



2014-2015 District Nominee Presentation Form

CERTIFICATIONS

District's Certifications

The signatures of the district superintendent on the next page certify that each of the statements below concerning the district's eligibility and compliance with the following requirements is true and correct to the best of the superintendent's knowledge.

1. The district has been evaluated and selected from among districts within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental education.
2. The district is providing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review.
3. OCR has not issued a violation letter of findings to the school district concluding that the nominated school district has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
4. The U.S. Department of Justice does not have a pending suit alleging that the school district has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
5. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the school district in question; or if there are such findings, the state or school district has corrected, or agreed to correct, the findings.
6. The district meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

U.S. Department of Education Green Ribbon Schools 2014-2015 District Sustainability Award

Name of Superintendent: **Dr. Donald Johnson**

(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

District Name: **Middleton-Cross Plains Area Schools**

(As it should appear on an award)

Address: **7106 South Avenue, Middleton, WI 53562**

Telephone: **608-829-9004** Fax: **608-836-1536**

Web site/URL: **www.mcpasd.k12.wi.us** E-mail: **djohnson@mcpasd.k12.wi.us**

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

A handwritten signature in black ink that reads "Donald Johnson".

(Superintendent's Signature)

Date: **January 15, 2015**



Nominating Authority’s Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the district’s eligibility and compliance with the following requirements is true and correct to the best of the Authority’s knowledge.

1. The district is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental education.
2. The district meets all applicable federal civil rights and federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating Agency: **Wisconsin Department of Public Instruction**

Name of Nominating Authority: **State Superintendent Tony Evers, PhD**
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.

Julie Chapman Date: **January 26, 2015**
(Nominating Authority’s Signature)

SUMMARY AND DOCUMENTATION OF NOMINEE’S ACHIEVEMENTS

Provide a coherent "snapshot" that describes how your district is representative of your jurisdiction’s highest achieving green school efforts. Summarize your strengths and accomplishments in all three Pillars and nine Elements. Then, include documentation and concrete examples for work in every Pillar and Element.

SUBMISSION

The nomination package, including the signed certifications and documentation of evaluation in the three Pillars should be converted to a PDF file and emailed to green.ribbon.schools@ed.gov according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509
Expiration Date: February 28, 2015

Public Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.

**U.S. Department of Education Green Ribbon Schools
Summary of Achievements
for
Middleton-Cross Plains Area School District**

Middleton-Cross Plains Area School District encourages and supports green and healthy practices in all its schools. Two schools, Middleton High School and Park Elementary School have already been honored as U.S. Department of Education Green Ribbon Schools and both are Wisconsin Green and Healthy Schools at the Sugar Maple level. Located adjacent to Wisconsin's Capital city, this suburban district strives to lead by example.

Pillar I: Reduced Environmental Impact

The Middleton-Cross Plains Area School District (MCPASD) over the last ten years has upgraded its schools to be energy efficient. All ten schools have received Energy Star status since 2007, which saved over \$2.7 million in energy cost avoidance since 2004.

Recently, an inefficient Kromrey Middle School, which had mold issues has been replaced with a new building that has geothermal heating and cooling. Moreover, a fifth grade addition to Glacier Creek Middle School has also incorporated geothermal heating and cooling. Many energy efficient, water saving, and healthy choices have been incorporated in both building projects. While this building project has not sought LEED certification, the lead architect/engineer believes a silver certification could be earned, at the very least.

MCPASD Transportation Services have also replaced inefficient, old buses with energy efficient models. The transportation department has incorporated software for optimal routing and has reduced idling in order to decrease pollution and fuel use. Four suburbans have been made available for use with small groups to conserve fuel.

Middleton High School (MHS) and both middle schools have included solar hot water; Clark Street Community School and MHS have demonstration solar panels (energy for one classroom) for environmental education. MHS has a permeable all-season turf with rainwater storage for infiltration and stormwater reduction. MCPASD is in the top 25% of energy efficient districts in the United States. The district has schools where students recycle milk cartons, maintain gardens, compost garden waste, has prairie plots, rain gardens, a school forest, and integrate pest management for reduced pesticide use in order to reduce environmental impacts.

Pillar II: Improved Health & Wellness

MCPASD is committed to providing school environments that promote, protect and sustain health and well-being. Health education is incorporated into all elementary and middle schools and high school students must take a semester health class for graduation. MHS offers a year round movement-improvement and conditioning program to all 9th-12th graders (athletes and non-athletes, alike) at no cost.

The district has a wellness coordinator and nutrition/wellness committee. Teachers and staff are enrolled in the Dean Care Living Healthy Rewards Program or the Unity Health Insurance Fitness First and More Program. Since 2006, all food and beverages sold in district schools must meet acceptable nutrition standards as established by the Alliance for a Healthier Generation.

The integrated PE/Health and Wellness curriculum "Rest-Eat-Move" is both a K-12 comprehensive education program, as well as a staff wellness initiative designed to provide skills and resources for achieving and sustaining healthy living for life. The "Rest" element focuses on three areas: Passive rest (how to get a good night's sleep); Active rest (daily physical decompression); and Mindful rest (strategies for stress reduction). The "Eat" portion of the program emphasizes the importance of choosing real (rather than processed) foods and stresses the enjoyment of buying, preparing and sharing meals. The "Move" portion of the program--for students, athletes and staff--aims at creating bodies that are physically "literate," balanced, and adaptable, rather than simply adapted.

Pillar III: Effective Environmental and Sustainability Education

All district elementary schools participate in field trips, led by trained naturalists, to the local Pheasant Branch Conservancy (PBC) to have lessons aligned with Foss science units. Topics include trees, soils, plants, water, web of life, and landforms. An intergenerational grant was received in 2013-14 from American Girl to fund art projects by Sauk Trail Elementary's fourth graders who visit a natural area, hear stories about nature from senior citizens remembering their youth, and with the seniors' help, create art inspired by nature and these stories.

MHS biology students learn about data collection in the prairies of PBC during a scientific methods unit and return to do service at PBC, Holy Wisdom Monastery, and/or Governor Nelson State Park. They learn to seed collect or remove invasive species and dates when they can return for more volunteer service. Eight Saturday mornings, fall and spring, are reserved for HS volunteers for restoration work.

A youth farm, along with raised gardens at MHS and the district's charter school, serve the district as outdoor learning environments. Run by two former MHS students, the MHS greenhouse uses high school students to help raise and transplant seedlings. A summer program uses college interns to work with elementary students to tend the gardens and learn about the benefits of organic food. A community-supported agriculture (CSA) was established for the harvests of 2014. Vegetables from the gardens will be used in the annual fall Organic Dinner, a sustainable dining experience for the community hosted by the Ecology Club.

Three levels of photography classes take nature shots at the PBC and all students enter one to five images in the Friends of Pheasant Branch (FOPB) Photo Contest. Winning photos appear in the FOPB Phenology Calendar. A 2014-15 grant was awarded to connect the Business Video Production class with the FOPB to produce four nature videos, including a history of the PBC. These initiatives, plus AP Environment and Environmental Studies I and II classes at MHS, and infusion of environmental education into other disciplines and grade levels develop environmentally aware citizens.

Cross-Cutting Questions

Two schools in the MCPASD participate in Green and Healthy Schools Wisconsin and are recognized as "Sugar Maple" Schools (highest level) and are also nationally certified PLT GreenSchools! Moreover, MHS has been an active participant in the state Envirothon Competition, taking first place several years and advancing to the North American competition. Community partnerships are apparent through much of the district's work in all three pillars.

Scoring and Highlights:

The complete state application is too long to include in this nomination submission, so the applicant's information has been summarized in the following pages, aligned with the pillars and elements. Each application was ranked by teams of external reviewers and internal reviewers, each with different areas of expertise, using a common ranking tool. In addition, the slate of nominees was forwarded to related state and federal agencies to ensure there were no compliance or regulatory issues.

Middleton-Cross Plains Area School District has 10 school buildings, serves 6,622 students, and has 1,090 staff.

The ten school buildings are referred to throughout the application by abbreviations:

1. Middleton High School – MHS
2. Clark St. Community School – CSCS
3. Kromrey Middle School – KMS
4. Glacier Creek Middle School – GCMS
5. Northside Elementary School – NS
6. Elm Lawn Elementary School – EL
7. Sunset Ridge Elementary School – SR
8. West Middleton Elementary School – WM
9. Sauk Trail Elementary School – ST
10. Park Elementary School – PS

Since a single application is used for both school and district nominees, in some locations, information from the application may refer to "school" instead of District. Where this happens, please understand the question has been answered from the District perspective.

