

Northern Michigan FruitNet 2017

Northwest Michigan Horticultural Research Center

Weekly Update

FruitNet Report – May 5, 2017

CALENDAR OF EVENTS

- | | |
|--------------------|---|
| 5/19 | Save the Date: Apple Thinning Meeting
NWMHRC, 10 – 1 PM, RSVP by May 17
More information to come! |
| 5/9 – 6/27 | Leelanau IPM Updates
Jim and Jan Bardenhagen's Farm, 12PM – 2PM |
| 5/9 – 6/27 | Grand Traverse IPM Updates
Wunsch Farms Packing Shed, 3PM – 5PM |
| 5/10 – 6/28 | Antrim IPM Updates
Jack White Farms, 10AM – 12PM |
| 5/10 – 6/28 | Benzie IPM Updates
Blaine Christian Church, 2PM – 4PM |

What's New?

- **Update on Williamsburg Enviroweather Tower**
 - **Clarifications on Worker Protection Standards: Central Posting for Pesticide Application Information versus Decontamination Station Requirements for Agricultural Workers**
 - **Apple Frost Guide 2017**
 - **On-farm food safety documentation: How much is enough?**
-

Williamsburg Enviroweather tower not fully functional – UPDATE

UPDATE - The tower is not scheduled to be fixed until sometime on Monday, May 8, 2017, which is unfortunately is after the expected cold on Sunday into Monday.

This Tuesday, the Enviroweather tower located in Williamsburg, was struck by lightning. It has been discovered that 20 meter sensor appears to have suffered damage. All other functions appear to be working at this time.

Currently, the 20 meter sensor seems to be recording temperatures 10 degrees below the actual temperature. MSU Extension is working on getting replacement parts as quickly as possible, and we hope to have a new part in place by this weekend. We will plan on sending out an update via FruitNet on Friday afternoon, regarding the status of reconstruction.

We apologize for this interruption during this critical time.

Clarifications on Worker Protection Standards: Central Posting for Pesticide Application Information versus Decontamination Station Requirements for Agricultural Workers

Eric McCumber, MDARD

Emily Pochubay and Nikki Rothwell, MSU Extension

Both MDARD and MSU have received recent questions about the requirements to display pesticide application information at a central posting area. Growers also have questions about what should be included at designated decontamination stations. This article is intended to clarify such questions because we have heard misinformation that pesticide application information should be posted within a ¼ mile of where agricultural workers are working in a treated block—this type of posting is *not* required to meet WPS regulations. This confusion may be related to regulations for decontamination stations; according to WPS, **decontamination stations** are required with ¼ mile from where agricultural workers will be working during the REI or for 30 days thereafter of the application of a WPS-labeled pesticide. Although we will cover the key points for these two issues in this article, more detailed information can be found in the How To Comply Manual (HTCM) at www.pesticideresources.org. In the HTCM, central posting location information is on page 21 and decontamination station information can be found on page 48. The information presented below is relevant to agricultural employers of agricultural workers. Supplies needed for handlers' decontamination sites are different

and we encourage employers and handlers to review this information as needed (page 74-75 of the HTCM).

Central Posting

Central posting locations serve as the hub for pesticide application information, and this central posting location is the *only* location on the farm that is required to contain the information outlined below. *According to MDARD, central posting locations* are areas where all farm employees can find any information related to pesticide applications. If a WPS-labeled pesticide has been applied, or if a restricted-entry interval (REI) has been in effect within the past 30 days, then the agricultural employer must display the required information (see below) at a central posting location whenever any agricultural worker is on the agricultural establishment. The location of the central posting is determined by the agricultural employer, but it should be placed in a location where employees congregate such as the workshop, office, break room, or an area where they check in for work. Agricultural workers must be informed where the designated central posting location is located and must be allowed unrestricted access to the posted information during employment hours.

Agricultural producers are required to display at the central posting area the following information. Again, agricultural workers must have unimpeded access to the information during work hours.

