

County Road Commission Reforms and Efficiencies



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What is CRAM?

The County Road Association of Michigan (CRAM) has represented the interests and concerns of Michigan's 83 county road agencies for more than 90 years. From seasonal roads to seven-lane highways and beyond, county road commissions (CRC) are responsible for the majority (75 percent) of Michigan's road system- representing more than 90,000 miles and 5,700 bridges- the fourth largest county road system in the nation. In addition, 63 counties are under contract with the Michigan Department of Transportation (MDOT) to provide maintenance on the state trunklines in their county.

In Michigan, all counties are served by a county road agency. In all but two counties this is the county road commission. In Wayne and Macomb Counties, the county roads are under the jurisdiction of a special county department, the Department of Public Services and Department of Roads respectively.

Efficiencies and Effectiveness:

In 2008, the Citizens Advisory Committee to the Transportation Funding Task Force, Highway, Road and Bridge Subcommittee, issued three reports. The first report highlighted the crisis facing Michigan's road and bridge network, while two supplemental reports focused solely on the efficiencies and effectiveness measures taken by road agencies in Michigan.

The following is an excerpt from the Highway, Road and Bridge Subcommittee's *Supplemental Report No. 3*:

“Michigan's road agencies, from the Michigan Department of Transportation (MDOT), to the smallest county road commissions and village departments of public works, have been under-funded for decades. As a result, they have focused on effectiveness and efficiencies for a long time. However, as was noted in the Highway, Road and Bridge Subcommittee's *Supplemental Report No. 2*, **those who are not aware of what is happening, may assume nothing is happening-** and that has often been the case with regard to efficiency and effectiveness achievements of Michigan's road agencies. How could legislators, the general public or, for that matter, most people outside of these agencies, know that these efforts were taking place? **The constant effort to improve efficiencies and effectiveness is not something most road agencies publicize- it's just a normal part of doing business.** However, because these agencies have been grossly under-funded and cannot accomplish all that is expected of them, it is assumed by many that they are inefficient.”

The data gathered in these reports and public testimony at hearings across the state led the Transportation Funding Task Force (TF2) to conclude:

“Transportation agencies have been relentlessly vigilant in stretching shrinking revenue. Their efforts may go unnoticed, because the cost cutting measures are designed not to disrupt service or impose on customers.... **It is clear that efficiency is standard operating procedure at agencies across the state.**”

Despite the innovations and efficiencies of road commissions, funding has not allowed state and local road agencies to keep up with the needs of our aging transportation infrastructure. The Michigan Legislature has not taken action to implement the recommendations of the TF2, to at least double Michigan's current level of transportation funding.

Sharing Efficiencies:

A survey conducted in 2008 for the Citizens Advisory Committee to the Transportation Funding Task Force (TF2) developed five categories of efficiencies common to road agencies. Some of the information gathered during this survey was included in the Highway, Road and Bridge Subcommittee's *Supplemental Report No.3*. In January 2011, as part of an annual survey of road commissions, CRAM asked Michigan's county road agencies to once again share their efficiencies.

This report provides a glimpse into the reforms and efficiencies road commissions have implemented in recent years, and reveals the extensive efforts underway across the state to work cooperatively with other agencies. Gov. Snyder stated in his *Special Message on Community Development and Local Government Reforms*, "It is clear that we need to look beyond our own immediate townships, city and county boundaries in order to build a stronger Michigan."

This is not a new concept to Michigan's county road agencies that, in the face of continuously inadequate funding, have for many years shared labor and equipment with other agencies; conducted joint projects with adjacent communities; and sought out innovative ways to work with other governmental entities.

It is clear from reviewing the examples provided by county road agencies that a cookie cutter approach to managing Michigan's county road agencies is not feasible. Efficiencies in some counties may not work in others due to a variety of factors such as traffic counts, size and training of the workforce, distance from material distributors and the availability of contractors. Each local road agency must continue to evaluate operations and services to maximize efficiency and value to taxpayers based on the situation and resources present in its community. This report provides an in-depth look at some of the ways Michigan's county road agencies have been working together and with other organization to enhance efficiency and reduce costs.

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Labor and Equipment Sharing

Alcona: The Alcona County Road Commission (CRC) exchanged county line snowplowing routes with **Oscoda** CRC to improve response time; provided tree trimming lift bucket truck and operator to **Alpena** CRC to assist with their state maintenance demands; and provided roadside mowing to **MDOT** direct maintenance area on M-72.

Alger: The Alger CRC routinely rents equipment from adjacent counties for chip seal operations. They also rent equipment to the **City of Munising** and other road commissions, and assist the **Village of Chatham** with winter maintenance operations.

In 2008, Alger CRC reported several efforts to share equipment including:

- Renting their shoulder machine to **MDOT**;
- Renting their temporary bridge to **Delta CRC**;
- Renting chip sealing equipment from **Delta CRC**;
- Renting their AMZ patching machine to the **City of Munising**; and
- Alger CRC has contracted with the **Village of Chatham** to provide complete summer and winter road maintenance.

Alpena: The Alpena CRC has shared labor and equipment for seal coating and tree cutting operations, and rents equipment from or leases equipment to various entities as needed.

Antrim: The Antrim CRC has rented labor and equipment to and from neighboring counties.

Baraga: The Baraga CRC has experienced great success with cooperative partnerships developed with other road commissions including:

- Equipment sharing agreements with all adjacent counties, villages and **MDOT**. The signed agreements have been in place well over 10 years;
- Large excavator has been used on other agency's projects, including **Houghton and Iron CRC**;
- AMZ machine is used by the **Village of L'Anse**;
- Utilizing the **Marquette CRC** guard rail pounder;
- Utilizing the **Dickson CRC's** shoulder spreader;
- Utilizing the **Village of L'Anse** VAC Truck, specialty equipment that cannot be cost-effectively owned by the Road Commission;
- Utilizing the **Keweenaw Bay Indian Community** trucks for hauling purposes when needed;
- The Road Commission and **Michigan DNR** jointly own and use a CAT tracked excavator. This machine is stored and maintained by the Road Commission. MDNR Baraga staff use the machine to maintain the Sturgeon River Sloughs;
- Prior to sale of the plant, the Road Commission had annually produced bituminous mix which was sold to **L'Anse Village, Baraga Village** and **Houghton CRC**;
- Prison labor crew was shared with townships and villages when needed for many years. Now that Baraga CRC no longer has a prison crew, they are able to use the **Village of Baraga's** crew when needed;

- The Road Commission's surveyor is used by **Baraga County** for their remonumentation program;
- The Road Commission provides consultation, engineering and other technical assistance to villages and the county;
- Traffic counting equipment is utilized by both villages and the tribal government. Work crews are contracted out during the summer to help both villages with traffic counting;
- CRAM committees, listserv, and other resources allow the Road Commission to cooperatively share knowledge and technical assistance among county road agencies; and
- In recent years, seasonal employees utilized by Baraga CRC have been hired by **MDOT** in the summer season. This saves on unemployment costs and provides continued employment opportunities for trained and experienced employees.

Barry: The Barry CRC has conducted chip sealing operations for a **Kent CRC** project; jointly purchased a distributor with **Kent CRC**; traded maintenance with the **City of Hastings**; shared engineering staff with **Branch CRC**; and is hired by townships cities and villages to maintain their roads and parking lots.

In 2008, Barry CRC reported that they shared equipment with **Clinton CRC**. At that time, both Barry and **Muskegon CRCs** were contracted to provide labor and equipment to perform chip seal operations on **Kent CRC** roads.

Bay: The Bay CRC contracts with a neighboring county and city for chip sealing operations on a yearly basis. This helps pay for their equipment and labor while providing a necessary service for other local governments. In turn, the other local road agencies do not have the long-term upkeep expense for this equipment. It is a "win-win" for all parties.

Benzie: The Benzie CRC has rented labor and equipment to and from neighboring counties. In the past they have borrowed/rented rollers from **Manistee** and **Wexford CRC's**; **Leelanau CRC** has used their lead trailers; and **Manistee CRC** has used their guardrail post pounder and distributor with an operator.

In 2008, Benzie CRC reported that they shared labor and equipment with **Grand Traverse CRC** and **Manistee CRC**. Benzie used Manistee's Bomag roller, and at times Manistee used Benzie's tar distributor. Benzie also shared their roller with Grand Traverse and Manistee CRCs.

Berrien: The Berrien CRC rents equipment from **Cass CRC** and the **Berrien County Drain Commission** and has rented a distributor from **Ottawa CRC**. The Berrien CRC Finance Director spends approximately 8 hours per week helping at **Cass CRC**. The Road Commission coordinates their contract for pavement marking services with the cities and villages in Berrien County. Berrien CRC has also provided chip sealing operations for cities and villages in the county; and borrows **MDOT's** Reach-All for bridge inspections every other year.

Branch: The Branch CRC shares engineering staff with **Hillsdale and Barry CRC** and labor with the **City of Coldwater**. They also share staff with the **Branch County Parks Department**. Information technology at the road commission is outsourced to the **Branch County IT Department**.

Calhoun: The Calhoun CRC shares labor and equipment with other road commissions as requested. They purchased a 10,000 gallon hot oil emulsion tank. **Jackson** and **Branch CRCs** both purchase emulsion and pickup the material directly from Calhoun's tank. Additionally, the Road Commission shares staffing resources with the **County's Public Works and Parks Department**.

Cass: The Cass CRC shares both a manager (**St. Joseph CRC**) and finance director (**Berrien CRC**) with adjoining counties. They also share an engineer with the **City of Cassopolis**. Equipment is shared with other local governments on regular basis.

Charlevoix: The Charlevoix CRC shares labor and equipment with surrounding road commissions and cities/villages in emergency situations or when the need arises. A cooperative agreement exists with each of the road commissions in the **CRAM Straights Area District Council, Boyne City, Charlevoix, East Jordan, and the Village of Boyne Falls**.

Cheboygan: The Cheboygan CRC and its surrounding road commissions have an agreement to share equipment when available. This agreement extends to the counties of **Charlevoix, Emmet, Montmorency, Otsego, and Presque Isle**.

In 2008, the Cheboygan CRC hired the **Emmet CRC** to fog seal a couple of their roads since they do not have a tar distributor. Emmet performed the work for Cheboygan at a substantial cost savings. Cheboygan paid the equipment and labor costs to perform the work.

Chippewa: The Chippewa CRC has participated in labor and equipment sharing with the **City of Sault Ste. Marie, Detour Village, the International Bridge Authority, and Kinross Township**. In some instances the Road Commission has borrowed equipment and operators (usually sewer VAC truck) and in other cases equipment was borrowed from the Chippewa CRC (usually loader, backhoe or grader and sometimes emergency construction signage).

Clare: The Clare CRC currently engages in labor and equipment sharing with surrounding counties and municipalities.

Clinton: The Clinton CRC operates their seal coat programs jointly with other entities; completes crack filling for other entities; and rents equipment from other entities when necessary. In 2008, Clinton CRC reported sharing equipment with **Barry CRC, Shiawassee CRC** and **Ionia CRC**; sharing both labor and equipment with **Gratiot and Eaton CRCs**; and sharing labor with **Ingham CRC**.

Crawford: Crawford CRC has and will continue to share equipment with other road commissions. In the past, they have shared mostly with **Roscommon CRC**. They have shared road building equipment such as dozers and surface maintenance equipment such as pavers and AMZ machines.

Delta: The Delta CRC has several mutual sharing agreements including:

- An agreement with the **City of Gladstone, City of Escanaba, and Alger and Menominee CRCs** to utilize each other's equipment and labor forces. All work is based on MDOT's schedule "C" rental rates plus labor and fringe costs;
- Seal coat work for both **Escanaba and Gladstone** as well as **Alger and Menominee CRCs**;
- Delta CRC has leased their crack seal machine to the **Cities of Escanaba and Gladstone**;
- **City of Escanaba** rented a sand screening plant to Delta CRC, as well as their compactors, small asphalt roller, and high pressure culvert cleaner with labor;
- **City of Gladstone** has rented their street sweeper and AMZ to Delta CRC and used their labor forces to teach Delta CRC how to put in their own curb and gutter;
- **Alger CRC** has rented their temporary bridge to Delta CRC;
- **The City of Escanaba** paint crew along with a person from the Delta CRC does the symbol painting on roadways; and
- Shared services between **MDOT** and the **City of Escanaba** to build a non-motorized path connection from the City sidewalks to MDOT right-of-way paved shoulder.

Dickinson: The Dickinson CRC shares labor and equipment on a regular basis including:

- Dickinson CRC shares specialized equipment with other counties and neighboring cities;
- Dickinson CRC has rented out its shoulder spreader to **Menominee, Baraga and Ontonagon CRC**;
- Dickinson CRC has used a sewer VAC truck from the **City of Iron Mountain**;
- Dickinson CRC rented out a mower to the **City of Norway**;
- Dickinson CRC used traffic counters from **Menominee CRC**;
- Dickinson CRC has provided aggregate testing for **Iron CRC**;
- Dickinson CRC has done traffic counting for the **City of Kingsford**; and
- Dickinson CRC has surveyed and prepared DEQ permit applications for **Menominee CRC**.

Eaton: The Eaton CRC rents specialized equipment to and from other road commissions, cities and villages for specialized services. In 2008, the **Clinton CRC** reported sharing both labor and equipment with Eaton CRC.

Emmet: The Emmet CRC shares their chip spreader and emulsion truck with **Cheboygan CRC** and **Otsego CRC** when requested. Emmet CRC has reciprocal agreements with the **Cheboygan, Charlevoix and Otsego County Road Commissions** for sharing equipment.

Genesee: The Genesee CRC has taken on more work on **MDOT** trunklines, and will possibly take on work for the **City of Flint**.

Gladwin: The Gladwin CRC has limited staff and equipment therefore, they are typically unable to share labor and equipment with other agencies. Gladwin County has a county-wide road and bridge millage and the road commission fully utilizes their staff by completing numerous construction projects and normal maintenance activities. Local contractors are also used on occasion to supplement the road commission forces. The Gladwin CRC communicates regularly

with the surrounding road commissions and is willing to consider sharing labor and equipment if they are available.

Gogebic: The Gogebic CRC shares specialized equipment with the **City of Bessemer, City of Wakefield, Iron CRC,** and the **Wisconsin Highway Department.** For the past several construction seasons, the **Ontonagon CRC** has been the Project Engineer on several Gogebic CRC projects. **Ontonagon CRC** has also shared equipment and personnel with Gogebic CRC.

Grand Traverse: The Grand Traverse CRC shares equipment with other agencies. In 2008, Grand Traverse CRC used **Wexford CRC's** Durapatcher. Since that time, they purchased two Durapatchers and have used them on their own roads as well as on state trunklines under the **MDOT** maintenance contract. They share electrical services for traffic signal work with **Traverse City** and have also done crack sealing in the **City** and the **Village of Kingsley.** The **County DPW** assists in some structure cleaning. The Road Commission has also loaned out their seal coating equipment to several counties. **Manistee CRC** reports allowing Grand Traverse CRC to use their scrapers.

Gratiot: The Gratiot CRC shares labor and equipment with surrounding counties. When another road commission needs a part to repair equipment right away, Gratiot will furnish the part if they have the inventory, which the other agency replaces when theirs is shipped. This minimizes equipment down time for all agencies involved.

Hillsdale: The Hillsdale CRC provided several examples of sharing labor and equipment including:

- Performing construction engineering for a **Branch CRC** bridge;
- The **City of Hillsdale** hires the Hillsdale CRC engineering technician to perform PASER ratings on their local streets;
- Renting a rubber tire roller from the **Jackson CRC** for their chip seal program; and
- A few years ago, Hillsdale CRC's asphalt distributor was damaged in a crash, and **Branch CRC** came to their rescue. Hillsdale rented Branch CRC's machine and operator to finish their chip seal program.

Houghton: Houghton CRC has shared equipment with neighboring counties, MDOT, villages and cities. Some of the examples follow:

- Rubber tire excavator has been used by **MDOT** on the state trunklines;
- Crack sealing machine is used by **Houghton County Villages;**
- **Keweenaw CRC's** Asphalt Zipper has been used on projects, and in return the Keweenaw CRC used Houghton CRC's vibratory roller on a project to offset the rental rates;
- Houghton and **Keweenaw CRCs** have met and gone over plow routes to eliminate overlapping routes. From these meetings each CRC plows approximately .5 miles of roadway in the neighboring county. The Houghton CRC is in the process of evaluating overlapping routes with other neighboring counties;
- Pavement roller has been used by **Keweenaw CRC** to perform pavement wedging on Brockway Mountain;

- Houghton CRC has used sand from **Ontonagon** and **Keweenaw CRC** when performing construction projects near their borrow areas/stock piles to reduce trucking costs;
- The Road Commission has worked with **the Michigan Department of Natural Resources** in replacing/fixing trail crossings with Houghton CRC equipment and employees;
- **Baraga CRC**'s excavator was used on a culvert replacement project and sand fill for the project was received from **Ontonagon CRC**;
- The Road Commission provides engineering consultation, engineering, and technical advice to townships, cities and villages relating to roadways; and
- Organizations such as the **CRAM Great Lakes Council** and the **Rural Task Force** utilize each other to perform surveys and offer assistance in other technical areas without fees.

Huron: The Huron CRC currently performs crack sealing for another county.

Ingham: The Ingham CRC contracts with **Ingham County** for human resource services. They also share spray patchers with **Washtenaw CRC**. **Clinton CRC** reports sharing labor with Ingham CRC.

Ionia: The Ionia CRC works jointly with **Kent CRC** on I-96 concrete patches. They also overlap coverage territories with Kent CRC and **MDOT Grand Ledge Garage** for I-96 winter maintenance. Ionia CRC also uses county jail work crews to do delineator maintenance, trash pickup, garage and yard maintenance and clean up. They use salt from the **City of Belding** salt shed and replace it after snow events to increase their response and efficiency in that area of the county.

In 2008, the Ionia CRC reported several other agreements including:

- Sharing paving equipment and crews with **Kent CRC** including: AMZ patching equipment and crews, concrete joint repairs with crews working jointly; and helping each other with winter maintenance;
- Assisting with engineering for **City of Belding** projects;
- Assisting various county villages with traffic counts, pavement management ratings, and engineering work; and
- Ionia and **Montcalm CRCs** constructed a roadside park toilet building together.

Iosco: The Iosco CRC shares their sewer clearing machine, snow blower, message board signs, and loader with the **City of East Tawas**. They also share message board signs with **Plainfield Township**.

Iron: In 2008, Iron CRC reported sharing equipment and labor with the surrounding communities. They have worked with a local fire department (hose) and township (hydrant) to flush out culverts. This saved the Iron CRC from purchasing hose and running a water tanker to the site.

Isabella: The Isabella CRC uses other road commissions for services that they do not do in house such as computer and material usage. They have also added side-mount wings to snow plows helping to cope with a reduction in the work force.

Jackson: The Jackson CRC has contracted with other road commissions for summer maintenance projects.

Kalamazoo: The Kalamazoo CRC has implemented many personnel and equipment related reforms including:

- Sharing a Traffic Engineer with the **City of Kalamazoo**;
- Training and coordinating seasonal staffing in conjunction with **MDOT**;
- Sharing personnel and equipment as needed with the **MDOT**;
- Sharing equipment with other transportation agencies;
- Reducing and sharing of fleet vehicles; and
- Experimenting with new equipment/trials.

Kalkaska: The Kalkaska CRC has contracted with adjoining counties to perform maintenance projects which the Road Commission did not have the equipment or manpower to complete. Kalkaska CRC rents equipment and purchases materials from adjoining counties to perform maintenance on the county road system.

Kent: The Kent CRC has shared labor and equipment with a number of agencies over the years including MDOT, neighboring CRCs and cities. Several examples follow:

- Kent CRC leased out spray injection patching equipment to several CRCs to assist them in pot hole patching;
- Kent CRC has performed concrete patching in both **Ionia and Montcalm CRCs**;
- Kent CRC used **Barry and Muskegon CRC's** labor and equipment to perform chip seal surfacing in Kent County;
- Kent CRC joined with **MDOT** to perform bridge deck repairs and tree trimming and removal on MDOT roads; and
- Kent CRC performs engineering services for **Newaygo CRC** to reduce cost and personnel.

Keweenaw: The Keweenaw CRC has several sharing agreements with the **Houghton CRC** including:

- Renting their Asphalt Zipper and operators to Houghton CRC to do cold in-place asphalt recycling for two substantial projects;
- Renting their distributor and operator to Houghton CRC on numerous occasions over the years to spray dust control oil for them. The total for these rentals from Keweenaw to Houghton CRC was approximately \$6,000 over a recent two-year period;
- Renting Houghton CRC's vibratory roller and asphalt roller on several projects since they did not have those pieces of equipment or the need to purchase them for smaller projects. These hours were used to offset the use of the asphalt recycler listed above; and
- Sharing chip sealing and snow removal with Houghton CRC.

Lake: The Lake CRC shares equipment with neighboring counties, including **Manistee CRC**. Lake and Manistee CRC utilize the same clay pit, so one road commission supplies the excavator and the other supplies the loader.

Lapeer: The Lapeer CRC helps with engineering and inspection along with basic road maintenance (grading, brining) for their smaller villages that do not have the labor or equipment.

Lenawee: The Lenawee CRC reports sharing labor and equipment. **Washtenaw CRC** recently received a CRAM Best Practice Award for hiring the Lenawee CRC bridge crew to install the foundation for a timber bridge at a substantial cost-savings.

Livingston: The Livingston CRC coordinates activities with the **Livingston County Drain Commission** and local municipalities for Vector services in exchange for excavation services.

Luce: The Luce CRC shares equipment with adjacent counties.

Mackinac: The Mackinac CRC has explored a partnership with the **City of Saint Ignace** to conduct overband crack sealing and Durapatching, but the Road Commission has not shared equipment or labor in recent years.