The summary of the nominee's achievements as reported in their application is presented in each pillar and element below. The focus area is in reference to Wisconsin's application structure.

Pillar I: Reduced Environmental Impact

Element 1A: reduced or eliminated green house gas (GHG) emissions

Focus Area: Energy

Johnson controls conducted a detailed energy audit in conjunction with district-wide energy performance project in August 2009. Eight sites had energy audits in October 2014 with Sustainable Engineering Group, Inc. as a part of Energy Star certification. From 2008-2013, all district schools earned the Energy Star ranking, with scores between 86-97. As of 11/12/14 scores were 94, 88, 83, 93, 97, 92, 92, 90, 93. Due to new construction, our two middle schools do not qualify in 2014, as re-benchmarking must occur at a later date. Until current construction, MCPASD was one of only 2 districts in Wisconsin to have all schools energy star certified. Energy use is monitored using Portfolio Manager on a monthly basis. MCPASD has developed an Energy Policy Plan (Date developed: 2011) All staff has access to this plan, which includes curriculum for each grade level and MCPASD was one of first to have energy policy. MCPASD has worked with an energy manager, Cenergistic (formally Energy Education Incorporated) for 11 years. MCPASD spent \$2.5 million to engage Johnson Controls to complete an energy performance project 2009-10.

MCPASD purchases energy and water efficient products and has a budget to retire inefficient equipment. In addition, they have:

- ✓ Switched to energy efficient lighting with T-8 florescent lights in all schools
- ✓ Installed occupancy sensors in all schools.
- ✓ Installed vending misers at all schools that have vending machines.
- ✓ Upgraded to a more energy efficient HVAC system. KMS, GCMS have installed geothermal and upgraded heat pump units, as well as DDC controls.
- ✓ Most schools/district buildings have replaced inefficient windows for greater R-value/less infiltration

All of the new construction or renovations having taken place in MCPASD in the past ten years meet green building standards. The district has photovoltaic, solar thermal, and geothermal renewable energies. Schools also utilize daylighting. MHS has solar hot water in the pool area and two schools have solar hot water. Two schools have demonstration PV for a classroom's energy needs.

MCPASD has reduced its total non-transportation energy use by 11% over a ten year period. All schools have integrated state-of-the-art mechanical and lighting systems. MCPASD has web-based access and control to each school's HVAC and lighting to ensure proper scheduling and operation of equipment. Setbacks of these systems to lower levels occurs daily during unoccupied periods as well as school holidays. Staff have been trained to participate in the district's energy program by routinely lowering individual classroom lighting levels and turning off all non-essential electronic equipment. Software is used to manage power reduction in computers in all areas and the network operations center takes full advantage of virtualization to reduce energy footprint. Renovations to the kitchen at MHS resulted in more energy efficient dishwashers, walk-in coolers, and exhaust system. Renovations to several schools resulted in more energy efficient windows. All energy inefficient computer monitors have been replaced with energy star compliant monitors. Copiers are set to take advantage of reduced energy consumption and printers go to sleep mode whenever they are not in use. Many schools have programs where students encourage "good" practices such as lights off when room is vacant.

Three facility managers have completed outside certification courses including WASBO's Facility Manger Program, Practical Energy Management, and Building Operator Certification.

The school has implemented behavioral changes to reduce energy consumption in the following ways:

Individual staff refrigerators and any other electronics in classrooms and offices are shut down during the summer. The Pool cover is used to save energy whenever the pool is not in use. Most schools have had student projects to gain awareness and practice in lowering amount of classroom lighting. Routine audits by the district energy manager confirm this behavior change in energy use. Energy manager leaves positive notes for energy saving. Teachers and support staff are required to ensure that all electronics in their areas are shut down on a daily basis. Staff are asked to close doors and windows to keep heat/cool inside the classroom rather than escape into hallways. In accordance with MCPASD policy 733, staff are directed to seek administrative

approval for any personal appliances in their offices or classrooms. This policy also describes general energy conservation expectations from staff as well.

This school year, WM is planning to do an energy audit of the school looking for energy using, non-essential equipment such as refrigerators and asking for their removal as per the district's energy policy. This is energy education for staff and can apply to extra units at home.

Energy is taught in the curriculum in the following ways:

An ongoing partnership with Rapid Improvements plus a WEEB grant resulted in software giving the ability to download real time data on energy use every 15 minutes. MHS & CSCS PV and conventional electricity use were tied into the software. Real student research and energy reductions resulted. Tech Ed. offers engineering classes that have a unit centering on alternative energy and design. Recreational Vehicles Modification and Design focuses on more efficient fuel use. Power, Energy and Transportation explores energy use and impacts. Architecture and Design educates about LEED design for reduced environmental impact including energy conservation. Chemistry (450+ students) requires all students to have a first quarter project connecting climate change to a learned chemical concept. Chemistry has an energy unit with oil/fracking as a basis for organic chem. Third grade studies matter, energy, and electricity. Fifth grade has solar energy unit and 6th-8th have electronics FOSS units. CSCS students' energy research project resulted in lowering school lighting. Elementary grades learn and use energy saving habits daily.

Professional development is offered to staff in energy and/or energy education:

KEEP courses are offered to staff and many take related courses. New teacher orientation includes training in the energy reduction program. The District energy manager attends seasonal national training conferences conducted by Cenergistic. The energy manager also trains with webinars provided by mission critical software companies and from the EPA on a routine basis, i.e.: three times monthly on average. The district information coordinator updates staff on sustainability topics and program offerings. Updates are regularly given to this coordinator by the energy manager for ongoing staff development in the energy area.

The following explains energy features installed during new construction at KMS and GCMS. No mow grass was planted at the new KMS, which will cut down on mowing and reduces energy use and eliminates emissions generated by mowing. T-8 fluorescent light fixtures were installed in the two new construction buildings as in all district buildings. LED exterior lighting for parking lots, trails, and wall packs. Occupancy sensors in building and daylight sensors where appropriate. Dual-level lighting throughout the buildings. Geothermal HVAC with variable speed water pumps. Energy recovery ventilation to recapture energy that would be lost through ventilation process. Programmable zones for setback capabilities. Energy star equipment was purchased whenever possible. These energy saving features will be examples for energy education of the children as well as adults in the community.

Element 1B: Improved water quality, efficiency, and conservation

Focus Area: Water

Most of the District's drinking water comes from a municipal source. Two schools also have wells.

The school uses the following practices to increase water efficiency and ensure quality:

- ✓ Our school conducts annual audits of the facility and irrigation systems to ensure they are free of significant water leaks and to identify opportunities for savings.
- ✓ Our school uses alternative water sources other than potable municipal or well water (rain barrels at the high school) for irrigation
- ✓ Our school has no-irrigation landscaping
- ✓ Our school's landscaping is water-efficient and/or regionally appropriate.
- ✓ Our school has reduced storm water runoff and/or reduced impermeable surfaces.
- ✓ Taps, faucets, and fountains at our school are cleaned at least twice annually to reduce contamination and screens and aerators are cleaned at least annually to remove particulate lead deposits.
- ✓ Our school has a program to control lead in drinking water (including voluntary testing and implementation of measures to reduce lead exposure).

- Comments: voluntary testing for WDNR at 2 schools with wells
- ✓ Our school has a medication disposal policy that helps ensure water quality.
- Comments: medications are taken to med drop off at the police station

Additional progress the school has made towards improving water quality, efficiency, and conservation:

The district has multiple rain gardens and native prairie plantings for water capture and infiltration. The MHS pool renovation project in 2008 provides a system to prevent pool drainage from entering City storm water and negatively impacting PB Creek. Solid soap canisters = less suds in sewer. MHS replaced a Hobart dishwasher saving 40% of former water usage, 7 other schools have new Hobarts for energy and water use reduction. MCPASD has plan to replace inefficient equipment annually. At MHS sinks in the newer addition and in renovation have motion detectors for instant on and off faucets. Faucets in science rooms are anti-siphoning to protect water quality. When replacing or adding fixtures, MCPASD purchases low flow fixtures and lower gallon per flush urinals and toilets.

