

Southern Region Forest Health Update

Wisconsin DNR, Forest Health Protection Unit
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Mark Guthmiller (Southern Region Forest Health Specialist)
Articles in this newsletter were written by Mark unless otherwise noted

Gypsy Moth Program Updates (Bill McNee)



Newly hatched gypsy moth larvae on an egg mass.

DNR Suppression Program

This year's first gypsy moth hatch was seen in Beloit and Madison on May 9. The later-than-average hatching date is due to the cold spring we have had in 2011. In contrast, last year was exceptionally warm and hatch was seen on April 8, 2010.

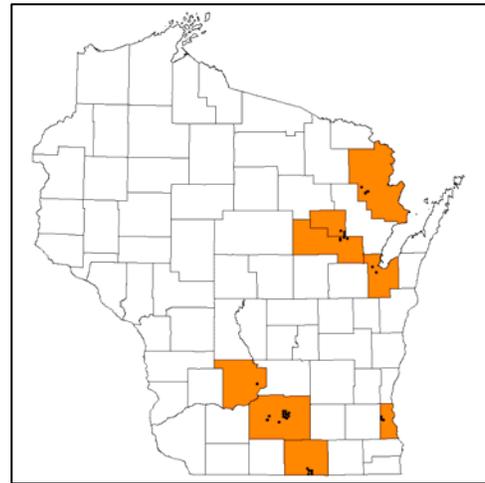
As a result of the late hatch, we are expecting to be spraying for gypsy moth in the southern counties in the later part of May. It is still too early to predict a target spray date. Maps of the proposed DNR suppression program treatment areas are now available online at www.gypsymoth.wi.gov. This year the program plans to spray approximately 3,000 acres in 8 counties. For more information, visit www.gypsymoth.wi.gov.

Email Spray Notification and Info Line

Community residents interested in knowing when the spraying will occur can visit the gypsy moth website and sign up for a daily email notification, or call 1-800-642-MOTH for a daily recorded update.

Federal Cost Sharing

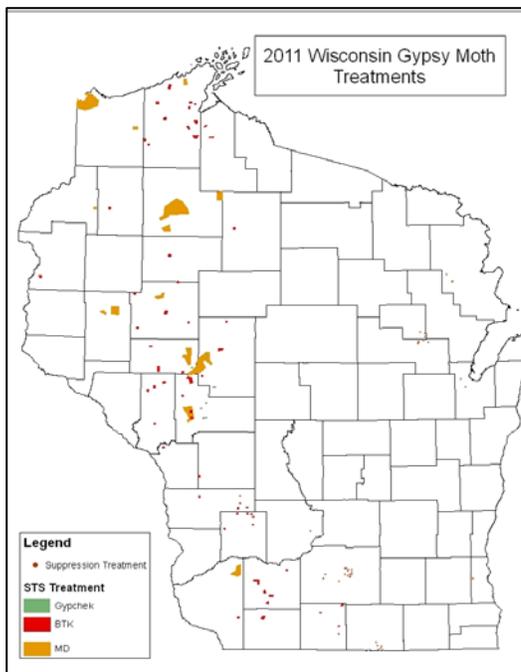
Cost sharing at or close to 50% of treatment and administrative costs will be available to participating applicants in the DNR suppression program. The federal process for receiving this funding has become more competitive than in previous years.



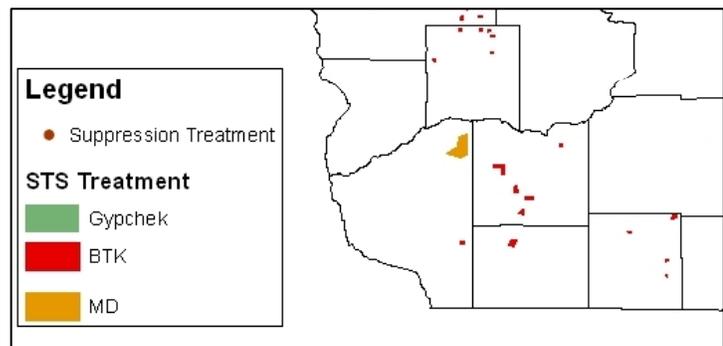
Counties with DNR gypsy moth program treatment areas are shown in orange.