- **Pesticide application information including:**
 - ✓ Brand name of the pesticide(s) applied.
 - ✓ Active ingredient(s).
 - ✓ EPA Reg. No.
 - ✓ REI.
 - ✓ Crop/site treated.
 - ✓ Location and description of treated area(s).
 - ✓ Date(s) and time(s) application started and ended.
- **Safety Data Sheets (SDS)** for each pesticide product.
- **Pesticide Safety Information.** Prior to the updated WPS, this information was required to be displayed in a poster format (known as pesticide safety poster). Agricultural employers are no longer required to display a poster, but must provide information about certain WPS safety concepts-about preventing pesticides from entering the body. The required 7 safety concepts include:
 - ✓ Avoid getting pesticides on your skin or into your body. Pesticides may be on plants, soil, irrigation water, equipment, or may drift from nearby applications.

- ✓ Wash before eating, drinking, using chewing gum or tobacco, or using the toilet.
- ✓ Wear work clothing that protects your body from pesticides, such as long-sleeved shirts, long pants, shoes, socks, and a hat or scarf.
- ✓ Wash or shower with soap and water, shampoo hair and put on clean clothes after work.
- ✓ Wash work clothes separately from other clothes before wearing them again.
- ✓ If your body is contaminated by pesticides wash immediately, and as soon as possible, wash or shower with soap and water and change into clean clothing.
- ✓ Follow directions about keeping out of treated or restricted areas.

In addition, the updated safety information that will be required in the future must include:

- ✓ Instructions for seeking medical attention as soon as possible after being poisoned, injured or made ill by pesticides.
- ✓ Name, address and telephone number of state or tribal pesticide regulatory authority. In Michigan, the agency is the Michigan Department of Agriculture and Rural Development, 525 West Allegan Street, P.O. Box 30017, Lansing, MI. The phone number is 800-292-3939.
- ✓ If pesticides are spilled or sprayed on the body use decontamination supplies to wash immediately, or rinse off in the nearest clean water, including springs, streams, lakes or other sources if more readily available than decontamination supplies, and as soon as possible, wash or shower with soap and water, shampoo hair, and change into clean clothes.
- ✓ Follow directions about keeping out of treated areas and application exclusion zones.
- ✓ The term “emergency medical facility” should be revised to “a nearby operating medical care facility.” Include name, address, and telephone number for the medical facility. This information should be clearly identified as emergency medical contact information on the display.
- ✓ The point that there are federal rules to protect workers and handlers is self-evident and is no longer required to be part of the safety information

NOTE: The updated pesticide safety information content is not required until 1/4/18, but employers can begin using the updated version immediately. Details are shown on page 23 of the How To Comply Manual. The EPA is in the process of developing a poster version of the pesticide safety information.

Agricultural producers are only required to have *one central posting area*, but must provide unrestricted access to agricultural workers during work hours. It can be impractical for farms that are many miles apart to give unrestricted access, so agricultural producers may set up different central posting areas for distinctly different farm locations at their discretion. Agricultural employers may also provide the central

posting information electronically, as long as content, accessibility, display, legibility, location, and retention requirements are met. Employers would need to ensure that agricultural workers have access to the information, such as through a smart phone or dedicated computer, and are instructed in how to access the information.

Decontamination sites

Agricultural employers must make sure that decontamination supplies are provided to workers doing tasks that involved contact with anything that has been treated with the pesticide including soil, water, or plants in a pesticide-treated area where, within the last 30 days, a WPS-labeled pesticide product has been used or a REI for such pesticide has been in effect.

Decontamination supplies that must be provided include:

- ✓ Water – the employer must provide at least 1 gal of water per worker at the beginning of the work period and at a quality and temperature that will not cause injury or illness if it contacts skin or eyes, or is swallowed.
- ✓ An adequate supply of soap and single use towels. Hand sanitizers or wet towelettes *do not* meet the requirement for soap or towels.

Duration of the Decontamination Site

If the REI of an applied pesticide is greater than 4 hours, decontamination supplies must be provided until 30 days after the end of the REI expires. If the REI is less than 4 hours, decontamination supplies must be provided until 7 days after the REI expires.

