



U.S. Department of Education Green Ribbon Schools

**2011-2012 Presentation of Nominee to the
U.S. Department of Education**

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Attach State or Nominating Authority’s Evaluation of School Nominee (Either application or other documentation of review)

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

PART I - ELIGIBILITY CERTIFICATION

School and District's Certifications

The signatures of the school principal and district superintendent (or equivalents) on the next page certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct.

1. The school has some configuration that includes one or more of grades K-12. (Schools on the same campus with one principal, even a K-12 school, must apply as an entire school.)
2. The school achieves or comes close to achieving the goals of all three green Ribbon Pillars: 1) environmental impact and energy efficiency; 2) healthy school environments; and 3) environmental and sustainability education.
3. The school has been evaluated and selected from among schools within the state or Nominating Authority's jurisdiction (BIE, DoDEA), based on *documented achievement* toward the three Green School Pillars and Elements.
4. Neither the nominated public school nor its public school district is refusing 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.
5. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole 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.
6. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
7. 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 public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
8. The school meets all applicable federal, state, tribal and local 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 2012

For Public Schools only: (Check all that apply) [] Charter [] Title I [] Magnet [] Choice

Name of Principal: Denise Herrmann

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

Official School Name: Middleton High School

(As it should appear in the official records)

School

Mailing Address: 2100 Bristol St.

(If address is P.O. Box, also include street address.)

Middleton, WI 53562

County: Dane

State School Code Number* 3549

Telephone 608-829-9660

Fax 608-831-5160

Web site/URL: www.mcpsd.k12.wi.us

E-mail: dhermann@mcpsd.k12.wi.us

I have reviewed the information in this application, including the award and eligibility requirements on page 2-4, and certify that to the best of my knowledge all information is accurate.

Denise Herrmann Date March 15, 2012
(Principal's Signature)

Name of Superintendent* Donald Johnson

(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name* Middleton-Cross Plains Area

Tel. (608) 829-9057

I have reviewed the information in this application, including the award and eligibility requirements on page 2-4, and certify that to the best of my knowledge all information is accurate. I concur that this is one of the highest performing green school applicants in our state.

Donald Johnson Date 3-15-12
(Superintendent's Signature)

*Private Schools: If the information requested is not applicable, write N/A in the space.

PART II – SUMMARY OF ACHIEVEMENTS

Instructions to School Principal

Provide a concise and coherent "snapshot" that describes how your school is representative of your state's highest achieving green school efforts in approximately 600-800 words. Summarize your strengths and accomplishments. Focus on what makes your school worthy of the title U.S. Department of Education Green Ribbon School. Be sure to note if students were actively involved in preparing the application.

This summary should be written as a stand-alone document. It will provide the ED review panel with an overview of the school's green activities that were detailed in the application to the state, DoDEA or BIE evaluators. If the school is awarded a U.S. Department of Education Green Ribbon, this information may be shared with other schools, candidates for next year, the press, and the public.

PART III – DOCUMENTATION OF STATE EVALUATION OF NOMINEE

Instructions to Nominating Authority

For the pilot year, the Nominating Authority must review nominated schools for high achievement based on the schools' *documented achievement* toward reaching the goals of each of the three U.S. Department of Education Green School Pillars and elements. For each school being nominated by the Authority to ED, please attach state (or equivalent) evaluation materials (application) based on the Nominating Authority Evaluation Support Framework provided by ED to facilitate your evaluation of schools.

The Nominating Authority must review and sign the following certification for each school being nominated to ED.

Nominating Authority's Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct.

1. The school has some configuration that includes one or more of grades K-12. (Schools on the same campus with one principal, even a K-12 school, must apply as an entire school.)
2. The school achieves or is one of those overseen by the Nominating Authority which comes the closest to achieving the goals of all three green Ribbon Pillars:
1) environmental impact and energy efficiency; 2) healthy school environments; and
3) environmental and sustainability education.
3. The Nominating Authority has evaluated the school and selected it for submission to the U.S. Department of Education from among those schools overseen by the Nominating Authority which have applied for a Green Ribbon, based on *documented achievement* toward the three Green School Pillars and Elements.

4. The school meets all applicable federal civil rights and federal, state, tribal and local health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

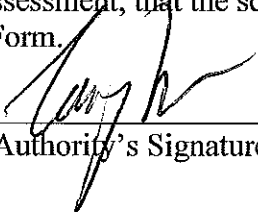
Name of Nominating

Agency Wisconsin Department of Public Instruction

Name of Nominating

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

I have reviewed the information in this application, including the award and eligibility requirements on pages 2-4, and certify, to the best of my knowledge through a documentary verification assessment, that the school meets the provisions in this Part of the Nominee Presentation Form.


(Nominating Authority's Signature)

Date

3/20/12

Note to Nominating Authority: The application, including the signed certifications and documentation of evaluation in the three pillars should be converted to a PDF file and emailed to Director, ED-Green Ribbon Schools at green.ribbon.schools@ed.gov according to the instructions in the Nominee Submission Procedure.