WI DATCP Slow-the-Spread (STS) Program

The slow-the-spread program run by the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) plans to aerially treat about 250,000 acres in 22 counties this year. Maps are available online at www.gypsymoth.wi.gov. Click on the yellow county and then click on the spray block to see a detailed boundary map.



2011 DATCP STS and DNR treatment areas.



2011 DATCP STS areas in SW Wisconsin including Grant, Green, Iowa, Lafayette and Richland Counties.

Private Aerial Applicator Information

We continue to hear of landowner interest in hiring private applicators to do aerial spraying for gypsy moth this spring. A list of for-hire aerial applicators is available on the state's gypsy moth website, www.gypsymoth.wi.gov. Applicators should be contacted immediately. For more information on conducting a private aerial spray go to: <http://dnr.wi.gov/forestry/Fh/spray/>

Home Owner Controls

Homeowners who are interested in reducing gypsy moth populations now that hatching has begun should consider scraping and drowning unhatched masses in soapy water and putting up sticky bands. Burlap collection bands should be prepared in early June. More information about management options for



Sticky barrier band keeps crawling caterpillars out of the tree.

homeowners and woodlot owners is available at www.gypsymoth.wi.gov.

Hiring a Private Arborist

Homeowners considering insecticide treatments this spring should contact an arborist or tree service very soon. The Wisconsin Arborist Association has a list of certified arborists available at www.waa-isa.org. Additional businesses offering insecticide treatments may be found in the phone book under 'Tree Service.' Homeowners can also purchase insecticides (some applied as a soil drench) at garden centers and large retailers.

Caution, It May Not Be Gypsy Moth

Forest Tent and Eastern Tent Caterpillars

As we rapidly approach the growing season be aware that in certain parts of southern Wisconsin we might experience high numbers of "forest tent caterpillars" and "eastern tent caterpillars", along with other spring defoliators. Be especially alert in eastern Sauk, western Columbia, and northern Dane Counties for damaging levels of forest tent caterpillars. It is also possible we may see other areas impacted by this defoliator as well, including urban areas as the adult moths are attracted to lights. Attached is a link to a great caterpillar ID sheet to compare gypsy moth, forest tent caterpillar, and eastern tent caterpillar. Keep this ID sheet handy or share with those who have questions about identification. Both forest tent and eastern tent caterpillar usually hatch ahead of gypsy moth and we are starting to see the tents being formed by eastern tent caterpillar at this time. Remember that the forest tent caterpillar does NOT make a tent.



Eastern tent caterpillars hatching and starting to form tent

Caterpillar identification document:

<http://www.otsego.org/msue/bulletins/E2299.pdf>

For additional information on tent caterpillars:

Forest tent (does not make a tent):

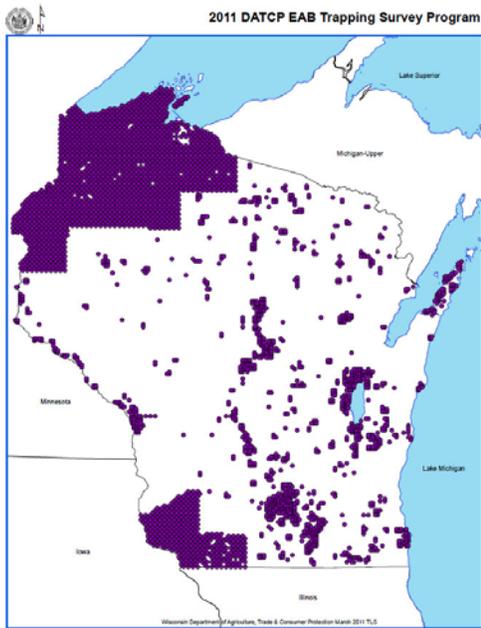
<http://www.na.fs.fed.us/spfo/pubs/fidls/ftc/tentcat.htm>

Eastern tent caterpillar:

<http://learningstore.uwex.edu/Assets/pdfs/A2933.pdf>

Emerald Ash Borer Updates (Bill McNee)

WI DATCP EAB Purple Panel Trapping Program



2011 EAB trapping plan. Map by DATCP.



Purple Panel Trap

DATCP has begun hanging approximately 6,000 purple EAB traps this year. About 2,000 will be on a grid in northwest and southwest Wisconsin, while the rest will be risk-based and placed at campgrounds, wood-utilizing businesses, etc. Traps are not being placed in Kenosha, Milwaukee, Ozaukee and Washington Counties because EAB has already been detected there. If you see a purple trap lying on the ground, please email Becky Gray at DATCP (rebecca.gray@wisconsin.gov). A trapper will re-hang the trap.