Location of Decontamination Sites

All decontamination supplies for agricultural workers must be located together and be reasonably accessible to where the workers are working (generally within ¼ miles of the workers) and be outside of any treated area or an area under a REI. For worker tasks performed more than ¼ mile from the nearest point reachable by vehicles or more than ¼ mile from a non-treated area, the decontamination supplies may be at the nearest vehicular access point outside any treated area or area under REI (page 48 of the HTCM).

Remember that in addition, the Pesticide Safety Information (formerly referred to as the Pesticide Safety Poster) must be displayed at any permanent decontamination site, or any decontamination site that services 11 or more workers (page 21, HTCM).

In summary, central posting locations are the main hub for pesticide application information, and the information that must be displayed at the central posting locations is not required in other agricultural areas (i.e. ¼ mile from workers working in treated fields, or at decontamination stations). It is the responsibility of the employer to train employees on how and where to access the central posting information. Although not required, some growers may choose to provide additional pesticide application

information to their workers by having additional posting sites or virtual access to this information. Potable water, and an adequate supply of soap and single use towels, and possibly pesticide safety information (if the decontamination site is a permanent location or services more than 11 workers) must be provided at decontamination

Apple Frost Guide 2017

Philip Schwallier and Amy Irish-Brown

When frost conditions occur in fruit orchards, what are activities that you can do to help minimize the potential damage and what are minimizing characteristics?

Apple Critical Minimum Temps for 10% Kill

Petal Fall	30°F
Full Bloom	30°F
Pink	28°F
Open Cluster	27°F

Activities:

- Frost fans will provide warming by mixing warm into the orchards. (Perhaps 5°F)
- Under-tree micro-sprinkler will provide heat from well water into the orchard. Start system a couple of hours before temps get too cold and freeze up the system. (Perhaps 4°F)
- Over-tree sprinkler will protect plants coated with ice. (Uses large amounts of water)
- Herbicide strips. Bare Soils will absorb heat and provide radiation heat to trees overnight. (Perhaps 2°F)
- Mowing orchards short. Short grass will allow sod to absorb heat all day from sunny conditions to release all night to the trees. (Perhaps 2°F)
- Nutrient sprays will strengthen fruitlets to resist freezing temps. (Perhaps 1°F)
- Burning wood and hay will provide heat to the orchard for only small areas near the fire. (Perhaps 4°F). Place small piles of firewood down the center of every row and light every other pile at 3 am and then at 5 am start the other piles. Each will burn to roughly 2 hours.
- Wetted soil, run irrigation to wet the soil as much as possible before the frost event. Start trickle early enough to thoroughly wet orchard before the frost. Run irrigation (trickle) the all night of the freeze. Trickle will probably freeze up during the frost event. Wet soil absorbs heat and radiates heat best.
- Frost protection spray products can be useful but not consistent.

Minimizing Characteristics:

- Flowers pointing downward will not radiate their heat as much and flowers pointing toward the sky. These tend to survive cold frost events

- Abundant bloom. Numerous flowers will survive the light to moderate frost event.
- Flowers at a wide stage of development (Pink to Petal Fall) will have different critical minimum temperatures and will survive frost events.
- Abundant foliage. Leaves will provide protection to flowers hiding under the leaf. It will reduce radiation of heat.

Other Information:

- Smoke is of no value. The heat will radiate skyward right through the smoke.
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On-farm food safety documentation: How much is enough?

Knowing how much documentation is necessary to prove practices were done can be difficult to figure out. Here are considerations when trying to determine how much is enough.

Posted by [Phil Tocco](#), Michigan State University Extension, MSUE News

A big reason to have a food safety plan is to provide a proof of commitment to food safety on the farm. So when an auditor or inspector asks that something be documented, the follow-up question from a grower is usually, “How much is enough?”

The best answer is it depends. The level of documentation you need depends on the size of your operation, the requirements of your audit scheme and how critical the particular activity is to ensure the safety of the product.