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 High School**

Middleton High School (MHS) is a traditional high school with nearly 2,000 students that has made significant progress toward achieving all three pillars of the U.S. Department of Education Green Ribbon Schools program. This is due to dedicated teachers, students, and the work of the school's sustainability committee.

Pillar I: Net Zero Environmental Impact

MHS has been an Energy Star school since 2008 and gained points each year achieving a score of 92 in 2012. MHS has solar panels, solar hot water for the pool, and students are engaged in "behavior modification" to conserve electricity through reduced lighting. They have reduced their overall energy use by 17% and also worked closely with Wisconsin's K-12 Energy Education Program to educate students and staff about energy use. All appliances are unplugged over summer, occupancy sensors have been installed, and the temperature is appropriately regulated for breaks and seasons. MHS has at least a 50% recycling rate, utilizes green certified cleaning products 90% of the time, and has upgraded to low-flow water fixtures. Water is also conserved and mitigated through the on-site prairie gardens, rain gardens, and organic gardens that are used to teach about storm water management, management techniques, and sustainable life-styles. MHS has worked through the Earth Partnership for Schools program to dedicate 90% of their school grounds to socially or ecologically beneficial uses. In addition, the school uses cleaner burning buses and promotes walking and biking to school through a "Safe Routes to School" program.

Pillar II: Net Positive Impact on Health

Indoor environmental health and occupant health is a focus at MHS. The school has programs for chemical management, indoor air quality, and mercury. The school meets American Society of Heating, Refrigerating and Air-conditioning Engineers standards for indoor air quality. MHS has an onsite food garden and participates in the Farm to School program and other community partnerships to offer local, chemical-free healthy options to students. Ten percent of the \$75,000 food budget goes to chemical-free local vegetables. This has resulted in 58% of students choosing to remain on campus for lunch, reducing travel, and enhancing overall safety. The school uses unbleached paper products, durable over disposable, and requires eco-friendly packaging of the products sold in the student store.

Environmental science and studies courses and physical education courses go outside routinely. An outdoor pursuits course includes snowshoeing, cross-country skiing, biking, ice skating, kayaking, orienteering, hiking and camping skills, and archery. Other physical education classes go outside for a variety of sports. The Pheasant Branch Creek corridor and Fireman's Park border MHS and provides hiking trails and recreation areas for students.

Pillar III: Environmental and Sustainability Literacy

MHS offers AP environmental science (APES) classes and cross-curricular environmental studies courses that take advantage of field sites including: UW Trout Lake Research Station to study limnology, invasive species, and bogs; Sandhill Wildlife Area to track Blandings Turtles and to view migrating Sandhill Cranes; DNR electro-shocking of trout for annual census; Madison Metropolitan Sewage District Plant; the International Crane Foundation and Aldo Leopold Shack and Legacy Center; and the captive breeding program for endangered species at the Milwaukee Zoo. The students are also involved in citizen action projects. Pheasant Branch Conservancy is close to the school and is used to study diversity, invasive and prairie plant ID, restoration techniques, and the importance of land use management. Students monitor the creek and report data, raise Purple Loosetrife beetles, and conduct salamander and bat censuses in the conservancy. MHS along with Friends of Pheasant Branch were awarded the 2007 Environmental Excellence Award from Seaworld/Busch Gardens/Fujifilm.

The MHS Ecology Club raised \$16,000 in the last four years for community service projects ranging from oak savanna restoration and invasive species removal to prairie planting and independent study opportunities are offered for semester credit. The club hosts an annual Organic Dinner for the community to showcase sustainable dining choices and celebrates Earth Week with activities for the school and community. The Ecology Club offers a trip to Costa Rica alternating with a wilderness backpacking trip. Students also write about sustainability issues through a project called “Nuts About Nature” in their local newspaper.

Community partnerships are critical at MHS. The local library wanted to have a native garden that did not rely on energy consuming practices, and the students took on this project. Students developed garden planting and maintenance plans and wrote and received a grant for their native gardens.

MHS has received multiple awards, recognitions, and grants. Since 1999, MHS Envirothon teams have placed first in Wisconsin six times, and thirteenth, eighth, and sixth place at the Canon Envirothon, competing with teams from the U.S. and Canada. The students and teachers have been recognized for a variety of awards including: Dane County Natural Heritage Foundation Youth Stewardship Award (1997), Wisconsin Stream Monitoring Award-Teacher Category (2002), Excellence in Teaching-Wisconsin Energy Star Homes (2003), Youth Group of the Year, Dane County United Way (Ecology Club, 2004), Madison Civic Club recognition of outstanding teaching (2005), Wisconsin Wildlife Federation Conservation Educators of the year (2005), and the Richard C. Bartlett Environmental Education Award (2007).

Reviewer's comments for Middleton High School

Received strong in crossing-cutting question section because of impressive list of awards and Envirothon achievements although the vast majority won by 2 teachers – what is everyone else doing?