WI DNR EAB “Double-Decker” Purple Panel Trapping Program



Double-Decker EAB trap used in state parks and forests.

DNR forest health staff have also deployed ‘double-decker’ EAB traps in a number of state parks and forests. These traps are not practical to set up in large numbers, but may be able to detect EAB at lower populations than a standard trap hung in a tree. We will be monitoring these traps during the season.



Forest health staff, Sally Dahir, assembling a trap.

EAB Parasitoid Wasp Release Planned by UW-Madison

Later this month, researchers from UW-Madison are planning to release two species of small, stingless wasps near Newburg to help control the emerald ash borer. Both species attack the EAB larvae beneath the bark. A third natural enemy, which attacks the EAB eggs, will be released later this summer once the EAB adults are laying eggs. For more information, read the recent DNR news release at: http://www.dnr.wi.gov/news/BreakingNews_Lookup.asp?id=2083.

Marmorated Stink Bug (Bill McNee)

Over the past few months we've been mentioning another invasive pest called Brown Marmorated Stink Bug because of its nuisance factor and agricultural damage. Unfortunately, this pest has been found in northern Illinois. For more information and some pictures of what the insect can do to agricultural crops, visit: <http://bulletin.ipm.illinois.edu/article.php?id=1461>.



Brown Marmorated Stink Bug. Photo from www.forestryimages.org.

Rhizosphaera Needle Cast (Kyoko Scanlon)

A number of reports have been coming in this spring regarding *Rhizosphaera* needle cast on spruce. *Rhizosphaera* fruiting bodies were confirmed on a couple samples that were submitted and numerous other reports were received. The disease is caused by the fungus, *Rhizosphaera kalkhoffii*. Infected needles turn purple to brown, and later fall off. Symptoms often start with inner needles on the lower branches, and progress upward. Spores are produced from infected old needles during wet conditions in the spring to spread the disease. Although infections occur in the spring, the development of needle symptoms is delayed until the following spring.



Small pin-head size black round fruiting bodies on infected needles

Diagnosis can be made by looking for rows of small pin-head size black round fruiting bodies on infected needles. Colorado blue spruce is especially susceptible to this disease, however, other spruce species, such as, white, black, and Norway spruces can also be infected. Different species of *Rhizosphaera* (*Rhizosphaera pini*) infects fir needles, and causes similar symptoms.

Recommendations to control this disease include; maintain the health of the trees by properly watering and fertilizing, properly prune dead or severely infected branches, and remove lower branches to encourage air circulation. When shearing is performed, healthy trees should be sheared first to avoid transporting spores to healthy trees, and also shearing should be avoided when the needles are wet. It also helps reduce disease spread by sterilizing shearing tools by dipping them in bleach solution after shearing diseased trees.

Applications of fungicides that contain chlorothalonil (Trade names: Bravo or Daconil) in spring can be effective to protect new growth from infection. Fungicide applications may be practical if infected trees are scheduled to be harvested as Christmas trees in a few years. Applications should be made when new needles are half elongated and again when needles are fully elongated, or every three to four weeks during wet periods. Repeated years of applications may be necessary.

There are factsheets that describe this disease, including cultural and chemical control options. Some of them are from UW Extension at <http://hort.uwex.edu/sites/default/files/Rhizosphaera%20Needle%20Cast.pdf> and from Ohio State Extension at <http://ohioline.osu.edu/hyg-fact/3000/3059.html>.

White Pine Blister Rust

Two sites visited this month (Lafayette and Dane County) both had white pine with a fair incidence of blister rust causing branch dieback and some tree mortality. At the Dane County site the yellow-orange aecial blisters were forming. At the Lafayette site there was saw log size white pine with many cankers forming at the base of the trees. It was common to find a very small branch with old needles that likely served as the infection court where the basal cankers formed. Some evidence of turpentine beetle was also present at the Lafayette Co. site.



Aecial blisters forming on a white pine branch



Blister rust basal canker with small stem and needles that likely served as infection court.