New construction at 2 middle schools provides drinking fountains that have a place for filling up reusable water bottles. Sinks have motion detectors for on/off faucets. Low flow toilet room fixtures and low flow aerators @ .5 gal/min on sinks. Pervious asphalt at KMS for paths, walkways, and plazas. Storm water is treated for quality through rain gardens, bioswales, drainage patterns across green spaces.

Students and staff identified and implemented water conservation and increased water quality in the following ways:

MHS Ecology club has posted signs during Earth Week encouraging water conservation and to reduce pollution. CSCS teaches a seminar about Water in January that is devoted to helping students develop awareness about water as a resource and their own water footprint in relation to the rest of the world. District has identified areas to conserve water such as no irrigation unless there is a new seeding. Hand watering of trees is applied vs water bags to conserve water. Water saving devices, such as motion detection on/off faucets, automatic shut off faucets, low flow showers and toilets, have been installed at all district buildings.

The school has integrated education about water across multiple grade levels:

4K teaches about water using sensory table. Third grade classes learn about water and all students take a field trip to PBC to learn the water cycle, watershed, water testing, the springs and land use, and infiltration/impervious surfaces that affect aquifer and Middleton drinking water. Enviro Studies: Water use and Pollution is a semester class centered around a water resources curriculum. APES has a water resources unit and does water testing at PB creek. Field Biology has a limnology unit and began stream monitoring fall of 2014. CSCS students test soil for P, K, N and pH and then a specialist talks with them about phosphorus in the watershed and threats to Lake Mendota plus remediation. Social studies class, Issues in Global Development discusses access to clean water. Online course offerings for high school students include Marine Science, devoted to water resources and Global Studies, a class where students report for Global News Network on environmental issues such as water shortages and pollution. Four HS classes discussed the need to pass a storm water utility referendum to protect PB Creek and Lake Mendota.

GCMS 6th graders monitor Black Earth Creek (BEC) during a yearly field trip. PS also uses BEC as a learning space. MHS students monitor PB creek once monthly for six months since early 1990s-2011. KMS students were trained in water quality testing in summer during 2 field trips to the PB creek and begin monitoring spring of 2015. MHS Env Sci students develop runoff rating tools to assess various parts of the community in order to identify how farms, houses, and businesses can reduce runoff. Students do a self-use inventory and then create a campaign poster with strategies to help others reduce their water use as well. One example was a student who focused on what impact would be made if all students took GI showers (turning off the water before soaping up). FOSS units on water occur in third, fifth, and sixth-eighth grade. They include weather and water, water planet, and basic water concepts. 4K has a unit around Earth Day with one of their topics being the conservation of water and energy.

Professional development is offered to staff in regarding water and/or water education:

Classes are offered through Project Wet for water education. UW-Extension offers classes for stream monitoring training. Friends of Pheasant Branch (FOPB) currently has a grant to hire naturalists to help teachers train classes/students for stream monitoring. NALMS periodically has their conference in Madison and some science teachers at MHS have attended with students for the local watershed issues track. Assistant Superintendent Wohlleber emails professional development classes for EE to staff. All schools are Earth

Partnership Schools and have prairies with native plants that are not watered after establishment. Students are taught the benefits of native planting to conserve water as one theme.

Element 1B: Improved water quality, efficiency, and conservation

Focus Area: School Site

The schools use the following types of outdoor grounds:

- ✓ Our school has a habitat garden. Number: 9 Comments: KMS, NS, MHS, CSCS, PS, SR, WM, EL GCMS
- ✓ Our school has a food garden. Number: 6 Comments: MHS, CSCS, PS, KMS, 2 of 4K sites
- ✓ Our school has an arboretum. Number: 3 Comments: forested areas at ST, CSCS, MHS
- ✓ Our school has a school forest registered with the Department of Natural Resources. PS 2008 certified
- ✓ Our school utilizes a wooded site adjacent to the school site. Number: 4 Comments: CSCS, KMS, MHS, PS
- ✓ Our school utilizes a community park. Number: 10 Comments: all use PBC and Pope Farm Park plus Fireman's Park adjacent to MHS & Baer Park across from GCMS
- ✓ Our school uses the existing site, lawns, playgrounds, etc. for outdoor teaching. Number: all 10 schools
- ✓ Our school has integrated natural features into the playground area. Number: 6 Comments: wood chips, par course on nature trail for exercise training, logs as seats in outdoor learning center at school forest
- ✓ Other: 2 schools use Pheasant Branch Creek

Additional progress the school has in place to maintain or improve safe, healthy, and environmentally sound grounds:

MCPASD has integrated pest management to limit chemical use. MCPASD limits fertilizer use on playing fields and no phosphorus in fertilizer to protect area lakes. Low or no mow areas around buildings at new construction sites. All sites have rain gardens/detention ponds to capture and infiltrate storm water. Parking areas all have landscaped islands for infiltration & shade. SR and the school forest have trails through a nature area for safe and healthy walking. Walking trails to PB Creek and a bridge to connect MHS and KMS campus for environmental collaboration are planned for the future.

The school encourages educational use of the grounds, school forests, and teaching sites in the following ways:

All schools utilize FOPB naturalists to teach lessons in the PBC and all 4th graders go to Pope Farm park to learn about Native American diet, hunting techniques, gardening, and needs for survival with geology and land use in spring. K-5 have lessons in the PBC tied to Foss science units. These center on trees, soil, web of life, plants, water, and land forms. All MHS biology students learn about data collection in PBC and return for service; collecting seeds or invasive removal. MHS students have done restoration in PBC since 1995. PS utilizes the school forest, outdoor learning center, large rain garden and food gardens in their curriculum. The new KMS & GCMS have outdoor amphitheaters. The location of KMS is on the banks of PB Creek and curriculum is being written for outdoor education. MHS and CSCS have garden projects that connect college interns with 9-12 and 4K students as they learn about organic farming. MHS art students learn nature photography in PBC, submit their best, and winners appear in FOPB calendar.

Professional development offered to staff regarding use of school grounds school forest, and/or outdoor teaching sites in the following ways:

Staff members have participated in many courses that offer a variety of outdoor education ideas. Some of these courses include Project WET, Project Wild, Project Learning Tree, and Earth Partnership for Schools. Almost all district schools are Earth Partnership Schools and have prairies and resources for educating students in the prairie. Recently 2 staff members from PS participated in a Growing Minds workshop at Troy Community Gardens. MHS teacher took a class in how to utilize school grounds in his Master program in EE at UW-SP. Staff member has offered Teaching through Gardening classes to colleagues.

Additional progress the school has made to encourage educational use of the school grounds, school forests, and outdoor teaching sites:

Advanced composition students came to PBC, learned about different aspects of the local ecology, wrote poems and research papers with some poems published in FOPB calendar. Fourth grade students at ST learned about nature in forested area, listened to stories about playing outside by senior citizens and with

help from the seniors, did art projects and wrote about the experience captured in a published booklet. This 2013-14 Intergenerational project was funded by an American Girl grant and had student artwork on display around the community. The 2014-15 AG grant is also intergenerational with MHS video production classes producing 4 videos documenting the history of the FOPB and the Conservancy. These grants connect students to the local environment and senior citizens giving them a real world project. In the works, is the next AG grant (2015-16) to connect music students, seniors and concerts in the Conservancy. Science, english, art, and music students are all introduced to the PBC as an outdoor learning site. In 2014, four MHS pupils completed an independent study, prairie plant I.D. survey at Pope Farm to document how many species survived a drought; data for management decisions.

Element 1C: Reduced waste production

Focus Area: Recycling & Waste Management

The school's Green Team conducted a formal waste audit in 2011. The school recycles the following materials:

- | | |
|------------------|------------------|
| ✓ Paper | ✓ Cell Phones |
| ✓ Glass | ✓ Milk Cartons |
| ✓ Metals | ✓ Batteries |
| ✓ Plastics | ✓ Other: E-waste |
| ✓ Ink Cartridges | |

The District has a 48% recycling rate. The District purchases 30% post-consumer recycled, chlorine free paper from managed forests. Recycling bins are clearly labeled (students have helped with proper labeling of all), always placed next to trash cans, and are in the following locations:

- | | |
|--|----------------|
| ✓ Hallways | ✓ Staff Lounge |
| ✓ Classrooms | ✓ Main office |
| ✓ Lunch Room | |
| ✓ Other: All spaces where staff, students and the community are present. | |

The school composts waste in the following ways

- ✓ Our school has a small scale, compost demonstration site used primarily for educational opportunities. Comments: CSCS & MHS uses for both education and in school food gardens
- ✓ Our school composts our cafeteria food waste. Comments: WM has just begun food waste composting.
- ✓ Our school composts school landscape waste material. Comments: WM for use in school gardens
- ✓ Other: school garden waste and leaves are composted. Grass clippings left on lawn.

