

## 1994 MIDWESTERN STATES EQUIPMENT MANAGEMENT CONFERENCE

*Richard W. Hunter*  
*Illinois Department of Transportation*

### SUMMARY

The 6<sup>th</sup> Midwestern States Equipment Managers Conference was held June 6-8, 1994 in Arlington Heights, Illinois and hosted by the Illinois Department of Transportation (IDOT), Division of Highways. The following is a brief summary of discussion topics and information reported during the meeting.

● *Alternative Fuels Update.* Illinois has several ethanol flex-fueled automobiles for pool use. Kansas has several flex fuel cars and light trucks for use in metro areas. Minnesota recently purchased 20 E85 Chevrolet Lumina and is using propane fueled pickup trucks. These have had problems with poor performance and hard starting in cold weather. Iowa is operating 25 alternative fuel vehicles, 21 were purchased this year. They are a combination of Ethanol and slow-fill CNG. Several medium duty highway maintenance trucks have been equipped with an injection system that mixes 20% soy oil and 15% ethanol. The after-market system costs \$9,500.00 but appears to work. South Dakota is using some alternative fueled busses, primarily bio-diesel. North Dakota has no alternative fuels in use. They must be provided as an OEM product to be considered. Missouri is operating 30 dual fueled vehicles. GMC is in the process of retrofitting their CNG vehicles with gasoline engines. They are still operating several propane powered vehicles and will begin using soy-diesel powered trucks in the near future. Ohio is using 20 dual fuel (CNG powered) pickup trucks in the Cleveland area. They are constructing quick-fill facilities. Indiana is operating four CNG Chevrolet S10 pickup trucks. Fuel sources for these vehicles is a problem.

● *Color Standardization - Are We Any Closer Today?* Indiana, Missouri, and South Dakota use yellow for their vehicle fleet. They will allow some "off-road" equipment in manufacturers standard color. The rest of the states use a variety of oranges. Kansas purchases all orange with no deviation.

● *Automatic Transmissions - Experiences with Allison MD Series. What Manual Transmissions Are Currently Specified?* Illinois purchased 190 trucks with Allison World Transmissions both the 3060 and 3560 models. The only problem experienced with the World Transmission has been RF interference on the low band

FM radio frequency. This interference locks the radio receiver until a stronger signal is received and can override the interference. Indiana and Kansas have purchased several of the MD series transmissions for evaluation. Ohio, North Dakota, and Missouri purchase mostly manual transmissions. Iowa and South Dakota trucks are equipped with standard or automatics based on the use of the truck.

● *Anti-Lock Brakes for Medium and Heavy Duty Trucks - Experiences and Expectations.* Only Kansas and Ohio have vehicles with anti-lock brakes. The cost for this feature is approximately \$1,200.

● *Discussion of Fleet Management Systems.* The consensus of the group was to carefully determine what costs and records are essential for the operation. The most important function is the planning of the system. Then purchase only what is needed.

● *Equipment Fleet Size and Utilization Expectations for Government Fleets.* Missouri makes the rental of major equipment "easier" for field forces to accomplish. Ohio purchases only "core" equipment and encourages the rental of other major pieces. Kansas is under going a three phase program to reduce the amount of state owned equipment. They are currently in phase two of the program. Iowa requires 12,000 miles per year utilization or the vehicle is reassigned. They use a lane mile formula to assign snow removal trucks.

● *Re-Refined Lubricants and Fluids - Who Is Using What?* Iowa requires military specifications and American Petroleum Institute standards be met. Several states have purchased machines to recycle their own fluids. All states agreed they have had no failures of major components due to the use of recycled material.

● *Discuss the "Pros and Cons" of Remanufactured Engines, Transmissions and Other Major Components.* Kansas uses remanufactured components with warranty protection. The Illinois Tollway purchases mostly new components but does rebuild some engines and transmissions in-house if practical.

● *Discuss the Purchase and Use of Electronic Diagnostic Tools for Servicing Diesel Engines.* Minnesota has purchased these tools for their shops. They can be used for most engines. The Illinois Tollway is planning to acquire this type equipment in the coming year.

● *Discuss the Inventory Control Practices for Tools and Small Equipment.* Illinois and Missouri begin

formal numbering procedures at \$100; South Dakota at \$300; Iowa and Kansas at \$500; and, North Dakota \$750. Kansas uses a decal "Property of" for all major equipment items. Several states commented that the limits for these item may be going to increase. Indiana has taken recent disciplinary action against employees for inventory discrepancies.