Macomb: In 2008, the Road Commission for Macomb County reported utilizing city and township manpower and equipment during snow emergencies. They also contracted with cities including **Warren, Madison Heights, Clinton Township, Chesterfield Township, and Huron Clinton Metro Authority** for mowing. When this survey was completed in 2011, the Road Commission was in the process of transitioning to a department within Macomb County general government. It was unclear how or if these working relationships will be changed.

Manistee: The Manistee CRC shares equipment with **Benzie CRC, Grand Traverse CRC, Kalkaska CRC, Lake CRC, Missaukee CRC, Oceana CRC, and Wexford CRC**. They also share equipment and labor with the **City of Manistee**. Manistee CRC grades the City's beaches in the spring, and in turn, the City cleans the Road Commission's catch basins and sweeps county streets. Other operating agreements include:

- The **Village of Kaleva** uses a Manistee CRC salt shed and in return the Village allows the Road Commission to use their street sweeper to clean garages in the winter and sweep streets in the spring;
- **Wexford CRC** shares their tar distributor and dozer, in return Manistee CRC shares their scrapers, dozer and pups;
- **Benzie CRC** uses Manistee's Bomag roller, and at times Manistee CRC uses Benzie's tar distributor;
- **Grand Traverse CRC** allows Manistee CRC to use their scrapers;
- **Missaukee CRC** uses Manistee's scrapers; and
- **Lake CRC** and Manistee CRC use the same clay pit. One road commission supplies the excavator and the other supplies the loader.

Marquette: The Marquette CRC shares equipment and labor with the **City of Marquette, City of Negaunee, City of Ishpeming, Baraga CRC, Alger CRC, Marquette County Airport (KI Sawyer), Tilden Township, Ishpeming Township, and MDOT.**

Mason: The Mason CRC shares equipment with other road commissions in the area. In 2008, the Mason CRC experienced a significant storm event and reported several examples of coordination of efforts including:

- The Mason CRC needed barricades immediately following the storm which destroyed many road/stream crossings. **Oceana CRC** provided barricades to them on a weekend to ensure traffic safety; and
- As part of the storm disaster relief, Mason CRC used equipment from **Oceana CRC** and **MDOT** trucks and drivers to make various emergency repairs. A coalition of road commissions that share resources during snow disasters came together to assist Mason CRC in opening roads to travel.

Mecosta: The Mecosta CRC is exploring ideas of what could be accomplished and if there would be any advantages/cost reductions to collaboration with neighboring counties.

Menominee: The Menominee CRC chip sealed roads in Menominee County in 2010 with the **Delta CRC** providing labor and equipment for the chip spreader, emulsion distributor and roller, and the Menominee CRC hauling the chips. Also, the Menominee CRC has rented the **Dickinson CRC** shoulder machine. Menominee, **Houghton, Marquette, Delta** and **Luce CRCs** have one road commission deliver and return all weigh scales for the five counties to Lansing for certification each year.

Midland: The Midland CRC shares labor and equipment with all surrounding cities, villages and counties. Several examples follow:

- Allowing **Isabella CRC** to use their storm sewer cleaner and truck;
- Sending their crack sealer and operator to **Saginaw CRC**;
- Sending their excavator to **Arenac CRC**; and
- **City of Midland**, on a continuing basis, maintains Midland CRC traffic signals.

Missaukee: The Missaukee CRC is currently using part-time staff with no benefits. For years, they have shared equipment with surrounding counties including **Osceola CRC** (truck with v-bottom lead and pup trailer); **Wexford CRC** (Durapatch Machine); and **Manistee CRC** (scrapers).

Monroe: The Monroe CRC occasionally shares labor and equipment with **Monroe County.**

Montcalm: The Montcalm CRC shares labor and equipment with **Kent CRC, Gratiot CRC** and **Newaygo CRC.** They also jointly constructed a roadside park toilet building with **Ionia CRC.**

Montmorency: The Montmorency CRC will share labor and equipment with surrounding counties if needed.

Muskegon: The Muskegon CRC has several examples of labor and equipment sharing including:

- Loaning high volume water pumps to **Muskegon County Sheriff**'s dive team to assist with underwater recovery;
- Loaning changeable message boards to **Muskegon County** to assist with traffic control for their 'Air Fair';
- Dispatching two operators, a roller and Flarhety to **Kent CRC** for several weeks to assist with chip seal operations;
- Loaning an Athey to **Kent CRC** for berm removal operations; and
- Sending an operator and post pounder to **Kalamazoo CRC** to assist with guardrail installation.

Newaygo: The Newaygo CRC has eliminated their engineering staff and currently uses **Kent CRC** engineers. In 2008, the Newaygo CRC also reported sharing labor and equipment with **Kent CRC, Montcalm CRC, the County of Newaygo, City of White Cloud, City of Newaygo,** and the **City of Freemont**. When Newaygo CRC built a border road, the **Oceana CRC** provided the earth movers, manpower, and some financial help.

Oakland: The Road Commission for Oakland County (RCOC) is in the process of meeting with the **MDOT** Transportation Service Center (TSC) to discuss using MDOT direct forces and equipment for assistance in winter maintenance on the MDOT system. RCOC provides traffic signal maintenance for 112 MDOT signals and 375 city signals (100 percent) in Oakland County. There are **sixteen communities** that have lump sum contracts for either summer or winter maintenance with RCOC.

Oceana: The Oceana CRC has worked with the **Village of Pentwater** on paving and the **Newaygo CRC** on grading and graveling. **Manistee CRC** reports sharing equipment with Oceana CRC. When **Mason CRC** experienced a major storm event in 2008, they reported that Oceana CRC provided barriers over a weekend to ensure traffic safety.

Ogemaw: The Ogemaw CRC utilizes the services of the **Ogemaw County** prisoner workforce for guardrail maintenance, trash pickup and mailbox replacement. In 2008, they reported renting the **Roscommon CRC**'s distributor to pick up large quantities of emulsion and deliver to their on-site tank.

Ontonagon: The Ontonagon CRC has shared both labor and equipment with adjacent counties for many years. They have also served as the Project Engineer on several **Gogebic CRC** projects.

Osceola: The Osceola CRC has shared labor, equipment and engineering with **Lake, Missaukee and Mecosta CRCs**.

Oscoda: The Oscoda CRC shares labor and equipment with surrounding counties.

Otsego: The Otsego CRC commonly shares equipment including the necessary labor with neighboring road commissions and the **City of Gaylord**. They share bucket trucks, wood chippers, mulch spreaders, shoulder discs, VAC-trucks and sweepers with other entities. Rarely is money exchanged unless equipment is used for an extended length of time. **Emmet CRC**

cited a recent example of using an Otsego CRC tar distributor when their equipment broke down in the middle of a project. This allowed Emmet's seal coat operation to continue without interruption. Otsego CRC also has an arrangement with a village to maintain a major connector route. The village is invoiced once per year for this service.

Ottawa: MDOT uses Ottawa CRC employees during the summer months to work on special crews. Likewise, Ottawa CRC uses MDOT employees in winter maintenance. Some equipment is shared between adjacent counties.

Presque Isle: The Presque Isle CRC works with the **Alpena CRC** on sealcoat activities. MDOT hired the Presque Isle CRC crew for work in a MDOT maintained area. Also, the Road Commission shares equipment with **Rogers City** and the **City of Onaway**.

Roscommon: The Roscommon CRC shared very little, and does not expect to in the near future because current labor and equipment are stretched thin. However, both **Crawford** and **Ogemaw CRC** reported the benefits of being able to utilize Roscommon CRC equipment in the past.

Saginaw: The Saginaw CRC offered many examples of labor and equipment sharing including:

- Sharing both equipment and labor with **Bay** and **Midland** CRCs;
- Sharing equipment with the **City of Saginaw**;
- Performing traffic counts for the **City of Frankenmuth** and the local MPO;
- Lending their traffic counters to the City of Saginaw;
- Providing chip seal operations for the **Village of Merrill, Village of Chesaning, Village of Oakley**, and the City of Frankenmuth;
- Including line striping for the Village of Merrill in their county contract;
- Including pavement marking for the Village of Merrill, **Village of Birch Run**, and the **Saginaw County Parks Department** in their county contract;
- Performing street sweeping for the Village of Merrill, MDOT, and the Saginaw County Parks Department;
- Performing brush cutting and parking lot grading for the Saginaw County Parks Department;
- Providing engineering services as the Act 51 agency for several local communities, and county parks during the design and construction of non-motorized paths, bridges, and streetscape projects; and
- Assisting several communities over the years by providing them with salt after running out during severe winters. Salt is returned the following fall as part of their follow up purchase.

Sanilac: The Sanilac CRC hires **Huron CRC** to do their material testing and crack fill work.

Schoolcraft: The Schoolcraft CRC works with multiple county and city agencies, the state and federal governments to be cost effective. They rent heavy equipment such as trucks, trailers, excavators, and rollers from private and public entities when additional or special equipment is needed. Schoolcraft CRC also shares emergency management equipment and supplies county-wide.

Shiawassee: The Shiawassee CRC has shared equipment with other road commissions and communities within Shiawassee County.

St. Clair: The St. Clair CRC works with the **St. Clair County Drain Commission** to provide engineering services, tree removal and drain cleanouts.

St. Joseph: A cooperative work agreement exists with each of the road commissions within the Frugal Five, a group of 5 road commissions in the south west region. The St. Joseph CRC shares a manager with **Cass CRC**, has utilized jail trustees in cooperation with the **St. Joseph County Sheriff**, and shares engineering expertise with other agencies. The Road Commission cooperates on winter maintenance on short sections of **City of Three Rivers** streets that abut county roads and end at major trunklines. They are also investigating using shared equipment maintenance with cities.

Tuscola: The Tuscola CRC has not participated in any joint efforts as of late, but is interested in any cost savings or efficiency measures.

Van Buren: The Van Buren CRC shares its truck wash bay with the **Intermediate School District** for their buses on a pay-per-wash basis.

Washtenaw: The Washtenaw CRC has collaborated with neighboring CRCs to share equipment. They share human resources staff with **Washtenaw County** and provide design services for the **Washtenaw County Drain Commission**.

Wayne: The Wayne County Department of Public Services found efficiency by converting old trucks into anti-icing rigs.

Wexford: The Wexford CRC rents equipment to and from other CRCs and also share work forces if needed. The **Manistee** and **Missaukee CRC** both offer examples of working cooperatively with Wexford CRC.

Joint Purchasing of Equipment and/or Materials

Alcona: The Alcona CRC coordinates the purchase of sign posts, and asphalt emulsions with adjacent counties; temporarily swaps with neighbors when short on blades or culverts; and coordinates a rotation with adjacent CRCs for the transport of portable truck scales to the Lansing testing center.

In 2008, the Alcona CRC provided several examples of joint purchase agreements including:

- Routinely splitting tanker loads of AE90 asphalt emulsion used for asphalt preservation with **Alpena, Iosco, and/or Presque Isle CRCs** to save on shipping costs and optimize CRC storage facilities;
- Historically purchasing winter maintenance salt and equipment from the statewide contract;
- Exchanging underbody scraper blades and salt with the **Alpena CRC** to cover temporary shortages; and
- The Road Commission salt storage facilities have been constructed in cooperation with **MDOT** and are used for mutual storage of winter maintenance salt in an environmentally safe manner. Material storage is also provided for the **Village of Lincoln**.

Alger: The Alger CRC purchases bulk quantities of road salt and cold patch, then allows small amounts to be purchased by the city and other governmental entities. They recover their standard overhead rate when this material passes through their inventory. The **United States Department of Agriculture (USDA)** provided 250 cubic yards of processed gravel materials for maintenance of a joint-jurisdiction roadway.

Allegan: The Allegan CRC bid centerline painting for the **City of Allegan** this year with their countywide contract and has talked to some of the cities and villages about including them in the bid package for chip seal and fog coat next year. The hope is that a lower unit cost will be realized with the larger bid packages. Allegan CRC has also bid out chip seal and fog coat contracts with **Ottawa CRC**.

Alpena: The Alpena CRC jointly purchases signs, posts, and blades with the **City of Alpena**. They also, jointly purchase with other CRCs for asphalt emulsion and blades.

Antrim: The Antrim CRC has extended bid prices on material to other counties. The **Antrim, Grand Traverse, Kalkaska, Manistee, Missaukee and Wexford CRCs** jointly purchased a crack filling machine and cooperatively rent equipment on several occasions.

Arenac: The Arenac CRC purchases salt under the **MiDeal** contract.

Baraga: The Baraga CRC frequently uses joint purchase agreements including:

- Utilizing **MiDeal** for purchases such as salt;
- Utilizing the **Federal Surplus Program** for purchases;
- The Road Commission jointly purchased a CAT excavator with the **Michigan DNR**, and jointly purchased dust oil with **Houghton CRC** for **Baraga Township**;

- In 2008, Baraga CRC purchased used trucks from the **Chippewa CRC**. Five equipped units were sold to Baraga CRC at the cost of one new truck. The units were reconditioned and placed in service as part of the daily plowing fleet. Two additional trucks were purchased from Chippewa CRC in 2010.

Barry: The Barry CRC uses **MiDeal** for the purchase of materials. Barry CRC and **Kent CRC** jointly purchased a distributor.

Bay: The Bay CRC currently has a contract with another county to purchase permanent pavement marking material at a reduced rate- a good deal for all that are participating. By including several jurisdictions, the volume is larger, thus the unit price drops, and everyone wins. The Bay CRC has also extended bids for crack sealant to the **Midland CRC**.

Benzie: The Benzie CRC is the fueling depot for most of Benzie County, including: the **Benzie Bus** (public transportation), **Benzie Central Schools**, **Benzie County Sheriff's Department**, **fire departments and EMS**. They also sell salt and sand to cities and villages in the county. Benzie CRC coordinates emulsion deliveries with neighboring counties to reduce shipping costs. In addition, they use **MiDeal** for material and equipment purchases whenever possible.

Berrien: The Berrien CRC purchases salt through **MiDeal**. They helped to establish the "Border Counties Purchasing Council" to purchase or sell equipment, parts and material.

Branch: The Branch CRC has bid salt and scraper blades with adjacent county road commissions. According to information provided by Lenawee CRC, the joint bid for salt includes **Calhoun, Hillsdale, Jackson and Lenawee CRCs** as well as the **City of Jackson**.

Calhoun: The Calhoun CRC is participating with an **MDOT Equipment Consortium** in Paw Paw that is exploring bulk chassis purchasing. Calhoun CRC continues to look at used equipment auctions as a source of equipment acquisition. The Road Commission participated in a cooperative bid for winter salt with **Branch, Hillsdale, Jackson and Lenawee CRCs** as well as the **City of Jackson**; and purchases bulk amounts of hot asphalt emulsion which is sold to **Jackson and Branch CRCs**.

Cass: The Cass CRC helped to establish the "Border Counties Purchasing Council" to accomplish strategic purchases.

Charlevoix: The Charlevoix CRC jointly bids with the **Village of Boyne Falls** to purchase salt.

Cheboygan: The Cheboygan CRC facilitated a regional car and light truck bid in 2010, which was extended to 2011. The bid allowed other local governments to purchase vehicles locally through a competitive bid with vehicle costs through the state purchasing agreement.

Chippewa: The Chippewa CRC jointly purchases with the **City of Sault Ste Marie, Detour Village, the International Bridge Authority and Kinross Township** for cold patch material which is delivered to the Road Commission and distributed further from there.

Clare: The Clare CRC utilizes the state purchasing program, **MiDeal**.

Clinton: The Clinton CRC purchases materials and equipment through the state purchasing program, **MiDeal**. They have also purchased salt in a joint contract with the **Ingham CRC**.

Delta: The Delta CRC offered several examples of joint purchase agreements including:

- All county government entities purchase fuel from the Delta CRC;
- The Delta CRC is currently doing some joint purchasing of like materials with the cities of **Escanaba** and **Gladstone**- combining like purchases for increased quantity as well as reduced freight costs; and
- Delta CRC is also working on a joint government cooperation agreement to look at all services.

Dickinson: The Dickinson CRC has had gravel crushed and stockpiled in conjunction with other governmental agencies or private parties to obtain a lower bid for a larger quantity. They have recently sold their asphalt patching machine and emulsion tank to **Menominee CRC**.

Eaton: The Eaton CRC purchases material and equipment through the state **MiDeal** program where applicable.

Emmet: The Emmet CRC shares in the cost of filling their emulsion tanks to get better prices by splitting a full load with **Cheboygan, Charlevoix, Presque Isle, Otsego or Mackinaw CRCs**.

Genesee: The Genesee CRC has a joint bidding agreement with the **City of Flint** and is pursuing the same with the **City of Burton**.

Gladwin: The Gladwin CRC participates in **MiDeal** for salt and vehicle purchases such as pickup trucks. They also purchase tires from suppliers that offer the state bid prices. They purchase truck and grader blades jointly with some other surrounding road commissions for a larger order to minimize shipping costs.

Gogebic: The Gogebic CRC has not had any joint purchases of equipment but they do purchase materials via state negotiated contracts. Gogebic CRC prefers to have one single owner of equipment and to rent to other government agencies. This works better for replacement and future upgrades of the equipment.

Grand Traverse: The Grand Traverse CRC uses **MiDeal** for purchasing.

Gratiot: The Gratiot CRC jointly purchases equipment and materials with cities within the county.

In 2008, the Gratiot CRC reported that they regularly communicate with other road commissions sharing equipment and material specifications, prices received, experiences using certain products and equipment, and also ideas for being efficient. The regional superintendents and shop foreman get together quarterly to share ideas and experiences. An example follows: The Gratiot CRC purchased two snow wings for their plow trucks. After talking with other road

commissions that were using them and learning of their experiences, Gratiot was able to use this information to purchase a product that best meets the needs of the Road Commission.

Hillsdale: Hillsdale CRC and Branch CRC bid grader blades together. Hillsdale CRC is part of a cooperative bid for winter salt with **Branch, Calhoun, Jackson and Lenawee CRCs** as well as the **City of Jackson**. They also sell ice control salt to all the small cities and villages in the county, including **Litchfield, North Adams, Camden, Montgomery and Waldron**. These municipalities save costs by not having to build and maintain a salt shed.

Houghton: The Houghton CRC routinely purchases equipment and materials with other agencies, examples follow:

- Participating in **MiDeal** for salt purchases;
- Purchasing and reconditioning two used sand trucks from the **Chippewa CRC**;
- Selling a used CAT grader to **Keweenaw CRC**;
- Coordinating a bid for dust oil purchasing and the program is utilized by townships, cities, villages and neighboring road commissions;
- A township donated a tractor to **Houghton CRC**;
- **Michigan Technological University** purchases its salt through the Houghton CRC; and
- The Road Commission's prison labor crew is shared with **MDOT** and townships.

Huron: The Huron CRC assists local municipalities with salt, asphalt, and equipment purchases.

Ingham: The Ingham CRC purchases salt, certain vehicles and occasionally other products through the state **MiDeal** program also for better pricing. In 2008, the **Clinton CRC** reported purchasing salt in a joint contract with Ingham CRC.

Ionia: The Ionia CRC jointly purchases with bids let by **Kent CRC** and has allowed other counties to utilize their bids. They participate in the state purchase program, **MiDeal**; and have also put together bid packages for pavement marking, chip sealing and HMA surfacing work for the Road Commission and the cities and villages in the county.

Iosco: The Iosco CRC purchases sign posts with **Alcona CRC**. They also purchase AE90 asphalt emulsion for their AMZ machine with **Alcona and Alpena CRCs**.

Iron: The Iron CRC jointly purchases crack filling materials with the **Houghton CRC**. This allows both agencies to purchase a lesser quantity without paying premium prices for shipping a small load. Iron CRC routinely coordinates supply deliveries with other counties.

Isabella: The Isabella CRC has jointly purchased a shoulder reclaimer and VAC Truck.

Jackson: Jackson CRC coordinates a cooperative bid for winter salt with **Branch, Calhoun, Hillsdale, and Lenawee CRCs** as well as the **City of Jackson**.

Kalamazoo: The Kalamazoo CRC has participated in joint purchasing including: **MiDeal**; purchasing office supplies with **Kalamazoo County**; and supplying salt to three municipalities

and public schools. They share materials and storage with **MDOT** and surrounding municipalities and experiment with new materials in the field.

Kalkaska: The **Antrim, Grand Traverse, Manistee, Missaukee and Wexford CRCs** jointly purchased a crack filling machine and cooperatively rent equipment on several occasions. Kalkaska utilizes **MiDeal** for purchases of salt and equipment (pickups/tractors) and purchases bulk materials from adjoining counties (emulsion for Durapatcher).

Kent: The Kent CRC purchasing department extends its contracts to area municipalities and adjacent road commissions for such items as salt, emulsions, aggregate materials, guard rail, and pipe products. Kent CRC participated with **Barry CRC** in the purchase of an asphalt distributor for chip seal operations.

Keweenaw: The Keweenaw CRC may consider a joint purchase of specialized equipment in the future, but cannot afford to take part in something like that now. In 2008, Keweenaw CRC reported the following:

“The Keweenaw CRC has given **Houghton CRC** access to their stamp sands at no cost when they have a road project in the vicinity and need sub-base fill materials. Keweenaw CRC has provided several thousand dollars worth of material for free to their neighboring road commission. The two organizations have swapped materials with the locally owned timber land company on several occasions. Whether it is mine rock, stamp sand or pit-run gravel, they trade like quantities to reduce hauling costs for all involved.”

Lake: Although the Lake CRC has not currently purchased equipment jointly, it is something they will consider in the future.

Lapeer: The Lapeer CRC jointly purchases road materials (limestone, gravel, salt, brine and crack seal material) with other entities.

Lenawee: Lenawee CRC participates in a cooperative bid for winter salt with **Branch, Calhoun, Hillsdale, and Jackson CRCs** as well as the **City of Jackson**.

Livingston: The Livingston CRC jointly purchases salt with other counties, other participating municipalities, and school districts within the county.

Luce: The Luce CRC purchases asphalt emulsion with **Schoolcraft and Mackinac CRC**, and purchases salt with the **Village of Newberry**.

Mackinac: The Mackinac CRC has purchased road materials (AE 90 asphalt emulsion) with **Luce and Chippewa CRCs** to share delivery expenses.