The school takes the following actions to minimize and safely manage hazardous waste:

- ✓ Our school has a hazardous waste policy for storage, management, and disposal that is actively enforced. Comments: all hazardous waste is disposed of environmentally
- ✓ Our school disposes of unwanted computer and electronic products through an approved recycling facility or E-cycle Wisconsin program.
- ✓ All our computer purchases are Electronic Product Environmental Assessment Tool (EPEAT) certified products.

The chemical hygiene officer at MHS approves all chemicals before purchasing. Years ago the chemistry department eliminated lead, mercury, chromates, dichromates, and other hazardous chemicals through a clean sweep program for schools. The most recent clean sweep disposal from the HS science department was over 12 years ago. Since that time, no chemicals have been purchased that are on the Flynn non-recommended for students list. During the move to a new facility, KMS science chemicals found not safe for student use were disposed of through Badger Disposal. There were 71 substances identified for disposal. Amounts were determined by container capacity and % remaining. Some were not deemed hazardous and others such as sodium peroxide, sodium hydroxide, copper compounds, lacquer thinner are hazardous. Environmental and health services contractor quantified the materials and Badger Disposal will complete the manifest that will track the waste disposal.

Additional progress the school has made to reduce waste, increase recycling/composting, or eliminate hazardous waste:

All confidential documents from schools and administrative offices are shredded & recycled. Milk cartons are recycled at all sites K-8. Green team at WM is surveying 2014 recycling and garbage for streamlining. Equipment such as cabinets, computers, printers, etc are sold at district "garage sale" for reuse. Ecology club has had swap events in the student center where students bring in unwanted clothing, shoes, accessories, etc. Anything left over is donated to Goodwill. Gardening program donates leftover food to Middleton Outreach Ministry food pantry. Paper napkins for all schools are chlorine-free, suitable for composting. Any pre-packaged food such as carrots, milk, whole apples, etc that students have taken but don't want are placed in a box for the food pantry. According to a survey in 2014, this food donation (in place for 25 years) exceeds 30,000 lbs/year kept out of landfills. Over last 3 years, training reduced waste at the food production level. In Tech Ed. all scrap metal parts, including nails, screws, rivets and sheet metal are recycled. KMS PTA recycles printer cartridges including 211 from City Clean Sweep in Oct. 2014.

Waste reduction, reuse and recycling behaviors are encouraged in the school in the following ways:

HS & Middle schools have clearly labeled recycling bins for bottles and cans from vending machines. Durable trays are washed and reused. All cardboard, cans, and glass are recycled from all production kitchens. Distributor brings truck load of food to the district's central warehouse which has large cooling and freezing capacity. This reduces the need for smaller less efficient units at individual schools and allows for one delivery vs going to 10 schools thus reducing fuel and pollution. Food delivery to individual schools occurs with daily mail delivery to create more efficient routing. Less equipment is needed at individual schools because the central kitchen produces meals which also saves energy besides resources in equipment manufacture. MCPASD has software that requires teachers to actually select what they want printed at the printer (after selecting print on the computer) to reduce mistake printing. This has reduced the paper use by 346,471 sheets in 2013-14. All printer cartridges in the district are recycled and reused.

Waste reduction and recycling are part of the curriculum in some/all grades:

All classrooms have both garbage and recycling bins. Middleton recycling is co-mingled so no sorting is needed. When recycling began in the 1990s, as freshmen, students were trained by environmental studies students in proper recycling methods. The students placed cardboard boxes in classrooms to encourage recycling. Field trips to Columbia County recycling facility were offered to environment students. Speakers on recycling were also invited. Students were trained in recycling K12. Today, the culture of recycling is so common place that recycling curriculum can be replaced with more pressing environmental education. The "star" program at some elementary schools rewards students that are "caught" recycling. Some classes have gone to on-line evaluations and articles to reduce paper use. 4K teaches students to recycle paper, to not waste materials, and conserve paper towel use. 4K also pick up trash and decides what is recyclable versus trash then graph recyclables; plastic, cans, & glass.

Professional development for staff regarding waste reduction and recycling is offered in the following ways:

The director of food services has in-serviced kitchen staff on a yearly basis regarding waste reduction at the production level and recycling. A study was done 2 years ago that focused on kitchen waste volume that resulted in training for new production techniques that reduced waste. Lower meal cost is attributed to the cost of waste disposal being less due to less waste. UW-Madison offered a course on waste generation and recycling that 2 MHS science teachers attended.

The District Administrative Center has purchased reusable glassware and pitchers to provide tap water at meetings and eliminate plastic water bottles.

Additional progress the school has made towards waste and recycling education:

Construction waste for 2014 new buildings was recycled. 24,700 square feet of the existing KMS was maintained and updated with modern plumbing, HVAC and electrical systems thus keeping this portion out of the waste stream. Of the old building that will be demolished, 30% can be recycled. However the demolition contractor is currently working to possibly get up to 50% of the old building recycled. End of the year activities includes a locker clean out and gently used supplies are collected for distribution to students in need during next school year. Unclaimed Lost and Found articles are donated. APES field trips to Holy Wisdom Monastery, a platinum LEED certified building learned how the Monastery recycled 99% of the old building. Elementary age students take a field trip to the library in Cross Plains, first LEED silver

certified library in Wisconsin, and learned about recycled building materials. GCMS for last 2 yrs has a terra-cycling program to reuse plastic.

Element 1C: Use of alternative transportation

Focus Area: Transportation

The school offers the following transportation options:

- ✓ A well-publicized, no idling policy that applies to all vehicles (including school buses).
- ✓ Vehicle loading/unloading areas are at least 25 feet from building air intakes, doors, and windows.
- ✓ Programs to encourage carpooling. Please explain limiting response to 350 characters. Comments: program to encourage bussing rather than cars
- ✓ A plan to regularly review bus routing. Comments: district wide
- ✓ A policy pertaining to fuel-efficient fleet vehicle purchasing. Comments: district wide
- ✓ Bike racks. Comments: all schools
- ✓ Safe Pedestrian Routes to school or Safe Routes to School. Describe: worked with city on locating Safe Routes to School. Received funding.

The school transportation use is efficient and has reduced its environmental impact:

- *buses retrofitted with diesel oxidation catalyst using EPA region 5 Midwest clean diesel initiative grant
- *ultra low sulfur diesel fuel used
- *From 2010 to 2014 retired 24, 1993-99 buses and added 31 new, low emission and better MPG buses
- *Transportation center requires no idling when dropping off or picking up students at school
- *GPS equipment used to monitor reduced idling
- *one suburban with flex fuel option
- *district owns 4 suburbans for transporting small groups
- *offering late bus to reduce individual vehicle use for after school activities
- *Use routing software, Transfinder, to locate stops to shorten routes for route optimization and stop optimization.
- *district participates in the "Safe Routes to School" Program.
- *district has a well-publicized no idling policy that applies to all vehicles (including school buses).
- *district has established Safe Pedestrian Routes to school which are distributed to parents and posted in school offices.
- *District uses a rubric that includes age, condition of bus, power train, and cost to maintain the bus, to replace inefficient buses.
- *Applied for National Clean Diesel School Bus rebate program to replace 5 more buses. Pending

Additional progress the school has made towards transportation efficiency and decreasing emissions:

All district buses are equipped with a GPS system that monitors idling. The Transportation Director regularly reviews the idling reports and conducts follow-ups with drivers. Students who live in town have the opportunity to complete safety slips notifying schools that they will be riding bikes to school. Families take advantage of this healthy alternative knowing the school is maintaining and enforcing safe practices. KMS - Trails/paths, bike parking, and showers are provided to encourage students and staff to use alternative modes of transportation. GCMS with new construction has bike parking and showers provided as does all the other schools. Asst. Superintendent Wohlleber, serves on the city Pedestrian, Bicycle and Transit Committee that encourages and develops safe and environmentally friendly transportation options for students and community residents. Superintendent Johnson, serves on the WI Sustainable Schools Coalition board which promotes school and community green and healthy initiatives.