A larger operation that uses flume tanks to process product may need to keep a record of the water changing schedule of the flume, an hourly concentration of the sanitizer in the flume water, results of a frequent pH test and water testing records, in addition to standard operating procedures (SOPs) for each of these activities. A smaller operation may only use water once per batch of washing, necessitating one record of when water was changed.

Different audits require different levels of recordkeeping. In one situation, including the monitoring of toilets for adequate supplies into a pre-harvest checklist may be adequate for the particular audit. Other audits specify growers must have a separate record for stocking the toilet or sanitation units. Including this information in a pre-harvest checklist likely will not be acceptable under those audit schemes. Even within a particular audit scheme, there may be differences among auditors that can prompt a more aggressive recordkeeping need.

If a particular activity is critical to ensuring the safety of the fresh produce you are growing, expect that it will require more intensive recordkeeping. Worker health and hygiene is critical to ensuring produce is not contaminated. As such, training logs, blood

and bodily fluids logs, worker policies, disciplinary policies and records of their activity as well as traceability as to who harvested what product are all essential components to ensuring workers are not serving as a source or route of contamination. By contrast, a simple log of cleaning and sanitizing totes or buckets and a pre-harvest check to verify they are clean at the commencement of filling may be all that is required to address the relatively small risk of sanitary food contact surfaces pre-harvest.

If you have specific questions about documentation or have difficulty tailoring GAPs to your farm, contact [Michigan State University Extension's Agrifood Safety Work Group](mailto:gaps@msu.edu) at gaps@msu.edu or 517-788-4292.

Save the Date: Apple Thinning Meeting

The NWMHRC and MSU Extension will be holding an apple thinning meeting at the NW Station on May 19, 2017 from 10AM – 1PM. We will be talking about when to start thinning, products and rates to use; timing windows of thinners; how to determine crop load; and precision crop load management strategies. We will also focus on how to use the carbohydrate model, which is now an added feature on the MSU Enviroweather site (please see pictures below). [Michigan State University Extension](#) educators Phil Schwallier and Amy Irish-Brown will be our featured speakers.

Lunch will be provided and sponsored by Crop Production Services. Please RSVP by 5PM on May 17, 2017 to guarantee a lunch: Jenn Zelinski 231-946-1510 or goodr100@anr.msu.edu.

[Expand All](#) | [Contract All](#)

Resources for:

Tree fruit

Apple

Crop Development

Apple Carbohydrate
Thinning

Apple Maturity Model

Pest Management

Codling Moth

Obliquebanded

Leafroller

Oriental Fruit Moth

Apple Scab

Fire Blight of apple

blossoms

Sooty Blotch and

Flyspeck of apple and

pear

Fireblight Interactive

Predictor

Fruit Fly Monitoring

Daily Summary of

Weather and Disease

Risk for Station

Station Disease

Report: Seasonal

History of Wetting

Events

Regional Disease

Report

Resources

IPM Resources

Apples

MSUE News for Fruit

Cherry

Traverse City (NWMHRS), Michigan

Latest observations at Traverse City (NWMHRS)

04/25/2017 09:00 AM (Station online).
Measurements by 5-minute average or total unless
otherwise indicated.

53.9 F	Air temperature
0.0 in.	Rainfall(04/25/2017)
62.1%	Relative Humidity
41.2 F	Dewpoint
SE	Wind Direction (hourly average)
6.5 mi./hr.	Windspeed
0%	Percent of last full hour wet - leaf wetness (tripod- mount)
0%	Percent of last full hour wet - leaf wetness (canopy)

Weather observations and summaries

[NEW Meteogram](#): Real-time observations in graphical
format

[NEW Meteogram](#): Real-time observations in graphical
format

Overnight temperatures/ [hours below freezing](#)

Rainfall comparisons [for Region](#)

Temperature, rainfall and degree-day [summary](#)

Rainfall comparisons [last 5 years](#) at this station

[Soil conditions](#)