Strongest applicant in terms of net zero environmental impact

Has energy policy and education plan

Strong recycling program, big plus with carton recycling

Utilizing building controls scheduling

Outside air calculations/better indoor air quality

Strongest in transportation

- 68% of students use alternative transportation (question on validity of data, however)
- Utilizing biodiesel

Purchased environmentally preferable food – onsite food garden, farm to school, chemical free

Environmental literacy – AP Env. Science course – 3 or better on test

Broad connections across curriculum – PLTW and Engineering, Civic engagement

Areas for growth:

- Didn't use recycled paper or PCF paper
- Are buying low VOC products but didn't specify which types of products
- Water – didn't have data to back it up – although cited purchasing and installing low-flow fixtures/dishwasher

Seemed like it has been a part of the school culture for a while – can show benchmarks and improvements over the years

Commitment from school was obvious demonstrated by 4 years of energy star ratings.

Could improve in all health and physical fitness areas.

Does participate in Safe Routes to Schools program.

Strong achievement in AP environmental science.

Wisconsin Green Ribbon Schools Nomination Application 2012

Response ID: Data

2. Certifications

School Type

Public/Charter

By submitting this electronic application, the school principal and district superintendent (or equivalents) on the previous page certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct.

Please note: you must meet all certifications in order to be nominated and continue on with this application.

1. The school has some configuration that includes one or more of grades K-12. (Schools on the same campus with one principal, even a K-12 school, must apply as an entire school. Early learning centers and post-secondary institutions are not eligible.)
2. The school achieves or comes close to achieving the goals of Green Ribbon Pillars: 1) environmental and sustainability education; 2) healthy school environments; and 3) environmental impact and energy efficiency.
3. The school is in compliance with all applicable occupational safety and health standards and has no outstanding citations for violation of federal, state, or local occupational safety and health regulations and standards, nor has resolved such a case within the past year.
4. The school is in compliance with all applicable federal food and drug standards, including the Federal Food, Drug, and Cosmetic Act and has no outstanding violations, nor has resolved such a case within the past year.
5. The school is in compliance with all applicable state and local codes and has no outstanding citations for state or local environmental, health, existing building, fire, plumbing, mechanical, or property maintenance codes, laws, or regulations, nor has resolved such a case within the past year.
6. The school has not been cited within the past three years for failure to meet federal, state or local potable water quality standards.
7. The school has not been cited within the last three years for improper management of hazardous waste according to federal and state regulations.
8. Neither the applicant nor its public school district is refusing 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.
9. OCR has not issued a violation letter of findings to the public school district concluding that applicant or the public school district as a whole 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 plan to remedy the violation.
10. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
11. 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 public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
12. The school and the district meet applicable federal, state, tribal, and local health, environmental and safety requirements in law, regulations, and policy, and is willing to undergo U.S. Environmental Protection Agency (EPA) on-site verification.

By submitting this electronic application, the school principal and district superintendent (or equivalents) on the previous page certify that the following statements are true.

In no case, is a private school required to make any certification with regard to the public school district in which it is located.

Please note: you must meet all certifications in order to be nominated and continue on with this application.

4. Thinking...

New Page Logic Action

5. Applicant Information

School Contact Information

School Name

Middleton High School

Street Address

2100 Bristol St.

City

Middleton

State

WI

Zip

53562

School Website

<http://www.mcpsd.k12.wi.us/mhs/>

Principal First Name

Denise

Principal Last Name

Herrmann

Principal Email Address

dhermann@mcpsd.k12.wi.us

Principal Phone Number

608-829-9923

Lead Applicant First Name (if different from principal)

Debra

Lead Applicant Last Name (if different from principal)

Weitzel

Lead Applicant Email

debraw@chorus.net

Lead Applicant Phone Number

608-836-4051

Level

High (9 or 10 - 12)

How would you describe your school?

Private/Independent

District and Code

3549 Middleton-Cross Plains Area

What percentage of students at your school are economically disadvantaged?

An "economically disadvantaged" student is a student who is a member of a household that meets the income eligibility guidelines for free or reduced-price meals (less than or equal to 185% of Federal Poverty Guidelines) under the National School Lunch Program (NSLP).

<39

7. Cross-Cutting Question

QCC1: Is your school participating in a local, state, or nationally recognized green school program which asks you to benchmark progress in some fashion (for example, Wisconsin's Green and Healthy Schools Program, National Wildlife Federation Eco-Schools USA, Green Schools Alliance, Collaborative for High Performance Schools, or Project Learning Tree's Green Schools!)?

No

Which program(s) are you participating in and what level(s) have you achieved?

QCC2: Has your school, staff or student body received any awards for environmental or sustainability stewardship/action?

Yes

Please list the awards you have received and the years you received them.

