Natural Resources, Minerals Division. So I hope you ask a lot of geology...[questions]
Chairman Osthoff: Do you work for Bill Brice?
Mr. Martin: Yes, I work for Bill Brice.
[unknown speaker] The new real estate magnate?
Mr. Martin: Oh... [laughter]
Mr. Martin: Maybe in the future. I hope you ask a lot of geology questions. That's what I'm here to talk about.
Chairman Osthoff: Well, Bauerly might be able to, but my extent of it was, I think, my freshman or senior year at the U[niversity of Minnesota], [undecipherable] scratch something to see if the bubbles came up so, you don't want to talk to me about it.
Mr. Martin: I'm here to talk about the Aggregate Planning and Protection work that we in the DNR call County Aggregate Mapping.
Chairman Osthoff: Is all your stuff at LMIC as well, that you transport information to LMIC, Land Management Information Systems? Do they have what you have?
Mr. Martin: In the last few years we have not been directly giving it to them. We have all of the information on computer [files] like this, CD ROM now. This is what we've gone to with our last product, so we can give them or any person this CD ROM.

Chairman Osthoff: The reason I asked that is most of the public now gets directed to LMIC, and we're trying to get one big data base of what's out there, and I'm trying to understand if all the agencies are funneling it through there.
Mr. Martin: Ok.
Chairman Osthoff: When we do LCMR stuff, they have to, but I just wondered if we kept up with it.
Mr. Martin: We find it's easier than... an individual can put this CD right in their own computer now [and], get access to it.
Chairman Osthoff: Can I ask a question of these three gentlemen [Tim Magnusson, Mark Johnson, and Jerry Bauerly]? You might know this, but I would guess the public doesn't think the Department of Natural Resources is where you would go to get aggregate information.
[Unknown speaker]: Right. MNDOT. That's right.
Chairman Osthoff: That's why we try to get one spot where the public knows they can go get at least a list where everything is at, and that's something we may want to think about as we work our way through this, on how to make this information easily accessible. Please continue, Dennis [Martin].
Mr. Martin: We view our job as providing technical information and technical assistance to a county or the local government units in the county, like the townships. I'm going to give you an example of the most recent map that we did so that I can [show you]. You know, what is one of these county aggregate resource maps? What does it look like? I've got a basic form of the map on the overhead and then a paper copy right here. This is for Blue Earth County. We finished this last month. We also make it available, like I said, on a CD ROM form, and we've gone to...In order to try and encourage townships to use it, we've broken it up by township in a booklet, and so they can look at their own township in here and just deal with what they need.
Chairman Osthoff: Why is it when I look at that map, I think it [aggregate resources] is following stream or river beds?
Mr. Martin: Many of them are. The reason is that the rivers now follow...the rivers that are there now like the Blue Earth River follow pathways where the glaciers had melted, and the melting water of the glaciers put gravel down.
Chairman Osthoff: Let's not pretend that, you know, conflict for us for the environmental folks and rivers and watersheds and how we are going to be able to access that.
Mr. Martin: That's exactly right. And so we think that if you have a map so that you can make decisions and do planning, you're way ahead. If it's a map in the public sector, everybody's got access to it. All the environmental groups have access to it, and everybody can contribute to the planning process to determine where mining can be and where mining should not be. I guess I want to point out very briefly that the brown orange color on this map represents where aggregate resources are, and the light color, sort of a yellow, is where they are... very likely, there are no aggregate resources. We have some bedrock aggregate resources up here in this portion of the map so there is a stippled pattern up there to distinguish that for crushed stone.

I just want to point out that we have additional map plates here, and all I mean to say is that they provide a lot more detailed information. Often times when you start working on a particular place, you want to know more details about it. And so we're providing a lot of detailed information, and even more so than what's on the maps, there is more information on the CD ROM. In its basic form and on that CD ROM, we've classified the gravel deposits and, you can actually look at all the

different classification information. So for any given map unit, you can look up a lot of different information about it on the CD.

Let's step back for a minute and ask again, "Why would we do this?" This air photo shows Mankato and North Mankato. Minnesota River goes through the middle there. Minnesota River, Mankato, North Mankato--there's about eleven square miles within the city limits of Mankato and four square miles within the city limits of North Mankato. In the next twenty to fifty years all of the streets and bridges and many of the buildings and parking lots will have to be rebuilt, and they will be rebuilt with aggregate. When you look at it from an air photo here, and you think about this area, it's easy to put into perspective to understand how much aggregate it requires. On this [undecipherable] map, we found an area about ten miles from Mankato where there's no mining right now. There are plenty of aggregate resources. It seems to be in that area. The challenge for the county will be to do some planning to see if they can preserve those aggregate resources for future mining. That's just one example, really on this map.
Chairman Osthoff: Can I ask, "Is that a lake in the blue there?"
Mr. Martin: Right here.
Chairman Osthoff: You're going to ask the County Commissioners not to develop those $300,000 homes on that lake?
Mr. Martin: Well, we're up here. We're [far] away from the lake.
Chairman Osthoff: But that's some of the choices they got to make if they want. [undecipherable] They won't be in office long. [laughter] Those are tough decisions. I spent 28 years at Ramsey County, and you face those tough decisions.
Mr. Martin: In 1984 the [undecipherable] of history, in 1984 the legislature passed a statute. That statute is in the appendix on page 29 in this book here, that you have, and it's a handout here today if you want to look at the entire statute. It's on this side table over here, but I just want to point out again, as we review, the purpose of the statute told us in the DNR to do this mapping to protect aggregate resources, to promote [undecipherable] and environmentally sound development so, Mr. Chairman, it was right in the statute to introduce aggregate resources in the local comprehensive planning, and that's really the challenge for everybody. The scope was to identify and classify potentially valuable aggregate lands outside of the Metro area, to give priority to those areas where urbanization is occurring and to work cooperatively with [the] Minnesota Geological Survey and the Department of Transportation. We think that as these projects have evolved since 1984 into the form of the last project that we did, that we showed you here for Blue Earth County.