Transportation issues and outdoor air quality are part of the curriculum in some/all grades:

Transportation issues are discussed in APES during the energy unit and urban planning unit. The pollution unit covers outdoor air quality for a number of pollutants, many tied to transportation choices. Chemistry has students explore climate change and the impact transportation and carbon based fuels have on the atmosphere. Growing Food and Sustainability, formal name of the gardening program, is a youth-led,

community-based sustainability initiative. The program engages elementary, middle and high school youth in hands-on EE and leadership training through agriculture, nutrition, cooking, art, biking, and multi-age relationship building. All transportation is done with bicycles. They have a wagon attached to a bike that picks up food waste from 3 local businesses to deliver back to the compost pile at MHS. Over 2 years, 2500 lbs of food waste was diverted from landfills to provide composted soil for the school gardens. The bike/wagon delivers vegetables to the local food pantry, Middleton Farmers Market and 2014 CSA members. By modeling good practices, this educates youth on alternatives to cars. See <http://growingfoodandsustainability.wordpress.com>

The district offers incentives for students or staff to encourage sustainable transportation practices:

District participates in walk/bike to school day. During Earth Day events Ecology club gave tickets to students walking, biking, or carpooling for a drawing for prizes. During a transportation/energy unit, Environment students encouraged high school administration to give preference to students carpooling with reduced parking fees. Students that opt to attend another school in the district, outside their attendance area, had to pay an additional fee for busing but that fee was waived in 2012 to encourage more bus riders.

Professional development offered to staff regarding sustainable transportation education include:

MCPASD sent the transportation services manager (TSM) and transition transportation coordinator (TTC) to National Association for Pupil Transportation conference in November to learn of alternatives to gasoline and diesel fuel such as propane, CNG, and diesel electric hybrids. Transportation staff, Superintendent and Assistant Superintendent are all inserviced on the latest technology learned at the conference. WI Department of Energy held conferences in 2012 on CNG opportunities that were attended by TTC. All transportation staff are instructed in low idling procedures...at 20F--10F limit is 15 min/hr and below -10F idling as necessary. This low idling policy reduces emissions, wear and tear on the engine, and saves \$8-10,000 annually. In winter the buses were idling as much as 200 hours/week and after GPS equipment was installed to monitor and enforce idling policy in 2012, the average was reduced to 15 hours/week greatly reducing fuel use and emissions.

Pillar II: Improved Health & Wellness

Element 2A: Integrated school environmental health program

Focus Area: Environmental Health

The school has fully complied with the state law prohibiting elemental mercury and has an indoor environmental quality plan.

The school employs the following practices to improve contaminant control and ventilation:

- ✓ Our school has a comprehensive indoor air quality management program that is consistent with EPA's Indoor Air Quality (IAQ) Tools for Schools.
- ✓ as mold, dust, and pet dander.
- ✓ Our school meets ASHRAE Standard 62.1-2010 (Ventilation for acceptable indoor air quality).
- ✓ Our school has installed one or more energy recovery ventilation systems to bring in fresh air for use in the HVAC system.
- ✓ Our school has installed local exhaust systems for major airborne contaminant sources.
- ✓ Our school has CO alarms that meet the requirements of the National Fire Protection Association code 720.
- ✓ Our staff visually inspects all our school's structures on a monthly basis to ensure they are free of mold, moisture, and water leakage.
- ✓ Our school's indoor relative humidity is maintained below 60%.
- ✓ Our school has moisture resistant materials/protective systems installed (ie. flooring, tub/shower, backing, and piping).
- ✓ There are no wood structures on school grounds that contain chromate copper arsenate.
- ✓ Our school prohibits smoking on campus and in public school buses.
- ✓ Our school has combustion appliances that are annually inspected to ensure they are not releasing Carbon Monoxide? (Not applicable – the school does not have combustion appliances.)

- ✓ All of the ground contact classrooms at our school have been tested for radon within the last 24 months.
- ✓ Radon tests for all of our schools tested at or below 4 pCi/L.

The school has a chemical management program that includes:

- ✓ Chemical purchasing policy (low or no-VOC products).
- ✓ Storage and labeling.
- ✓ Selecting third-party certified green cleaning products: 80% of custodial products used are Green Seal Certified. Also use Ecologo, Green Seal, and EPA
- ✓ Hazard communication.
- ✓ Spills (clean up and disposal).

The school controls and manages chemicals routinely used in the school to minimize student and staff exposure:

All chemistry students use goggles in lab, closed toed shoes, and lab aprons. All science labs have eye wash stations and drench showers. Chem labs have exhaust fume hoods. Faucets are anti-siphoning. Yearly chemical safety workshops occur.

The school has an integrated pest management program and uses the following practices to reduce exposure to pesticides:

- ✓ Our school has an employee who is certified to apply pesticides.
- ✓ Our school contracts with a certified and licensed pesticide applicator.
- ✓ Our school post a notice at the time of pesticide application and for at least 72 hours following application
- ✓ Pest control policies, methods of application, and posting requirements provided to parents and school employees.
- ✓ Copies of pesticide labels, copies of notices, material safety data sheets (MSDS) and annual summaries of pesticide applications all available and in an accessible location.
- ✓ Students are prohibited from entering a treated area for at least 8 hours after the treatment or longer if required by the pesticide label. Comments: 72 hours post and restrict

Efforts to reduce use of pesticides at school include:

All school gardens are organically farmed.

"An Integrated Pest Management (IPM) approach for controlling insects, rodents and weeds shall be used in the District. The District's IPM approach will focus on making the school building and grounds an unfavorable habitat for these pests by removing food and water sources and eliminating their hiding and breeding places. The District will accomplish this through routine cleaning and maintenance.

School buildings and grounds are monitored regularly to detect any pests that are present. Pest sightings will be reported to the District's IPM Coordinator who will evaluate the "pest problem" and determine the appropriate pest management techniques to use to address the problem. The techniques can include increased sanitation, modifying storage practices, sealing entry points, physically removing the pest, etc. Chemicals (pesticides) shall only be used when necessary to eliminate a pest problem. Pesticide application in a school or on school grounds shall only be done by authorized persons and shall be posted in accordance with state law requirements."

Additional progress the school has made towards improved environmental health specifically on the school building and grounds:

APES students tested the air in the woods shop while students were sawing and sanding wood for a project. It was found that the particulate matter in the air exceeded safety levels indicating the air handling system was not effectively working. MCPASD called in professionals and the exhaust system was fixed. The following year recorded safe levels of particulates. The district monitors semiannually the CO2 levels.

Professional development or training offered to staff regarding environmental health:

Each year district custodial, grounds and maintenance staff attend a half day seminar to include discussion concerning environmental health. This training is backed up by mandatory online training throughout the year. Science teachers are inserviced yearly on chemical hygiene and safety.

Chemical safety and awareness and mercury information are part of the curriculum in some/all grades:
Mercury is not allowed in schools. All mercury and mercury thermometers were removed years ago.
Chemistry labs all have chemical safety information located in each classroom. Students have safety training and testing before any chemistry labs are performed. Chemical hygiene officer must approve all chemicals on order and inspects storage areas for chemicals considered unsafe for student use.

Additional progress the school has made towards improved environmental health through training, teaching, and professional development:

The district has yearly training through a health and safety consultant. On-line training is required for all staff to ensure awareness of chemicals present in all district facilities. Other targeted training is available for health and safety topics for specific work groups as appropriate based on job related responsibilities.

Element 2B: Nutrition & Fitness

Focus Area: Health & Wellness

The Middleton-Cross Plains Area School District is committed to providing school environments that promote and protect children's and adult's health, well-being, and ability to learn by supporting healthy eating and physical activity. Therefore, it is the policy of the Middleton-Cross Plains Area School District that:

(See: <https://app.eduportal.com/documents/view/433046?q=district%20wellness%20policy>)

The school provides the following options to promote nutrition and fitness:

- ✓ Our school offers pre-made salads and large vegetable condiment bar daily
- ✓ Our school offers fresh fruits and vegetables. Comments: offered daily
- ✓ Our school uses whole grain foods. Comments: all district uses for last four years
- ✓ Our school has restricted access to foods of minimal nutrition value. Comments: for 15 years
- ✓ Our school has restricted access to beverages of minimal nutrition value. Comments: juice, milk, naked juice is offered. Vending contract offers diet soda but no sugar soda.
- ✓ Our school garden supplies food for our students in the cafeteria, a cooking or garden class or to the community. Comments: Volume of school gardens not enough for district food service but Food pantry, organic Dinner, and garden program uses "farm" program.
- ✓ Our school has an on-site indoor exercise room available to students and staff. Comments: at high school
- ✓ Other: swimming pool, hiking trails, track and outdoor fields

The school has a policy for harassment and bullying:

BULLYING OF STUDENTS AND STAFF 411.1

Bullying of students and staff will not be tolerated and is prohibited in the Middleton-Cross Plains Area School District. All forms of harassment in cyberspace, commonly referred to as cyber bullying, are also unacceptable and viewed as a violation of this policy.