•Trout Unlimited Environmental teacher of year (Mike Duren) 1995 *Dane County Natural Heritage Foundation Youth Stewardship Award 1997 to Ecology Club and advisors (Mike Duren & Debra Weitzel) *Wisconsin Stream Monitoring Award – Teacher category (D. Weitzel) 2002 •Excellence in Teaching Award from Wisconsin Energy Star Homes (D. Weitzel) 2002 •Youth Group of the Year, Dane County United Way, Ecology Club 2004 •Madison Civic Club Honors MHS Ecology Club 2005 •Wisconsin Wildlife Federation Conservation Educators of the Year (Duren & Weitzel) 2006 •Richard C. Bartlett Award – NEEF to Debra Weitzel 2007 •Sea World Environmental Excellence Award – Friends of Pheasant Branch & Middleton High School Environmental Studies Program 2007 *MHS Received EPA Energy Star Awards from 2008-2011. *Wisconsin first place Envirothon 2000, 2001, 2008-2011 *Canon Envirothon 13th place 2001, 6th place 2010, 8th place 2011

CC3: Please check other state or national green school related programs in which your school is actively involved.

Wisconsin Envirothon Competitor (envirothonwi.org)
Other: High mileage vehicle competition

Does your school participate in the Wisconsin Green Schools Network field program?

9. Pillar 1 - Element 1A

Q1A1: Can your school demonstrate a reduction in its Greenhouse Gas emissions?

Yes

Please provide the following information:

Initial GHS emissions rate (MT eCO2/person) : 2.01
Final GHG emissions rate (MT eCO2/person) : 1.65

Percentage reduction : 18%

Time period measured (mm/yyyy - mm/yyyy) : 07/2004-01/2012

How did you document this reduction (e.g., the inventory module from Clean Air Cool Planet's Campus Carbon Calculator)? :

Portfolio manager - Create a statement of energy performance

Q 1A2: Has your school received EPA ENERGY STAR certification or does it meet the requirements for ENERGY STAR certification?

Yes

If your school received the certification, please note the year it was achieved and the score received:

2008-88, 2009-87, 2010-90, 2011-92

Q 1A3: Has your school reduced its total non-transportation energy use from an initial baseline?

Yes

Please provide the following information:

Percentage reduction : 17%

Measurement unit used (kBtu/square foot, kBtu/student, annual therms, etc.) : kBtu/square foot

Time period measured (mm/yyyy - mm/yyyy) : 07/2004-12/2011

How did you document this reduction (ie. ENERGY STAR portfolio, district report)? : portfolio manager - Facility performance

Q 1A4: What percentage of your school's energy is obtained from:

Purchased renewable energy : 0%

On-site renewable energy generation : 1.9%

In what year was the oldest part of your school constructed?

1946

What is the total area of your school in square feet?

419,975

Q 1A5: Has the school been newly-constructed or renovated in the past ten years?

Yes

Please provide the following information regarding the construction in the past 10 years (above):

Percentage of the building area that meets green build standards (for example, LEED, CHPS, Green Globes or other standards) : 0

Which certification did you receive and at what level? : N/A

What is the total constructed area? : 173,000 ft²

What is the total renovated area? : 150,000 ft²

Q 1A6: Does any part of the applicant's existing school building meet green build standards (for example, LEED, CHPS, Green Globes, or other standards)?

No

Please provide the following information regarding the existing building above:

Q 1A7: Does your school reduce and/or offset the greenhouse gas emissions from building energy use?

Yes

Please provide the following information:

List offsets used : solar hot water-indoor pool, electricity and natural gas reductions through conservation and efficiency equipment

Change from baseline : 927.53

Current total GHG emissions (MtCO₂e) : 4264.69

Baseline total GHG emissions (MtCO₂e) : 5192.22

Time period measured (mm/yyyy - mm/yyyy) : 07/2004 - 01/2012

Q 1A8: Please indicate which green building practices your school is using to ensure your building is energy efficient.

Other (please describe): Fully integrated DDC system using occupied/unoccupied schedules and unoccupied setbacks.
HVAC/Lighting motion sensor setbacks.

Q 1A9: Has your facilities manager completed the Facility Managers Program certification?

Yes

Name of Facility Manager

Bill Eberhardt

10. Pillar 1 - Element 1B

Q 1B1: Can you demonstrate a reduction in your school's total water consumption (measured in gallons/occupant) from an initial baseline?

No

Please provide the following information:

Q 1B2: Which of the following practices does your school employ to increase water efficiency and ensure quality? (Please check all that apply)

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 has a smart irrigation system that adjusts watering time based on weather conditions.

Our school's landscaping is water-efficient and/or regionally appropriate.

Our school uses alternative water sources (ie. grey water) for irrigation before potable water.

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 medication disposal policy that helps ensure water quality.

Please provide the following information about your school's landscaping

What percentage of your total landscaping is considered water-efficient or regionally appropriate? : 30%

What types of plants are used and where are they located? : native prairie in gardens on North Ave. entrance and bordering athletic practice fields on north. We do not water the lawns of grass. The football field is permeable astro turf with rainwater storage for infiltration.

Please describe the alternate water sources used for irrigation. (Maximum 100 words)

The organic gardens have two rain barrels collecting water from the roof of the greenhouse for irrigation. We do not irrigate grass lawns or prairie plantings once established.