● *Mechanic Classification - Is Any State Using a Classification Similar to "Lead Mechanic" Similar to Shop Supervisor Position Between the Highway Mechanic and the Mechanics Job Description?* In Minnesota one mechanic gets higher grade classification. Iowa has small shops. Each has only three mechanics. No difference in grade is provided. Indiana uses a Mechanic II position in its larger facilities.

● *How Are Other States Handling Welding Fumes in Their Shops?* Missouri uses an air circulation system and is beginning to use positionable vacuum devices at designated welding areas. Minnesota is having similar problems with paint. Iowa has a manual that outlines the wastes generated by their sites and the steps to take for the treatment and disposal of these items. They perform the employee training and continually update the manual.

● *Presentation of Illinois Modification to the Minnesota "Gordon Stanley" TMA Hitch.* The modified hitch mounts in the same "over-the-tailgate" fashion as the original hitch. The modification extends the upper and lower arms to provide clearance for an under-tailgate salt spreader. This addition makes the use of the attenuator easier during winter months when immediate responses to snow removal are necessary. The extended arms and additional gusseting weldments are available in a kit to modify the older "Gordon Stanley" hitch.

● *General Discussion of Dump Body Specifications.* Most states are using conventional dump bodies on their snow removal fleets. Iowa has successfully used the "Western" style dump body. They lowered the dump body height 3.5 inches. Illinois has 12 trucks ordered this year with this style body.

● *Use and Experiences with Track-Type Hydraulic Excavators. For What Operations & What Sizes Are Purchased?* Kansas, Iowa, Minnesota and Ohio purchase larger (40,000 pound) track machines. Illinois, Illinois Tollway, Indiana, and Missouri primarily use rubber tired machines. The track machines are used for ditch work, major pavement patching and in soft-soil conditions. The rubber tired machines are primarily ditching machines. Illinois has purchased several small track hoes to use for ditch maintenance in place of larger rubber and track type units. Missouri has purchased a large self-propelled rotary ditcher.

● *Review of "Under-body" Plow Specifications.* Each state is using a limited number of under-body

plows in a variety of applications and styles. Primarily used for ice scraping.

● *Ground Speed Spreader Controls - Who Is Using and from Where Are They Purchasing?*

● *Presentation on a Cooperative Purchasing Venture by Minnesota.* Dave Strage described the program Minnesota uses to assist other governmental entities in the state to purchase equipment and supplies. This program includes the use of Department staff as consultants in generating specifications and allowing local units of government to attach to existing bids and contracts. This cooperation results in better relationships amongst agencies and lower operating costs for government. This concept could possibly be expanded to allow other states to participate in the purchase of like pieces of equipment or other goods and services. If this type of purchasing is implemented, it must be simple, easily understood and easy to use. The local units of government must be convinced they have input into the purchase and selection process.

● *Discuss the Application of SHRP Products by the Participating States.* Minnesota has received a \$750,000 annual research grant for all forms of projects including equipment. Minnesota is currently operating two remote control trucks for work zone protection and one remote control slope mower. The use of the SHRP snowplow has not worked out. They could not make the scoop portion of the plow work. Iowa also found the snow scoop design plow unsuccessful the first time tried. It is being tested again in a different area of the state. North Dakota has run a SHRP snow scoop for two years with poor performance reports.

## HOST STATE FACILITY AND EQUIPMENT TOUR

A portion of the meeting was spent touring some of the Illinois Department of Transportation and Illinois Toll Highway Authority facilities in the Chicago area. Highway maintenance equipment was displayed on the tour that included the IDOT Emergency Traffic Patrol Headquarters. This facility is the home of the "Minutemen" that patrol the Chicago Expressway system assisting stranded motorists and responding to expressway emergencies. Their equipment ranges from 30,000 GVW rated wrecker-type trucks to large rotating 50-ton wreckers mounted on chassis in the 80,000 GVW range, and specialized equipment used to lift and upright semi-trailers.

## PLANS FOR FUTURE MEETINGS

Several suggestions were made for future meetings. They included video taping the conference; changing the

schedule; advantages of hosting and the additional attendance for the host state; the minutes from the Western States Meeting; documenting the benefits from the conference; and, send the three most important to potential host state executives.

Iowa agreed to host the meeting, possibly on the border with Nebraska. Ohio agreed to host the 1996 meeting pending upper management approval. Several state representatives commented on this being their first opportunity to attend this meeting and were pleased with the worthwhile information and sharing of ideas and experiences relating to highway maintenance equipment.