[More weather](#) for this station



National Weather
Service [radar](#) and
[local forecast](#) for
Traverse City

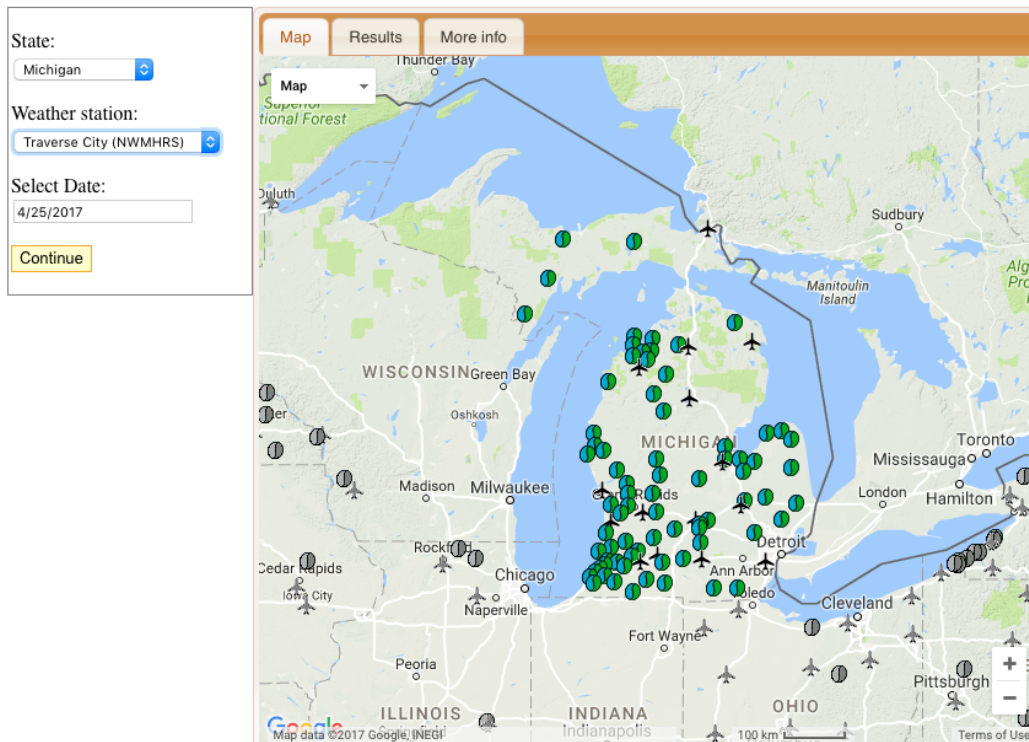


[Weather Station at
Traverse City
\(NWMHRS\)](#)

Thanks to our
station
sponsors:

This station is
hosted at
Northwest
Michigan
Horticultural
Research
Station and is

Cornell Apple Carbohydrate Thinning Model



Accuracy of the weather data is the responsibility of the owners of the weather station instruments. NEWA is not responsible for accuracy of the weather data collected by instruments in the network. If you notice erroneous or missing weather data, contact [NEWA](#) and we will contact the owner of the instrument.



2017 IPM Update Schedule

Emily Pochubay and Nikki Rothwell
Michigan State University Extension

Tree Fruit IPM Updates beginning the second week of May through June will highlight management of the seasons current potential pest challenges dictated by weather and pest biology. Attendees are encouraged to bring examples of pests and damage found on the farm to these workshops for identification and discussion. Additionally, we are

planning to revisit some of the new Worker Protection Standards as well as host invited speakers from local organizations and MSU at this year's meetings. Workshops will be held weekly in Leelanau, Grand Traverse, Antrim, and Benzie counties. Tree fruit growers and consultants are welcome to attend meetings at any of the locations and times that are most convenient (see below). These workshops are free and do not require registration. Restricted use pesticide applicator recertification credits (2 credits per meeting) and Certified Crop Advisor credits will be available. We are looking forward to seeing you in a few weeks! For more information, please contact Emily Pochubay (pochubay@msu.edu), 231-946-1510.