Macomb: The Macomb County Department of Roads jointly purchases with other governmental entities.

Manistee: The Manistee CRC purchases sand and salt for winter maintenance operations for the **Village of Onekama, Bear Lake, Copemish, Kaleva and East Lake**, the **City of Manistee**, the

Oaks Correctional Facility and the **Department of Natural Resources (DNR)**. Several of these agencies also purchase cold patch from the Road Commission in the summer. The **Antrim, Grand Traverse, Kalkaska, Missaukee and Wexford CRCs** jointly purchased a crack filling machine and cooperatively rent equipment on several occasions.

Marquette: The Marquette CRC utilizes **MiDeal** for some equipment purchases along with salt. In the past, they have purchased cold patch and sold it to the **City of Negaunee** because they were able to get it at a better price.

Mason: The Mason CRC purchases materials such as gravel, stone, and salt with other local municipalities.

Menominee: The Menominee CRC has purchased safety training materials in conjunction with **Dickinson and Delta CRCs**. Menominee CRC has shared training costs with local contracts over the past few years (crusher training provided by **MI Tech** in Menominee County).

Midland: The Midland CRC has purchased a crack sealer with the **Gratiot CRC's** bid, and crack sealant with the **Bay CRC's** bid.

Missaukee: The Missaukee CRC routinely shares equipment. The **Antrim, Grand Traverse, Kalkaska, Manistee, and Wexford CRCs** jointly purchased a crack filling machine and cooperatively rent equipment on several occasions.

Monroe: The Monroe CRC has purchased a chipper jointly with **Monroe County**.

Montcalm: The Montcalm CRC purchases various road materials through **Kent CRC**.

Muskegon: The Muskegon CRC provided several examples of joint purchasing agreements for equipment and materials including:

- Bidding sign posts and other related sign material and makes the material available to any municipality in Muskegon County. Many cities, villages, townships and school districts use this service;
- Working through the county to allow the **Cities of Roosevelt Park and Whitehall** to purchase salt from the Road Commission at the state contract prices;
- Bidding pavement markings for **all Act 51 agencies** in the county;
- Renting equipment back and forth with the **City of Muskegon**; and
- Using the state contract for salt and small vehicles purchases. They also purchase internet service through the county government fiber network.

Newaygo: The Newaygo CRC bids for vendor services with **Kent CRC**.

Oakland: The Road Commission for Oakland County (RCOC) purchases salt through the **Michigan Inter-governmental Trade Network (MITN)**. They order additional quantities of a number of materials on behalf of local communities, and then sell the extra material to them at cost. (That way all communities get a better price. The additional quantity brings the per-unit

cost down, and the communities benefit from economy of scale). RCOC uses **MiDeal** to obtain communication circuits for maintaining all traffic signals within the county.

Oceana: The Oceana CRC purchases salt from the state bid and distributes it to all municipalities within its borders. They also participate in **MiDeal**, purchasing many materials and equipment for local entities, and trucks for the Road Commission.

Ogemaw: The Ogemaw CRC has shared in some purchases of maintenance materials, aggregate and salt. They have shared loads of emulsion and culverts with the **Oscoda CRC**.

Ontonagon: The Ontonagon CRC has purchased materials with both private and governmental units, including the **Village of Ontonagon**. They also rent equipment from neighboring counties and private contractors.

Osceola: The Osceola CRC purchases salt for the Road Commission as well as **Osceola County**, the **Village of Leroy** and **Reed City Public Schools** under the state contract.

Oscoda: Although the Oscoda CRC is currently holding off on equipment purchases, they report splitting emulsion tanker loads with the **Ogemaw CRC** and **Alcona CRC**, and splitting a truck load of culverts with the **Ogemaw CRC**.

Otsego: The Otsego CRC has discussed the joint purchase of materials and large equipment with other local governments.

Ottawa: The Ottawa CRC participates in the state bid for equipment and salt. Some materials are bid with adjacent counties.

Presque Isle: The Presque Isle CRC has purchased blades with **Rogers City** to get better prices. They also purchase emulsion with adjoining road commissions.

Saginaw: The Saginaw CRC purchased patching material from **Bay CRC** and annually purchases salt, pickup trucks, and passenger vehicles thru the **MiDeal** program.

Schoolcraft: The Schoolcraft CRC has jointly purchased asphalt emulsion with other counties and the **City of Manistique**. They utilize **MiDeal** for salt purchasing; jointly purchase raw aggregate materials with other counties; and purchased some winter maintenance supplies jointly with the **City of Manistique**.

Shiawassee: Communities within Shiawassee County purchase salt, signs, cold patch, and other materials from the Road Commission.

St. Clair: In 2008, the St. Clair CRC reported they were considering purchasing a VAC truck with the cost and use shared with the **St. Clair County Department of Public Works**, one city and four townships.

St. Joseph: The St. Joseph CRC helped Cass CRC to establish the “**Border Counties Purchasing Council**” to accomplish strategic purchases such as an Athey sod conveyor, emulsion distributor truck, and chip seal materials. The Road Commission utilizes the **City of Three Rivers** Vactor sewer cleaner rather than purchasing a limited need item. St. Joseph CRC also uses the state **MiDeal** program; and purchases bulk quantities of road salt and cold patch, allowing small amounts to be purchased by the city and villages.

Van Buren: The Van Buren CRC has sold salt and used vehicles/equipment to various cities and villages in the county.

Washtenaw: The Washtenaw CRC purchases salt and light vehicles through **MiDeal** or the **RCOC** annual bids.

Wexford: The Wexford CRC routinely purchases materials with cities, villages and other CRCs; including purchasing crack filling material with the **Manistee and Missaukee CRCs**. They purchase materials such as Durapatch, gravel, blades and salt with the **Cities of Cadillac, Mesick, Manton, Henrietta and Buckley**. Wexford has explored other purchase agreements but trucking prices sometimes absorb any cost-savings. Wexford CRC has shared equipment with Missaukee CRC, and the **Antrim, Grand Traverse, Kalkaska, Manistee, and Missaukee CRCs** jointly purchased a crack filling machine and cooperatively rent equipment on several occasions.

Joint Projects with Other Governmental Entities

Alcona: The Alcona County Road Commission has coordinated major road improvement projects with each adjacent road commission. They offered several examples of joint projects with other governmental entities including:

- Completing several road stream crossings with **USFS and USFW**;
- Working with **MDOT** direct maintenance crew on a roadside clearing project;
- Assisting the **Village of Lincoln** in upgrading F-41 and Barlow Road to all season standards thereby completing adjacent county roads and providing a suitable US-23 detour route for MDOT;
- Cooperating/coordinating with **Oscoda CRC** in developing Forest Highways #12 and #10 on the Kirtland's Warbler Auto Tour at their west county line;
- Cooperating with **Alpena CRC** on reconstruction of Hubert at Hubbard Lake Road intersection at their north county line;
- Obtaining a detour route from the Alpena CRC to ease the impact of construction on Hubert Road on their north county line thereby reducing the cost;
- Providing a detour route to Alpena CRC to ease the impact of their construction of Alpena's Scott Road Bridge thereby reducing the cost;
- Assisting the Village of Lincoln with a variety of issues such as sign maintenance, drainage improvements, and pavement preservation;
- Coordinating the development of its all season road network with **Iosco, Oscoda, and Alpena CRCs** and the Village of Lincoln; and
- Renting their equipment to **Alcona County Parks and Recreation** for trail maintenance.
- Participating in, and supporting Alcona County's remonumentation effort and assisted with the development of a County-wide addressing system.

Alger: The Alger CRC will complete a \$192,000 project with **USDA Forest Service** in 2011. The **National Park Service** has also placed processed gravel on 1/2 mile of county road leading to their facility.

Allegan: The Allegan CRC offered the following examples of joint projects:

- In 2007, Allegan CRC included two local road surfacing projects for the **City of Plainwell** with a resurfacing project they were doing in the township;
- Allegan CRC included a portion of Blue Star Highway under the jurisdiction of the **City of Saugatuck** when resurfacing their portion;
- In 2008, the Allegan CRC reported joint projects with "Category A" funds with both the **City of Plainwell and the City of Otsego**; and
- Allegan CRC completed a joint project in 2009 with the **City of Allegan** using Urban STP funds.

Alpena: The Alpena CRC routinely works cooperatively with **Alcona CRC** and has completed joint projects with the **City of Alpena** and townships within the county.

Arenac: The Arenac CRC shares costs with townships, cities, and villages on various projects.

Baraga: The Baraga CRC has completed several joint projects including the following examples:

- Alston Avenue over Mill Creek in Houghton County- Baraga CRC provided CAT 235 Excavator, and a large multi-plate salvaged culvert (new condition) to Houghton CRC. **Houghton CRC** provided all other equipment and work. Baraga CRC work performed and billed was about \$10,000;
- Baraga CRC engineer is responsible for all of the public works in the county as part of the **Emergency Response Team**;
- Baraga CRC prepares public service announcements on **WLUC** with all members of the **CRAM Great Lakes Council** that are routinely aired with a primary focus on the winter season;
- Baraga CRC conducts mowing and gravel road grading for the **Village of L'Anse**;
- In the past, Baraga CRC has done paving for the Village of L'Anse and the **Village of Baraga**;
- Baraga CRC completed traffic counts for both Villages of L'Anse and Baraga;
- Baraga CRC provides all winter maintenance on Cardinal Road in Marquette County and bills **Marquette CRC** for the work annually. The road is more cost effectively maintained by Baraga CRC as Marquette CRC would have to travel a long distance out of their county to reach the road.

Barry: The Barry CRC is currently in the process of completing a massive multi-year \$12 million project with funding from 13 different sources including the Barry CRC, **Village of Middleville and Thornapple Township**. The Finkbeiner/Crane Road and Bridge project consists of 4.25 miles of road construction and two new bridges over the Thornapple River and Spring Creek in Thornapple Township.

In 2008, the Barry CRC provided several examples from recent joint projects with other local governments including:

- Conducting a project on a county line road with **Allegan CRC** and with **Kent CRC**;
- Trading maintenance on county roads for maintenance on **Hastings City** streets for years with no money exchanged;
- Working with **Orangeville Township** on a joint project for dam repairs.

Bay: The Bay CRC recently completed a project with **Bay City**. The Road Commission realized a huge savings in several areas. One plan set meant lower design fees, fewer MDOT required meetings and one set of specifications. Since The Road Commission and City partnered, the quantities increased, more contractors bid, the unit prices dropped due to the larger quantities, and the fact that it was one big job versus two small ones (mobilization costs were half) saved \$400,000. A savings was also realized during the construction engineering phase, as it was only necessary to keep one set of books.

In 2008, Bay CRC reported that they had joined forces to complete projects located on border roads. Costs to complete bridge or road projects that involve a border road are split between two road commissions (or a road commission/city) and two townships (or township/city). In the case of two road commission and two townships, each has a 25 percent share of the total project cost.

For a city, the costs are split in thirds, road commission, township and city (unless the city decides to “assess” another group for the work). The programs are difficult to put a dollar figure on as the size and type of projects can vary substantially, but routinely Bay CRC will expend \$50,000 on a border project every other year.

Benzie: The Benzie CRC has contracts with many of their villages, the **City of Frankfort**, and the **Grand Traverse Band of Ottawa & Chippewa Indians** for winter and summer maintenance. They have acted as pass through agency on several projects with the **Benzie County Parks and Recreation Commission** including the Betsie Valley Trail and the Lake Michigan Road Boat Launch. In addition, they performed design and construction engineering for the Lake Michigan Road Boat Launch. In conjunction with their state maintenance contract, they do as many projects as possible including replacing the Arcadia Deck for **MDOT**. They also supply personnel when MDOT special crews are in the area working.

Berrien: The Berrien CRC has a history of sharing project costs with all 22 townships, the **County of Berrien**, the **Pokagon Band of Potawatomi Indians** and the **Bureau of Indian Affairs**. The Berrien County Road Commission has also coordinated road projects with **Berrien County Drain Commission** projects. In 2000, they abandoned a portion of Red Arrow Highway and upgraded a section of Euclid Avenue in cooperation with the **Southwest Michigan Regional Airport** runway extension project.

Branch: The Branch CRC works on capital improvement projects and performs maintenance for the **Branch County Parks Department**. They also perform work for townships on special assessment projects on private roads. Branch CRC shares a long-term tree service contract with the **City of Coldwater**.

Calhoun: The Calhoun CRC sublets traffic signal maintenance to the **City of Battle Creek**. They are also exploring options with the City of Battle Creek to potentially consolidate snow removal operations through multi-jurisdictional neighborhoods.

Charlevoix: In 2008, the Charlevoix CRC reported that they attempted to coordinate with **Emmet CRC** on the Bear River Road reconstruction project, but the **Bureau of Indian Affairs** grant for the Charlevoix CRC portion was approved one year later.

Cheboygan: The Cheboygan CRC has worked with townships to facilitate enhanced applications and grants; cooperated on stream crossing projects with the **US Fish and Wildlife Services**; and completed hazard mitigation projects through **Michigan State Police**.

Chippewa: In the recent past, the Chippewa CRC has completed approximately 3 miles of roadwork and one large bridge structure in cooperation with the **Bay Mills Indian Community** and the **Bureau of Indian Affairs**. They have also completed a storm sewer outfall and slope restoration project in cooperation with the **MDNRE** and **MDOT**. Chippewa CRC is currently cooperating with the **U.S. Forest Service** on several stream crossing replacements on joint jurisdiction roads within the Hiawatha National Forest.

Clare: The Clare CRC recently participated in a Safe Routes to School project with a village, township and school district.

In 2008, the Clare CRC reported that they were in the application process through MDOT for a joint project involving the city, township and Road Commission; using Urban STP and Federal-D funds for the 2009 Harrison Avenue road construction project bordering the westerly city limit of Harrison. The City would contribute an estimated \$27,000 to the project, the township \$56,000; the Road Commission \$56,000; STP would add \$256,000; and Federal-D would add \$300,000.

Clinton: The Clinton CRC has completed several safety projects with other entities; joint paving projects with abutting entities; and joint drainage projects with the **Clinton County Drain Commission**. They also share engineering services with other entities.

In 2008, the Clinton CRC reported they had completed several joint projects with a variety of governmental entities including: **Gratiot CRC, Shiawassee CRC, Ionia CRC, Ingham CRC, Eaton CRC, City of DeWitt, City of East Lansing, City of St. Johns, Village of Eagle, Village of Maple Rapids, Village of Ovid, Village of Elsie, Village of Fowler, and the Village of Westphalia.**

Delta: The Delta CRC has worked with the cities, surrounding counties and school districts, and is willing to work with any other entities that would like to participate.

Dickinson: The Dickinson CRC has completed several joint projects with other governmental entities including:

- Completing numerous culvert replacement projects jointly funded with the **Dickinson Conservation District**;
- The **Dickinson Conservation District** has partially funded erosion control work on a number of Federal/State projects;
- Working with the **City of Iron Mountain** and the **City of Kingsford** on a number of road projects. The Road Commission provided all administration, survey and engineering services. In 2011, they are working on the construction of a bike path, in conjunction with the City of Iron Mountain, which extends through both jurisdictions;
- In 2013-2014, Dickinson CRC will provide similar services for a Small Urban Area road project within the City of Iron Mountain and **Breitung Township**;
- Providing labor and equipment for earthwork on a bike path project in the **City of Norway**;
- Constructing a wetland mitigation site in the City of Norway in which they provided labor and equipment in exchange for a share of the wetland credits; and
- Providing detours on county roads for **MDOT** projects where MDOT provided upgrades on the roads as part of the projects.

Eaton: The Eaton CRC offered several examples of working cooperatively with other governmental entities including:

- **City of Potterville-** Vermontville Hwy project; **City of Charlotte-** traffic signal/ intersection reconstruction; **City of Grand Ledge-** Jefferson Street reconstruction; **Eaton**

County Drain Commission- enhancement project; **Grand Ledge and Waverly Schools** Safe Routes to School projects;

- Performing winter maintenance services on city and village streets under mutual assistance contracts. They also contracted with cities and villages for them to provide routine maintenance and winter maintenance on county roads adjacent to the cities of Grand Ledge, Charlotte, and **Eaton Rapids**;
- Performing pavement preservation projects on city streets by contract with cities and villages;
- Furnishing material and work on city and township park roads; and
- Contracting with the **City of Lansing** for signal maintenance.

Emmet: The Emmet CRC builds most of their roads with either township participation or through their local tribe with financial support from the **Bureau of Indian Affairs**.

In 2008, the Emmet CRC reported they were designing two projects that involved multiple governmental agencies. The first project was on Hoyt Road which borders **Little Traverse Township and West Traverse Township**, but also runs into the **City of Harbor Springs**. All three entities were interested in widening the road and improving to all-season standards. A bike path was designed into the project for the **Harbor Springs School District**. Five different agencies were involved in paying for the project, including the Road Commission.

The second project coordinated by Emmet CRC was Cemetery Road which borders **Bear Creek Township and Resort Township**, but also runs into the **City of Petoskey**. Cemetery Road provides an alternate route to the new Odawa Casino. All entities were interested in widening and improving the road to all-season standards. A bike path was designed into the project to tie into the City sidewalk system and provide connections to future bike path routes in both townships. There were five governmental agencies involved with the project, including the Road Commission and the tribal government.

Gladwin: The Gladwin CRC has worked with all townships and the **Cities of Beaverton and Gladwin** for many years on various road, bridge, and maintenance projects based on a cost-share program. Revenue generated by Gladwin County's county-wide road and bridge millage and township and city contributions has been responsible for the completion of numerous road and bridge projects over the years.

Gogebic: The Gogebic CRC routinely completes joint projects including:

- A force account project for the **City of Wakefield**.
- A joint water main, sewer and HMA paving projects with **Gogebic Range Water Authority**; and
- Completing PASER ratings for **City of Bessemer**.

Grand Traverse: The Grand Traverse CRC routinely completes joint projects with the other entities:

- **USDA Natural Resources Conservation Service (NRCS)** replaced four culverts for fish passage with one scheduled for 2011 replacement;

- Various township partnerships for graveling and seal coating for which the townships pay for material and the Road Commission provides equipment and labor; and
- Active participant in the **Grand Traverse Band of Ottawa and Chippewa Indian's** tribal road inventory and through this partnership have been able to improve many miles of county roads by obtaining **BIA** funding.

Gratiot: The Gratiot CRC is currently performing design and construction inspection for a city project. They are routinely involved with joint projects with surrounding road commissions on county line roads. In 2008, Gratiot participated with the **Saginaw CRC** and two townships for a small structure replacement. In past years, they have participated in the reconstruction and heavy maintenance of borderline roads with **Midland and Montcalm CRCs**.

Hillsdale: The Hillsdale CRC provided several examples of joint projects including:

- Performing construction engineering for a **Branch CRC** critical bridge project and a **City of Litchfield** federal-aid paving project in 2011. Branch CRC may use their engineering services for another bridge in 2012;
- Hillsdale CRC and **Branch CRC** have done joint paving projects near their county borders using Branch's paving equipment and asphalt plant and Hillsdale's trucks; and
- **Lenawee CRC** has paved some county line roads leading into Hillsdale County with Hillsdale CRC paying for the asphalt costs. Lenawee CRC is doing the same in 2011 with a chip seal project on Hillsdale's end of Forrister Road using federal-aid funds.

Houghton: The Houghton CRC provided the following examples of their efforts to complete joint projects with other local governments:

- Working with villages and cities to perform adjoining construction projects that appear seamless to the motoring public and help drive down construction costs;
- Performing all estimates and the bid letting for **Copper City's** repaving project;
- Working with **Baraga CRC** and **Ontonagon CRC** on Houghton CRC's Alston Avenue culvert project. Baraga CRC provided the excavator and used multi-plate culvert for approximately \$10,000 and Ontonagon CRC provided the sand fill and loader to load Houghton CRC trucks at no cost;
- Allowing **Ontonagon CRC** to utilize one of its outlying storage garages to store plow tucks and related maintenance equipment to reduce travel/time costs at no charge;
- The County Highway Engineer serves as the Public Works Coordinator in the county for **Emergency Response Programs**; and
- Providing plowing services to the townships and villages when necessary.

Huron: The Huron CRC has established a great working relationship with their townships. Township and county-wide millage revenues help fund most Huron CRC projects.

Ingham: The Ingham CRC jointly contracts with various Ingham County cities and villages for pavement marking to achieve better unit prices.

Ionia: The Ionia CRC provides engineering for villages in the county and traffic counts for cities and villages. They have completed projects jointly with the **Ionia County Drain Commissioner**

and do all winter maintenance for the **Village of Clarksville**. They recently replaced all signing under contract with the Village of Clarksville.

Iosco: The Iosco CRC has a contract for winter maintenance services with the **City of Whittemore, Village of Oscoda, and Plainfield Township**.

Iron: The Iron CRC works with cities and townships to coordinate road projects with other infrastructure work. The Iron CRC purchased services for bridge inspection with the **Cities of Caspian, Crystal Falls and Iron River**. By gaining the benefit of volume on the number of structures inspected, all cities and the Iron CRC realized estimated savings of \$2,000 to \$2,500.

Isabella: The Isabella CRC has an agreement with a village for winter maintenance. The Road Commission bills the village for actual costs incurred. They are also working with various groups to expand non-motorized access with the Isabella CRC right-of-way.

Kalamazoo: The Kalamazoo CRC has participated in joint projects with the **City of Kalamazoo, City of Portage**, Township Sewer Projects and the Township Local Road Programs including:

- Sewer and water projects, signal upgrades, intersection improvements, road construction, engineering and construction engineering;
- Joint partnerships with **Kalamazoo County Dispatch**;
- Collaborative efforts with the **Kalamazoo County Drain Commission**;
- Partnerships with **Western Michigan University** Civil & Construction Engineering student projects;
- **Kalamazoo Area Transportation Study (MPO)** is located at the Kalamazoo CRC;
- Intergovernmental auctions; and
- Kalamazoo River Valley Trail project with **Parks Department and Parks Foundation**.