This policy applies to all educational activities and environments supported by the district. The Board of Education considers these actions to be detrimental to the health and safety of students and staff, and disruptive to the educational environment. <https://app.eduportal.com/documents/view/432915?q=Bullying>

Students, parents, and staff may report bullying 24/7 utilizing the district online reporting system, School Works. There is also a district telephone hotline to report bullying. Both systems allow anonymous reporting.

Additional progress the school has made towards improved health and wellness specifically related to the school facilities and policies:

*6-7 am M-W-F **free**, community based fitness program, Middleton Morning Movement Mayhem reconnecting bodies to movement potential & possibilities. 11 year program has grown from 7 to 70 attendees.

-On Tuesdays and Thursdays: 30 minute Introduction to Movement sessions are designed to acquaint people with methods and equipment used in the MMMM sessions.

-New PE/Health curriculum, "Rest - Eat - Move" (REM): K-12 comprehensive program to provide students skills and resources to achieve and sustain fitness for a lifetime. REST: Passive rest (sleep); Active rest (physical decompression); and Mindful rest (stress reduction); EAT: Connecting people to real food; MOVE: Creating bodies that are physically literate and adaptable rather than simply adapted.

-MHS athletes training: Instruction in proper movement mechanics assisted by students from UW physical therapy graduate program, M-Th from 4:15-5:30. Program has reduced sport injuries.

The school provides the following resources for staff and student social well-being:

MCPASD provides access to social-emotional services in each and every building. Students access these services through teacher referral, classroom lessons, and by student request as staff are present in each building. Not all the positions are full-time, but all are available every week or by appt. or request. Overlap occurs so that students can always get help when needed.

The school employs the following practices to promote nutrition, physical activity and overall school health:

- ✓ Our school has implemented Fuel Up to Play 60. Comments: in the past not currently
- ✓ Our school has implemented Got Dirt or Got Veggies program. Comments: Park School
- ✓ Our school participates in a Farm to School program or other program to use local, fresh food.
- ✓ Our school promotes hand washing for staff and students.
- ✓ At least 50% of our students have participated in the EPA's Sunwise (or equivalent program). Comments: students taught benefit in using sun screen
- ✓ Other. 2006 Comments: local source for fresh whole apples Sept.- Jan.

The following types of outdoor education, exercise and nature-based recreation is available:

All sixth graders have an overnight field trip to Upham Woods for outdoor activity such as snowshoeing and cross-country skiing plus have team building skills and environmental lessons. Ten under-resourced students ages 13-18, are selected to participate in BWCA trip. The core Big City Mountaineers program is a week-long wilderness mentoring expedition where urban youth are given the opportunity to experience the beauty and challenges of the wilderness alongside supportive adult mentors. MCPASD is the only district in WI participating in BCM trips and has done so the last 2 summers. PE offers Fitness for Life, Outdoor Pursuits, & REM as 3 courses with nature based recreations such as camping/hiking, snowshoeing, cross-country skiing, etc. In recent years, 4 CO Wilderness backpacking and river rafting trips were taken by 35 students. A summer 2015 program called Outdoor Adventures will involve 5th-8th grade students in hiking, canoeing, swimming, and camping. GCMS PE uses Baer Park for outdoor activities. KMS holds an annual 1 mile fun run in PBC.

The following professional development, training, or programs are offered to staff regarding health and wellness: Introduction to Movement is a four-week course offered to staff taught by the MCPASD wellness coordinator. A Health Risk Assessment is mandatory for all staff with health insurance through MCPASD. A monthly wellness letter is emailed to all staff with tips on healthy living. The media coordinator at MHS has produced several short wellness-oriented video segments. Experts from the UW (Physical Therapy; Nutritional Science; Sports Medicine; Sleep Clinic, Sports-Med, etc.) are invited to present on various topics.

Health, nutrition, wellness, and physical activity are a part of the curriculum in all grades:

REM is a comprehensive vision for health, fitness and physical viability that is integrated throughout the district and the supporting local community. A partnership between Harbor Athletic Club and MCPASD provided the funds to purchase a lift and have it installed at Harbor Athletic Club's warm water pool for wheel chair bound students. It continues to be a well-used exercise option for handicapped students from MCPASD.

The school engages staff, students, and the surrounding community to promote health enhancing behaviors and wellness:

REM is individualized. One school may feature a teacher - staff walking group, while another may offer classes in yoga or circuit training; still others may create food-resource tribes stressing connection to local sources for whole foods, recipe sharing and group meals.
4K takes students on walking field trips every other week and nature walks in good weather.

Additional progress the school has made towards improved health and wellness among staff and students at the school:

The USDA administrative review of the district's child nutrition program was conducted in Feb of 2014. No citations were noted and the program was given exemplary status. Sanitation reviews are done twice yearly and also received exemplary status with no citations. Community-Service learning credits are offered to

students for assisting in the instruction of fellow students and staff to improve movement skills.

Pillar III: Effective Environmental and Sustainability Education

Element 3A: Interdisciplinary learning about the key relationships between dynamic environmental, energy, and human systems

Focus Area: Environmental & Sustainability Education

The school has a scope and sequence that integrates environmental and/or sustainability education as part of the regular coursework at all grade levels:

Trees, Water, Matter and energy, electricity, water planet, solar energy, environmental biology, environments, diversity of life, weather and water, populations and ecosystems, electronics, ecology, climate change, 4K-8 plus specific EE classes and infusion at HS level

Environmental and sustainability education concepts are integrated throughout the curriculum in grades 4K-12.

6th grade does a global awareness project that encompasses environmental issues. Kids choose topics (e-waste, pollution, climate change, invasive species) do research, hear/Skype with guest speakers, design their own scientific studies, write opinion essays, and culminate with group presentations. Environment classes are offered to 10-12th graders. H2O for Life fundraiser is done yearly in 6th grade. A few schools overseas needing help in raising funds for wells, hand washing stations, latrines are chosen. Students learn about the importance of clean water and hygiene while raising money to fund those projects. 4K take, nature scavenger hunts, have camping unit, tend gardens, eat harvest, & learn recycling/saving energy.

Science: biology: ecology unit and climate change. Biotech: ethics of GMOs.

Social Studies: Issues in Global Development has unit on access to clean water. Online course Global Studies have students reporting on Environmental issues.

English language arts: Debate often has environmental issues. 2013-14 Advanced composition had trip to PBC to get topics to research and inspiration for poetry.

Exceptional needs: Inclusion is practiced in all classes so all students learn together.

PE/Health education includes eating healthy and speaks to organic benefits, uses Rest-Eat-Move.

Tech Ed: Engineering has alternative energy/design. Rec Vehicles Modification and Design: more efficient fuel use. Power, Energy and Transportation: energy use, impacts. Architecture and Design: LEED

Students have access to environmentally and/or sustainability focused clubs:

Ecology Club and Envirothon are offered. The range of Ecology Club members varies from 25 to 15 currently. Envirothon is a 5 member/team club with mainly 2 teams/yr. Model UN has 40 students this year. The club analyzes the environmental impact their decisions will have in most every simulation, and Model UN had conference topics in the past that dealt with climate change, environmental crisis, and other topics such as mining, & industrial emissions. Debate team (30 members) topics are often environmental. For example: Nov. 2014: Resolved: On balance, the benefits of genetically modified foods outweigh the harms. Roots & Shoots 20, garden club, and GO club (Go Outside, Grow Outside, 40) are offered at the elementary level. 15 Elem. students have the option of joining the summer garden camp offered by Growing Food and Sustainability.