We think that we have accomplished our role in doing this work. We think that we've put together maps and provided the technical assistance to the county. For example, we've gone to the county board and had presentations at two meetings. We've done a public meeting that the county highway engineers set up for us down there, a three-hour public meeting in the evening. We've had a series of three newspaper articles in the Mankato Free Press that told the story of what's going on in that area. We met with the Planning Department, and they have this type of computer software, so they can use this directly, and they've told us that they're going to. We think we've done our side of it and that part of the Statute said to plan for the future, you need to make those aggregate resources available for the future, and that's really been the tough part on this.
Chairman Osthoff: Do the township people come to the meetings when you have county meetings?

Mr. Martin: They didn't, and so what we've done is we've...they get together, all the township officers get together in a meeting, I can't remember if it's monthly or quarterly, and we've asked to get on their agenda to give a presentation, so that's what we want to do. In fact, we'll even go out in the field. If they want to drive around and look at this stuff, we've told them we'll do that.
Chairman Osthoff: It's kinda old news, but a couple years ago, Mankato was the hot spot.
Mr. Martin: Yes.
Chairman Osthoff: And there was a war down there.
Mr. Martin: Yes.
Chairman Osthoff: And I'm trying to figure out if this is going to help solve it.
Senator Foley: Oh, Mr. Chairman.
Chairman Osthoff: Senator Foley.
Senator Foley: It looked to me like instead of leaving this up to the counties, the cities, and the town boards, that we ought to be looking at, dealing with this as a state resource, and the state getting some input as to what kind of development it is and what kind of use can be made of those kinds of properties till we've extracted the resources, at least.
Chairman Osthoff: Senator Foley, I think we all admit that this is the year that we took away local control from local units of government on most issues. What's one more? [laughter]
Senator Foley: Mr. Chairman, I think.
Chairman Osthoff: I'm not carrying it. You're going to do it, not me. [laughter]
Chairman Osthoff: I told Mr. Bauerly. You got to get [Representative] Rukavina to carry this bill. He's the only one crazy enough to do it. [laughter]
[unknown speaker]: Mr. Chairman.
Chairman Osthoff: Under serious things, and Senator Foley and I can joke and laugh about it, but these are serious, though decisions [end of tape]. Task Force will make [to] the Legislature and so we can get somebody behind it to support it. I don't believe it's the agency's job to have to stand up in front and take the bullets and arrows all the time.
Mr. Martin: That's good to hear. [laughter]
Chairman Osthoff: Yeah, but I'm in a minority now so I can't do much about it. [laughter]
Chairman Osthoff: Senator Foley can do more about it than I can.
Senator Foley: But when you're looking at that, it's kind of like what the manure pits that we just were dealing with that nobody seemed to pay any attention to the impact on the people who lived locally. They just...
Chairman Osthoff: Well, actually, Senator, we started out with the Met Council who was charged with not letting this trial go amuck, and they didn't even address it, and they weren't inventorying aggregate at the time. What a tragedy that [19]84, [19]83, [19]85 group in Met Council ought [to] all be strung up somewhere, so to speak. Since my campaign manager was one of those people. [laughter]
Mr. Martin: Mr. Chairman, to go back to one of your points, about Mankato being a hot bed, in about a six-week period, we gave out 100 sets of these preliminary draft maps that came out and then the final ones, and that's more than we've ever done at the beginning. When we first give out project maps like this, so having this down there in the public library up on the wall is where these maps, we've got them on display. We had dozens of phone calls in the first few days.
Chairman Osthoff: Was that from land speculators?
Mr. Martin: It's hard to know who all these people are. I think it's all across the board, we've seen. Now I'd like to switch gears just a little bit.

Chairman Osthoff: Dennis, before you leave, how many counties have you done like this? I [undecipherable] missed it.
Mr. Martin: We have done five counties, and that's what I'd like to show on this map here. We've done five counties. We just talked about Blue Earth County. Wright, Sherburne, Isanti, and Clay County are completed. We are now working on Nicollet County.
Chairman Osthoff: Could I ask you [a] question and maybe Brice wants to answer this. County Biological Survey, we funded phases out of LCMR since 12 or 15 years I've served that. Are we doing this because this sounds like an issue that should be done the same way from LCMR? I don't think the regular budget will do this for you.
[unknown speaker]: Right, not fast enough.
Mr. Brice: Mr. Chairman, our regular budget gets us about...
Chairman Osthoff: Please identify yourself.
Mr. Brice: I'm sorry. I'm Bill Brice from the Division of Minerals. Our regular budget gets us about one or one and a half counties every two years. It was never funded by any...
Chairman Osthoff: I would recommend you get into the process of LCMR requests because I think it's going to start this summer.
Mr. Brice: Thank you. We'll do that.
Chairman Osthoff: Well, it's not going to happen fast enough if we don't. Ok, please continue, Dennis [Martin].
Mr. Martin: Ok, to answer your question, we believe that it cost us about $60,000. It took us just more than one year to do Blue Earth County. For a county that size, that's about what it was.
[unknown speaker]: Mr. Chair, are you going to get into the priorities of how you ended up doing those counties?
Chairman Osthoff: What goes into your thoughts on selecting a county?
Mr. Martin: Ok, real good question.
Chairman Osthoff: Hot spots, yeah. [laughter]
Mr. Martin: The Statute tells us that we should look at areas where urban sprawl is occurring, or urbanization, and there are regional growth centers. Mankato was brought to our attention as one of those areas, a regional growth center, and Blue Earth County wrote us a letter from the county commissioners and asked us to participate in this. I mean, that's what we want. We want counties that the county staff wants to work on this. We also have solicited opinions from many different groups as to where we should go and what we should do.
Chairman Osthoff: Have you touched base with the Association of Counties at large so they could tell their other members?
Mr. Martin: No, we have not.
Chairman Osthoff: That might be a quick, easy step for you to get the word out.
Mr. Magnusson: Mr. Chair, you're kinda hooking up with LCMR. I think that's probably the only reason that Clay County has been done as quick as it was. It was part of an LCMR project with the Beach Ridges, or otherwise, I can't imagine that they would have reached out to us.
Chairman Osthoff: I know we've talked about it as an LCMR member, and I don't mean to borrow LCMR inside stuff, but we think this is such a significant issue both for aggregate purposes and for the environmental part of the native prairie stuff that we're willing to look at the whole state-wide issue, and we'll put our money where our mouth's at. We have $42 million. It's a good start. [laughter]