The alternate host, ribes, growing in the plantation.

For information on managing white pine blister rust go to: http://www.na.fs.fed.us/spfo/pubs/howtos/ht_white/white.htm

Cedar Bark Beetles

A small infestation of cedar bark beetles were observed on our DNR office grounds this spring. Some off colored foliage and thin crowns appeared on a few northern white cedar last fall and a couple trees started to exhibit browning over the winter in the upper canopy. Investigations indicated the trees were being infested by a species of cedar bark beetles believed to be in the genus *Phloeosinus*. These beetles are generally considered non-aggressive and need stressed trees to attack. The trees impacted at this site were under excess water stress due to lack of proper drainage of the site after the parking lot was re-paved. To reduce spread the DNR operations crew removed and burned the most infested trees that were likely to die this year. I've noticed similar bark beetle damage to northern white cedar a few years ago at a boat landing area due to extended high flood waters on the Rock River.



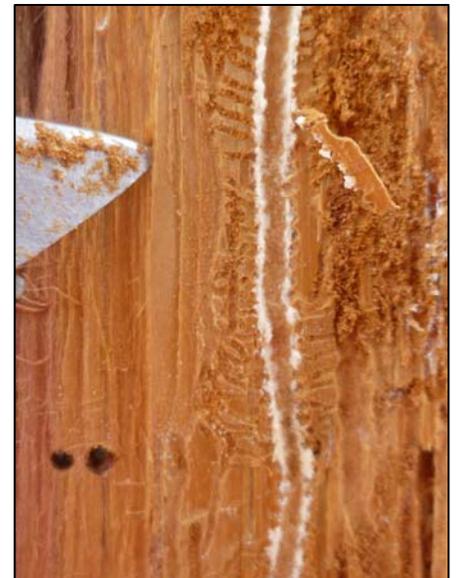
Thinning and browning canopy of northern white cedar



Reconstructed parking area causing poor drainage and stress to trees.



Small round adult beetle exit holes on outer bark.



Vertical egg laying gallery with horizontal larval galleries.



Adult cedar bark beetle that was getting ready to emerge

Request for Reports of Declining Walnut and Walnut Mortality

Thousand Canker Disease Survey Efforts

Dieback and mortality of eastern black walnut (*Juglans nigra*) may be caused by an insect/disease complex called Thousand Cankers Disease (TCD), which has been observed in western states. The first confirmation of TCD within the natural range of black walnut was made in Tennessee in July 2010. This disease **has not** been confirmed in Wisconsin to date, and we should be on the lookout for it. In 2011, the Forest Health Protection Program plans to continue our detection efforts for this problem and we need your help.

TCD is caused by spores of a canker-causing fungus, *Geosmithia morbida*, being carried by the walnut twig beetle (*Pityophthorus juglandis*). The fungus creates numerous small cankers beneath the bark. Symptoms include yellowing/wilting in the crown in late June to late August, and branch mortality/crown dieback. An infested tree often dies within 3 years once symptoms develop.

Black walnut grows mainly in southern Wisconsin as a component of hardwood cover types and in plantations. It is highly valued for the quality of wood as well as an important food source for wildlife and people. Black walnut is also found in urban landscapes. The potential damage of this disease to Wisconsin's forest resources could be great, due to the value of the species, susceptibility of the species to the disease, and the ability for the beetle and the pathogen to survive in the climate in Wisconsin.

If you observe crown dieback or mortality of black walnut, please contact your [regional forest health specialist](#). A form may be sent to request additional information and to discuss a possible site evaluation. We are in the process of developing a webpage to share more information on TCD. In the mean time you can learn more by going to: http://na.fs.fed.us/pubs/palerts/cankers_disease/thousand_cankers_disease_screen_res.pdf.

WVOA Bad Axe Chapter Field Day

Richland County DNR Foresters Jake Elder and Mike Finlay worked with the Wisconsin Woodland Owners

Bad Axe Chapter to offer a field day to discuss forestry and forest health topics, including tree defect issues. A number of trees with various external defects were marked and cut prior to the field day. A portable saw mill was set up and boards were sawn during the field day session so landowners and foresters could observe how the external defects impacted the lumber after it was sawn. We were fortunate to have Jane Cummings Carlson and Kyoko Scanlon attend and share their expertise. The gracious hosts of the field day were tree farm owners Steve and Carol Stephenson.