Please describe the program you have in place to control lead in drinking water. (Maximum 100 words)

Q 1B3: Our school's drinking water comes from:

Municipal water source

Please describe how the water source is protected from potential contaminants. (Maximum 100 words)

Q 1B4: Please describe any additional progress your school has made towards improving water quality, efficiency, and conservation. (Maximum 200 words)

When replacing or adding fixtures, we purchase low flow fixtures and lower gallon per flush urinals and toilets. MHS has multiple rain gardens and native prairie plantings for water capture and infiltration. The pool renovation project in 2008 provides a system to prevent pool drainage from entering City stormwater and negatively impacting Pheasant Branch

Creek. The kitchen was renovated summer of 2011 adding a new Hobart dish washer saving 40% of former water usage. Sinks in the newer addition and in renovated areas have motion detectors for instant on and off faucets. Faucets in science rooms are anti-siphoning to protect water quality. The environment classes require a life-style change that entails reducing the student's (and sometimes family) footprint for 2 weeks and writing a report about the experience. An estimate of 50-60% of the projects directly involved conserving water with the rest indirectly conserving and affecting water quality by becoming vegetarian, saving energy, etc. Former students have reported continuing their life-style change after high school. APES students design "green" homes incorporating water saving devices and landscaping into the plan.

11. Pillar 1 - Element 1C

Q 1C1: What percentage of the school's solid waste is diverted from landfilling or incinerating due to recycling and/or composting (i.e. Recycling Rate)?

A - Monthly garbage service in cubic yards (garbage dumpster size(s) x number of collections per month x percentage full when emptied or collected). : 90 yards/mo.

B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected). : 90 yards/mo.

Recycling Rate = $(B + C) \div (A + B + C) \times 100$: 50%

C - Monthly compostable materials volume(s) in cubic yards (food scrap/food soiled paper dumpster size(s) x number of collections per month x percentage full when emptied or collected). : 0

Q 1C2: What percentage of your school's total office/classroom paper content by cost is post-consumer material or fiber from forests certified as responsibly managed by the Forest Stewardship Council, Sustainable Forestry Initiative, American Tree Farm System or other certification standard. (If a product is only 30% recycled, only 30% of the cost should be counted)

0%

Q 1C3: What percentage of the total office/classroom paper content by cost is totally chlorine-free (TCF) or processed chlorine free (PCF)

0%

Q 1C4: Please provide the following information about your school's hazardous waste

How much hazardous waste does your school produce (lbs/person/year)? : N/A

How is the amount generated calculated? : N/A

List the types of hazardous waste generated : none in many years

How is hazardous waste monitored? : Chemical hygiene officer for classrooms and district facilities manager oversees district chemical use.

Q 1C5: Which of the following benchmarks has your school achieved to minimize and safely manage hazardous waste? (Please check all that apply)

Our school has a hazardous waste policy for storage, management, and disposal that is actively enforced.

Our school disposes of unwanted computer and electronic products through an approved recycling facility or program.

Which green cleaning standard is used?

Which recycling program is used?

Contracted with Waste Management

Q 1C6: Does your school use "third party certified" green cleaning products?

Yes

Please provide the following information about the green cleaning products used in your school:

What percentage by volume of all cleaning products in use are "third party certified" green cleaning products? : 90%

What specific green cleaning product standard (Green Seal, Ecologo, etc.) does the school use? : Ecologo, EPA

Q 1C7: What other indicators do you have of your school's reduction of solid waste and elimination of hazardous waste? (Maximum 200 words)

Many years ago the chemistry department eliminated lead, mercury, chromates, dichromates, and other hazardous (carcinogens, teratogens, mutagens) chemicals through a clean sweep program for schools. The most recent clean sweep disposal from the science department was over six years ago. Since that time, no chemicals have been purchased that are on the Flynn non-recommended for students list. MHS recycles 50% of its solid waste including all plastics 1-7, paper and cardboard, metal and glass. E-waste is contracted for recycling with a responsible company. Starting in 2012-13, milk cartons are expected to be recycled at MHS as in all other district schools where 30% of their solid waste was eliminated. The plan to delay implementation is to better ensure success at the high school by having trained students prior to entering high school.

Q 1D1: What percentage of your students walk, bike, bus, or carpool (2 + student in the car) to/from school?

68%

How was this data collected and calculated? (Maximum 100 words)

We accessed the number of students that have parking permits and took the average over 2 years, which was 491 with 25% carpooling averaging 2.5/car. Accessed bus ridership revealed 43.6% ride the bus which is 872 students. The school is a neighborhood school (8% of student body is not eligible for the bus) so many opportunities to bike and walk estimated at 5% or 100 students. We estimated 4% (2 students/car) carpool with a parent going to work. We also border a Conservancy corridor for a safe route to school. $1359/2000 \times 100 = 68\%$

Q 1D2: Which of the following policies or programs has your school implemented:

Our school participates in a "Safe Routes to School"

Our school has a well-publicized no idling policy that applies to all vehicles (including school buses).

Our school has established Safe Pedestrian Routes to school which are distributed to parents and posted in our office.