Leelanau County

Location: Jim and Jan Bardenhagen, 7881 Pertner Road, Suttons Bay
Dates: May 9, 16, 23; June 6 (tentative), 13, 20, 27
Time: 12PM – 2PM

Grand Traverse County

Location: Wunsch Farms, Phelps Road Packing Shed, Old Mission
Dates: May 9, 16, 23; June 6 (tentative), 13, 20, 27
Time: 3PM – 5PM

Antrim County

Location: Jack White Farms, 10877 US-31, Williamsburg (south of Elk Rapids on the southeast side of US-31)
Dates: May 10, 17, 24; June 7 (tentative), 14, 21, 28
Time: 10AM – 12PM

Benzie County

Location: Blaine Christian Church, 7018 Putney Rd, Arcadia, MI 49613
Dates: May 10, 17, 24; June 7 (tentative), 14, 21, 28
Time: 2PM – 4PM

Respirator Guidelines to Meet New Worker Protection Standards

Growers will need a medical evaluation and respirator fit test to handle and apply some pesticides this season.

Emily Pochubay and Amy Irish-Brown, MSU Extension

Requirements for a medical evaluation, fit testing, and specific training for use of respirators and the associated record keeping became effective on January 2, 2017. At this time, most growers are aware of this revision to the Worker Protection Standard (WPS) regulation that requires pesticide handlers and applicators to wear a respirator during mixing/handling, spray applications, and potential other uses as outlined on pesticide labels. Additionally, those who use pesticides with respirator requirements must receive documentation from a physician or licensed health care professional (PLHCP) that has 'respirator evaluation' as part of his/her license to ensure that the pesticide handler is medically able to use a respirator. Not all PLHCPs are qualified to provide the respirator evaluation, but primary care physicians should be able to refer patients to appropriate medical personnel. Alternatively, growers can contact local occupation and environmental health professionals who are more likely to have the credentials needed to provide the appropriate respirator medical evaluation and documentation. Please review the following guidelines to help address some of the recent questions we have received from growers.

Who needs to receive a medical evaluation and how often?

Employees that could be exposed to hazardous airborne contaminants may be required to wear a respirator; respirators and respirator use requirements will be outlined on individual pesticide labels. Some pesticides may require respirators for employees that mix spray material and/or require applicators to wear a respirator during applications of certain pesticides. Employers are responsible for ensuring that employees receive the appropriate equipment, evaluation, respirator fit test, training, and record keeping that conforms to OSHA standards.

According to the EPA, the medical evaluation is required one time per employee unless another evaluation is required due to one of the following reasons:

- The medical determination is only good for a specified length of time.
- The employee reports medical signs or symptoms related to respirator use.
- The PLHCP, supervisor, or program administrator recommends a re-evaluation.
- Fit-test or other program information indicates a need for re-evaluation.
- When changes in the workplace increase respirator stress on an employee.
- The initial medical examination demonstrates the need for a follow-up medical examination.

Who provides the evaluation? What kind of evaluation and documentation are needed?

A physician or licensed health care professional (PLHCP) with respirator evaluation as part of their license will provide the appropriate evaluation using a medical questionnaire or exam that conforms to the OSHA standard. Contact the PLHCP to determine whether a questionnaire or exam will be used and to receive appropriate paperwork. Prior to completing the questionnaire or exam, employers must provide employees with:

- The type and weight of the respirator that the handler will use.

- How long and how frequently the handler will use the respirator.
- How much physical work the handler will do while using the respirator.
- Other PPE the handler will use.
- The temperature and humidity extremes of the working environment.

Contact a primary care physician to receive a referral for a licensed professional, if necessary. Another low-cost (~\$25) and fast alternative for a medical evaluation is OshaMedCert (<http://www.oshamedcert.com/Default.aspx>), an online service that involves filling out a form and sending it for approval or denial by a PLHCP; individual's health information remains confidential throughout the process. A respirator fit test (see below) will be needed after receiving the medical determination from OshaMedCert.