Richland Co. DNR forester, Mike Finlay, discusses timber harvesting and order of removal concept.



Richland Co. DNR forester, Jake Elder, discusses tree planting and seedling protection products.

A number of topics were discussed including possible sap streak disease of maple. Samples have been taken from this log and are being tested to confirm if it is indeed sap streak disease. Interestingly this was the site of previous decline in sugar maple associated with squirrel damage at the base on the trunks of many sugar maples.



DNR forest health program coordinator, Jane Cummings Carlson, discussing seem defects in maple.



DNR forest pathologist, Kyoko Scanlon, discussing possible sap streak disease on maple.

Bare Naked Boxelders

And you thought I was kidding! I had received an email from a landowner in Columbia County concerned about some kind of trees in his woods completely stripped of bark. My first assumption was he was looking at old dead elms that had sloughed off bark. He sent some pictures and my best guess was it was boxelder with squirrel damage. The next day, around mid April, I was passing through Dodge County and noticed a number of “bare naked boxelders” at a rest area along a river. It was possible to see some small incisor marks indicative of squirrels on those trees. One could even observe many old wounds created previously by the squirrels once you started looking. So for those of you wanting a natural control for this aggressive native pioneer tree species, support for a squirrel breeding program for boxelder tasting preference may be in order. Since porcupine can also strip bark one can measure the incisor width to confirm. Forest Pest Specialist, Brian Schwingle, contacted professor Scott Craven who shared the difference in incisor width. (For a gray squirrel the incisor widths vary from 1.3 -1.7 mm, for a porky its nearly 3x's that.... 3.6-4.8mm)



Clockwise: Bare naked boxelder, incisor marks, and old squirrel injury.

Information on why squirrels strip bark: (I particularly like reason #4- “Squirrels may strip bark simply because they enjoy doing it. Just like some people enjoy doing less than ordinary activities, some animals may also be less than ordinary.” Anyone going to defend the squirrels!)
<http://icwdm.org/wildlife/Squirrels/BarkStripping.aspx>

Interesting old article from Minnesota related to sugar maple and squirrel damage:

http://www.forestry.umn.edu/prod/groups/cfans/@pub/@cfans/@forestry/documents/asset/cfans_asset_257205.pdf

Bur Oak Blight (BOB) Update

Kyoko Scanlon shared some results of bur oak samples sent to Iowa State University for testing for the fungal leaf disease, Tubakia, also known as “bur oak blight” or “BOB”. Below is the response on sample identification sent by Doug McNew, Iowa State University, Department of Plant Pathology:

[From *Quercus macrocarpa* Monroe, WI in Green county we isolated the Bur Oak Blight (BOB) Tubakia. As Tom mentioned the symptoms of discreet and coalesced necrotic spots on the tissue are not what we typically see associated with BOB west of the mississippi, almost always veinal necrosis.

From *Q. macrocarpa* Cross Plains, WI in Dane county we isolated BOB from veinal necrosis and a Tubakia sp. which we call the post oak type from a necrotic spot. It's not uncommon to find different Tubakia species on the same leaf. We have found the post oak type Tubakia on bur, post and chinkapin oak. It may be associated with spot or veinal necrosis and very difficult to tell apart from BOB unless you isolate a culture or sequence the ITS region. It doesn't appear to be or rarely is associated with tree decline like BOB, at least west of the misissippi.]

Back in August of 2001 I investigated some sites in Lafayette County that were experiencing Tubakia leaf blight disease. Shown below are some pictures from that year.

For more information on “BOB” go to:

<http://fms.extension.iastate.edu/vod/video/2010BobPresentCIC.html> (Video)

<http://www.ipm.iastate.edu/ipm/hortnews/2011/2-9/buroakblight.html>



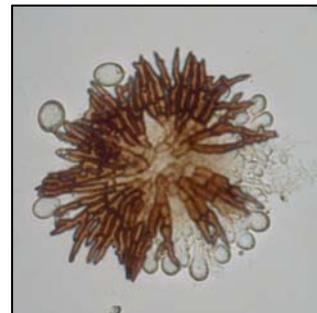
Bur oak blight appeared more common along road and woodland edges with cattle grazing



Necrotic spots that look similar to what was described from the Green County sample confirmed for “BOB”. This may however be a different species of Tubakia.