Mr. Martin: I want to take just a minute here to talk about geology because I like it. We do this work as a geological evaluation. We think that's at the heart of why we have confidence in what we're doing there. The economics of gravel deposits change. The prices of the commodities vary over time, but we think that the location of where these deposits are and the basic geological factors, how big they are, how deep they are, the relative quality of them does not change, and that's what we put and focus on, on our mapping. So we do not try to get into the economic evaluation and the economic factors of them. So we think these maps are going to hold up to review. We have a lot of confidence in them.
Chairman Osthoff: Can I ask you a question, Dennis [Martin]? I think all of [the] metropolitan counties have GIS in their public works.
Mr. Martin: Yes.
Chairman Osthoff: Are they doing some of this for you? I know my engineers did a whole lot of work on GIS, and I expect [undecipherable] must have done some of this down in Ramsey County. Did you get a chance to talk to them at all?
Mr. Martin: The Statute tells us not to work in the seven-county Metro area. So we haven't done this. That 1984 Statute. So the Minnesota Geological Survey has been doing their work inside the Metro area. Yup.
Chairman Osthoff: I think you need to talk....Bill [Brice], you need to talk to some of us about what that meant then and what it means now, you know, not here but at some point. We need to correct that part of it so we can get this thing inventoried. We need to talk about it.
Mr. Martin: What I'd like to do now is to go into a summary. I think there's a lot of agreement that inventorying the sand and gravel deposits has tremendous value. We think that we can assist the local governments by providing this technical information, and what I've put on this summary diagram is basically the approach that we've taken in our last project in Blue Earth County. I've mentioned these things before, that basically, we present the information in a series of maps to the local government units that are doing their planning and zoning and we go there basically pretty much any time, any place, and talk to them about it or make public if they want us to talk about it with them.

Just to review again, I know that Gene Wright went through this, but in 1997, when the last year that we have statistics, there's more than 51 million tons of gravel mined in Minnesota, produced in Minnesota, and a value of over $187 million, and about half of that was purchased through public tax funds. Looking at the future, we continue to see growth in this industry. Two to three percent has been brought up as a projection. It's probably very reasonable. It's worth looking at these inventories and trying to find a way, I think, to continue to do this.

Our next project is in Nicollet County. We just got started. Another example, there's a lot of growth in the St. Cloud area, but you probably know around the state where the growth is occurring. So there are many places around the state where they need this right now, basically. So, thank you.
Senator Foley: Thank you, Dennis [Martin]. So citizen members, you know, we put money in the budget to do an environmental study of that corridor plan, Metropolitan area up to St. Cloud. Nobody's addressed this issue. At some point we need to sit down and look at that as well, Jerry, [Bauerly] because there was big money in to do an environmental study, and I took it out a couple years ago, and I think we did part of it this year to slow that down. We may have taken it out this year, too. So the [undecipherable] go to the U[niversity of Minnesota], and the LCMR folks are all

looking at the environmental aspects of that corridor, and they are not doing an aggregate study, and that get's close to your home. I know that, so you need to pay attention to that and talk to us, as well.
Chairman Osthoff: Dennis [Martin], nice job. Thank you for coming in. Any questions from members of the Task Force? Tim.
Mr. Magnusson: I'd like to make a comment to Senator Foley. You had mentioned earlier, asked a question earlier about importing of materials, exporting materials, that type of thing. Up in Clay County, we are in a unique situation, where I would say that the majority of material that is produced in Clay County is exported out of state. It's interesting how the state would deal with aggregate material as a state-wide resource in that situation. We've had discussions amongst individuals up there that, you know, there should be a differential gravel tax if it goes out of state. You know, you pay in essence a severance tax like in the coal states and western part of the United States, but in our particular location, the exported material out of state, it's a Minnesota resource that's being moved out of state.
Chairman Osthoff: Is–Tim [Magnusson], maybe you explained it to me, and I think now Senator Foley knows this–some of the government units in North Dakota have bought land in Minnesota and are taking our gravel over for the road systems?
Mr. Magnusson: I guess I'm not sure if they are land owners, but I know that Cass County, North Dakota, does remove from Clay County, and they utilize it on the road systems in North Dakota.
Chairman Osthoff: And that's one of the reasons we started talking gravel tax so we can get a little money out of it when they depleted the course?
Mr. Magnusson: Well, that's been a consideration, yeah.
Chairman Osthoff: And I would tell everybody in the audience, and I've been in my twenty-fifth year, between fencing off old mines and gravel tax, I can't think of two more contentious issues. And you might not think so, but, boy, politically in the legislature, they are fire brands. I will tell you, and I don't know why, but they certainly are. Any other questions, any members of the Committee. Thank you very much.