Kalkaska: The Kalkaska CRC is currently working on a bridge project funded by a grant received by the **Conservation Resources Alliance**.

Kent: The Kent CRC contracts with two CRCs to perform chip seal, and performs engineering services for **Newaygo CRC**.

Keweenaw: The Keweenaw CRC has worked cooperatively with **MDOT, Keweenaw County** and the township to purchase land for a roadside park in Great Sand Bay along M-26. In 2010, Keweenaw CRC completed 4.5 miles of access road maintenance activities and reconstruction for the **Michigan Department of Technology, Management and Budget** to access their 800 MHz tower site on East Bluff in Keweenaw County. In 2011, they will construct a 1.5 mile bike trail for **Grant Township**.

Lake: The Lake CRC has completed a stream crossing project with the **Conservation Resources Alliance** and **USFFS** with ARRA money. Lake CRC labor was used as matching funds.

Lenawee: The Lenawee CRC has completed many joint projects with cities and villages within the county. The **Washtenaw CRC** recently hired the Lenawee CRC bridge crew to assist with a local bridge project saving the Washtenaw CRC thousands and completing the project ahead of schedule.

The Lenawee CRC has carried projects in Lenawee County over into another county on the same road with Lenawee equipment and work force (**Hillsdale and Monroe CRCs**). They also perform paving, seal coating, and pavement markings for various cities and villages throughout Lenawee County. They are able to provide various materials to these local governments at a lower cost due to volume.

Livingston: The Livingston CRC has completed several joint projects including a large interchange project and the Lakeland Trail Project.

Mackinac: The Mackinac CRC completed a \$1 million bridge project on Mackinac Trail over the Carp River with the **United States Forest Service** using ARRA funding. Mackinac CRC is also in the process of negotiating a partnership with the **City of Saint Ignace** to conduct overband crack sealing and Durapatching.

Manistee: The Manistee CRC teams up with their city and villages to complete projects and maintenance. The Manistee CRC and **City of Manistee** have jointly obtained grants for centerline painting; and worked together on a truck route utilizing a small urban and TEDF Category “A” grant to complete the entire truck route through the township and the city. Manistee CRC also jointly obtained a grant with **Bear Lake Township** for the installation of rumble strips on a very high risk intersection.

Marquette: The Marquette CRC has worked with the following entities: **US Forest Service, MDOT, Marquette Township, Chocolay Township, Iron Ore Heritage Trail Authority, Baraga CRC, Iron CRC, City of Marquette, City of Ishpeming, City of Negaunee, KI Sawyer Airport, and Marquette County Planning Department**. They have several joint contracts with other governmental agencies including many for winter maintenance:

- Guardrail crew from Marquette CRC help to train **Baraga CRC** employees in guardrail installation;
- **Baraga CRC** provides all winter maintenance on Cardinal Road in Marquette and bills the Marquette CRC for this work annually. The road is more cost effectively plowed by Baraga CRC as Marquette CRC would have to travel a long distance out of their county to get to the road;
- Plowing portions of roads in Iron County for the **Iron CRC** because it is more cost effective;
- Contracting with the **City of Marquette** to plow a portion of CR 492 (Wright Street) because it is more cost effective for them to provide that services; and
- Contracting with **Michigamme Township and Forsyth Township** to plow some alleys that are too narrow for the Road Commission snow plows.

Mason: The Mason CRC has completed joint projects with other local municipalities.

Menominee: The Menominee CRC was a partner in a TEDF Category “A” project with **MDOT** and the **Hannahville Indian Community**. The Road Commission has worked with the Hannahville Indian Community and **Bureau of Indian Affairs** on several projects in the northern part of Menominee County.

Midland: The Midland CRC provides snow removal for the **Village of Sanford**; and has provided brush cutting for the **Village of Sanford**, the **City of Coleman** and the **City of Midland**.

Missaukee: The Missaukee CRC attempts to work cooperatively to save money on engineering, design and construction costs when a project is done that is part of an adjoining county, city or village. Ten years ago they worked with **Wexford CRC** on Stoney Corners Road/McBain Road to reconstruct nearly 10 miles of roadway. In 2008, they did a combination project with **Lake City**.

Monroe: The Monroe CRC received a federal earmark grant to construct and share bio-diesel fueling facilities with the local bus system and possibly other county agencies.

Montcalm: The Montcalm CRC has worked with the **Kent CRC** and **MDOT** to complete a project on US131.

Muskegon: The Muskegon CRC partners with townships for local road improvements. They also collaborate with: major municipalities within the county for a mandated storm water program; a local watershed group for program design; and the local conservation district to provide the public education plan for the program. They participate in two insurance pools with other road commissions; CRASIF, for workers compensation insurance, and MCRC SIP for building, equipment, and fleet insurance.

Newaygo: The Newaygo CRC works with **Newaygo County** to complete parks and recreation projects, as well as **Commission on Aging** projects.

Oakland: The Road Commission for Oakland County (RCOC) is currently conducting research on new technologies ("connected-vehicle technologies" formerly known as IntelliDrive) by combining efforts with **MDOT**. RCOC and MDOT are part of a national pooled fund for connected-vehicle technologies.

RCOC frequently partners with local communities on road and bridge projects -- from massive projects costing hundreds of millions to minor enhancements costing a few thousand dollars, and everything in between. They also partner with **Oakland County** general government and many of the communities in the county for the **Tri-Party Program**, which involves equal funding from RCOC, the county and the participating communities to create a pot of funding that can be used on participating communities selected road improvement projects (projects must meet RCOC criteria).

RCOC builds, installs and maintains all traffic signals on state highways in the county on behalf of **MDOT**. RCOC also builds, installs and maintains traffic signals in the county for all, but four, cities and villages.

Ogemaw: The Ogemaw CRC has partnered with the village and townships, performing engineering services for them. The Road Commission also worked with **MDNR** on access road maintenance improvements.

Ontonagon: The Ontonagon CRC has completed several projects with cooperation from the **U.S. Forest Service** and local villages.

Osceola: The Osceola CRC, **Wexford CRC** and **Village of Leroy** jointly worked to perform a full reconstruction project on Mackinac Trail that goes through each of their jurisdictions. This project was an \$8 million job let to one contractor rather than having three separate projects.

Oscoda: The Oscoda CRC reported several joint projects with the **Alcona CRC** and work completed in 2011 with the **United States Forest Service (USFS)**.

Otsego: The Otsego CRC recently completed a \$9 Million dollar joint project with **MDOT**.

Ottawa: The Ottawa CRC has worked for **MDOT** in Oceana and Muskegon Counties doing joint repair. **Muskegon CRC** has worked for Ottawa CRC doing chip seal.

Presque Isle: The Presque Isle CRC has worked with **U.S. Fish and Wildlife Service**, along with **Huron Pines RC&D** to improve stream crossings. The Road Commission has also contracted road work with **MDOT**, the **City of Onaway** and the **Villages of Millersburg and Posen**.

Roscommon: The Roscommon CRC is exploring a possible project with the village in 2014-2015.

Saginaw: The Saginaw CRC has completed several joint projects including design, drainage, paving, maintenance work, chip seal, signal upgrades, intersection improvements, culverts, and gravel maintenance for adjacent counties, cities and villages. Over the last five years, they have had dozens of joint projects that included six other counties, three cities, five Villages, and the MDOT. This year alone, the Saginaw CRC has joint projects with the following agencies:

- One-half mile paving project with the **Midland CRC**;
- Intersection and traffic signal improvement with the **City of Saginaw**;
- Design of a 1.5 mile reconstruct project for 2012 with the City of Saginaw;
- Two gravel projects with the **Shiawassee CRC**; and
- \$200,000 drainage project with the **City of Zilwaukee**.

Schoolcraft: The Schoolcraft CRC currently participates in joint projects with **MDOT**, **US Forest Service**, **City of Manistique**, **County Emergency Management**, and townships.

Shiawassee: The Shiawassee CRC completes joint projects with other agencies when possible and provides road-related expertise to communities within the county. Road Commission staff and equipment has been used to assist the **Shiawassee County Drain Commission**, as well as the **Shiawassee County Buildings and Grounds Department**; and they have provided traffic counters to the cities.

St. Clair: The St. Clair CRC recently privatized equipment repair shop operations. Bringing in vehicle repairs for the **County Sheriff**, the **Parks and Recreation Department**, and the **Mental Health Department** increased the volume resulting in reduced overhead for the Road Commission.

The St. Clair CRC has worked with the **City of Port Huron** for the rebuilding of 24th Street (24th divides the city and township). The project was completed along with the City's water and sewer project. Other recent projects include road improvements for the Chrysler Plant in **Marysville** (shared with the county and the city) and the Keihin Plant in **Capac** (shared with the county and the village).

St. Joseph: The St. Joseph CRC has the **City of Sturgis** plow "island" roads that are off city streets, but are county roads. The City bills the Road Commission each spring using their Act 51 data to determine the prices of snow removal per mile. The Road Commission also works with villages and townships for urban connecting route projects.

Van Buren: The Van Buren CRC has completed various road reconstruction projects, as well as preventative maintenance projects with cities and villages within the county.

Washtenaw: The Washtenaw CRC has had many joint projects with the **County Parks and Recreation Department** to add non-motorized facilities to their resurfacing projects. Annually, they meet with all of their townships to develop local road project agreements that average \$2,500,000.

Wayne: The Wayne CRC has actively met with their local communities to discuss possible collaboration.

Wexford: The Wexford CRC has worked with the **City of Cadillac** on several projects. They have also worked for and with the **City of Manton, Village of Mesick, Village of Buckley, Village of Harrietta, Wexford County**, the **County DPW** and many of their townships. They have worked on many stream crossing improvements with the **MDEQ, US Forest Service** and the **Conservation Resource Alliance**. They have also worked with and for the US Forest Service on many road improvement projects in the Huron/Manistee National Forest.

Cost Sharing with Other Governmental Entities

Alcona: The Alcona CRC splits the National Association of Counties (NACo) dues payment with **Alcona County**. They also have an extensive cost sharing program with townships on local and primary roads.

In 2008, the Alcona CRC provided several examples of cost sharing including:

- \$1.6 million reconstruction of 6 miles of Ritchie Road was supported by \$487,000 in contributions from **Hawes Townships** local road millage spread over 4 years;
- \$843,000 reconstruction of 2.5 miles of Mt. Maria Road was supported by \$425,000 in contributions from **Alcona Township and Hawes Township**;
- \$370,000 reconstruction of 1.5 miles of Hubert Road was supported by \$180,000 in contributions from **Caledonia Township**;
- \$500,000 reconstruction of 1.5 miles of Hubbard Lake Road was supported by \$250,000 in contributions from **Caledonia Township**;
- Assisting and cooperating with the **County of Alcona** in securing Geographic Information Software, Parcel Mapping, and High Resolution Aerial photography. This effort aids the Road Commission in asset management, project scoping, project explanation, and notification to impacted property owners. Other county agencies obtain benefits in parcel administration, emergency planning and response, and land use planning;
- Maximizing the use of federal funds by securing matching funds from three area townships to coordinate three major road projects and two safety projects in the Hubbard Lake Area; and
- Major local road improvements on Cedar Lake Drive and Tollson Subdivision Road were supported by multi-year contributions from **Greenbush Township, Caledonia Township**, and benefiting property owner special assessments that were financed by the Alcona CRC with an MTF bond.

Alger: In 2011, the Alger CRC will receive \$460,000 from townships and \$256,000 from the **Conservation District** for construction cost sharing. The Alger CRC performed cost sharing projects with townships that contributed \$76,000 in 2008. Alger works with townships on dust control with the road commission grading the road and the township funding the dust control applications.

Alpena: The Alpena CRC conducts joint projects with the **City of Alpena** and townships.

Arenac: The Arenac CRC has a township match program in place.

Baraga: The Baraga CRC provided the following examples of cost sharing with counties and townships:

- Townships and **Baraga County** routinely participate in road projects with county millage and township millage contributions and donated materials from township properties;
- **Keweenaw Bay Indian Community** has partnered with Baraga CRC for many years to maintain and improve Indian Reservation Road System Routes that are also county

roads. Over the past 18 years of cooperative efforts, \$17 million dollars in improvements have been completed with \$10 million provided by the Tribe;

- Cost sharing on seasonal roads used for snowmobile trails with **MNDR Baraga Tourist Center** and **Keweenaw Bay Indian Community**; and
- Baraga, **Houghton, Keweenaw and Ontonagon Counties** employ three weighmasters during the spring weight restriction periods and the Road Commissions share the costs.

Barry: The Barry CRC is currently in the process of completing a massive multi-year \$12 Million project with funding from 13 different sources including the Barry CRC, the **Village of Middleville and Thornapple Township**. The Finkbeiner/Crane Road and Bridge project consists of 4.25 miles of road construction and two new bridges over the Thornapple River and Spring Creek in Thornapple Township.

Barry County CRC reported that their townships contributed approximately \$1.6 million per year for county roads, on a roughly 50/50 basis. The **County of Barry** contributes funds annually, and purchased a motor grader for the Road Commission.

In 2008, the cost of intersection improvements was shared with **Kent CRC**, the **City of Hastings**, and the **Village of Middleville**. On another high priority project, costs (\$11,000) were shared between the **Village of Middleville, County of Barry, Thornapple Township**, the state and federal government.

Bay: The Bay CRC has worked with the townships to replace larger culverts and bridges when the need arises, participating monetarily and with labor and equipment. The Road Commission also runs a program where they provide match funds with the townships to help offset the costs of local road improvements.

The Bay CRC has had several instances of cost sharing in recent years. Due to the deterioration of the local bridges, they provide limited engineering and some financial help (\$15,000 per township- one time contribution) to the township where a bridge failed or is in desperate need of repair. From 2006-2008, they spent \$30,000 per year for this program.

Bay CRC also offers a Building Better Roads Program which provides some funding in two separate categories. The first is Discretionary (\$12,000), which provides a defined amount of funding to complete work on local township roads, using Bay CRC employees and equipment. The second is a Matching Program that makes funding available to a defined limit (\$20,000), on a dollar for dollar basis, for each township to compete work on a local road that may or may not involve utilization of Bay CRC crews and equipment. An example of this would be hiring a contractor to cold mill and resurface a road, which would not involve Bay CRC crews or equipment. Total program costs to the Road Commission if fully utilized by all 14 townships: \$448,000. Program including township match and all 14 participating: \$728,000.

Bay CRC routinely participates with the **Bay County Drain Commission** and townships to complete small projects. Bay CRC crews and equipment are used to complete the work and occasionally the townships, if they possess the manpower or equipment. Average cost per year \$20,000.

Benzie: The Benzie CRC participates with townships on all local road projects. Some townships have helped with culvert replacement costs.

Berrien: The Berrien CRC has a history of sharing project costs with the **Pokagon Band of Potawatomi Indians** and the **Bureau of Indian Affairs**.

Branch: The Branch CRC currently shares the cost of engineering staff.

Calhoun: The Calhoun CRC plans to explore more shared equipment purchases. Calhoun CRC continues to operate a state **MDOT** maintenance contract.

Cass: The Cass CRC provides a 30 percent match to township contributions on local roads projects. Some townships also provide a 30 percent match on primary road projects.

Cheboygan: According to the Cheboygan CRC there is not much sharing on their part at this time. The current funding situation has created a situation where they are typically seeking entities willing to share their resources and funds with the Road Commission.

Chippewa: The Chippewa CRC is currently (and has in the past) sharing project costs with all of their townships, the **Eastern Upper Peninsula Transportation Authority**, the local tribes, the **Bureau of Indian Affairs**, the **U.S. Forest Service**, **MDNR**, and the **U.S Fish and Wildlife Service**.

The Chippewa CRC has an extensive history of partnership and cost sharing with other entities to make improvements to their road system. The largest partners in these projects have been the 16 townships that annually contribute around \$900,000 toward improvements. Typical agreements require a 50 percent share in grade work (sand sub-base and gravel base) and also for ditching and drainage projects. The road commission requires an 85 percent share (85 percent of cost provided by other entity) for paving or re-paving projects. The road commission has had great success with this cooperative system, completing many road projects. Unfortunately, the nature of township politics makes this an unstable funding source. Once the roads have been improved in front of a majority of the township voters' homes, the next millage renewal tends to fail. When millages fail, improvement slows drastically in those townships.

The Chippewa CRC recently partnered with the **Bureau of Indian Affairs (BIA)** on two projects, one being an 80 percent share on a bridge project on Six Mile Road for approximately \$750,000, and the other an 80 percent share on a grade life and paving projects on Seven Mile Road for approximately \$250,000. They are anticipating future projects with BIA involvement. This has been and will continue to be a great partnership but may be somewhat limited as the tribes are interested mainly in roadways directly connected to their reservations and housing developments.

Another partnership that has developed in Chippewa County has been with the **U.S. Forest Services** and is somewhat unique to the area. Chippewa CRC has many miles of their road system running through federal forest lands. The Forest Service has donated material from their existing borrow pits so long as it is placed on roads within the federal forest lands. In the past

year alone, they donated approximately 4,000 cubic yards of gravel and 20,000 yards of sand to be placed on these roadways. They also cost share with the Road Commission for annual grading of the roads within the federal forest.

Clare: According to the Clare CRC, townships share in the cost of projects and are spending more on maintenance activities versus new construction than in the past. However, the Road Commission is losing its ability to match with townships on larger construction projects. In 2004 they allocated up to \$700,000 to match townships. This has dropped to about \$200,000. Many townships have a road millage and the Road Commission cannot match all available township funds. Several townships have \$200,000-\$300,000 each and are waiting for the Road Commission to come up with match money. There are approximately \$1 million of township road funds waiting to be spent, and townships are willing to cost share in resurfacing and preventative maintenance.

Clinton: The Clinton CRC shares a mutual benefit cost in the following: safety projects with other entities; joint paving projects with abutting entities; sharing of engineering services with other entities; and many joint drainage projects with the **Clinton County Drain Commission**. The Clinton CRC also has cost sharing agreements with each of their 16 townships.

Delta: The Delta CRC Board recently signed an intergovernmental cooperation agreement with the **Delta County Board** and the **Cities of Escanaba and Gladstone**.

Dickinson: The Dickinson CRC offered several examples of cost sharing including:

- Using prison labor for years for brush/tree cutting, raking and other handwork;
- Working with all townships on local road projects in which the township pays for all materials and Road Commission supplies all labor/equipment and engineering; and
- One township will provide cash materials and the Road Commission will supply labor and equipment to repair a road embankment classified as a dam, which impounds Red Dam Lake.

Eaton: The Eaton CRC shares the cost of local road projects with townships.

Emmet: The Emmet CRC shares the cost of some paving projects with the **Emmet County Board of Commissioners**.

Genesee: The Genesee CRC has cost sharing agreements in place with the townships and other governmental agencies within Genesee County.

Gladwin: The Gladwin CRC, all townships and the **Cities of Beaverton and Gladwin** have completed numerous road and bridge projects over many years based on a cost-sharing program. Road resurfacing projects are completed with a 50%-50% cost share, and road reconstruction projects are completed with a 65%-35% cost share or 35%-65% cost share depending if it is a county local or county primary road. Other construction work is also performed on a cost-sharing basis.

Gogebic: The Gogebic CRC works closely with the **Bureau of Indian Affairs** on cost-sharing projects in their County.

Grand Traverse: The Grand Traverse CRC shares project costs with the **Grand Traverse Band of Ottawa and Chippewa Indians** and **Bureau of Indian Affairs (BIA)**. BIA Tribal funding has increased the Road Commission's project construction list- no local match is required on construction costs. Grand Traverse CRC also cost shares with townships on gravel road improvements and seal coating projects.

Hillsdale: The Hillsdale CRC recently built a two mile all-season haul route to a large gravel pit with the pit owner splitting the paving costs.

Houghton: The townships in Houghton CRC participate in all road projects on the local road system using their township millages; and townships have donated fill material for projects at no cost.

Huron: The Huron CRC provides each township with a share of \$360,000 for a construction matching program. County bridge projects regardless of primary or local road are paid for completely by the Huron CRC. The Road Commission has also partnered with the **Huron County Sheriff's Department** to share the services of a Certified Motor Carrier Officer.

Ionia: The Ionia CRC is one of many across the state that could provide pages of projects where the townships have shared the cost of projects. The Ionia CRC also receives support from county general government which shares in the cost of winter maintenance, brush cutting, brush spraying, bridge replacement projects, economic development upgrade projects, and more.

In 2008, The Ionia CRC received support from **Ionia County Board of Commissioners, Boston Township, Berlin Township, MDOT** and Herbruck's Poultry Ranch to upgrade Portland Road and Grand River Avenue (Michigan Economic Development Corporation funds were used on the Grand River Avenue project). In another area of the county, the Road Commission received support from Ionia County, **Lyons Township, the Village of Pewamo** and the Deveraux Sawmill to upgrade Hubbardston Road.

Iosco: The Iosco CRC shares costs with townships on local road projects; provides matching funds for state and federal-aid projects; and shares in the cost of dust control on local roads in townships.

Iron: The Iron CRC coordinates county-wide bridge inspection services with cities. The Iron CRC bid out multiple paving projects gaining benefit of volume. They have saved an estimated \$10-\$15 per ton by having increased quantities of material to bid. In Iron County, the townships are currently paying 100 percent of project costs on local road heavy maintenance/construction projects both when Iron CRC crews and private contractors are used.

Kalamazoo: The Kalamazoo CRC shares cost on various projects with other governmental entities.

Kalkaska: The Kalkaska CRC utilizes partnerships with various organizations to obtain local matching funds for projects.

Keweenaw: The Keweenaw CRC shared the cost of a roadside park and beach land purchase and development in Eagle River with **Keweenaw County** and the township.

In 2008, the Keweenaw CRC reported the recent completion of the first phase of a county road upgrade from a two-track to a full-width, two lane, all-season road with a private developer, Tolksdorf. Allouez Township did not have any money set aside for future road projects and the developer wanted the project completed in order to sell off hobby farm size lots. The developer agreed to pay the 50 percent local match required. Keweenaw CRC completed about half of the two mile project in 2008 at a total combined cost of \$250,000. The remaining portion will be completed when more parcels are sold.