Q 1D3: Describe how your school transportation use is efficient and has reduced environmental impacts (e.g. policies/programs regarding carpooling, the percentage of school-owned electric/hybrid/alternative fuel vehicles in your fleet, or other indicators of significant reductions in emissions):

*buses retrofitted with diesel oxidation catalyst using EPA region 5 Midwest clean diesel initiative grant *2% biodiesel mix with ultra low sulfur diesel fuel *From 2010 to 2012 retired 14 1993-97 buses and added 14 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 to locate stops to shorten routes for route optimization and stop optimization.

Q 1D4: What percentage of the school grounds are devoted to ecologically beneficial uses (school vegetable garden, wildlife or native plant habitats, outdoor classroom, environmental restoration projects, rain garden, etc.) or socially/culturally beneficial uses (e.g., playgrounds, outdoor spaces designed and used regularly for social interaction, athletic or recreational areas, walking or running trails etc.)?

90%

Q 1D5: This is the end of Pillar 1. Please describe any other accomplishments or progress your school has made towards reducing/eliminating environmental impacts or improving your energy efficiency. (Maximum 200 words)

Beginning in the '90s, an MG&E grant helped replace inefficient lighting. Renovation and new wing in 2001 replaced windows and outdated boilers, incorporated daylighting in the student cafeteria, motion detectors on more efficient lighting, and more. In 2004, Energy Education Inc. was contracted to further increase savings. Since '04, the district has nearly \$1.9 million in energy cost avoidance with MHS savings at \$685,000. After replacing infrastructure, the next action sought participation from staff and students. 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 PV and conventional electricity use were tied into the software. Real student research and energy reductions resulted. Another partnership with Johnson Controls in 2009 resulted in solar hot water for MHS pool. The district and MHS have an Energy Policy and Education Plan in place since 2010. With a current energy star rating of 92, MHS is one of the most energy efficient schools in the nation even though parts of the building originated in 1946. With a staff/student population of 2200 and almost constant use during the school year, this is a remarkable accomplishment.

13. Pillar 2 - Element 2A - School Environmental Health

Q2A1: Which of the following practices does your school employ with regard to pest management? (Please check all that apply)

Our school has an integrated pest management plan in place to reduce and/or eliminate pesticides.
Pest control policies, methods of application, and posting requirements are provided to parents and school employees.
Copies of pesticide labels, copies of notices, material safety data sheets (MSDS) and annual summaries of pesticide applications are all available and in an accessible location.
Our school prohibits children from entering a treated area for at least 8 hours after the treatment or longer if required by the pesticide label.

Q2A2: Which of the following practices does your school employ to improve contaminant control and ventilation? (Please check all that apply)

Our school has eliminated mercury-containing thermometers, chemical compounds, art chemicals, etc. and elemental mercury.
Our school disposes of any unwanted mercury laboratory chemicals, thermometers and other devices in accordance with federal, state, and local environmental regulations.
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 a chemical management program that includes: chemical purchasing policy (low or no-VOC products), storage and labeling, training and handling, hazard communication, spills (clean up and disposal), and selecting EPA's Design for the Environment approved cleaning products.
Our school has a comprehensive indoor air quality management program that is consistent with Indoor Air Quality (IAQ) Tools for Schools.
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 while recovering the heating or cooling from the conditioned air.
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).
If your school has combustion appliances, is there an inventory of them and are they annually inspected to ensure they are not releasing Carbon Monoxide? (yes/no/no combustion appliances): yes, yes, yes
What percentage of all classrooms with radon levels greater than 4 pCi/L have been mitigated in conformance with ASTM E2121?: N/A no radon

14. Pillar 2 - Element 2B - Nutrition and Fitness

Q2B1: Which practices does your school employ to promote nutrition, physical activity and overall school health? (Please check all that apply)

Our school has an onsite food garden.
Our school participates in a Farm to School program or other program to utilize local food in our cafeteria.
Our students spend an average of at least 120 minutes per week (over the past year) in school supervised physical education.
At least 50% of our students' annual physical education takes place outdoors.
At least 50% of our students have participated in the EPA's Sunwise program (or other equivalent UV protection and skin health education program).

Please list your school's USDA HealthierUS School Challenge award level or describe other nutrition program. (Maximum 100 words)

In what year did you receive the Wisconsin School Health Award?

Our school garden supplies food for our cafeteria.

No

Please describe the Let's Move programs you have implemented (such as Let's Move Salad Bars to Schools or Let's Move in Indian Country)

Please describe the type of outdoor exercise opportunities and nature-based recreation available to students. (Maximum 200 words)

PE classes: *Outdoor Pursuits: snowshoeing, cross-country skiing, biking, ice skating, kayaking, orienteering, hiking and camping skills and archery. *Fitness for Life: snowshoeing. *Lifetime Recreational Sports: archery, badminton, tennis, golf, & soccer. *Team Sports: flag football, soccer, softball, ultimate frisbee. Athletics: Include football, soccer, cross-country (trains on the Conservancy trails), track and field, tennis, golf, Ski & Snowboarding, baseball, softball and Lacrosse. *Environmental studies program took students wilderness backpacking in Colorado 3 different years. On 3 alternate years, the trip was to Costa Rica where the students hiked in rain forests, swam in the ocean, kayaked, etc. *The cross-country coach promoted entering Madison's Jingle Bell Run for 10 years and 50-100 students have been involved yearly. *The Pheasant Branch Creek corridor is located on the north side of MHS and affords trails for hiking that many students use. Fireman's Park also borders the school and many students recreate in the park when time and weather permit. *Two students in each of 3 summers, interned at a CSA organic farm for HS credit. They said it was the hardest work they ever did that was also most enjoyable. Many of these students continue to garden that is both exercise and recreation to them.