The Aggregate Material Tax: History, Purpose, Authorized Counties, Revenues, and Allocations
Mr. Donald Walsh, Manager, Minerals Tax Office, Minnesota Department of Revenue

Chairman Osthoff: Now we can get to the tax part. This is the part I keep waiting for. [laughter]
Chairman Osthoff: Don Walsh in the Department of Revenue, Don...
Mr. Walsh: Does everybody up there have a handout?
Chairman Osthoff: I don't know, I don't have it.
Mr. Walsh: I'll be talking from a handout so...
Chairman Osthoff: Ok. Here, [undecipherable] you keep it so you have it on file there.
Chairman Osthoff: And, we have to have identify yourself for the record and who, if anyone, you represent, and speak into the, it's not an amplifier, it's just a recording mic, I believe. Straight up
Mr. Walsh: My name is Don Walsh, and I'm with the Department of Revenue, Manager of the Minerals Tax Office. I'm here to talk briefly about the aggregate material tax.
Chairman Osthoff: Welcome to the committee, sir.
Mr. Walsh: Thank you. The aggregate material tax was first passed in 1961, and it was passed for the seven counties along the North Dakota, Minnesota border, for the exact reason I was just talking about here. [laughter]

Mr. Walsh: And in the early [19]80s, it was changed several times. In 1980 the legislature gave every county in the state the option of passing.
[unknown speaker]: Excuse me, we can't hear.
Chairman Osthoff: It's not an amplifier; it's a recorder.
[unknown speaker]: I think it does amplify.
Chairman Osthoff: Does it amplify? Oh, ok, I'm sorry. Well, maybe they shut it off. You'll have to see. Tap it once. No, it's on. You, these revenue guys aren't used to being in public. They work in the dark. You know that. [laughter]
[undecipherable] [laughter]
Mr. Walsh: In 1980 the legislature gave all the counties in the state the option of passing a tax. Most chose not to. In 1986 the tax took its current form. Those counties are identified on the following pages [handout]. Polk County was added in 1988. The tax was 7 cents a ton or 10 cents a yard. It's mandated to be distributed, 60 percent to the road and bridge fund, 30 percent to the township road and bridge fund, and 10 percent to [the] reserve fund for pit reclamation. On page 2, it show[s] all of the counties and the tax that they collected based on 1998 production. As you can see, that was $2.9 million. On page 3, there's a little bit more history, going from 1990 to 1998. In 1990 the tax is about 1.9 million. And, of course, in 1998, it's up to almost 2.9 million. So there's been a significant growth over that time, even though the tax rate has not changed. The next page, I guess there's quite a bit of interest in this reserve fund for pit restoration. I've accumulated quite a bit of information. The first column there shows the amount of aggregate tax that was put in the reserve fund for production in 1998, and that was $192,000. The next column shows the total aggregate tax, the reserve fund total from 1986 to 1998, which is about $1.9 million, and the third column is the total amount spent on pit reclamation from 1986 to 1998, which is $177,000, and, of course, the last column is the balance, the remaining balance in the fund for pit restoration.
Chairman Osthoff: I don't know if the other person, I should ask, Mr. Walsh, but does that say we're over taxing them or is there a liability out there for a million seven yet to be restored?
Mr. Walsh: Well, that's a good question, and I'm not sure that I can answer that, but.
Chairman Osthoff: Who do you think I should ask that question of, DNR Minerals?
Mr. Walsh: No, this is a county tax.
Chairman Osthoff: County tax.
Mr. Walsh: I'm with the State. The State gets no money from this tax. We just kind of..
Chairman Osthoff: Pass it through.
Mr. Walsh: Resource [?], right. And many of these counties probably don't realize that if they don't have any [undecipherable], they are on publicly owned or tax forfeit land, that they do not have to put that 10 percent in that reserve fund. It could go to the county road and bridge fund.
Chairman Osthoff: And does the interest get applied to the fund, or does it go somewhere else? Is it invested?
Mr. Walsh: I have no idea. That's a county matter for the county board.
Chairman Osthoff: So the counties could be spending this money in other manners? For which we think it was supposed to be used? Let me ask that county person's giving me that funny look over there. [laughter]
Chairman Osthoff: Mr. Magnusson?
Mr. Magnusson: I was going to make a comment on the fact that the amount of money that's been used up to date, or to date, on pit reclamation. There's probably a lot of factors in that; one is, who determines whether there was a pit there or not? It's generally been the county engineer. If it's a

county-owned pit, they're very reluctant to say that it's abandoned or mined out. They'll hang on to it until they can sell it to somebody else, generally. So that money is generally not extended on county owned land. Tax forfeit land is a different story, but in my county, I know, there isn't anybody that goes out on regular basis looking at tax forfeit land to determine whether there is a gravel pit on it or [undecipherable] gravel pit.

Chairman Osthoff: [The] Land commissioner is supposed to do that.

Mr. Magnusson: We have no land commissioner.

Chairman Osthoff: We all do. I used to have one working for me. That was their job. Tax forfeit land back, and sell it if possible.

Mr. Magnusson: I don't believe that our county has a land commissioner so...

Chairman Osthoff: That's a county commissioner's job to make sure it happens. They can hire an independent appraiser. Well, I'm not picking on you, Tim [Magnusson], obviously, but it looks like to me that we have a plan that isn't working for anybody. I don't mean to sound dumb, but that's what it looks like.

Mr. Johnson: Do you have an idea of how these numbers were derived at, at amounts spent on reclamation?

Mr. Walsh: Every year I communicate with every county that has a tax. While the information is in here, but every year we put out a tax guide about mining taxes, and part of that pertains to aggregate tax, and I get the collections every year of each county. And this year Dave Olson contacted me about the Task Force, and I asked these extra questions this year from each county about the reserve fund, and some were rather reluctant to provide it. [laughter]

Mr. Walsh: I got this information from each county, and the tax is generally handled by the county auditor, except in a few counties. The county engineer, the highway department handles the tax.