Lenawee: The Lenawee CRC shares the cost of joint projects with cities and villages. They also participate 50/50 with townships on the Local Bridge Program (formerly Critical Bridge Program). Lenawee CRC has purchased a brine well and trucks to apply the brine to gravel roads. They have also purchased many gravel pits to provide low cost materials. This has allowed them to provide dust control at no cost to townships.

Livingston: The Livingston CRC cost shares with townships on primary road pavement preservation.

Luce: The Luce CRC has a cost share agreement where the townships purchase gravel and the Road Commission places it.

Mackinac: The Mackinac CRC shares the cost of local road projects with townships.

Macomb: At the time of this survey, the Road Commission of Macomb County (RCMC) was transitioning to the Macomb County Department of Roads. The manager of the Roads Department indicated they still planned to jointly fund projects whenever possible.

In 2008, the Road Commission of Macomb County had cost share agreements in place with all cities, villages and townships on road and bridge construction programs. Project examples include: 24 Mile and Van Dyke, Fuller Road, Cass Avenue from M97 to Clinton River Bridge, 12 Mile from Harper to Gratiot, 25 Miles and Schoenherr, 27 Mile and Van Dyke, Metropolitan Parkway Service Drive, and a Concrete Patch Program.

Manistee: In 2008, the Manistee CRC provided several examples of their efforts to share costs with other entities:

- The Manistee CRC received two awards from the **U.S. Forest Service (USFS)** for partnering on road projects. They have worked on numerous roads stream crossings with the **Conservation Resource Alliance (CRA)**, **MDNR**, the **Little River Band of Ottawa Indians** and the **USFS**;

- Manistee CRC has worked with the **County Drain Commission** to replace culverts that are part of the county drain system. The Drain Commission purchases the pipe and the Road Commission installs the pipe at no charge; and
- The Manistee CRC is working with the **Coalition on Health** to acquire grant funding for paved walking and biking shoulders on their roads. This will consist of the coalition obtaining the grants and the Road Commission will cost share 20 percent and perform the work.

Marquette: The Marquette CRC has cost sharing agreements in place with all townships in Marquette County and the **County of Marquette**.

Menominee: The Menominee CRC cost shares with the townships in Menominee County on several projects. The CRC has also shared costs with the **Hannahville Indian Community** and **Bureau of Indian Affairs** on several past projects.

Midland: The Midland CRC shares the cost of local road projects with their townships. In 2008, the Midland CRC provided the following examples of cost sharing with other agencies:

- Meridian Road (Tittabawassee to Midland/Gratiot County Line) with the **Saginaw CRC**;
- Midland/Gratiot County Line Road (Castor to 8 Mile) with the **Gratiot CRC**;
- North County Line Road (Curtis to Shearer) with **Isabella CRC**;
- Bay-Mid County Line Road (Wheeler to Letts and Letts to Apache Trail) with **Bay CRC**; and
- Over \$1 million per year with township support (approximately 40 projects each year).

Muskegon: The Muskegon CRC participates in cost sharing with the county and its townships on road projects and brining. They have a program to cost share the replacement of culverts with townships on local roads. They also use the **Muskegon County** Fairgrounds as a practice area for new heavy equipment operators and chain saw training. This partnership has produced several projects at minimum cost to the county including tree removal, creation of a large parking lot, and a new arena for horse shows.

Newaygo: The Newaygo CRC works with cities and villages for service and goods.

Oakland: The Road Commission for Oakland County (RCOC) requires local government cost participation on all federal-aid projects except for ARRA projects. They partner with **Oakland County** general government and many of the communities in the county for the **Tri-Party Program**, which involves equal funding from RCOC, the county and the participating communities to create a pot of funding for participating communities that can be used on community selected road improvement projects (projects must meet RCOC criteria).

Oceana: In 2008, the Oceana CRC reported having a township match program in place to allow up to 25 percent of their MTF revenues to match with township monies for the improvements to local roads, up to 50 percent cap. **Elbridge Township** has matched monies to improve primary road guardrail to roads within its borders. **Golden Township** has matched monies to overlay a primary road within its borders, and **Benona Township** offered to try and pass a millage specifically to pulverize and re-construct a major road within its borders.

Ogemaw: The Ogemaw CRC shares the cost of road reconstruction with townships; on local roads the Road Commission pays 25 percent and on primary roads the Road Commission pays 50 percent.

Ontonagon: The Ontonagon CRC has completed several projects with cooperation from the **U.S. Forest Service** and local villages.

Osceola: The Osceola CRC shares the cost of local road projects with townships.

Oscoda: The Oscoda CRC shares a building with the **Oscoda County** Commission.

Otsego: The Otsego CRC shares costs on 90 percent of local and federal-aid construction projects with their townships and cities. Due to economic conditions and Act 51 restrictions, the majority of these projects could not have been completed without participation from townships.

Ottawa: The Ottawa CRC shares emulsion costs with the **Kent CRC** and the **City of Grand Rapids**.

Presque Isle: The Presque Isle CRC has cost shared with its 14 townships on various road improvement projects for many years, averaging two to four projects per year. They also share costs on state and federal-aid road and bridge improvements by paying a 20 percent match.

Saginaw: The Saginaw CRC has shared costs on several projects with counties, cities and villages including:

- In 2009, they implemented a local road ditch cleaning program;
- In 2009-2010, they utilized moneys saved by the ARRA program to provide two miles of local road chip sealing to each township;
- In addition to typical cost sharing with their 27 townships, the Saginaw CRC has also shared in project costs with the **Kochville Township Downtown Development Authority (DDA)**, **Bridgeport Township DDA**, and **Saginaw Valley State University**;
- Beyond projects, the Saginaw CRC is a member of the **Saginaw Area Geographic Information System (GIS) Authority (SAGA)** where hundreds of thousands of dollars in expenses are split amongst members to provide software, hardware, labor, and aerial photography along with dozens of other base level services; and
- The Saginaw CRC is also a member of the **Saginaw Area Storm Water Authority (SASWA)**. This Authority has been formed to minimize the impact and cost of the most recent Phase II Storm Water requirements as mandated by the DEQ rather than each entity providing redundant information at much more cost.

Schoolcraft: The Schoolcraft CRC cost shares projects with **MDOT**, the **US Forest Service**, and the **City of Manistique**; and shares the cost of dust control and local road projects with townships. The Road Commission is in negotiations with public transit, the **Schoolcraft County Sheriff** and others for sharing fuel needs county-wide.

Shiawassee: The Shiawassee CRC provides a savings to other local governments by purchasing additional salt and sand and making it available to cities, villages and school districts at the purchase price.

St. Clair: The St. Clair CRC recently privatized repair shop operations. During this process they partnered with the **County Sheriff**, as well as the **County Parks and Recreation, and Mental Health Departments**. Adding additional vehicles reduced the overhead for all involved.

In 2008, the St. Clair CRC reported having a matching fund program (based on mileage and population) with the townships for use on local roads. This program is funded by county appropriation, and townships normally over-match, \$3 on every \$1 from the Road Commission. St. Clair CRC also has what they call a Drain Fund, which is a 50/50 match program with the townships for projects that increase road drainage, berm removal, ditching, etc.

St. Joseph: The St. Joseph CRC is currently sharing a manager with **Cass CRC**. They have also worked to establish a joint purchasing agreement. The Road Commission is working closer with townships on road conditions and needs with support from townships to complete agreed upon projects. St. Joseph CRC currently offer an 80/20 split on building and sealcoat of local road projects.

Van Buren: The Van Buren CRC has shared the cost of various road reconstruction projects, as well as preventative maintenance projects with various cities and villages.

Washtenaw: The Washtenaw CRC has frequently participated with neighboring road commissions, townships and cities in their county. These projects have included routine maintenance trade-offs, preventative maintenance projects, and reconstruction. Some of the projects have been one-time collaboration and others have involved multi-year federal-aid projects.

Public- Private Partnerships

Alcona: The Alcona CRC rents private facilities to stage winter maintenance equipment for better response time for plow routes located some distance from the normal base of operations. They also rent local equipment from time to time on special projects, and contract for off-site fuel services (Alcona CRC does not operate its own fuel facilities.)

Alger: In 2010, the Alger CRC received gravel from a timber company to improve a local road providing access to forestland. The Road Commission had access to their pit for 1,000 cubic yards of material.

Alpena: In 2008, the Alpena CRC reported several public-private partnerships including:

- Princeton Avenue was resurfaced in 2008 with Alpena Credit Union, Alpena Township, and Road Commission funds;
- A local company, Ossineke Industries, contributed one-third of the project cost for the Piper Road reconstruction;
- Several special assessment projects were completed with participation by townships and benefiting property owners;
- The County of Alpena and Glawe Inc. participated in the Long Lake Park Road special assessment project;
- Participation in road improvements by local industries and aggregate producers, Fiver Char, Cordes Excavating, Glancy Inc., and Specification Stone; and
- Right-of-way has been donated by residents and businesses to accomplish road improvement projects. A major project included the cooperation of Lafarge Cement, DPI Inc., and Fletcher Paper Company.

Baraga: The Baraga CRC offered several examples of public-private partnerships including:

- Years and years of cooperative partnership with major timber landowners. Champion, International, Mead, Plum Creek Timber, Besse Forest Products and others that have been bought out, sold or changed names. These entities have contributed thousands of dollars worth of assistance with sand and gravel resources;
- As recently as 2007, Plum Creek Timber provided gravel royalty of \$15,000 towards their participation in a \$425,000 bridge replacement project completed by Baraga CRC;
- MDNR, MDEQ, Baraga CRC and Stone Container Corporation built two new bridges on Menge Creek Road over Menge Creek in 1997. Materials were provided by Baraga CRC and bridges were provided by Stone Container Corporation; and
- Plum Creek Timber opened up a new gravel pit for the Road Commission's use in 2010.

Barry: In 2008, the Barry CRC provided the following examples of public-private partnerships:

- A local company, Flex Fab, wanted to have their property leveled and allowed the Road Commission to mine material off their property as long as the property was leveled upon completion;
- Barry CRC has partnered with numerous private land owners for natural resources including sand, gravel, topsoil, and stockpile areas; and

- The Road Commission also contracts with many private entities to perform duties they can do more efficiently/effectively including trucking, health care consulting, sign construction, equipment repairs, paving, gravel processing, screening sand, and more.

Bay: The Bay CRC has worked with DDAs and local colleges on some projects. The Road Commission continues to remind the townships that if a business is considering locating, expanding or even leaving (try to save the jobs) the township, they should contact the Road Commission or a consultant as jobs are often linked to infrastructure improvements including roads.

Benzie: The Benzie CRC rents labor and specialized equipment from local contractors. In addition, they bid out tree removal and stump grinding to local contractors. They have worked extensively with the Conservation Resource Alliance on road stream crossing projects. This list of projects includes two timber bridges, 5 bottomless culverts, a steel sheet pile retaining wall, and a stream bank restoration project. Currently, they are trading clay for fill sand with a local contractor. The clay will be used on several local gravel roads in Benzie County.

Berrien: In 1999, the Berrien CRC upgraded Mall Drive from Pipestone Road to Mall Court, by a special assessment district, to accommodate an extension of the road to M-139 requested by J.P.A. Development Company. In 2010, the Berrien CRC upgraded Hoder Road and a section of Maudlin Road in cooperation with the Pokagon Band of Potawatomi Indians for the Four Winds Casino development.

Calhoun: The Calhoun CRC explored a public-private partnership for snow removal activities in selected township subdivisions. While the first attempt did not prove to be as beneficial as expected, discussion continues regarding further exploration of potential partnerships in the future.

Cheboygan: Although there is currently not significant private development occurring in Cheboygan County, the Road Commission took advantage of a 3M/NACE signing grant in 2009.

Chippewa: The most recent public-private partnerships the Chippewa CRC has entered into have been cost sharing agreements for road improvements with the Piatt Lake Bible Conference Association and also with Waste Management for improvements to a road serving their landfill.

Clinton: The Clinton CRC routinely works with developers on shared costs on items that benefit the road system, and to provide water and sewer to their facilities.

Crawford: In 2008, Crawford CRC provided the following examples of public-private partnerships:

- The Crawford CRC anticipated the arrival of the proposed Main Street USA Theme Park. The private corporation seeking to develop in the area had agreed to provide the funding for road improvements and engineering to complete the project;
- The Crawford CRC is also the County Drain Commission. A private non-profit group provides the funding for improvements and monitoring of a local dam in Crawford County.

Dickinson: The Dickinson CRC participates with public-private partnerships including:

- Receiving monies from a private trust fund, which is used to repair roads;
- Renting their shoulder machine and other equipment to contractors;
- Using a boring machine and boring rig borrowed from a local contractor;
- Using a contractor's testing facility for testing aggregates and HMA;
- Providing areas for out of town contractors for storage of materials and equipment for any projects they may have in area;
- Working extensively with the forest products industry, and other businesses to obtain a number of TEDF Category "A" grants. One local business provided part of the Road Commission's match.

Emmet: The Emmet CRC has contracted most road reconstruction/resurfacing projects with private contractors. They also subcontract snowplowing in subdivisions. During the winter of 2008, the Emmet CRC sub-contracted 28 miles of subdivision streets for winter maintenance. This was a necessity for the first time due to the reduction in employee levels, and the agreement worked out extremely well. The subcontractor was able to plow the subdivisions most times before schools started. If the Road Commission were to plow the subdivisions they probably would not get to them until 4:00 p.m. or later.

Gladwin: The Gladwin CRC hires local contractors regularly during the construction season to supplement road commission forces on various construction projects, especially for the rental of specialized equipment that the road commission doesn't have such as earthmovers, bulldozers, cranes, and large gravel trains.

Gogebic: The Gogebic CRC works with the local asphalt suppliers. They make the HMA material that is purchased and installed (labor and equipment) by the Road Commission.

Gratiot: Although uncommon due to private business reluctance to pay more than what they do through taxes, the Gratiot CRC had a successful public-private partnership in 2008. A large farming operation contributed (along with the township), to thicken the new gravel being placed on the road in front of their operation.

Hillsdale: The Hillsdale CRC recently built a two mile all-season haul route to a large gravel pit with the pit owner splitting the paving costs.

Houghton: The Houghton CRC offered the following examples of public-private partnerships:

- Houghton CRC has worked co-operatively with the timber industry in updating seasonal roadways; and
- Private citizens have upgraded seasonal roadways at their expense in order for the Houghton CRC to resume plowing.

Huron: The Huron CRC has coordinated road building projects with large agricultural operations.

Ingham: The Ingham CRC has utilized Downtown Development Association (DDA) funds in various projects.

Ionia: The Ionia CRC worked with their local egg producer to upgrade one roadway to all-season status and to repair an existing all-season road to their new facility.

Isabella: The Isabella CRC has had tribal participation on road improvements and some participation from commercial developments.

Kalamazoo: The Kalamazoo CRC examples of public-private partnerships include:

- Using contractors in winter maintenance, material equipment storage, road construction and maintenance operations, lease agreements and consultation; and
- Managed services in various routine maintenance programs including but not limited to paving, mowing, crack sealing, guardrail and brush control spray, and tree removal.

Kalkaska: The Kalkaska CRC has partnered with townships and private entities to improve the condition of roads utilized by local businesses.

Kent: The Kent CRC offered several examples of public private partnerships including:

- Working with a local developer to relocate 1.5 miles of county road to facilitate the sale and removal of mineral deposits that resulted in a new and improved roadway;
- Working with a local developer on behalf of the County of Kent to sell excess parcel of land that resulted in Phase 1 of Kent County's Millennium Park;
- Using private local engineering firms to perform permit, survey and staking activities; and
- Working jointly on numerous road improvement projects with private sector companies to facilitate placement of their water and sewer in exchange for sub base, drainage work, or resurfacing.

Keweenaw: The Keweenaw CRC reported that in 2007, a private developer paid 50 percent of improvements to a local road project.

Lapeer: In 2010, the Lapeer CRC partnered with Kmax, MEDC and their local Economic Development Corporation to improve a two mile haul route for KMAX, an automotive parts supplier in the county.

Livingston: The Livingston CRC has worked with private companies for widening on primary roads, road relocations for economic development, and safety and capacity improvements.

Luce: The Luce CRC has partnered with private sources and the MDNR in order to widen roads through the forests.

Macomb: The Macomb County Department of Roads will cooperate when partnerships become available.

Manistee: The Manistee CRC has used local contractors to help on projects where the contractor's equipment and resources help the Road Commission's project completion to be more cost effective.

Marquette: The Marquette CRC has entered into public-private agreements on road projects with the following companies: Best Buy; Lowes; A Lindberg and Sons; Kennecott Eagle Mine; logging companies in Marquette County; Associated Constructors; Oberstar Excavation; AECOM; Integrated Design; and Coleman Engineering.

Mason: The Mason CRC uses consultants as necessary.

Mecosta: Nestle Waters (Ice Mountain Water Plant, Stanwood) paid the majority of an overlay project (approximately \$120,000) on 8 Mile Road that services their facility along with being a corridor and access route to US-131 for all area residents.

Menominee: The Menominee CRC has constructed several all-season routes with cost participation from the business to facilitate commercial traffic. The businesses include: Great Lakes Pulp and Fiber; United Waste; Kleitzke's Mill; Wendrick's Truss Co; and Hannahville Indian Community.

Midland: In 2008, the Midland CRC reported three public-private partnerships:

- Michigan Chloride- asphalt and gravel from Redstone to Laporte;
- Wonzy Tree Service- crush concrete from Shepherd Road, 9 Mile to West; and
- ENTAC- gravel on Magruder Road from Bradford Road to Kent Road.

Missaukee: In 2008, the Missaukee CRC, City of McBain, and Biewer Sawmill (located in the McBain Industrial Park) worked together on providing an all-season route to the sawmill (Cherry Drive).

Monroe: The Monroe CRC receives volunteer funding from private gravel haulers for the repair of local hauling routes and for obtaining and improving road right-of-way.

Montcalm: Over the years, the Montcalm CRC has paved and improved several local roads with financial assistance from area farmers and businesses.

Muskegon: The Muskegon CRC subcontracts for chemical brush spray, bridge inspection and design services, tree removal, sign construction, sign manufacturing, specialized environmental engineering services and administrative building cleaning services. They contract some winter maintenance activities including snow routes and major vehicle maintenance issues, and use the private sector for high volume trucking.

In 2008, they offered the following examples of public-private partnerships:

- Working with a pallet manufacturer to upgrade a section of a border road to all-season status in Holton Township;
- Upgrading a section of road to accommodate the needs of a large CAFO interest in Ravenna Township; and
- Working with an oil company to upgrade a section of road to accommodate heavier trucks hauling crude in White River Township.

Oakland: Many of the connected-vehicle technology efforts undertaken by the Road Commission for Oakland County (RCOC) include private financial participation (i.e. Chrysler, Ford, Mercedes, Motorola). RCOC has entered a number of partnerships with paving and road building companies to experiment with new road building techniques or materials. RCOC has also privatized numerous functions and services, ranging from road striping and light-vehicle maintenance to road paving and heavy construction.

Ogemaw: The Ogemaw CRC coordinates their Adopt-a-Highway pickup with a local trash hauler, and gets some assistance with road maintenance due to trucking activity.

Ontonagon: The Ontonagon CRC has a long-standing relationship with private partners from providing materials and equipment to hiring their laid off construction workers as seasonal employees, saving unemployment costs for all parties involved.

Otsego: The Otsego CRC offered several examples of public-private partnerships including:

- The on-site fuel system was removed several years ago due to the cost of replacement of the antiquated system and to reduce liability insurance costs. The Road Commission now has arrangements with two fuel suppliers. One is a local supplier and the other has a card system that can be utilized locally or when personnel travel;
- On occasion, residents petition to have their private road made public. There are specific rules the private land owners must follow and agreements to be signed if the road is added to the county road network; and
- The Road Commission is a member of the Otsego County Economic Alliance whose mission is to “facilitate economic growth in Otsego County through a public-private partnership that maintains economic vitality and stimulates economic growth while preserving quality of life.

Ottawa: The Ottawa CRC has a private contract to supplement winter maintenance services, as well as a contract with MDOT to operate a lift bridge.

Presque Isle: The Presque Isle CRC provided several examples of public-private partnerships including:

- Working with Huron Pines RC&D on stream crossings;
- They have worked with a local sportsman's club to improve a lakeside pavilion at a Road Commission facility and to clean debris from culverts;
- Establishing an Adopt-A-Road program to help keep roadsides clean; and
- The Road Commission has partnered with numerous private land owners for natural and agricultural resources including sand, gravel, top soil, clay, straw and seed.

Schoolcraft: The Schoolcraft CRC provided chip seal services for the local mining industry and is currently in negotiations to partner on road project materials. They have negotiated with the local solid waste landfill for roadway improvements, and partnered with a local snowmobile association for roadway and trail improvements.

St. Clair: The St. Clair CRC recently privatized their repair shop operations. In 2008, the St. Clair CRC reported cost sharing on ditching projects with private landowners. At that time, they

were also working on a bike path with Chrysler Corp., and had leased their limestone dock to a private company.

St. Joseph: The St. Joseph CRC utilizes private land to stage stone for sealcoat operations and reduce hauling cost. They have also seal coated a private township road under a special assessment coordinated by the township; and they contract roadside mowing to a private contractor.

Van Buren: The Van Buren CRC currently snow plows, grades and boom mows various uncertified (private) roads at the townships' cost.

Washtenaw: The Washtenaw CRC has had many public-private partnership projects including resurfacing, intersections, round-a-bouts, and non-motorized improvements. This has been an area where the agency has excelled at securing significant contributions from the private sector with the use of cooperative road improvement agreements secured by a declaratory judgment.

Wexford: Wexford CRC has had several local businesses provide funding for paving and graveling projects

Additional Areas of Collaboration with Other Entities

Alcona: The Alcona CRC is constantly exchanging ideas with other road commissions. The Alcona CRC was one of the initial road agencies in Michigan to launch the pilot PASER surface rating inspection program in cooperation with MDOT and LTAP. The resulting database has been used by LTAP in marketing the PASER system and promoting the asset management concept throughout the United States, as well as internationally.