Q2B2: What percentage (by cost) of food purchased by your school is certified as "environmentally preferable" (e.g. Organic, FairTrade, Food Alliance, Rainforest Alliance, etc.)?

10% of \$75,000 budget goes to chemical-free local vegetables.

Q2B3: This is the end of Pillar 2. Please describe any additional progress your school has made in terms of the school's built and natural environment (including unique community and/or business partnerships) to promote overall student and staff health and safety. (Maximum 200 words)

MHS is contracted with the DPI for the USDA national school lunch and breakfast programs, offering fresh fruits and vegetables daily that are locally sourced and chemical-free when available. We have moved to greener chemical use. MHS uses durable ware over disposable and unbleached paper products. The lunch program has partnerships with two local businesses providing fresh sub sandwiches and fresh locally made pizza. These choices result in students and staff remaining on campus reducing travel and enhancing overall safety. With 58% of 2000 students remaining at school, this is a significant impact. The school nutrition coordinator projects this system would qualify for silver level of Healthy Schools Challenge, however a lack of resources has prevented the district from applying. MHS nutrition program maintains a partnership with DECA/FACE to provide an actual experience for entrepreneurial and marketing opportunities within the Cardinal Cafe, a renovated "school store" for students and staff with healthy food choices and eco-friendly packaging. The natural environment includes a park and conservancy stream corridor on two sides of the schoolyard for birdwatching, walking, running, and snowshoeing. The built environment includes a weight room and pool that staff as well as students may use and staff yoga is offered.

16. Pillar 3 - Elements 3A-3C

Q3A1: Which practices does your school employ to help insure the environmental and sustainability literacy of your graduates? (Please check all that apply)

Our school offers environmental or sustainability-specific classes.

Our school offers courses that are heavily embedded with environmental and/or sustainability content.

Environmental and sustainability concepts are integrated into classroom based and schoolwide assessments.

Professional development opportunities in environmental and sustainability education are provided for all teachers.

Environmental and sustainability concepts are integrated throughout the curriculum.

Please describe the environmental or sustainability literacy knowledge or proficiencies that students are required to demonstrate before they leave this school. (Maximum 200 words)

What percentage of your students take environmental or sustainability classes?

What are the title(s) for the "green" classes you offer?

Environmental Studies: Water use and Pollution, Environmental Studies: Climate Science and Policy, AP Environmental Science, Economics, Issues in Global Development

What percentage, of said class(es), is environmental and/or sustainability content?

APES and 2 env. studies = 100%, 20% for other two

Please describe your school's environmental or sustainability curriculum integration. (Maximum 200 words)

Each department uses State and National standards to integrate these EE concepts into the curriculum. *Art offers photography classes that use the Pheasant Branch Conservancy for nature photos that fosters an environmental ethic. Students may enter the Friends of Pheasant Branch photo contest which encourages student entries with lower fees; a connection to the local community. *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 our energy use and impacts. Architecture and Design educates about LEED design for reduced environmental impact. *The English Department offers Debate that often centers on environmental topics.

Does your school have a documented scope and sequence for integration of environmental and sustainability education across the curriculum at all grade levels?

No

Please describe your classroom based or schoolwide assessments in environmental and sustainability concepts and include what percentage of students scored "proficient" or better. (Maximum 200 words)

The Environmental Studies and APES classes use a combination of multiple choice, short answer and essay/free response questions in their exams. From the 2010-11 completed school year, 96.1% of students scored proficient in the classes. For the last two, most recent years AP test scores were 19 students averaging of 4.05 and 33 students averaging 3.61 on a 5 point scale. We do not have a school wide assessment in environmental concepts. However, students take the WKCE, EPAS, and ACT that have environmental questions in the science section. WKCE: Middleton students scored 82% proficient/adv in science in 2009 and 87% in 2010. EPAS testing had science scores as follows: 9th grade at 41.92% at benchmark in 2010 and 48.27% in 2011. 10th grade scores were 46.46% in 2010 & 56.25% in 2011 11th grade at 54.90% in 2010 & 64.45% in 2011. ACT mean scores for science were 24.61 in 2010 & 24.58 in 2011.