Chairman Osthoff: Mr. Walsh, if we were looking at the big picture, shouldn't we put this money in the hands of the State and guarantee reclamation?

Mr. Walsh: I don't know.

Mr. Bauerly: Mr. Chair?

Chairman Osthoff: Mr. Bauerly.

Mr. Bauerly: One thing to keep in mind is [that] a presenter in one of our other meetings, I think, from, I don't remember, Washington County, or somewhere, said that in many cases what historically might have been tax forfeit land, that this restoration money would be used for now actually has value, and it no longer is tax forfeit, plus the fact that we've been in good economy for a number of years, but there aren't many. I think that's what Tim [Magnusson] was saying is...

Chairman Osthoff: Ever since President Clinton took office

Mr. Bauerly: Is that when it was? I forget. [laughter]

Mr. Bauerly: But anyway, there is very little tax forfeit land. Isn't that simply the issue? And, I think, one of our earlier presenters said that even if it is an old abandoned gravel pit, people are paying the taxes on it, because the land is appreciating.

Chairman Osthoff: Rightfully so, because we know now some day we'll develop it.

Mr. Magnusson: And there again, in my particular case, if it's the county engineer who's going to determine whether a property is right for reclamation or not, he also has in the back of his mind that if that money's not used for reclamation, it goes to his own bridge fund.

Chairman Osthoff: I find with interest we hold the private industry to a higher standard then, that they must reclaim, but we let local government get away for doing nothing. Is that what we're saying?

Mr. Magnusson: I don't believe that there's anything on the statutes that forces an industry to reclaim, other than, well, this money's here to do it with. I mean, let's take your Felton Prairie, for example. CAMAS is making, I think, a noble effort up there to do some things, but I go over to my DNR property where their little pit is at, and they're not doing squat.
Mr. Bauerly: See this money is only applicable to public land.
Chairman Osthoff: I know, but the county gets it, DNR doesn't.
Mr. Magnusson: Well, if you look at what Clay County has spent, the reason that we've spent this amount of money is because we've been in cooperative efforts with DNR.
Chairman Osthoff: And you are one of the progressive ones, sir; let me say for the record.
Mr. Magnusson: Thank you.
Chairman Osthoff: I have high regard for what you've been doing. I don't mean to pick on you as a county person. I had twenty-eight years at Ramsey County. I got used to that, but we have a law that gives tax money to counties that they aren't using. And either we shouldn't tax somebody or we should figure out what our liability is on a grand scale. If we are going to have a bill that says this aggregate is a state-wide treasure or state-wide resource, then maybe we should talk about this money should be in a state-wide fund so that it's made available for those folks like yourself that want to do responsible things. Why just limit it to what you pay the tax on, then. We'll sweeten the pot and get you in there. I'm sorry. You're here to teach about tax.
[laughter]
Chairman Osthoff: When's the last time this puppy's been raised?
Mr. Magnusson: It hasn't been raised since 1986, when it took its current form. Well, if you showed everybody this [handout], nobody would want to raise it, I suspect. But what we need to understand is what the potential liability out there might be. This might not be near enough to do it if we were serious about reclamation.
Mr. Bauerly: Mr. Chair?
Chairman Osthoff: Mr. Bauerly.
Mr. Bauerly: Can I ask you a question? When you said a potential liability out there, are you talking about private lands, public lands?
Chairman Osthoff: I'm talking about whatever this fund was set up for.
Mr. Bauerly: Ok. Public lands
Chairman Osthoff: Whatever this fund was set up for.
Mr. Bauerly: Mr. Chairman, I might also add to my earlier comments about reasons that there is not tax forfeit land that needs to be reclaimed, and that is for, at least, the last ten years that I can remember, most zoning that allows gravel operations to exist also has a sizeable bond for restoration attached to it; and the minute you don't have the bond, you don't operate. So, at least, in the recent history, that might have something to do with it as well, and I don't know how universal that is, but, I think, it's true in most counties.
Chairman Osthoff: Mr. Bauerly, let me tell you one of the perspectives I bring to this group, from what I call environmental types who ask me to come here, is that they want to make certain that there is some way that those pits that can be reclaimed should be reclaimed.
Mr. Bauerly: Absolutely.
Chairman Osthoff: And for people who want to do it, somebody to help them do it. And this issue gets to be one that they think really is doing something, but if they read this, they would know it's not. And if we want to make it work and have less pain deciding where we combine and where we

could take gravel out, we need to have something for them to see, that they think is helpful at the end. And this issue, to me, seems to be addressed to solve a lot of hot problems very easily.
Mr. Johnson: Mr. Chair, one of the issues that came up in our Duluth area townships, as they were debating doing gravel tax, is that whole reclamation where the private operator said, "We aren't going to pay for reclaiming the county's pit." That's a general county obligation. All the taxpayers in the county ought to pay for that. And they point out that we do. We have to maintain our pits. Why should my tax money go to pay for the tax forfeit lands?
Chairman Osthoff: Well, when someone [undecipherable] price of doing business is that you've got to do things to make everybody happy so you can stay in business, unfortunately. And I think we're kinda the referees of where we're going from here, but we'll present the legislature to adopt and keep this industry alive and still have people not so concerned about what's happening to the native prairies and whatever. And, I think, we have potential here to do great things because, you know, as I say, we have never discussed this openly in the task force in all the years I've been with the legislature. [If] somebody did. I didn't hear about it.