Alger: The Alger CRC has rented equipment to their regional MDOT direct maintenance garage.

Allegan: The Allegan CRC works with the Allegan County Land Information Services (LIS) Department on updating their county maps.

Barry: The Barry CRC assists townships with expertise on private roads, parking lots, and parks. They also do maintenance for the Barry County Parks Department.

Bay: The Bay CRC participates with the Bay County Drain Commissioner in either cost sharing or service "trading". If the Road Commission needs a survey done for a road project, they trade the like amount for improvements on a drain in the county, whether it be a spot clean out or brush clearing.

Benzie: The Benzie CRC works with the Soil Conservation District, the Conservation Resource Alliance, and the Grand Traverse Band of Ottawa and Chippewa Indians when grant opportunities arise. They are a recycling site for the county recycling program. Benzie CRC also allows various community groups to utilize their open spaces for event parking and community cleanup days. They try to coordinate work activities around the many weekend events and group bicycle rides throughout the county.

Berrien: The Berrien CRC participates in area wide planning activities. The Berrien CRC is also participating with other communities with Municipal Separate Storm Sewer Systems (MS4S) in Berrien and Cass Counties in a watershed-based storm water program for the Lower St. Joseph River Watershed.

Calhoun: The Calhoun CRC continues to collaborate with Battle Creek Area Transportation Study (their MPO) on joint federal-aid projects. Calhoun CRC began hosting monthly Township Supervisor Meetings last year inviting all 19 township supervisors for a monthly meeting increased discussion, brainstorming, and collaboration beyond road and transportation items such as FEMA Flood Plain Maps.

Chippewa: The Chippewa CRC is currently cooperating with Lake Superior State University (LSSU), MDNR, MDEQ, US Army Corps of Engineers, EPA and the Great Lakes Commission on a habitat restoration project that involves the installation of a number of box culverts in a causeway owned by the Road Commission and operated on Sugar Island in the St. Mary's River. They also collaborate with LSSU to provide materials testing for the Road Commission, and in return they make their gravel borrow sites available for LSSU geology classes to aid in

instruction. The most recent project involved LSSU students verifying the material properties of a shipment of cutting edges to determine if they met specifications.

Clinton: The Clinton CRC has shared services on National Pollution Discharge Elimination System (NPDES) compliance and on obtaining permits for drainage and sedimentation.

Delta: The Delta CRC recently started purchasing some office supplies through a previously arranged cooperative agreement with the Intermediate School District.

Dickinson: The Dickinson CRC frequently collaborates with other entities. Several examples follow:

- Working with MDOT to construct a large wetland mitigation site. MDOT designed the site and the Road Commission constructed it. Each agency received a share of the wetland credits;
- The Road Commission has a line of credit with the Dickinson County Board. With that they provide snowplowing/snow removal, engineering, and construction/maintenance on County owned properties;
- Providing guidance and performs all administrative activities for Iron Mountain, Kingsford, Norway and U.P Community Services necessary for the Small Urban Area Program and Rural Task Force meetings and project submittals.

Eaton: The Eaton CRC offers several examples of collaboration including:

- Design and construction services for Safe Routes to School projects;
- Furnish (sell) road materials to schools, cities, villages and state DMB;
- Rent facilities to Michigan State Police for training;
- Furnish training facilities to Eaton County Sheriff's Department and city/village police departments;
- Ordered radio equipment and facilities for Eaton County Sheriff's Dept, FBI and DEA;
- Rent road equipment to Lansing Board of Water and Light power plant;
- Facilities used for regional recycling operations; and
- Coordinate emergency management for city/village Departments of Public Works.

Emmet: The Emmet CRC assists the Village of Alanson with some road material purchases.

Genesee: The Genesee CRC has used Recovery Zone Bonds to replace large culverts. The interest rebate is used to aid the townships in their required portion of the project.

Gladwin: The Gladwin CRC has completed projects with the District Soil Conservation Service to reduce or eliminate erosion and sedimentation at some road/stream crossings.

Grand Traverse: The Grand Traverse CRC continually works with many different collaborators.

Hillsdale: The Hillsdale CRC is using federal-aid funds for force account wedge/seals with their crews doing the work. The Road Commission benefits from 80 percent cash in labor, equipment and material instead of 20 percent cash out for local match.

Huron: The Huron CRC mows grass and completes grade work for the Huron Community Fair; provides rubber tired roller for all non-profit tractor pulls in the area; provides engineering service for street projects in many small local cities and villages; and Huron CRC labor and equipment is utilized extensively by the Park Dept., Drain Dept. and the Airport.

Ionia: The Ionia CRC works with cities and villages to complete work such as crack sealing and bump grinding.

Iron: The Iron CRC always works with surrounding counties on operational questions.

Kalamazoo: The Kalamazoo CRC partners with Western Michigan University using engineering students for KCRC projects and is continuously seeking opportunities for collaboration.

Manistee: The Manistee CRC has been talking with the local tribal government about coordinating the construction and maintenance of their roads.

Marquette: The Marquette CRC uses SBAM for COBRA administration.

Midland: The Midland CRC provides input to townships for efficient implementation of water construction projects.

Montcalm: The Montcalm CRC has met with Isabella, Clare, Midland and Mecosta CRCs about sharing equipment and services.

Montmorency: The Montmorency CRC works with Huron Pines, a local AmeriCorps organization, on culvert replacements.

Muskegon: The Muskegon CRC provides pothole patching services to City of Muskegon Heights; uses the asset management approach to program local township partnered projects; and shares a multi-agency traffic signal maintenance contract with private vendor for traffic signal maintenance. The Road Commission also coordinated the administration and construction engineering for two township bike path projects; and conducts survey and clean out work for the County Drain Commission.

Oakland: The Road Commission for Oakland County (RCOC) provided the following examples of collaboration:

- The RCOC Forester provides his expertise to Oakland County Parks to develop a tree removal plan. RCOC also provides local communities with assistance in the preparation of environmental assessments for road widening projects. RCOC is “nested” under the Oakland County Water Resources Commission Phase II National Pollution Discharge Elimination System (NPDES) storm water discharge permit program;
- RCOC partnered with Oakland County general government in the purchase of new customer service software that allows RCOC, the county and participating communities to jointly track and map service requests. The collaboration ensured a lower price for the initial software purchase and for the ongoing use of the system as well as ensuring that participating entities share critical customer service request information;

- In the past, RCOC has partnered with Oakland County general government to jointly produce a county road map, thus reducing the cost for each party; and
- RCOC participates in a county general government short-term financial investment service that allows the Road Commission to get a better return on its short-term excess funds (for example, money received for a road project, but that won't be spent for six months) than it could on its own.

Ogemaw: The Ogemaw CRC has developed a cost sharing agreement for drainage enhancements with a local lake association.

Ontonagon: The Ontonagon CRC is considering buying big ticket items with neighboring counties and sharing in the cost and use of this equipment.

Osceola: The Osceola CRC is working with MDOT, cities and villages for possible maintenance contracts to help offset any short comings.

Otsego: The Otsego CRC has worked with the Otsego County Parks & Recreation Department to provide services; and with Huron Pines and the Federal Fish & Wildlife Federation for culvert replacement in rural areas. The Road Commission uses SBAM for the administration of COBRA and Blue Cross Blue Shield. Otsego CRC also participates in MiDeal, the state purchasing program, for the purchase of county and state salt.

Ottawa: The Ottawa CRC is working to coordinate joint county/city line projects; and with MPOs and other agencies to secure other revenue streams.

Presque Isle: The Presque Isle CRC participates in MiDeal when purchasing equipment and salt.

Saginaw: Over the last several years, the Saginaw CRC has shared their technical experiences with their GPS system. They are now sharing their expertise and software with other agencies within Saginaw County. The Saginaw CRC has also worked with several local units of government, including Saginaw Future, and private industries such as the Hemlock Semi-Conductor to secure several million dollars of Economic Development Funds.

In 2008, the Saginaw CRC worked very closely with the Office of Emergency Management, and Emergency Services Personnel to create a county wide emergency route. In addition to the route, an actual county wide plan was created providing direction for future events.

Sanilac: The Sanilac CRC doesn't have enough work forces to do work for others at this point unless township work and state work is cut.

Schoolcraft: The Schoolcraft CRC partners with County Emergency Management utilizing the garage for a drive-thru site for mass immunizations/flu clinics as well as being designated as a holding center for mass fatalities. They hold a contract with MDOT for road maintenance activities and the US Forest Service for signage activities. The Road Commission also holds contracts for roadside park maintenance and provides services cooperatively with the County Drain Commission.

Shiawassee: The Shiawassee CRC attempts to work cooperatively with local communities and adjacent road commissions whenever possible.

St. Joseph: The St. Joseph CRC is a member of the Frugal Five, a coalition of five road commissions in southwest Michigan, that meet quarterly to share best practices. The St. Joseph CRC offered several examples of collaboration including:

- Providing a staging area on Road Commission property for MDOT mowing and signage crews;
- Rolling the public school baseball fields;
- Working with the County Sheriff to improve enforcement of weight restrictions;
- Installed drive in exchange for land to dump sods that were cut from shoulders; and
- The Road Commission shares copy paper purchases with the county.

Van Buren: The Van Buren CRC is currently in discussions with several inter-county agencies regarding cooperative fleet maintenance.

Washtenaw: The Washtenaw CRC collaborated with the bicycling community in 2010 where the bicyclists contributed \$50,000 to match the Road Commission's \$60,000 to resurface and widen paved shoulders on a very popular bike route. Also their engineering staff has been hired by the County Drain Commissioner to design a county drain project.

Wexford: Wexford CRC has worked closely with the Counties GIS program, providing pavement marking for mapping and information for updating addresses for 911.

Reforms or Efficiencies to Enhance Summer Operations

Alger: In Alger County, dust control is contracted and purchased by the townships. By communicating with the townships and grading, just prior to application, the Road Commission has been able to reduce grading costs. They have also purchased lead and pup trailers to become more efficient when hauling materials.

Allegan: The Allegan CRC works four 10-hour days during the summer. The office is closed on Fridays during that period of time.

Alpena: The Alpena CRC has utilized equipment sharing, a four 10-hour day schedule, and summer student help to make summer operations more efficient.

Antrim: The Antrim CRC uses four 10-hours work days to minimize mobilization to projects.

Arenac: The Arenac CRC subcontracts out as much work as possible.

Baraga: The Baraga CRC contracts out gravel crushing, paving, brushing, mowing, paint marking and chip seal operations. In recent years, seasonal employees utilized by Baraga CRC have been hired by MDOT in the summer season. This has saved on unemployment costs and provides continued employment opportunities for trained and experienced employees.

Barry: The Barry CRC alternates gravel and chip sealing to do a two-year program every other year; chip sealing operations and equipment purchasing is coordinated with Kent CRC; and both temporary workers and jail help are used more and more to perform truck and equipment operations.

Bay: Two years ago, the Bay CRC started to design small road projects in-house and also including force account work for their crews in them. By doing so and depending on the funding source, labor, equipment, and materials are reimbursed 80 to 100 percent (ARRA).

Benzie: The Benzie CRC works four 10-hour days in the summer. Whenever possible they use temporary traffic signals on projects in order to reduce costs and use manpower more efficiently.

Berrien: The Berrien CRC has encouraged more participation from townships. The Berrien CRC provides labor, equipment and overhead if the township will provide the materials.

Branch: The Branch CRC closed one mile segments of very rural roads during chip seal operations to increase labor and equipment efficiency and to eliminate the centerline joint. By crack filling more thoroughly prior to chip sealing they are able to increase the longevity of the chip seal treatment.

Calhoun: The Calhoun CRC works four 10-hour days and other scheduling modifications help increase the efficiency of summer operations. Additionally, Calhoun CRC maintains a summer night crew allowing coverage to respond to immediate concerns 20 out of 24 hours per day.

Cass: The Cass CRC developed a new brush and spray program; and developed commission wide scheduling for local and federal projects.

Charlevoix: The Charlevoix CRC plans to purchase a self-propelled sweeper.

Cheboygan: The Cheboygan CRC has put as many employees as possible on "funded" work to minimize overtime.

Chippewa: Several years ago, the Chippewa CRC purchased a screen plant which they have used extensively to produce sand for winter operations and to produce 2" minus gravel for their local gravel surface roads rather than using crushed material. This has generated a savings of about \$4 per yard for the material, but it does require more frequent grading. They also operate several tractor-trailer dumps which haul about double the payload of a regular dump truck saving the need for additional operators.

If county owned materials are a significant distance from a given project they purchase the material locally, if available, to save on the transportation costs. Most of their operators are cross-trained to operate two different machines as well; the dozer operator also operates the roller; the excavator operator also operates the loader or the truck drivers load their own trucks. They have eliminated the position of grade checker and the operators are also required to check their own grade and keep track of quantities as a project progresses.

Clare: The Clare CRC is utilizing full-time regular employees for summer maintenance activities. In the past, some of this work was performed by temporary seasonal employees. The elimination of summer help results in less training requirements and cost savings through a reduced work force.

Clinton: The Clinton CRC moved to a four 10-hour day schedule to conserve energy and improve production. They also use summer temps to provide inspection, documentation and traffic control.

Delta: The Delta CRC has implemented asset management principles which will bring about efficiency in the long-term.

Dickinson: The Dickinson CRC works four 10-hour days during the summer construction season. In the past, they have purchased tri-axle and quad-axle trucks to more efficiently haul sand, gravel, topsoil, and other materials.

Emmet: The Emmet CRC works four 10-hour days to get more work out of their employees. They also hire seasonal workers at a reduced rate to assist in labor duties.

Genesee: The Genesee CRC assigns multiple projects to any one inspector. No overtime is approved unless deemed an emergency or unless it is funded by some other source.

Gladwin: The Gladwin CRC has been working four 10-hour days from May through September since 2008 and believes that it has improved their efficiency and reduced expenditures when working on numerous road and bridge construction projects and routine maintenance operations. The Gladwin CRC only has one office and garage in the City of Gladwin, therefore, four 10-hour days reduces the travel time and costs, and improves the efficiencies when working on projects and maintenance activities at the far reaches of the county.

The Gladwin CRC also hires approximately ten seasonal employees (typically local college students) during the months of May through September to perform various maintenance activities such as crack sealing, roadside mowing, and other work. Utilizing seasonal employees at a lower wage rate and without benefits allows the completion of various activities at a reduced cost.

Gogebic: The Gogebic CRC implemented several changes to improve the efficiency of summer operations including:

- Purchase of Flowboy trailers to haul more material to projects with less manpower and smaller equipment;
- Purchase of double mower to perform work of two with one man; and
- Coordination and scheduling of work items. Setting productivity requirements for the operation and ensuring they are met.

Grand Traverse: The Grand Traverse CRC (GTCRC) revised grading routes to make them more efficient and productive. Maintenance crews work four 10-hour days to increase production and minimize mobilization in the summer months. GTCRC is using asset management to select preventative maintenance projects which will extend the life of the road system. GTCRC has competitively goes after force account work that was at one time completed by contractors.

Gratiot: The Gratiot CRC added tooth blades on scraper trucks for maintaining gravel roads.

Huron: The Huron CRC added V-bottom trailers.

Ingham: The Ingham CRC went to spray patching, crack filling and chip sealing instead of a full rehabilitation and paving. They also utilize in-place base recycling (pulverizing) of failed road areas rather than dig-out and replacement with virgin materials.

Ionia: The Ionia CRC negotiated more flexibility for work hours in their current union contract.

Iosco: The Iosco CRC is realizing efficiency through the use of lead tractors in sand hauling operations. They use a pull behind mower in addition to a side mower to increase mowing width per pass, and have purchased a boom truck for tree removal operations.

Iron: The Iron CRC is trying to maintain summer seasonal workers to keep up on patching and crack sealing.

Isabella: The Isabella CRC rescheduled hours to four 10-hour days; eliminated overtime; reduced brush mowing; and increased brush spraying.

Jackson: The Jackson CRC implemented four 10-hour days, contract mowing, and has contracted-out other maintenance activities as needed.

Kalamazoo: The Kalamazoo CRC is contracting services when cost beneficial. They have reviewed all operations and equipment for efficiency, and reviewed their staffing level. They have introduced tri-axle trucks to the fleet for improved capacity; and manage services in various routine maintenance programs including but not limited to paving, mowing, crack sealing, guardrail and brush control spray, and tree removal.

Kalkaska: The Kalkaska CRC utilizes multiple employee crews to perform operations like crack seal instead of employees working on individual beats, thus limiting the number of trucks on the road. Kalkaska purchased a Durapatcher (spray injection pothole patch machine) and emulsion storage tank in an effort to cost- effectively patch potholes.

Kent: The Kent CRC contracts with two CRCs to perform chip seal operations using their own equipment. This prevents Kent CRC from having to purchase equipment, and provides the other agencies with additional work off their budget. Kent CRC also transfers five employees to MDOT specialty crews for the summer.

Lenawee: The Lenawee CRC implemented four 10-hour work days.

Livingston: The Livingston CRC reduced the number of seasonal workers hired.

Luce: The Luce CRC blades gravel roads much less frequently than they used to.

Mackinac: The Mackinac CRC maintains only enough full-time staff to meet their summer construction needs. They have also implemented four 10-hour work days during the construction season to reduce start-up and shut down time.

Macomb: The Macomb County Department of Roads increased the emphasis on preventative maintenance.

Manistee: The Manistee CRC purchased a used tanker trailer to be more efficient in brining.

Marquette: Marquette CRC summer operations have been reduced so the resources can be used during the winter operations. They have added more lead persons and reduced the number of foremen.

Mason: The Mason CRC switched to four 10-hour work weeks and has increased the pooling of equipment.

Menominee: The Menominee CRC utilizes labor and equipment from neighboring road commissions for chip sealing and shoulder operations.

Midland: The Midland CRC implemented four 10-hour work days to improve efficiency.

Missaukee: The Missaukee CRC does a better job of scheduling blading of gravel roads at the right time. They are always looking for better products such as seal material, asphalt specs, and more.

Monroe: The Monroe CRC sought greater funding participation from townships. Monroe CRC provides labor, equipment and overhead if the township will provide the cost of materials and contract services to do rehabilitation and improvement projects.

Montcalm: The Montcalm CRC is using summer/temporary help for longer periods of time to help make up for a reduced full-time workforce. The temporary workers are paid lower wages and no benefits.

Muskegon: The Muskegon CRC uses asset management techniques to assist with planning and prioritizing sign and culvert replacement.

Newaygo: The Newaygo CRC is working to improve the scheduling of maintenance activities.

Oakland: The Road Commission for Oakland County is sharing maintenance staff and equipment across District boundaries.

Ogemaw: The Ogemaw CRC began a partnership with the Ogemaw County Sheriff Dept. They also purchased and installed a pickup mounted broom for the foreman's vehicle.

Otsego: The Otsego CRC implemented several changes to enhance the efficiency of summer operations including:

- Implementing a summer work schedule of four 10-hour days, including the office. This saves fuel and wear on equipment and is especially useful during seal coat season;
- Adding GPS and a Digital Radio System to improve efficiency;
- Otsego CRC does a lot of wedging and crack sealing before a hard surface is reapplied. This increases the longevity of the reapplied hard surface;
- Coordinating grading gravel roads with the application of brine so that the brine lasts longer. Usually an employee rides in the truck (brine is purchased from a vendor) so that brine is applied as the road commission desires;
- Hiring temporary summer employees to work on the road crew and in the shop. They are paid at a substantially lower rate; and
- One of OCRC's employees has been trained in some engineering procedures so that the work does not have to be hired out.

Ottawa: The Ottawa CRC has implemented four 10-hour work days.

Presque Isle: The Presque Isle CRC has implemented four 10-hour days. They hired several college students to perform summer operations such as; roadside mowing, park maintenance, building and grounds maintenance, and flagging. They also contract out dust control.

Roscommon: The Roscommon CRC self-performs preventative maintenance work like Durapatching and crack sealing.

Saginaw: The Saginaw CRC implemented a four 10-hour work week and added GPS units to each truck. The Road Commission's technology allows them to see where each truck is located at any time, and has tremendously increased operational efficiency and reduced damage claims. Saginaw CRC has also reduced the amount of construction work being done, and focused its efforts on preventative maintenance functions in an effort to stabilize the current condition of their system.

The Saginaw CRC also employs 14 college students as summer temps. Job functions are multiple but are primarily used for traffic control in chip sealing operations, to manage their roadside mowing operation, assist with a full time sign shop employee, and assist with building and grounds maintenance. This program has greatly improved their services at a lesser cost than replacing positions lost to retirement.

Sanilac: The Sanilac CRC bought equipment and hired experienced operators through the years that allow them to do additional construction work for townships and MDOT with their own forces.

Schoolcraft: The Schoolcraft CRC implemented four 10-hour work days to maximize efficiencies in operations. The Road Commission has expanded work experience and knowledge which enables them to apply for federal-aid projects as well as additional projects for MDOT, townships and US Forest Service. They employ seasonal workers as needed; and have reprioritized their summer construction program to focus on safety, bridges, drainage, and roadway improvement projects.

St. Clair: The St. Clair CRC leased out their limestone dock, thereby generating additional income and promoting competitive stone bid pricing.

St. Joseph: The St. Joseph CRC shares specialized equipment with Cass CRC. They have moved to a four 10-hour day schedule during the summer. The office is closed on Friday's during that period of time. The Road Commission also is crack filling more thoroughly prior to chip sealing which increases the longevity of the chip seal treatment.

Tuscola: The Tuscola CRC gravel hauling operators are more efficient by using tandem-axle dump trucks pulling a V-bottom trailer.

Van Buren: The Van Buren CRC instituted four 10-hour days for summer operations. They have also installed GPS units in most of their trucks and on some of the equipment.

Washtenaw: The Washtenaw CRC invested in their brine well in order to double the production, storage capacity, transportation and supply of their own locally produced brine. This has benefited the townships as well as the Road Commission.