Refoliated bur oak from severe blight damage.



Pycnothyrium fruiting structure of Tubakia

Miscellaneous Topics

Spring Camping Season and Firewood Movement (Bill McNee)

As we approach the start of the 2011 camping season, remind the public to buy firewood near where they plan to burn it in order to reduce the spread of invasive pests. Attached is a link to a map that explains the state's restrictions on firewood movement, and should help to make the rules less confusing.

https://onlineservices.datcp.wi.gov/eab/articleassets/EAB_GM_Firewood_Restrictions.pdf

For more information on firewood movement, please visit the WI DNR website at <http://dnr.wi.gov/invasives/firewood/>. Be aware that private campgrounds, county parks, national parks and national forests may have their own restrictions that are not covered on the map.

In addition, here's a new "Don't Move Firewood" poster that is available for distribution. Contact a forest health specialist if you would like us to send you an email with the attached document.

PROTECT THE TREES
where you live,
play or camp.

Get FIREWOOD where you use it.

Insects and diseases that kill trees can hide and hitchhike in firewood.

DON'T GIVE THEM A FREE RIDE.
DON'T MOVE FIREWOOD.

You can help keep the trees in Wisconsin's yards, parks and forests healthy and beautiful.

How?
It's simple.

Don't move firewood.

Firewood easily transports harmful pests and other problems to trees in your backyard, along your street, or at your favorite campsite. **Firewood that looks clean may actually be hiding insects** or the tiny spores of a tree-killing fungus.

Instead of taking firewood along on your next camping trip or bringing some home with you from far away, **get your firewood where you're going to use it.** Make sure that it was produced from trees harvested nearby. Consider buying your firewood from a **certified firewood dealer.**

Many campgrounds now restrict firewood use. **Call ahead** for specific information for your campsite.

Remember, **insects and diseases that can kill trees are excellent hitchhikers** in firewood.

To help protect the trees in all your favorite places **don't give those tree-killers a free ride** and **don't move firewood.**

dnr.wi.gov (search: firewood)
1-877-303-WOOD

Wisconsin Emerald Ash Borer Program

DATCP ADMIN PLAN 274 (10/11)

Forest Health Publications

Ordering Publications - As the field season approaches, DNR staff can order forest health and other forestry brochures from the following link: <http://intranet.dnr.state.wi.us/int/land/forestry/Publications/>. Non-DNR staff can order publications by sending a note to the email link at the external web site for DNR forestry publications: <http://dnr.wi.gov/forestry/publications/>. If any problems or questions contact your forest health specialist.

SOR Forest Health Assistance
Wisconsin DNR, Forest Health Protection Unit
September 2010 to September 2011

Contacts for DNR staff, municipal foresters, and forestry cooperators

For general forest health and municipal level urban forest health issues

Mark Guthmiller (SOR region: SCR & SER combined) 608-275-3223

For gypsy moth

Mark Guthmiller (SCR Team area) 608-275-3223

Bill McNee (SER Team area) 920-662-5430

Andrea Diss-Torrance (Statewide issues) 608-264-9247

For emerald ash borer

Mark Guthmiller (SCR Team area) 608-275-3223

Bill McNee (SER Team area) 920-662-5430

For beech bark disease/beech scale

Mark Guthmiller (SCR Team areas) 608-275-3223

Bill McNee (SER Team area) 920-662-5430

Direct public inquiries regarding yard tree concerns to UW county or state extension offices or:

Emerald ash borer hotline

1-800-462-2803

Emerald ash borer e-mail

DATCPEmeraldAshBorer@wi.gov

Gypsy moth hotline

1-800-642-MOTH

Additional Program Web-based Resources:

Forest Health web site: <http://www.dnr.state.wi.us/forestry/fh/>

Gypsy Moth web site: <http://gypsymoth.wi.gov/>

Emerald ash borer web site: <http://dnr.wi.gov/forestry/fh>

Emerald ash borer cooperative state web site: <http://emeraldashborer.wi.gov/>

Note: Southern Region is composed of both SCR and SER Team Counties

SCR Team Counties: Columbia, Dane, Dodge, Grant, Green, Iowa, Jefferson, Lafayette, Richland, Rock and Sauk

SER Team Counties: Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Walworth, Washington, and Waukesha