Last time they sat on our Environment and Funding Committee since I've been here, and this went to me, and I'm really sad, in fact, Jonathan [Wilmshurst] from CAMAS is the one who got me turned on in this issue because I thought he was a man that cared about what he was doing, what we were doing, and we had a nice long talk about it a couple times. And I really think, and I missed most of these meetings, but I want you to know that there is a number of us sitting in the Legislature who want to make this work for everybody. This one seems like a little pimple that would put away a big boil. Not a very good terminology, sir, but that's how it is when you're on interim time. [laughter]
Chairman Osthoff: And since my wife worked at Revenue, I can pick on you all I want. [laughter]
Chairman Osthoff: Please continue, Mr. Walsh.
Mr. Walsh: The only thing I have is the last page [handout]. I've attached a copy of this statute. Everybody's reference if you...it's all there on these two pages. But note on Item 6, they name counties and all the others are then excluded, I assume, under the definitions.
Chairman Osthoff: Right.
Mr. Walsh: So it's only applicable to the named counties.
Chairman Osthoff: Do we need to change that as time goes along here?
Mr. Walsh: Some of those counties do not have the tax. They chose not to impose it.
Chairman Osthoff: Ok.
Mr. Walsh: Carlton and St. Louis have not imposed the tax, and then Chisago.
Chairman Osthoff: So that's the only way they're identified as a player is that they're in the tax. And it hasn't been changed since [19]86, you say?
Mr. Walsh: To the best of my knowledge.
Chairman Osthoff: And, Mr. Walsh, how do you recover your cost for attending to this fine fund that does nothing? And that's not your fault, sir. [laughter]
Mr. Walsh: It's just part of what we do. Then I work with the minerals and primarily work with taconite and iron ore and that... and this is part of the same statute.
Chairman Osthoff: So Tommy Rukavina is paying for your time to spend on gravel. This is good. I like this. [laughter]
Chairman Osthoff: Quit talking about this one quick. Yeah. [laughter] All right, please continue
Mr. Walsh: That's all I have.

Mr. Johnson: Mr. Chair?
Chairman Osthoff: Mr. Johnson.
Mr. Johnson: One of the issues that came up in St. Louis County is the issue of the cost of the administration of the program, going after all these, the operators, the hauling people, it was felt very difficult and time consuming and with luck 50 [percent], 60 percent cooperation. One idea that came up from an operator, though, was switching this over to the sales tax, instead of having a set amount of part of the sales tax because they all have...the operators already report that. And it would [undecipherable] as a simpler procedure. Does revenue have any thoughts on that?
Mr. Walsh: I hadn't heard that before, but that's an interesting idea. Another problem in St. Louis County, when they talked about it, was there was some concern that the taconite tailings would have been subject to the tax. So taconite companies, even though they produce aggregate, the produce millions of tons of tailings could have been paying huge amount of tax.
Chairman Osthoff: And certainly the part, like last month we heard from EVTAC, and they want to use it on the material, well that would fall under the gravel tax.
Mr. Walsh: Looks like the statute needs a little work.
Chairman Osthoff: Yes.
Mr. Bauerly: Mr. Chair.
Chairman Osthoff: Mr. Bauerly.
Mr. Bauerly: It's my understanding, you quickly talked about the list of counties. This is permissive as someone said for counties. It gives them authorization to do it. So these counties have authorization to do it, and I tell you that Benton County, you see zero is across there. Benton County, some years ago did collect the tax for, I think, five years. And then one of the operators in Benton County realized they were the only ones paying the tax and said that they would not pay the tax anymore unless it was enforced county wide and essentially decided exactly that, that it would cost more to collect the tax than it would generate since the county and the townships utilized, and that's naturally well in excess of 50 percent of the aggregate used in the county. So I think you have counties where really the road and bridge of the townships, and the counties and the cities would use the majority of the material. Then it becomes questionable whether it's...So, I agree with it being permissive so that counties that feel that it's advantageous for them to use, do that. And those that don't still have that option to choose that route.
Chairman Osthoff: And, Mr. Walsh, this is all on the honor system, this reporting?
Mr. Walsh: It's up to the county, I would say that most counties, the county auditor handles it, and a lot of counties they don't give it a very high priority. They don't put any staff; they don't do any audits; they just...whoever reports, reports, and, you know, that's...
Chairman Osthoff: So it's kind of like a licensing thing, and send us your money if you feel like it.
Mr. Walsh: In some counties, I understand that's the way it is.
Chairman Osthoff: Mr. Bauerly
Mr. Bauerly: Again...
Chairman Osthoff: You did send your fair share, I hope. [laughter]
Mr. Bauerly: Yeah, yeah, I might say in Sherburne County, for example, which I'm also familiar with, they as part of your zoning permit make you sign something that says they can come in to your office and audit your books every month if they wish to see if you're in compliance with this. At least that way, it has some teeth, but I'm not crazy about having county auditors audit, you know, ...[undecipherable]
Chairman Osthoff: You got the auditor of Ramsey County, watch yourself. [laughter]

Mr. Bauerly: Specifically, that's why I said that. [laughter]
Mr. Bauerly: But at least that way it has some teeth. You're just not waiting for people and hoping they'll send it in.
Chairman Osthoff: But shouldn't we have it stopped?
Mr. Bauerly: Why, sure, if you ask for it.
Chairman Osthoff: We should have it uniform statewide application.
Mr. Magnusson: Mr. Chair?
Chairman Osthoff: Mr. Magnusson.
Mr. Magnusson: What Clay County has done and you ask the question as to whether the tax had ever been raised. It has not been raised since its implementation. There was legislation last year, not in the most current session, but in the 1998 session, to increase the tax, I believe, almost doubling it. That piece of legislation also included, for the first time, the right for counties to go in and audit the books of operators if there was some discrepancy that was felt that doing what they were paying in tax and what they might be taking out. The increase in the tax did not get passed, but the right for counties to go in–the county auditor to go in–and audit books back, I believe, five years was approved.