Professional development offered to ensure environmental and sustainability education include:

- ✓ Aquatic WILD - Number of staff_7
- ✓ Attended the Midwest Renewable Energy Fair for professional development credit. Number of staff_5_
- ✓ Trainings offered through your local CESA - Number of staff_4
- ✓ Earth Partnerships Program - Number of staff_54_ Optional Comments: all schools had teams except CSCS
- ✓ KEEP (WI K-12 Energy Education Program) –Number of staff_19
- ✓ LEAF (WI K-12 Forestry Education Program) –Number of staff_4_
- ✓ Leopold Education Project - Number of staff_2
- ✓ Masters Degree in Environmental Education - Number of staff_1
- ✓ National/International Conference – Number of staff attended. 4
- ✓ Project Learning Tree – Number of staff 2_

- ✓ Project WET - Number of staff 10_
- ✓ Project WILD - Number of staff 17_
- ✓ Related university level course: Number of staff_19 Comments: Environmental Justice, EE, EE Curriculum and Deveolpment, EE curriculum Resources, Environmental Conservation, DNR groundwater, Wingra Watershed field experience, Water Monitoring, Wis. Bioneers, Growing Minds - Garden based Learning, Citizen based Monitoring
- ✓ WI Association for Environmental Education Event - Number of staff_2
- ✓ WI Center for Environmental Education Sustainability Course/Workshop/In-service - # of staff_1_
- ✓ Other in-service, training, workshop, or course: _20: biology teachers inserviced on outdoor learning, Kids for the Earth inservices, MATC Teaching about Energy, Great lakes Bio-energy research Center-Research exp. for teachers, Yahara watershed 2070 workshop, Nelson Institute Earth Day Conference.

Outdoor learning experiences offered to students at the school each year include:

Fourth graders from Park removed invasive species and assisted with trail maintenance on the Ice Age Trail. Field biology and PS are hopeful they will participate in Snapshot Wisconsin, DNR partnership with trail cams placed in the PBC and the school forest to monitor wildlife. Field biology is centered on different monitoring opportunities in PBC. Many independent study projects include: determining the impact of development on Brewery creek, & bat and Blanding's turtle research projects. GCMS 8th grade uses Brewery Creek to study local fauna.

The curriculum makes connections between classroom and college and career readiness, in particular post-secondary options in environmental and sustainability fields:

Project Lead the Way courses tie careers to activities. In Principles of Engineering, students build mock re-cyclers & environmental engineering is discussed. When Hydrogen and Solar cars are done, careers are explored. Field trips & job shadows are often set up for in the field experiences. In Principles of Biomedical Sciences, some of the careers that are explored include environmental toxicology. In Biomedical Innovations, water quality testing and bacterial investigations of contaminated wells are done including career discussions. Agriculture, Food, and Natural Resources is one of these clusters that can then be linked to the DPI Program of Study Plan for recommended high school courses. Yearly, 8th grade parents are asked to participate in their 8th grader's Student Planning Conference; focused on education and career development, talents and interests, and preparation for a smooth transition to MHS.

Career and technical student organizations' projects focus on environmental or sustainability topics:

At the middle school level, the Builders Club, for the last 2 years, competed in CANstruction, a project involving a local food drive that is a competition for teams to build structures with canned food.

Additional ways the school integrates environmental and sustainability education:

- *Fifth graders at NS prairie seed collect and learn about the importance of maintenance of prairies.
- *Biology students make observations at PBC. Students design and build their own ecocolumns. The goal of the ecocolumn is to create a fully functioning ecosystem that can be sustainable.
- *4K explore the school prairie, plant grass, grow bean sprouts, and plant flowers for a take home gift.
- *Social Studies dept. holds Human Rights Week once yearly that includes fair trade sale. Past speakers discussed women's issues; education, family planning, abuse (all related to family size).
- *A wolf research project in the Treehaven area (WDNR) will be the focus of an overnight field trip by Field Biology students in Dec. 2014. After activities at Treehaven the students will go to the site of the study to track wolves with a WDNR biologist.
- *For many years, APES and Advanced biology students went on separate overnight field trips to UW-Trout Lake to collect data on chemical and biological testing of Trout Lake, collect data and experience a bog, collect invasive rusty crayfish (with a crayfish boil) and learn about other research going on through the station. APES compared water studies in northern WI vs southern and examined land use patterns to determine differences. Currently, Field Biology is planning a field trip to UW-Trout Lake in May to continue this great experience. Two former MHS students that were on this field trip, one at UW and the other at UW-SP have been employed during the last 2 summers to do research at Trout Lake.

Element 3B: Use of the environment and sustainability to develop STEM content, knowledge, and thinking skills

Focus Area: Environmental & Sustainability Education

Integrated Art and Science explores fiber reactive dyes as opposed to the toxic fixatives of natural dyes. The FR dyes are used in producing artwork using Sacred Geometry and look into nature for the divine ratio. Civil Engineering and Architecture has projects using LEED design elements. Intro to Engineering Design learns about management of waste in manufacturing and in balancing economic and environmental concerns in product design during their project. Principles of Engineering design systems using product lifecycle and how to minimize environmental impact. Government and Law has a student project to write a law changing US fossil fuel use to alternative energy. Digital Electronics incorporates circuit recycling and proper disposal of electrical components. Engineering Design and Development research new technologies to reduce the use of resources. Investigating Environmental Health: project to outline a plan to solve a local environmental health problem. Biotech students explore GMO's through PCR and gel electrophoresis testing of foods to see if they are made with genetically modified DNA. Students spend time researching GMO products and their implications.

Element 3C: Development and application of civic knowledge and skills

Focus Area: Community Involvement

The school has community involvement in all of the focus areas:

- *Plastic Ingenuity partners with Park ES to provide annual maintenance of the 9,000 ft² rain garden.
- *Town of Cross Plains donated 50 tree stumps to create 2 learning circles at the base of the school forest trail.
- *City of Middleton Youth Center will run a program next summer called Outdoor Adventures that will involve 5th-8th grade students in hiking, canoeing, swimming, and camping. The Youth Center is housed at CSCS.
- *MCPASD and FOPB are collaborating to create an Environmental Education classroom that will be utilized by district teachers/students and community groups. The classroom is located in the new KMS and it is adjacent to the PB Creek. The goal is to create instructional materials, lesson plans, and field experiences that are easily accessible to faculty and the larger community.
- *Phase 2 of Pope Farm independent study (IS) project: team of students learn restoration ecology techniques from professionals to manage the Pope Farm prairies that were surveyed by IS students in 2014.
- *Independent study students partnered with International Crane Foundation to help with Whooping Crane research and in the field surveying habitat and sandhill crane crop deprivations. (3 years) Students were exposed to real world science in the preservation of cranes. Learned habitat management techniques, assisted with artificial insemination, monitored nesting whooping cranes by close circuit TV, were involved in radio telemetry tracking of sandhills, and participated in a prairie burn.
- *UW-Madison limnologist partnered with independent study student to monitor progress with phosphorous reduction to eliminate swimmers itch at Devils lake. (3 years) Result: real world experience in science data collection. The students water tested, netted fish for a mercury content test and learned a lot of limnology.
- *Middleton Times Tribune provided a column "Nuts About Nature" for APES students to write about local environmental issues. Result: students researched and learned about local environmental issues while honing their writing skills and were published.
- *PS 4th graders partnered with Ice Age Trail Alliance Saunters Program to learn about the Ice Age Trail and assist in a Green Apple Day of Service to remove invasives and assist with trail maintenance.
- *MHS APES students (50 over 2 years) partners with Ice Age Trail Alliance to assist with building trails. 2014
- *Field Biology has partnered with WDNR buck mortality study in northern WI to help tag bucks and learn about the study. Result: data collection, hands-on experience with tagging deer, and knowledge that hunters and cars cause the majority of deer mortality....not wolves.
- *City of Middleton partnered with MHS students to bait deer and participate in removing culled deer from PBC. City personnel demonstrated deer biology after the cull and the meat was donated to the Food Pantry.
- *For the last 8 years the Sustainability Committee for the City of Middleton has a MHS student representative on the committee to help make Middleton a more sustainable community. Result: one student rep currently at UW formed a partnership with her sister and Growing Food and Sustainability was born.
- *Sixth graders in Middleton partner with the City in Garlic Mustard removal. Result: education on why invasive species are undesirable and service to community in removal.
- *Third graders in Cross Plains have partnered with the Swamplovers to seed collect in fall and spread seed in spring in restoration projects. Results: restored native species and learned the value.