Wayne: The Wayne County Department of Public Services, Roads Division, installed AVL systems on a portion of the fleet to better track productivity.

Wexford: The Wexford CRC purchased two rollers that attach to the motor graders. They are also using a private contractor for their chip seal operations.

Reforms or Efficiencies to Enhance Winter Operations

Alcona: The Alcona CRC exchanged county line snow routes with Oscoda CRC to improve response time; houses trucks and stockpiles winter maintenance sand at private facilities on the west side of the county to improve response time and reduce costs; calibrates spreaders to better control usage of winter materials; and conducts internal training on winter maintenance goals and expectations.

Alger: The Alger CRC purchased multi-purpose truck body packages on their tandem trucks. This eliminates the mechanic labor when changing between summer and winter operations.

Allegan: The Allegan CRC does not work overtime plowing local roads unless they have four inches or more of snow.

Alpena: The Alpena CRC hires part-time temporary drivers as needed; and are using wing plow on some trucks.

Antrim: The Antrim CRC added equipment to snowplow trucks that increases plowing efficiency and reduces manpower needs.

Arenac: The Arenac CRC added temporary employees and a night shift; and subcontracts snow removal in some subdivisions.

Baraga: The Baraga CRC has swapped plow routes with neighboring road commissions; added wing plows; and they are renting a loader from a local contractor with a fee charged for hours used, yielding significant savings since they are able to, at least temporarily, defer the cost of a new loader.

Barry: The Barry CRC added 14 snow wings and eliminated 4 positions/routes for snow removal. They are also using temporary employees to help plow snow.

Bay: Through MDOT's request and one on their own, the Bay CRC has two employees each on second and third shift through the winter. They "ride the roads," salt when necessary, keep the highways and expressways clean, call in help when needed, and basically monitor the roads from 4:00 p.m. to 7:30 a.m. Bay CRC has realized a significant savings from having two employees on these shifts as they keep up with smaller snow and ice events without calling crews in on over time. It allows the crews to come in at their regularly scheduled times for these events, which make up the lion share of the snow events throughout the winter season.

Benzie: The Benzie CRC has implemented several changes to enhance the efficiency of winter operations including:

- Eight seasonal snow plow drivers do not receive benefits;
- Involvement in the MDOT Pilot Project to reimburse some of the unemployment costs associated with winter operations;
- Adding wing plows to four trucks;

- Developing a priority list for off-hour operations in order to maintain safety yet minimize overtime costs; and
- Calibrating all of their sanders and only uses material on hills, curves, and intersections.

Berrien: The Berrien CRC installed 38 wing plows, uses computerized spreaders and carbide insert scraper blades to enhance the efficiency of winter operations.

Branch: The Branch CRC has purchased wing plows for two trucks. They are also mixing salt with sand to increase traction and reduce salt use.

Calhoun: The Calhoun CRC uses a salt sand mix 50/50 on hills, curves, and intersections only on local roads. They have also implemented an overtime management plan and adopted a two-wheel path minimum like MDOT. Additionally, a second shift works during this period to minimize overtime and provide the maximum benefit and response to inclement weather conditions. Seasonal workers are also employed to reduce the expense of fringe benefits and legacy costs.

Cass: The Cass CRC reorganized their snow routes; built a centralized salt barn; and started a second shift.

Charlevoix: The Charlevoix CRC is hiring temporary drivers with no benefits to assist with winter operations.

Cheboygan: The Cheboygan CRC installed two wing plows. They are also using pre-wetting systems on salt trucks, and temporary employees to assist with winter maintenance operations.

Chippewa: The Chippewa CRC reformed their overtime guidelines for winter maintenance activity and is slowly improving their equipment to maximize payload and minimize unnecessary trips to reload (replacing single-axle trucks with tandems) and they have added a wing blade to any new trucks. They are also considering adding wings to older trucks to gain more efficiency. They have extended the average route length from around 25 miles to 45 miles. Also, they are trying a switch from dual wheels to the new wide single tires on a few trucks in an effort to increase fuel efficiency.

Clare: All blade trucks operated by the Clare CRC now have automatic transmission resulting in faster service, especially in subdivisions. Most blade trucks are now tandem axle, resulting in more handling capacity for sand and salt. Four motor graders are used for winter maintenance. Wing plows are being specified on new equipment for faster plowing.

Clinton: The Clinton CRC is using anti-icing, pre-wetting (lots of liquid use and experimentation), sensible salting, wing plows, scheduling, and improving equipment (when they can afford it) to increase the efficiency of winter operations.

Delta: The Delta CRC added wings to plow trucks; started using anti-icing; and is preparing to begin pre-wetting salt.

Dickinson: The Dickinson CRC worked diligently to reduce overtime, and calls in part-time drivers as needed for snow plowing. They use tri-axle and quad-axle trucks for sanding and salting to increase area of coverage with one load. They also use trucks with underbody scrapers and wings to reduce time spent plowing, and allow one driver to cover a larger area.

Emmet: The Emmet CRC uses plow wings on several trucks to increase the width cleared with each pass. They use pre-wetting tanks to soak their salt to speed up the melting process and to make the salt work longer. They also subcontract plowing services in subdivisions.

Genesee: The Genesee CRC has installed side wings on plow trucks; purchased a brine maker; and uses chloride sand in open-ditch areas instead of salt. They have also initiated a process of using private snow plow companies to supplement CRC efforts in major winter storms; and implemented communicating overnight winter storm response efforts to schools, colleges and universities in the county.

Gladwin: The Gladwin CRC has been using more winter sand (sand/salt mixture) instead of salt on the primary county roads when possible over the past three winters to reduce costs. They began purchasing “snow wings” with new blade trucks starting in 2010 and will continue to in the future to become more efficient. They are also purchasing a salt pre-wetting system for the truck ordered in 2011 and are considering retro-fitting some existing trucks for salt pre-wetting.

Gogebic: The Gogebic CRC has implemented several changes to improve the efficiency of winter operations including: a complete overhaul of the previous snow removal operations plan to improve driver route efficiencies, timing and equipment usage; use of carbide insert blades for the plow trucks; and sanding and salting sensitivity.

Grand Traverse: The Grand Traverse CRC is using seasonal plow drivers, uses pre-wetting systems on trucks, revised snow plow routes for increased efficiency, and added wing plows to snow trucks.

Gratiot: The Gratiot CRC added wing plows to snow trucks.

Hillsdale: The Hillsdale CRC is trying to be frugal with the use of salt.

Houghton: The Houghton CRC swaps plow routes with other neighboring counties to gain maximum efficiency.

Huron: The Huron CRC added snow wings to plow trucks.

Ingham: The Ingham CRC uses more of salt/sand mix on rural roads with greater percentage of sand; uses pre-wetting agents; and avoids the use of salt during cold-dry blowing conditions.

Ionia: The Ionia CRC added wings to snow plows; and contracted the winter maintenance of rest areas and weigh stations. They also overlap coverage territories with Kent CRC and MDOT Grand Ledge Garage on I-96 winter maintenance. They have used pre-wetting of salt for the past 15 years.

Iosco: The Iosco CRC installed wings on tandem trucks.

Iron: The Iron CRC is using seasonal operators.

Isabella: The Isabella CRC instituted MDOT's red route rules for snow plowing; installed side wings, and mix deicing material per snow fall. The Isabella CRC also has an agreement with a village for winter maintenance; the village is billed for actual costs incurred.

Jackson: The Jackson CRC has worked to reduce overtime, monitor material usage, calibrate their salters to a lower rate, and reduce hours on the weekend.

Kalamazoo: The Kalamazoo CRC implemented a de-icer system in the salt barn, uses a mix of materials, added side mount wings, evaluated route efficiency and equipment assignment, and shares material with MDOT. They have also introduced tri-axle trucks to the fleet for improved capacity.

Kalkaska: The Kalkaska CRC utilizes snow patrol wing plows on a four plow truck (one truck completing the work of two); and they revised plow routes to provide better service and to improve efficiency. They also installed digital radios with GPS tracking in plow trucks.

Kent: The Kent CRC and MDOT have a relationship where MDOT transfers four of their employees to Kent CRC for winter maintenance.

Keweenaw: The Keweenaw CRC is trying to use super-trucks more often to save on fuel (sander, plow, underbody, wing vs. Oshkosh style Heavy Duty plow). They also swap snow removal routes with Houghton CRC.

Lake: The Lake CRC uses temporary operators in winter storms.

Lapeer: The Lapeer CRC is using liquid for pre-wetting and anti-icing. They have added wings to their fleet, and changed from tailgate salters to V-box salters.

Lenawee: The Lenawee CRC uses computerized salt spreaders, and salt mixed with brine-soaked sand.

Livingston: The Livingston CRC added GPS units to all salt trucks and motor graders; revised snow routes to be more condensed and efficient; and increased the use of chloride brine to help reduce the amount of salt needed.

Luce: The Luce CRC uses temporary employees. They limit overtime and do not plow on weekends unless snowfall exceeds 6 inches.

Mackinac: The Mackinac CRC hires seasonal workers to supplement their full-time work force to meet winter maintenance needs; and combined plow routes, reducing winter staff by three people over the past two years.

Macomb: The Macomb County Roads Department uses improved salt spreading technology to reduce usage and improve function.

Manistee: The Manistee CRC is purchasing wing plows to increase the efficiency of snow removal operations.

Marquette: The Marquette CRC started to update their radio system and an Advanced Vehicle Location System is being put into place. Less salt is being used during a snow event. When material is needed sand is used. The Road Commission uses 18 temporary employees for winter operations which is a savings of over \$300,000 per year. They also swap snow routes with various road commissions and municipalities to maximize the efficiency of operations.

Mason: The Mason CRC is working staggered shifts to provide comprehensive coverage.

Mecosta: The Mecosta CRC added 17 side mount wings to its fleet.

Menominee: The Menominee CRC utilizes temporary employees for snow plowing operations.

Midland: The Midland CRC uses side plow wings and is pre-wetting salt; they also use more sand/salt mixture than salt.

Missaukee: The Missaukee CRC is using side wings, and has become better educated on pre-wetting and anti-icing technology.

Monroe: The Monroe CRC is in the process of adding wing plows and pre-wetting equipment.

Montcalm: The Montcalm CRC is adding more wings to trucks to reduce manpower and overtime on winter maintenance. They also use anti-icing prior to snow/ice events to reduce call-in overtime.

Muskegon: The Muskegon CRC uses pre-wetting and anti-icing technology. They have also added wing plows to trucks - reducing the number of passes required to clear the road and ultimately allowing for employee reductions with no loss of service.

Newaygo: The Newaygo CRC has equipped 14 trucks with snow wings.

Oakland: In recent winters, RCOC contracted with private road plowing services (primarily those with graders for use on rural gravel roads) to augment RCOC staff and equipment during severe winter weather. They expanded the use of anti-icing and are using liquid brine for de-icing.

RCOC has also implemented a state-of-the-art GPS based fleet management system that provides fleet managers with a wealth of real-time data about the fleet during winter maintenance operations, including location, speed, salt-spread rate, whether front and under-body plows are up or down, air temperature, pavement temperature and more.

Oceana: The Oceana CRC overhauled winter operations in an effort to re-district, re-route and reprioritize.

Ogemaw: The Ogemaw CRC added on-board pre-wet systems to 5 trucks, installed wing plows on two trucks, and installed pickup snow plows on the foremen vehicles.

Ontonagon: The Ontonagon CRC has used seasonal employees for the past 12 years.

Osceola: The Osceola CRC uses more brine sand than salt/sand.

Oscoda: The Oscoda CRC has turned the heat down in garage and office areas.

Otsego: The Otsego CRC has implemented many changes to enhance winter operations including: changing the way they disperse salt on their trunklines; adding a driver for a fourth shift at night that overlaps two other shifts; adding GPS- Digital Radio System; using retirees and others as temporary help during the snowplowing season; using wing plows to help reduce the number of crew required; revising the snow plowing to increase the number of inches of snowfall before drivers are called in; using a pre-wetting system for salt application to increase effectiveness and allow less material to be applied; using a salt-sand or straight sand mix on county roads; extending the average plow route to compensate for a reduced work force; lowering the heat in the garage and no longer allowing trucks to idle for extended periods of time.

Ottawa: The Ottawa CRC uses a private contractor to supplement winter maintenance. MDOT uses Ottawa CRC employees for winter maintenance.

Presque Isle: The Presque Isle CRC added side patrol wings on four trucks to make up for the loss of manpower. They have also cut back on salt use.

Roscommon: The Roscommon CRC uses wing plows and has implemented changes to snow protocols.

Saginaw: The Saginaw CRC has added GPS to all trucks and now uses advanced technology salt spreaders which will reduce salt application rates. During the winter of 2009, the SCRC performed some extensive testing of different de-icing treatments at several different application rates. Upon completion, the results and analysis were shared with the CRAM Pre-Wet/Anti-Ice Sub Committee. Shortly thereafter, Saginaw CRC was contacted by the Michigan LTAP and asked to present the information in a nationwide Webinar. The testing drew attention from many entities across the nation, including Washington, Utah, Iowa, Minnesota, and West Virginia.

Ultimately this information was used internally to help Saginaw CRC in establishing their plan to implement new state-of-the-art salt spreaders. Most importantly, these spreaders are anticipated to reduce salt application rates between 38% and 50%, depending on the spreader that is being replaced. Additionally, drivers will be able to stay out all day with one load of salt rather than having to drive back for more salt.

In 2009, plows were added to the Foreman's truck. This addition allows the Foreman to assist in the snow removal process during their normal day-to-day activities. Generally speaking, the Foremen were driving around checking road conditions and dealing with resident complaints during snow events. Now they can help open up an intersection, push back dead ends, or open an impassible road while driving from one location to another; all along, reducing the amount of overtime required, and increasing service.

Sanilac: The Sanilac CRC added snow wings on their trucks.

Schoolcraft: The Schoolcraft CRC changed de-icing materials, application rates, and limits over time for non-storm winter maintenance. They have installed eight snow wings to increase plowing productivity; four pre-wet systems to increase efficiency of de-icing materials; and increased the use of carbide blades reducing labor expenses in changing blades, and increasing the time the truck is on the road plowing snow. In addition, the Road Commission has rearranged plow routes to maximize efficiency, and employs seasonal workers.

Shiawassee: The Shiawassee CRC now uses treated sand with salt for winter weather.

St. Clair: The St. Clair CRC purchased wing plows for trucks to enhance productivity.

St. Joseph: The St. Joseph CRC has implemented several changes to enhance the efficiency of winter operations including:

- Revising their snow routes for efficiency;
- Wing plows were added to six trucks with more planned in the future;
- Consolidating garages;
- Collaborating with the City of Three Rivers to perform winter maintenance on short sections of streets that abut county roads and ended at major trunklines;
- Most blade trucks are now tandems rather than single axle, resulting in more handling capacity for sand and salt;
- Instituting uniformity in how sand/salt mix is applied; and
- Adding a plow to the foreman pick-up so they can clear intersections and sub-divisions while in route.

Tuscola: The Tuscola CRC increased the use of pre-wet systems with their salters. They are also considering adding wing plows to their blade trucks.

Van Buren: The Van Buren CRC installed GPS units in most of their trucks, and currently utilizes plow wings, pre-wetting systems, and more sand/salt mix as opposed to salt alone. The Van Buren CRC contracts out work in subdivisions and lake communities. Union contract modifications lead to reduced overtime and allowed earlier winter start times for plowing. They also hired one full-time seasonal winter driver.

Washtenaw: The Washtenaw CRC established a four inch snow depth policy to reduce local road overtime expense, meanwhile they continue to provide 24/7 services to the primary roads. They have switched to using carbon blades saving \$30,000; and have produced their own cold patch material saving \$40,000.

Wayne: The Wayne County DPS is increasing their operational efficiency through the use of pre-wetting salt; anti-icing spraying; more plowing and blading, and less salting.

Wexford: The Wexford CRC has added GPS, on-board pre-wetting systems, wing blades on half of their trucks, and tracks their salt usage better.

Reforms or Efficiencies Implemented to Reduce Administrative Expenses

Alcona: The Alcona CRC implemented several changes including: freezing salaries for the last two years and anticipated to continue for 2011; reducing travel expenses and increasing online training to reduce remote site training; and eliminating road commission participation in prescription drug co-pay for all employees.

Alger: The Alger CRC creatively managed health care benefits with third-party administrators to modify deductibles, while maintaining coverage. They have increased the number of temporary employees used for peak operations, while refraining from hiring full-time employees.

Allegan: The Allegan CRC reduced their engineering department from three to two people; more work will be done by consultants.

Alpena: The Alpena CRC's recent contract changes will reduce retirement and health care costs.

Antrim: The Antrim CRC made changes to healthcare, including using an HRA and increasing the co-pays to employees.

Arenac: The Arenac CRC capped pension costs and moved to Teamsters health insurance with fixed costs for a four-year contract.

Baraga: The Baraga CRC changed their health insurance plan several times to reduce premiums; and they are one of two counties that changed to enhanced Microsoft Great Plains Software System.

Barry: The Barry CRC has reduced staffing by 20 percent. Reforms were implemented many years ago to reduce/eliminate post-employment benefit costs.

Bay: The Bay CRC is currently in negotiations with both of their unions. Health care and pension cost-sharing are possibilities. The Road Commission also cut one engineering position from administration through attrition which provided a savings.

Benzie: The Benzie CRC's current contract calls for a three year pay freeze and 20 percent contribution towards health care premiums. They also use an HRA. New hires have a different benefit package than current employees. Effective July 1, 2011, any new employees are not eligible for post employment benefits. They reduced seven management positions to five; and in general, continue to reduce their workforce through attrition.

Berrien: The Berrien CRC closed two maintenance garages in three-years to reduce two foreman positions and the fixed costs of a garage. Berrien CRC has also replaced their dedicated weather service with internet-based reports.

Branch: The Branch CRC shares engineering staff with other road commissions, and information technology staff with county offices. They will likely increase the employee share of benefit costs in the next labor agreement renewal.

Calhoun: The Calhoun CRC has eliminated seven administrative positions. Jobs have been combined and no services have been sacrificed. All employees contribute 10% of their health insurance premiums.

Cass: The Cass CRC rolled over their union contract; revised the entire employee benefit packages; and post-retirement benefits for current and future retirees. They also share a manager, engineer and finance director.

Charlevoix: The Charlevoix CRC has not provided administrative wage increases in last four years.

Cheboygan: The Cheboygan CRC continues to negotiate reductions in benefits and increases to co-pays and deductibles.

Chippewa: The Chippewa CRC Clerk currently works only 32 hours per week and pays 20 percent of her health benefits. All other administrative staff serve the Road Commission in multiple capacities; the payroll clerk also does accounts receivable; the manager serves as superintendent; consultants are used instead of an on-staff engineer; the surveyor also serves as the draftsman and designer for local road projects; the engineering technician is also the permit agent and the office manager is also the accountant. Full time administrative employees receive the same benefits as the members of the bargaining unit.

Clare: The Clare CRC capped insurance costs and employees pay anything above the cap; employees pay five percent of their wages toward pension; and the work force has been downsized and more contractors are being utilized.

Clinton: The Clinton CRC has made several changes to increase administrative efficiency including electronic time keeping, mandatory direct deposit for payroll, inventory control, reduced benefits for new hires, continually changing health insurance plans and the amount employees are responsible for paying, and restructuring positions.

Delta: The Delta CRC continues to reduce staff in an effort to bring down administrative expenses.

Dickinson: The Dickinson CRC has implemented several changes to reduce administrative expenses including:

- Wages are frozen for the entire staff for the past three years;
- Health insurance benefits were reduced and the deductible on health insurance has increased as they continually look for ways to cut health care costs;
- Reduced engineering and office staff;
- Initiated a tier system for health care for all new employees; and
- Closed and sold two satellite garages.

Emmet: The Emmet CRC requires all new hires to join a defined contribution plan that reduces the CRC share of pension funding. The Road Commission partially self-funds their health insurance, saving hundreds of thousands of dollars.

Genesee: The Genesee CRC has implemented a variety of changes including: increasing co-pays for employees; and maintaining both premium plans and self-insured plans to decrease costs.

Gladwin: The Gladwin CRC is doing more design work for federal/state aid projects and other locally funded projects in house using the manager and county highway engineer to reduce costs of hiring private consultants. Employee cost participation in health care has increased over the past number of years, and retiree healthcare was eliminated with the last contract negotiations. The elimination of retiree healthcare applies to employees hired after July, 2009.

Gogebic: The Gogebic CRC made several changes to reduce administration expenses including: health care and defined contribution changes with the union and administration working together on cost-reduction options; combining positions and duties – for retirement of administration employees; and cross-training administrative staff to efficiently handle more tasks.

Grand Traverse: The Grand Traverse CRC recently went to a high deductible medical plan and defined contribution pension plans. The number of administrative staff positions has decreased by over 20 percent in the last nine years and everyone left is doing more with less. Grand Traverse CRC recently terminated an engineering position and has created a seasonal snowplow driver/construction technician position. Co-pay reimbursements have been eliminated for administrative staff and union negotiations should yield more cost savings in terms of benefits.

Hillsdale: The Hillsdale CRC switched to high deductible health insurance using an HRA. Employees have also voluntarily agreed to bank winter overtime for time off in summer at 1.5 times. This choice is voluntary at the option of the individual for each day worked.

Huron: The Huron CRC implemented several changes to enhance administrative efficiency including:

- Providing no wage increases or benefit improvements through 2010;
- The County Highway Engineer also serves as the Deputy Drain Commissioner. As such, the Drain Commission shares facilities, administration and all clerical functions with the road commission;
- Huron CRC also manages the Huron County Memorial Airport and the Huron County Park System for the County of Huron. Obvious extensive savings in equipment, facilities and manpower are the result of this venture; and
- Huron CRC road budget is approximately \$14 million, park is over \$41 million, airport is approximately \$100,000, and the drain office budget is several million. All administrative functions for these four departments are handled by only four clerical people, the Finance Director, Park Superintendent, Road Commission Secretary-Manager and Engineer/Deputy Drain Commissioner. By consolidating these operations with the Road Commission, the associated expenses of four separate departments within the county are eliminated.