Now, you're talking about where does the administrative cost come in? That's a cost if an auditor wants to do it and they have wherewith all to do it, they might. There is no funding. It's part of the gravel tax itself that allows it to be used for that administrative type of charge. So that's one of the problems with administration of gravel tax, at least, that's as far as I've seen it. Is it auditors have not given it high priority. It's been on the voluntary basis, and [in] Clay County, we go beyond what, I think, our requirements are in that the planning office actually sends out a gravel tax reporting form to all the known operators in the county two weeks prior to it being due. That's something we aren't made to do. It's not statute that we have to, but we do it to try to collect as much back as we can.

We also have concerns and comments from different operators in the county that other operators aren't paying their fair share, or other operators aren't paying anything, and in the past we've had no recourse to go back and make that determination. Now there is, at least, an opportunity to..
Chairman Osthoff: It's always interesting to hear how different counties work because, you know, we merged all of our [undecipherable] offices in something called revenue in Ramsey County so we would talk to each other and share that information. It wouldn't be three doors down the hall, and nobody would know what the assessor had looked at, and nobody would know what the engineer was doing. It worked better for us, and I'm not suggesting that's what you do, but didn't we need to really seriously, if we think this is a valuable resource, and I think everybody in this room agrees it is, in one form or another. We need to talk about some administrative or some procedure where it's handled, I think, quite uniformly as best we can. And then address local government's concerns on how they want to work with it. Because I think it's just been...it gets hot, and nobody talks about an orderly process, I don't believe. I mean, for you to have the taconite industry walk in and say "we want this money," it's got to be frightening, because they'd take it all.
Mr. Johnson: One quick...Could the Department of Revenue...like the town of Solway, which has...they have not collected any money yet. One large company got up at the township meeting and said, "we aren't going to pay. We aren't going to let you in to look at our books." Well, and their offices are in Eau Claire [Wisconsin]. Yah, is there...ya know, well beyond the possibility of the town of Solway, to go down to Eau Claire and go through the books. They wouldn't be allowed in

anyway. Is this...but I suspect that if somebody from the Minnesota Department of Revenue were to knock on their door they might be a little bit more interested.
Chairman Osthoff: Their out-of-state people are in New York and San Juan; they are not in Eau Claire. I helped some of those positions when I was a tax chair. Most folks don't know we have revenue people all over the country...California and that. So, we do have revenue people out chasing down sources for us.
Mr. Johnson: That is the thing...Could the Department of Revenue help in those?
Mr. Walsh: If you talk about a statewide application, clearly those are the issues that can be included in the discussion, I would think. Now, if you have somebody administering a fund, then you got to make them help be responsible for helping collect it or seeing that it is done properly. Then we get that cost off the local property taxpayers and let Jesse pay for it. But to answer your question, I am sure the Department of Revenue could do it if the provisions and appropriations were done. See, they're building a new building now, and they have no money left. [laughter]
Chairman Osthoff: All right, any other questions for Mr. Walsh? Thank you very much for coming in, Sir.
Mr. Walsh: You're welcome.

The Aggregate Material Tax: A County Perspective
Mr. Tom Delaney III, Chairman, Chisago County Board

Chairman Osthoff: Mr. Delaney. Welcome to the committee, sir. Please identify yourself for the tape and who, if anyone, you represent.
Mr. Delaney: Good afternoon, Mr. Chairman and members, my name is Tom Delaney, and I am Chair of the Chisago County Board and Vice President of the Association of Minnesota Counties. I don't know what I am doing here today, following all this good, expert technical presentation...a lot of good information today. Also, at the door I was very proud when I walked in here wearing that Vice President of the Association of Minnesota Counties hat. But after hearing some of the comments, I think we've got a good job to do in the PR department to let you guys know just how responsible we are out there. I want to thank you very much for the opportunity today to share our views and concerns relating to the mining of aggregate and potential impacts to our county, Chisago County. I am also Co-chair of a group called the Collar Counties, those counties surrounding peripherally the metropolitan area. This group includes Chisago, Isanti, Sherburne, Wright, McLeod, Goodhue, Sibley, Lesueur, in Minnesota.
Chairman Osthoff: What do you call them?
Mr. Delaney: We call them the collar counties. Some people call them the ring counties...
Chairman Osthoff: [undecipherable]
Mr. Delaney: Collar, collar, as in....
Chairman Osthoff: Oh, I'm sorry. I'm not sure what you meant by that.
Mr. Delaney: Collar...We spent a lot of time at these meetings trying to determine just what a good name would be, and we haven't come up with a good one yet.
Chairman Osthoff: It must be a loose collar cause it hasn't been tight enough yet ; [laughter] it's still going out there.
Mr. Delaney: Good point, Mr. Chairman. In Wisconsin, that includes St. Croix, Pierce, and Polk.
Chairman Osthoff: So, you're kind of the Metropolitan Statistical area, as defined by the U.S. Census Bureau?

Mr. Delaney: That is correct, Mr. Chairman. The collar counties are experiencing many of the same kinds of problems relating to growth, urban sprawl, transportation issues, and rapidly developing needs in the school systems, which gets to be really expensive. I bring this up because it appears that aggregate mining could also become an issue as mines in the metropolitan area are depleted, and these needs then will have to be met by the counties on the fringe of the metropolitan area. I think the whole issue of aggregate mining is really a sleeper, as not too many elected officials are familiar with the potential need in the regional area; and very few are even aware that this task force is in existence. I found out about it by accident about two months ago.
Chairman Osthoff: The members aren't too aware of it either, so don't worry about it. [laughter]
Mr. Delaney: Ok. [laughter] This whole aggregate issue first came to my attention a couple months ago when a constituent called and informed me that an international mining company had bought a couple of pits across the road from him. He was concerned that the screening and beautiful greenery along State Trunk Hwy 95 might be eliminated. That's in Franconia, beautiful Franconia, along the St. Croix River...
Chairman Osthoff: The Commissioner of Revenue, Mr. Matt Smith, is from Franconia. You ought to talk to him.
Mr. Delaney: All right, he is very fortunate if he lives in Franconia. Over the next 24 hours I learned that more interesting things were happening and that the large mining company was attempting to buy large quantities of land adjacent to the newly acquired pits. In doing some quick research, it became obvious that our county, Chisago County, did not have ordinances in place that would provide for the protection and set-backs concerning truck access points and reclamation procedures, just to name a few. So, its picking up on some of the issues that I have heard discussed today.