- *Environment classes partnered with City of Middleton Planner to survey parents to assess attitudes about ways to get elementary children to school as data the City could include in a Safe Routes to School grant .
- *MGE partnered with CSCS and MHS to provide demonstration solar PV panels connected to an active website to teach students about solar as an alternative energy source.
- *Rosemary Garfoot library partnered with environmental studies students to design, fund, and build two native gardens at the library. Students wrote a grant for funding. Bruce Company provided training in building the pondless waterfall and the UW-Extension Master Gardener program helped the students in the design process.
- *Vermont Valley Farm partnered with environmental students in 3 years of students learning the techniques of organic farming for their independent study.
- *KMS French class had lessons on la gastronomie (the study of good eating). Students and their families shopped for local produce or harvested them from their garden and created dishes to share in class. Result: great way to learn French and wellness.

Community involvement where **students participate in civic/community engagement projects** related to environmental and sustainability education:

- *In urban planning units student groups used different vacant sites in the community and planned the highest and best use for the property. City Planner helped with the project as well as an architect for LEED design.
 - *APES used different aspects of LEED to design a new elementary school that was coming to referendum. Each group used a different aspect of LEED so that when combined the whole new school was planned. Architects hired by MCPASD involved in the real project helped students learn about LEED. The superintendent met students at the site of the proposed school to explain the "lay of the land". The best of design groups presented their ideas to the school board.
 - *One service learning project involved a group of 15 students (9-11) who partnered with Dane County to build and install a belly board, a wooden platform placed at the edge of PBC springs for the purpose of allowing students and/or adults to touch the springs. This group also removed invasive water cress. The environmental learning occurred in a summer course at UW-Arboretum for area youth. The belly board has been incorporated into water cycle lessons that all 3rd graders experience at PBC. The belly board was constructed at MHS Tech Ed and designed in the CAD lab. Approval of the design came from Dane County Parks and FOPB.
 - *Four schools (NS, GCMS, MHS, KMS) had teams compete in CANstruction 2014, a community competition to end hunger. Schools had a canned food drive and then built their imaginative structures. Structures were put together on a week day, and were available for public viewing from 5 to 8 p.m. that night. More than 1,000 people attended in the evening and more than 29 tons of food was raised. After competition, the food is donated.
 - *2010 Fifth grade service learning project-Garden of Giving -All fifth grade students participated on committees to plan, design, coordinate and plant a food pantry garden that included raised vegetable beds with a watering system. Produce was collected weekly and donated to the Food Pantry. For funding, PS received \$4000 from 2 national School Garden contests.
 - *MHS environment students raised purple loosestrife beetles for the DNR. Brock Woods spoke to the students about invasive species, their control and the need for citizen monitoring. Help from community members occurred in summer to transport the beetles to a wetland infested with purple loosestrife.
 - *The Organic Dinner celebrates its 15th anniversary in 2015. The dinner involves all students in ecology club and many in the environment classes. Partnerships with CSA's, Whole Foods, and more recently Willy St. Coop and the MHS gardens provide the food. Dishes and silverware were borrowed from a local church, cloth napkins from Imperial Gardens, mugs from the Marriott, and glasses from the Club Tavern. In 2013 a community member donated reusable plates and silverware. Community businesses contribute items for the silent auction. Local caterers formally cooked the meals but currently the Ecology Club and advisor does all the cooking. Money raised has been donated to FOPB (\$10,000 for land purchase), Operation Migration, Growing Food and Sustainability as examples.
 - *Middleton Outreach Ministry Food Pantry (MOM) has a partnership with all MCPASD schools. All staff and students have participated in food and clothing drives. The class of 2009 donated all funds raised during their HS career (\$11,000) to MOM plus went to the chamber of commerce and launched Change the World Challenge asking the community, schools, and businesses to donate to fight poverty. With donations plus revenue from prom, homecoming and other fundraisers, over \$43,000 was donated to MOM. The seniors' Cause resulted from the news that in 2009, there were 81 homeless students at MHS and districtwide the number of homeless had doubled. They wanted to make a difference in the lives of students and their families
- Staff contributes to the community-based projects of local organizations as representatives of the school:

*Fourth Grade Teachers at Park Elementary School are collaborating with the Ice Age Trail Alliance. They develop creative, standards based, integrated lessons and activities that will allow students opportunities to do service learning projects as well as hike and learn on the Ice Age Trail. This is a pilot group. PS students' responses to lessons and activities are guiding the planning and writing of curriculum. This new school-year program is inspired by Summer Saunters, a well-established and successful wellness program that was designed to get students moving while gaining appreciation for the natural Wisconsin environment.

*The district encourages all staff to donate to United Way of Dane County campaign in fall of each school year. United Way does many community based projects that can be environmental and involve health and wellness.

*NS staff participated in Culver's One Day of Service in which the school received a percentage of the day's profits. Teachers became the staff of Culver's for the day and raised money for renovating their playground to increase outside activities.

*Lena Vergara, a graduate of MHS was drowned in a boating accident on the Wolf River in 2012. She was an education major at UW-Oshkosh so her family established a scholarship program in Lena's name for students majoring in education., A run/walk through PBC is held to raise funds for the scholarship. Many current and retired staff members from MCPASD have participated in the run to support this cause.

*Select Elementary teachers worked with FOPB education committee to create lessons that align with Foss Science Units to be used at PBC for student field trips.

*Wingra Watershed Field Experience-Amy Callies (Kindergarten Teacher) has worked or volunteered with the Friends of Lake Wingra over the past five years to write grants and support programs that educate other teachers and the public about the Wingra Watershed. Over the past two years she has received funding and assisted with Free Science Thursdays-a summer evening workshop. During summers, Amy is a hired naturalist at Aldo Leopold Nature Center in Monona.

*Children Are The Hope (CATH) - PS Teacher Brenda Autz is an executive board member on Children Are The Hope an organization that provides opportunities for students at PS and other WI Schools to experience a global and environmental project with students in Cuba.

*Susie Scudder-EL teacher serves on the FOPB education committee as MCPASD representative.

*Big City Mountaineers program requires a day of service from the participants for team building and doing environmental projects. 2013 the project involved raking two steep slopes that drain to PB Creek, seeding the slopes with prairie seed, and applying erosion netting and coconut logs at creek's edge. 2014 project planted trees in the creek corridor. The partnership was with the City of Middleton and included district volunteers.

*MCPASD representatives participated in 3 presentations at the WIAssociation of School Board's State Education Convention in Milwaukee in January 2014. Superintendent Johnson, Board of Education president Lindgren, and current MHS teachers, Culligan and Kourakis presented "STEM & STEAM: Creation, Credits, Community." The talk shared its STEM and STEAM programs through Project Lead The Way, Gateway to Technology and an innovative STEAM course co-taught by an art and a science teacher.

*The social workers of MCPASD work with MOM in the School Supplies Backpack program and Healthy Snack Bags to provide low income students with supplies & food necessary for them to be successful in school.

*GCMS tech ed teachers partner with the City of Middleton to supply trees that have been cut down. The wood is then used in classroom projects instead of ending up in compost or landfills.

*For years Superintendent Johnson served on the MOM board. Assistant Superintendent Mavrolis does now.

*Students/staff at ST had a food drive that collected 1,371 lbs of food for MOM. SR donated 560 lbs of food.

Cross-cutting Questions

MHS has been a Wisconsin Envirothon Competitor since 1999; 6-first place, 9-2nd place, North American Envirothon-13th, 6th & 8th place.

The District has received awards for facilities, health, environment, sustainability, or environmental education:

*Green Ribbon Award 2012 MHS, 2014 PS, *Sugar Maple level-Green and Healthy Schools 2013 PS, 2014 MHS, *2010 Leadership in Reducing greenhouse gas emissions. *Top overall energy performance 2010 *2007-14 energy star awards for all district schools. *Richard C. Bartlett Award – NEEF Debra Weitzel 2007 •Sea World Environmental Excellence Award– FOPB & MHS Environmental Studies Program 2007 *WI Wildlife Federation Conservation Educators of the Year 2006 •Youth Group of the Year, Dane County United Way, Ecology Club 2004 *WI Stream Monitoring Award – Teacher category 2002 •Excellence in Teaching Award from Wisconsin Energy Star Homes 2002