A written medical determination of the respirator evaluation for each employee is required before the employee can use the respirator. The employer must keep the medical determination documentation for two years. According to the EPA, the required written information to be provided by the PLCHP to the employer must only include:

- Whether or not the employee is medically able to use a respirator.
- Any limitations on respirator use in relation to the medical conditions (if any) of the employee or workplace conditions.
- Need for any follow-up medical evaluations.
- A statement that PLCHP provided the employee with written recommendation; in some cases, this recommendations may simply state that the applicator/person that will use the respirator is capable of wearing a respirator.

Again, the information outlined above is the *only* information that should be provided in the PLHCP's recommendation to the employer to protect the employee's private medical information and avoid violation of HIPAA laws.

What's Next? Respirator Fit Tests.

After receiving a medical evaluation, a fit test is needed to ensure that the respirator forms an adequate seal with an employee's face to provide appropriate inhalation exposure protection. A new fit test is required annually or whenever there is a change to the respirator or a physiological change to the employee that could affect the seal between the respirator and the user's face. Furthermore, fit tests are required for each type of respirator that will be used as indicated by pesticide labels. Finally, employees must undergo the fit test using a respirator with the exact specifications of the respirator that will be used on the job.

Fit tests must follow OSHA protocols, and there are two methods for fit testing. The quantitative fit test (QNFT) requires special equipment and a trained person to conduct the testing. Fit test kits are also available to perform qualitative fit tests (QLFT) by a person that can accurately prepare test solutions, calibrate equipment, perform the test properly, recognize invalid tests and ensure test equipment is working properly. Sources for fit tests include pesticide suppliers or companies such as [Gempler's](#) or [Grainger](#).

A primary care physician may be able to provide additional options and referrals for fit test providers in the area. We confirmed that Munson Medical Center's Occupational Health and Medicine Clinic (550 Munson Ave. Traverse City, MI 49686; Ph: 231-935-8590) is equipped to perform the appropriate respirator exam (~\$80.00) and the fit test (~\$25.00) in one visit by appointment only. Spectrum Health Services in other areas of Michigan provide similar services. Patients that wish to only receive a fit test need to provide appropriate respirator exam result documentation prior to the test.

Additional information regarding respirator requirements and other WPS revisions can be found in the EPA's *How to Comply with the 2015 Revised Worker Protection Standards for Agricultural Pesticides* (<https://www.epa.gov/sites/production/files/2016-10/documents/htcmmanual-oct16.pdf>).

Leelanau County HOUSEHOLD HAZARDOUS WASTE & ELECTRONICS COLLECTIONS

NOW ACCEPTING A MAXIMUM OF 10 - ONE GALLON CONTAINERS OF LATEX PAINT

The collections are for Leelanau County Households and covered as part of the \$29 recycling fee on winter taxes. The collections are held from 8 AM – 2 PM and registration is required. Please call the Planning Dept. at 231-256-9812 to register.

2017 Saturday Collections

5/20 - Leelanau County Government Center

7/15 - Glen Lake School

8/19 - Peshawbestown

10/7- Elmwood Twp., Cherry Bend Park off Avondale Lane

We are always looking for volunteers to help with the collections, please let us know if you are interested.

Thanks,

Leelanau Planning Department

MSU Extension programs and material are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability,

political beliefs, sexual orientation, marital status, family status, or veteran status. Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities.

WEB SITES OF INTEREST:

Insect and disease predictive information is available at:

<http://enviroweather.msu.edu/homeMap.php>

This issue and past issues of the weekly FruitNet report are posted on our website:

<http://agbioresearch.msu.edu/nwmihort/faxnet.htm>

60-Hour Forecast:

<http://www.agweather.geo.msu.edu/agwx/forecasts/fcst.asp?fileid=fous46ktvc>

Information on cherries:

<http://www.cherries.msu.edu/>

Information on apples:

<http://apples.msu.edu/>

Information on grapes:

<http://grapes.msu.edu>

Fruit CAT Alert Reports:

<http://news.msue.msu.edu>