Ingham: The Ingham CRC froze wages in 2010 and 2011. They are negotiating to cap the employer's costs for health care and retirement. Fewer people are doing the same amount of work.

Ionia: The Ionia CRC made multiple administrative changes including: changes to retiree health care; high deductible health plans with Priority Health and individual health savings accounts; self-funded dental claims; changed vision insurance carrier; more computerization; employees enter own time in payroll system; and no retiree health plan for new hires. When the Ionia CRC accountant retired, her duties were split between the existing employees and she wasn't replaced. Ionia CRC has not replaced any employees since 2006.

Iron: The Iron CRC's Civil Technician has begun to help on winter maintenance thus removing cost from administration.

Isabella: The Isabella CRC shopped around for a cheaper insurance agency in order to reduce their Blue Cross Blue Shield cost; and eliminated the expensive insurance plan.

Jackson: The Jackson CRC continues to reduce staffing through attrition.

Kalamazoo: The Kalamazoo CRC offers many examples of administrative efficiency including:

- Reviewing all operations and equipment for efficiency, and have reviewed their staffing level. This led to the realignment of departments and job descriptions. The Road Commission has reduced staff by 13 positions since 2006;
- Changing their premium contribution, and eliminated cost-of-living increases;
- Kalamazoo County and KCRC collaborate on pension and retiree health programs;
- Investing in personnel training initiatives including management leadership;
- Instituting an evaluation program and performance based incentive system;
- Implementing computer hardware and software upgrades throughout campus, including website and payroll upgrades;
- Management uses smart phone technology for easier access/response; and
- Facilities were consolidated into one campus, including renovations and lighting upgrades.

Kalkaska: The Kalkaska CRC is currently negotiating contracts with their unions.

Kent: The Kent CRC switched from a defined benefit plan to a defined contribution plan (401k).

Keweenaw: The Keweenaw CRC has changed their health insurance plan to an HRA and the plan was changed to UP Blue (now Simply Blue). New hires, if any, will have a greatly reduced benefit package.

Lake: The Lake CRC employees now pay a portion of their health insurance costs.

Lenawee: The Lenawee CRC employees have made several health care concessions.

Livingston: The Livingston County CRC has had no pay increases for non-union employees (salary/hourly) for the past three years. Health and post-retirement benefits have also been reduced.

Luce: The Luce CRC eliminated health insurance for retirees after they become Medicare eligible. They are also using an HRA for employee health insurance.

Mackinac: The Mackinac CRC switched healthcare providers saving \$150,000 each year; and they continue to shop for best value benefits. They have also reduced the number of administrative staff from five to three and set a policy that all new hires including administrative positions get current bargaining unit benefits (defined contribution vs. defined benefit, also reduced medical).

Macomb: The Macomb County Roads Division changed their health care plan and modified the retirement age.

Manistee: The Manistee CRC changed health insurance and pension to require a match from all new hires.

Marquette: The Marquette CRC implemented health insurance reforms saving the Road Commission over \$325,000 per year over the last three years. Administrative employees are contributing more for their retirement benefits and this is currently being negotiated in the bargaining unit contract. Staffing levels have been reduced and they are using third-party administrators and an insurance agent.

Mason: The Mason CRC is using consultants more; and puts examples from other road commissions to use.

Mecosta: The Mecosta CRC's administrative pension and benefits are the same as the union. All employees pay a portion of their health care premiums. The Road Commission offers opt-out for those who have coverage through a spouse.

Menominee: The Menominee CRC changed health insurance plans several years ago. The current health insurance plan provides premium rates up to four years in advance which allows the CRC to improve cost projections. In addition, the current plan offers more cost-effective rates than the previous plan. A wage freeze was in effect for employees in 2009 and 2010.

Midland: The Midland CRC, like most road commissions, has reduced pension benefits, overtime activity, and health care benefits. They also provided no raises for 2011; reduced administrative staff from ten to eight employees over the last five years; and reduced benefits for new employees.

Missaukee: The Missaukee CRC has a defined contribution pension; has not provided raises; and has tried to be as creative as possible with their insurance (reimbursements, deductibles).

Monroe: The Monroe CRC has negotiated cheaper health insurance for retirees over age 65, and reduced the cost of health insurance for regular employees by receiving a greater share from employees.

Montcalm: The Montcalm CRC administrative cost is 3.3 percent of expenditures. They have changed healthcare plans every couple years to reduce costs. In 2010, they changed to a higher deductible/higher co-pay plan and changed from HSA to third-party administered HRA. There will be no more early retirement open windows.

Montmorency: The Montmorency CRC has changed health insurance plans.

Muskegon: The Muskegon CRC eliminated positions; lowered salaries; raised the age limit for retiree benefits; ended "COLA" for retirees; and implemented a high deductible medical plan with significant employee co-pays.

Newaygo: The Newaygo CRC has increased co-pays and deductibles for insurance; capping premiums paid by Newaygo CRC for new hires and dropping spouse coverage for retirees.

Oakland: The Road Commission for Oakland County (RCOC) merged three departments into two. They changed healthcare plans, increased employee contributions, and no longer will reimburse future retirees for Medicare Part B costs. RCOC has also reduced its workforce by more than 20 percent and is continuing to do so by attrition.

Oceana: The Oceana CRC changed insurance plans to reduce costs.

Ogemaw: The Ogemaw CRC changed their healthcare plan and self-fund a portion of co-pays and deductibles to help save on premium costs. They also downsized office staff from three positions to two.

Ontonagon: The Ontonagon CRC reduced their staff by 50 percent through attrition.

Osceola: The Osceola CRC employees now have maximum amount that the road commission will put toward retirement. Employees are responsible for anything above 11 percent. A similar arrangement was made for health care.

Oscoda: The Oscoda CRC is currently looking into changing their health care plan.

Otsego: The Otsego CRC's current contract went into effect in 2008 and expires in 2012. In the current contract, the Road Commission implemented health insurance reform for retirees and new hires. The amount of sick and vacation payouts at retirement were reduced for administrative (non-union) employees. Over the past several years, the work force has been reduced by one-third due to attrition.

Ottawa: The Ottawa CRC has been under a wage freeze for two years; they are limiting the replacement of employees through attrition; and requiring employee contributions to retirement and health care.

Presque Isle: The Presque Isle CRC's last employee and administrative contract included a three year pay freeze; health insurance reforms; and high deductibles. Grants were obtained to update

lighting, reducing energy costs. The Road Commission also installed new furnaces that are more efficient.

Roscommon: The Roscommon CRC changed their health care provider, but still has 100 percent coverage through H.S.A.

Saginaw: From 2008-2010, the Saginaw CRC implemented a variety of cost-saving administrative reforms which yielded \$1,665,950 in annual savings including:

- The elimination of 6 management positions (2 IT Personnel, 1 Surveyor, 1 Construction Foreman, 1 Assistant Manager, 1 Assistant Engineer) and 5 union positions (1 Rodman, 3 Inspectors, 1 Stock Clerk) resulting in **annual net savings of \$968,000**;
- Modified health care plan without reducing benefits resulting in **anticipated savings of \$450,000 annually**;
- Reduced opt-out pay for health care by 50 percent for an **annual savings of \$16,800**;
- Eliminated 15 cell phones for an **annual savings of \$7,200**;
- Eliminated vehicles driven by four full-time and three part time employees for an **annual savings of \$136,000**;
- Reduced travel expenses by 42 percent for an **annual savings of \$11,000**;
- Reduced office supply expenses by 45 percent for an **annual savings of \$8,450**;
- Expanded Automatic Vehicle Location (AVL) system by including Mosquito Control and the City of Saginaw for an **annual savings of \$2,000**;
- In-house production of annual report for an **annual savings of \$6,000**;
- Substantially increased efforts in billing for property damage (signs, guardrail, road surfaces) which brought in **\$25,000 in 2010**; and
- The following minor changes saved an **accumulated \$15,000 annually**:
 - Eliminated P.O. Box and Delivery Service;
 - Reduced advertising costs by enhancing the website;
 - Eliminated the dedicated weather service (now done with internet);
 - Eliminated the music service for the phone system (now done in house);
 - Consolidation and changes within the IT department including changing phone service, eliminating lines, changing internet service, eliminating copiers and printers, changing modem service for GPS and Foreman wireless connection, and eliminating programming software.

Sanilac: The Sanilac CRC made changes to their employee and retiree health care plans. This has brought their 2010 total cost back down to 2005-2006 levels. They have also centralized equipment maintenance.

Schoolcraft: The Schoolcraft CRC implemented more efficient office procedures; utilize spreadsheets for better inventory control; and reduced staffing in the engineering department. Employee pay has been frozen since 2007. The Road Commission has changed health insurance carriers; and is currently undergoing an energy analysis for a district-wide heating co-op utilizing a bio-mass heating plant. They installed a waste-oil furnace and insulation at a satellite garage to reduce heating expenses.

Shiawassee: The Shiawassee CRC reduced pension benefits and eliminated retiree health care for employees hired after 1996.

St. Clair: The St. Clair CRC has made several changes to enhance administrative efficiency including:

- The Deputy Managing Director, Purchasing Agent, and Shop Foreman positions were eliminated;
- During 2005 negotiations all employee raises were tied to the MTF. If the MTF declined, no raises were given. Employees have not received a raise since 2005;
- The Road Commission became self-insured for health, dental, and prescription drug coverage;
- Outsourcing shop operations resulting in reduced worker's compensation claims;
- The Road Commission has refinanced debt; and
- Engineering staff performs in-house bridge design thereby reducing overall bridge replacement/repair costs.

St. Joseph: The St. Joseph CRC has implemented several administrative efficiencies including: sharing a manager with Cass CRC; sharing an insurance plan with the county; sharing copy paper purchases with the county; initiating a CRC funded HRA with higher deductibles into employee health plan to reduce the premiums; rolling over their union contract; replacing retired staff with agency help eliminated benefit costs; installing energy efficient lighting in garages; and they are investigating an automated timekeeping system.

Tuscola: The Tuscola CRC is currently redoing the health insurance plan including increased co-pays and deductibles for cost savings.

Van Buren: The Van Buren CRC revised their labor agreement to reduce health and pension benefits. They have also reduced the number of supervisory/administrative employees.

Washtenaw: The Washtenaw CRC eliminated the retirement cost-of-living adjustment benefit for new hires; they have contained health care costs by becoming a self-funded health care provider; and revised drug co-pays to increase generic drug and use experience. Employees are cost sharing health care premiums, the Road Commission is promoting wellness programs and implemented an early return to work program for worker's compensation injuries.

Wayne: The Wayne County DPS employees contribute to the cost of health care and have experienced a 10 percent wage cut.

Wexford: The Wexford CRC reduced health care costs, instituted higher co-pays, and required additional contributions to pension.

Reforms that Could Serve as an Example to Other Road Agencies

Alcona: The Alcona CRC employs asset management principles to aid township officials in deciding which road projects to consider; hosts training opportunities for township officials to learn asset management principles; uses the Roadsoft software; has inventoried all road signs and is in the process of inventorying culvert locations; seeks and implements valuable employee input for solutions to funding-related shortfalls resulting in such things as agreeing to carry extra job duties or work outside or beyond current duties; rehabilitating and refurbishing aging equipment to extend usage; and streamlining operations.

Alger: The Alger CRC concentrates on maintaining communication and relations with townships, cities, villages and the County Board of Commissioners. They provide information to the public, through media releases for projects, activities, policies, and funding challenges.

Allegan: The Allegan CRC has minimized their crew's involvement on construction projects. Their local road projects are let out to bid and financed 100 percent by townships.

Baraga: The Baraga CRC worked closely with the County Board to keep three road commissioners instead of five to avoid unnecessary increases in administrative costs.

Barry: The Barry CRC has implemented health insurance reform, resulting in 2010 healthcare costs that are lower than 2002 healthcare costs, and no pay increases for 2011 for administrative and union staff.

Benzie: The Benzie CRC has a policy that any employee, including the Engineer-Manager, who takes a vehicle home on a daily basis responds to tree calls and other after-hour emergencies. In addition, they are in rotation for winter weekend work.

Berrien: The Berrien CRC uses wing plows for winter maintenance allowing them to operate with less staff. They have downsized their work force by attrition.

Calhoun: The Calhoun CRC requires 10% premium participation on health, life, and dental insurance.

Cass: The Cass CRC continues to develop a customer-focused process to determine what services are desired. They have established a joint operation with the St. Joseph County Road Commissions and operate their own asphalt plant allowing forced account work.

Chippewa: The Chippewa CRC does not purchase any more than 600 tons of road salt per year and every bit of that is mixed with sand for traction control. They apply salt/sand mix on hills, curves and intersections when slippery conditions exist, and do not use pure salt on any of their roadways. This is a huge savings for their county. Chippewa County residents have become accustomed to this over the years and the Road Commission hears very few complaints about it.

Clinton: The Clinton CRC is continually tweaking legacy cost and benefits even if it means having to go to the mat on issues- making the harder decisions.

Delta: The Delta CRC's new intergovernmental cooperation agreement looks to be very promising. It will take some time to see how far this goes, but they have high hopes for many additional agreements.

Emmet: The Emmet CRC recently installed outdoor wood furnaces and started burning wood cut from county roads to heat two of their main garages. This has reduced their heating bills by 50 percent. They also installed energy efficient lighting in their garages that improve lighting and reduced their electric bills by 20 percent.

Genesee: The Genesee CRC implemented many changes that serve as examples to other road agencies including:

- Consolidating their traffic and engineering departments;
- Implementing a vendor managed inventory (VMI) process that, over five years, reduced the on-hand vehicle parts inventory by over \$2 million dollars and reduced the number of full-time employees needed to maintain this inventory from three to one;
- Initiating a process of using private snow plow companies to supplement CRC efforts in major winter storms; and
- Initiating a process to communicate overnight winter storm response efforts to schools, colleges and universities in the county.

Gladwin: The taxpayers of Gladwin County have supported a county-wide road and bridge millage for the past 43 years (since 1968) which has enabled the Gladwin CRC to complete numerous road and bridge projects. The Gladwin CRC has diversified staff that are very experienced in road and bridge maintenance and construction activities making them more efficient and cost-effective.

Grand Traverse: The Grand Traverse CRC installed energy efficient lighting in their garage and has participated in a county-wide governmental energy audit to produce more recommendations for energy savings. GTCRC is using social media to inform citizens about current projects, perform public education and to field service requests.

Huron: The Huron CRC operates the Road Commission like a business and has implemented several reforms that could serve as an example to other road agencies including:

- Three tandem trucks were rebuilt in-house with complete cabs and other used components from salt-free southern states. For an investment of approx \$12,000 the Road Commission basically has three new trucks;
- On-line auctions have been utilized extensively to purchase used pickups and other equipment;
- The Road Superintendent retired and was not replaced. His job duties were spread over other staff;
- Everyone on staff including the manager has a CDL and is capable of plowing snow;
- Every single invoice is scrutinized for accuracy; and
- Extensive "shopping" is done to create the best purchase price possible for all items.

Ingham: The Ingham CRC contracts with the county for HR functions.

Ionia: The Ionia CRC has not provided pay increases for union or non-union employees since 2008. Yearly changes are made to health insurance coverage to keep premium costs down. They are using part-time engineering technicians for design and inspection.

Isabella: The Isabella CRC now builds salt trucks in house at a cheaper cost, allowing them to keep staff employed.

Kalamazoo: The Kalamazoo CRC made several technology enhancements, cross trained staff, and completed a thorough review of all programs/services for operational efficiency. They also collect asset management data on the local road system. This data has been used to provide five-year plans for townships to consider funding levels needed for preventative maintenance.

Luce: The Luce CRC has saved substantially by insulating their garage and installing radiant heat.

Mackinac: The Mackinac CRC has eliminated the use of straight salt on county roads. They sand only hills, curves and intersections.

Macomb: The Macomb County Roads Department uses retirees to supplement snow removal operations.

Marquette: The Marquette CRC equipment repairs are done using quality used parts when available. Equipment has been rebuilt/refurbished rather than selling it and buying new. Old equipment is held onto for parts to keep other equipment running. Extensive shopping and bartering is done to ensure the lowest price is paid for parts and outside equipment repair.

Mecosta: The Mecosta CRC reduced the starting wages for new hires (employee union contract) by \$5 per hour with five years to reach normal wage.

Midland: The Midland CRC offers several changes that could serve as an example to other agencies including:

- Reducing the starting wage and benefit for new hires;
- Using a Consumer Energy Power Company grant to partially pay for new energy saving lighting fixtures. Payback for the new lighting retrofit is five years; and
- Saving money by building their trucks rather than outsourcing the work to a private entity.

Muskegon: The Muskegon CRC for many years has practiced health care cost containment.

Oakland: RCOC has, over the last four decades, created a safety culture that ensures that safety is the top priority guiding and infusing all agency activities. As a result, RCOC has helped to drastically reduce the traffic fatality rate in the county, bringing it from significantly higher than the state and national levels to substantially lower than the state and national levels. Today, Oakland County has one of the lowest traffic fatality rates for a community its size and population in the world.

Ogemaw: The Ogemaw CRC has changed their healthcare plan and self-fund a portion of co-pays and deductibles to help save in premium costs. They have downsized office staff from three to two positions.

Osceola: The Osceola CRC went to a no-guarantee 40 hour work week.

Otsego: The Otsego CRC offers the following examples that help their agency to run efficiently and effectively:

- Extending an invitation at least annually to all townships to meet and discuss projects or any items of interest. The Road Commission has established excellent working relationships with townships, cities and villages. Many of the projects could not be done without their participation;
- Advertising when a project is about to begin and any special conditions involved, such as detour information. Local law enforcement and emergency organizations are also notified;
- Building their own salt/sand trucks for many years at a great cost savings over having them built by outside vendors. The Shop Foreman and Parts Manager work very hard to shop for parts and services to get the best value for the dollar;
- Conducting a monthly materials inventory to encourage the crew to estimate loads more accurately and to avoid large adjustments at the end of the year. Monthly salt inventories are done during the winter;
- Installing new, highly efficient lighting in the shop and part of the garage; and
- Using CRAM's listserv program, legislative updates and educational mailings, and seminars as a resource to exchange operational efficiencies.

Presque Isle: Presque Isle CRC's contract with MDOT for state maintenance is slightly different from the CRAM contract. There is no audit to cost on equipment. Equipment and maintenance advances have been paid back. The contract must have "some type" of benefit for road commissions.

Roscommon: The Roscommon CRC relies on asset management and new mix of fixes ideas.

Saginaw: The Saginaw CRC has implemented administration reforms in the areas of communications, drug testing, GIS, and miscellaneous internal improvements:

- **Communications:** In 2008, SCRC's antiquated radio system was replaced with digital handheld radios that run on the State of Michigan system. Prior to replacement, only select pieces of equipment had radios in them which obviously limited communication, and presented a very serious liability in the event of an emergency. In addition, communication was limited to internal use and Central Dispatch. The new system allows everyone to carry a radio with them regardless of the piece of equipment they are in. SCRC now has coverage throughout most of the state, and are interoperable with emergency services when needed. Internally, it allows each department or district to have their own channels without concern of interfering with the rest of the organization.
- **In House Drug & Alcohol Testing:** Utilizing the Saginaw CRC office as a test site rather than sending everyone to Covenant reduced the amount of time spent per employee

from approximately 2 hours, on average, to about 30 minutes. Although there is not actual money saved, there are significant efficiencies created by getting the operators back onto the road.

- **GIS System:** Over the last few years, the Saginaw CRC has enhanced its use of the GIS system significantly. In addition to the general information on the site, they have all of their old road and bridge plans available. In the interest of Asset Management, they have also included all RR crossings, traffic signals, guardrail, pavement markings, easements, rumble strips, road ratings, traffic control orders, traffic counts, and are currently working on culverts, drainage systems, and signs.
The addition of this data and the ability of SCRC staff to access it while in the field have substantially increased their productivity and efficiency. It has also allowed them to manage and maintain their road system with less management staff than in the past.
- **Additional Internal Improvements:**
 - Payroll reforms- Saginaw CRC currently offers automatic deposit to all of its employees as part of payroll. This program has not only drastically reduced the amount of time spent printing and preparing paychecks for employees, but has also had an impact on their administrative costs by reducing the amount of paper, ink, and envelopes used;
 - Pubworks – Database that logs calls from the public. Calls are input, prioritized, and sent to the Maintenance Department for review. Much more systematic, and ensures a timely investigation or response to the caller. No longer can a call from the public slip through the cracks unnoticed or unattended to;
 - Auto Downloading of time sheets and fuel dispensing - Created a savings of approximately 20 hours per week inputting data in the Accounting Department;
 - Automatic withdrawal for retiree healthcare payments – Convenience for retirees, less paperwork to deal with in the office; and
 - Credit Card acceptance – Simple convenience for the public at no cost to the Road Commission.

Sanilac: The Sanilac CRC has centralized the maintenance and preventative maintenance of their equipment.

St. Clair: The St. Clair CRC outsourced shop operations resulting in decreased downtime and increased fleet availability. Including all governmental agencies reduced their overhead. This allowed them to concentrate on their core function-road and bridge maintenance.

Van Buren: The Van Buren CRC eliminated their contract with MDOT for maintenance on state roads to reduce overall costs and maintain uniform county-wide operations.

Washtenaw: The Washtenaw CRC implemented best management practices known as ISO-9001; this has created a documented system of procedures that strives for continuous improvements in their management practices and improved customer service.

Wayne: The Wayne County DPS installed AVL system and dash mounted web cams on patrol vehicles.

Wexford: The Wexford CRC is now using an outdoor wood burner to heat the truck garage; GPS units in trucks were added for improved efficiency; and an extensive use of mix of fixes is used for preventative maintenance and partial reconstruction.

If you would like additional information about any of the reforms or efficiencies listed in this report, a directory of Michigan's county road agencies is available at <http://www.micountyroads.org/crcs.htm>