The Chisago County Board of Commissioners immediately instituted a one-year moratorium on any new aggregate mining operations and any expansion of existing operations. While all this was taking place, another group of citizens had been meeting for a couple of years on a joint effort between Washington and Chisago counties, called the Green Corridor Project. They were attempting to identify contiguous natural areas in the county that cried out for protection and defining methods to do just that. It just so happened that one of the main corridors identified was the area along the scenic St. Croix River, and coincidentally, that is an area that contains a fairly good amount of aggregate, for the obvious reasons that were discussed earlier today. So, along with the moratorium, the County Board also appropriated the necessary funds to obtain the services of an experienced consultant to help provide the necessary expertise to put together an ordinance that would both get the job done and withstand scrutiny. The international mining firm that I referred to earlier was the big one we all know about, referred to as CAMAS. Of course, to everyone here that is a familiar name.

The week turned out to be an interesting one. No sooner had the moratorium been put in place, when a few days later a letter arrived in the county door step from Northern States Power. The letter indicated that an agreement had just been signed between NSP, CAMAS, and Mathy Construction. The proposal was to market fly ash from NSP's Shirko 3 coal burning power plant as an agricultural soil amendment. As there is not a great deal of local knowledge relating to this proposition, again, some more red flags were raised. One of the next steps was to direct our Public Works Directors to do a survey in our county to determine just how aggregate is now being mined and what is the impact to our county. Additionally, if larger amounts of aggregate in the future were to be mined, what could

be the impact to our landscape and roads. This report has not yet been finalized and will be completed sometime in the very near future.

In 1996, legislation was passed giving Chisago County authority, special authority, to levy the gravel or aggregate tax. As you all know, in order for that to become effective a resolution had to be passed by the Board of Commissioners before the next legislative session. After a great deal of deliberation, the County Board at that time took no action on that issue. The rationale being that most of the aggregate being mined in our county was used on either county roads or township roads. However, a few months ago Chisago County again became interested in the prospects of imposing gravel tax. It appeared that in the future, the prospects were extremely ripe for Chisago County to possibly become a major supplier to at least the north metro area. So, a request was made to our legislative representatives to introduce a bill to allow for the implementation of a gravel tax this year. It was, I think, Meeker and Renville, if I'm not mistaken, had legislation this year, and we wanted to tie into that. The Senate passed the bill for us but in the House, I guess, the Tax Committee Chairman felt that there was not enough public input, or a public forum had not been utilized, so he didn't hear [the bill]. That is my understanding, so we are going to get that in again next year.

In a very generic nutshell, that is where we are at in Chisago County. I will state again that we want to make these valuable resources available to the market, but at the same time we want to protect our beautiful countryside, the stability of our road system, and to make sure that policy is implemented that provides for a thorough reclamation of the mined area. These are just a few of the issues that have come to the table to date, and I am sure many more will surface in the coming months. It is interesting that some of the comments I have heard today because one of our main concerns is that if we don't do it right, local regulatory control will be preempted. So, we are trying to do it, unlike some of the suggestions heard here today, we're trying to do what is right. To allow for the mining of that valuable resource that we all need and yet still protect the environment. As everything else in this world, sometimes that is a balancing act.

Chairman Osthoff: Mr. Delaney, if I may, since I made that remark. I'm the one that was chagrined at why good conservative Republicans want to take away all the local control of my local units of government. Cause I used to always hear them say they believe in local control. That is why I was laying that on the table, so what's one more time. [laughter] This doesn't explain my vote but at least since you now referenced it, I think you need to know where I was coming from.

Mr. Delaney: I appreciate that, Mr. Chairman. Of course, being the County Commissioner, I have the luxury of not having to worry about the partisan side of politics but...

[unknown speaker]: Being a cousin to Loren Jennings, you have to talk to me, too. [laughter]

Mr. Delaney: I did hear, just as an aside, I just penciled in a couple of notes...We have a couple of operators in our county...it seems like most of the local guys do a pretty good job. There are a couple of contractors that I think are from outside our county and hauling outside our county. For awhile it was really bad. I mean 70 mph speeds on some of these county roads and not taking the time to maybe sweep off the tailgates. I had four windshields in about a year and a half. So, we took a hard stand and said, "Hey, look guys, you clean up your own act. We'd rather do it with a carrot than a stick, but you clean up your act. You slow down, you clean off your tailgates, you don't overload, and if you do that we'll all be friends. But, if you don't do it, we're going to pass ordinances that are going to make it really tough for you to operate in the county and it will be very expensive." They

that? Is the public invited to attend? I assume we're not paying for them to come; but if they want to meet us in places, I guess you'd let them do it.

Mr. Olson: My name is Dave Olson and I work for the DNR and am planning these trips. We are inviting other people to stop, especially in the metro trip we'll have a bus of perhaps 40 seats. We are planning to invite the chairs of the Transportation Committees, the Met Council, and legislators will have constituents at those stops. So, that will be a larger group. The other group is defined by the size of the plane, so we'll probably have people interested at the various stops.

Chairman Osthoff: All right, does anybody in the audience–if you want to see Mr. Olson you can get a copy of this agenda if somebody is interested in it, or you can get in touch with Mr. Humphrey in Representative Rukavina's office for any information you'd like.

Any other business to be brought before the task force? Anything from the members of the task force? [Nobody in the audience came forward.] We thank you all for your testimony and for coming forward on a very nice day today and with that, this task force stands adjourned.