Please describe professional development opportunities available in environmental and sustainability standards. Include the percentage of teachers who participated in these opportunities over the past 2 years. (Maximum 200 words)

Pheasant Branch Conservancy BUS TOUR..... Participants will visit the Pheasant Branch Conservancy, tour several sites within the Conservancy and learn about the topics and lessons that are supported there. FREE Conservancy Bus Tour..... Sustainability education will be one focus of this tour. Participants will: Visit the Pheasant Branch Conservancy. Tour at least 2 sites within the Conservancy and learn about the topics and lessons that are supported there. One site will be the community gardens focusing on food and sustainability. Participants will visit a sustainable farm or business in the community and explore how it can serve as a model for sustainability education. Bird Smorgasbord: Flying Wild, One Bird Two Habitats..... This program is about learning what birds can teach us about our world and how to foster students' learning through these amazing creatures. Kids for the Earth..... This program helps teachers to utilize the Pheasant Branch Conservancy outdoor "classroom" in teaching science and environmental concepts to a variety of grade levels. 3 KEEP classes were offered for energy education Education for Sustainability... How can we communicate, teach, and model sustainability for the next generation and integrate it into curriculum? These classes were offered 2009-2011 to the district. 10% of high school teachers participated.

Q3A2: If your school serves grades 9-12, please provide the following information:

Percentage of last year's eligible graduates who completed the AP Environmental Science course during their high school career : 8.8%

Percentage of these students who scored a 3 or higher on the AP Environmental Science exam : 21/25 = 84%

Q3B1: Do your school's science courses frequently use sustainability and the environment as a context for learning science (such as asking questions, developing and using models, planning and carrying out investigations, analyzing and interpreting data, using mathematics and computational thinking, constructing explanations, and engaging in argument from evidence when exploring environmental and sustainability issues)?

Yes

Please describe. (Maximum 200 words)

*Two new courses for 2012-13 are centered on field biology and research techniques. Field biology will have students design and conduct research in collaboration with professionals in the Pheasant Branch Conservancy. Collaborative Research Methods and Practice will have student-generated projects that can be environmental in nature. *Biotechnology discusses the ethical, legal, and environmental issues surrounding genetically modified organisms and stem cell research. *Biology has units on ecology with discussions on human impact and how to lessen that impact. Lessons on invasive species and their impact will be coupled with service learning for freshman who will help in oak savannah restoration at a local conservancy. *Science Independent study has included whooping crane research at the International Crane Foundation, assisting a limnologist in a Devils Lake project to reduce swimmer's itch, determining the impact of development on a local trout stream, porcupine, bat and Blanding's turtle research projects. *APES and environmental studies determine reductions in energy use with experiments asking teachers to reduce classroom lighting then analyze data showing pre and post experimental energy consumption. *Chemistry uses petroleum as a basis for an organic unit, with discussions of energy use, impact, fracking, and global warming. *APChem uses carbon emissions to teach stoichiometry.

Q3B2: If your school is a high school, does your school curriculum make connections between classroom and college and career readiness, in particular post-secondary options in environmental and sustainability fields (for example, CTE Green Sustainable Design and Technology course)?

Yes

Please describe these college and career connections. (Maximum 200 words)

As part of all the Project Lead The Way courses, careers are tied to activities. In Principles Of Engineering, where the students build the mock re-cyclers, environmental engineering is discussed. When the Hydrogen and Solar cars are done, careers are explored, including college and technical schools (installation specialists, etc). Field trips are often set up around these topics, so that students can meet people working in these careers. We also mention environmental law as a possible career choice. In the Principles of Biomedical Sciences class, 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. Freshmen advisory classes have a career component to help them match HS coursework to their career interests. During junior year each student meets with their guidance counselor who uses Career Cluster Pathways to match courses with career choices. 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. The environmental classes have speakers who discuss their career and job opportunities. Job shadows have been set up in natural resources.

Q3C1: Do students conduct an age-appropriate, self-selected, civic/community engagement project at every grade level?

Not at all grade levels

If not in all grades, please specify which grades.

MHS is initiating service learning with class of 2015 (Freshman)

What percentage of last year's exiting students scored proficient or better on a community or civic engagement skills assessment?

N/A

Please provide the following information:

What percentage of students completed such a project last year? : 0 (just started the program)

What percentage of these projects focus on environmental or sustainability topics? : yet to be determined

If you serve grades 9-12, what percentage of career and technical student organizations' (i.e., DECA, FBLA, FCCLA, HOSA, FFA, and SkillsUSA) projects focus on environmental or sustainability topics? : 0

Q3C2: Do students have meaningful outdoor learning experiences (experiences that engage students in critical thinking, problem solving and decision making) at every grade level?

Not at all grade levels

If not in all grades, please specify which grades.

9, 11,12

Please share how outdoor learning is used to teach an array of subjects in contexts, engage the broader community, and develop civic skills. (Maximum 200 words)

Note: As of 2012-13 school year 10th grade will also be able to take elective courses including APES and Environmental Studies and other courses that use outdoor learning. *Biology uses the school grounds that are connected to a city park and a portion of the Pheasant Branch Creek to teach ecology concepts and human impact on ecosystems. *The environment and APES classes used the community to teach an array of topics from water quality to stormwater management to urban planning of a local vacant lot. Many times professionals in the field will join the students in these out of the classroom sites to enhance the learning. *Advanced biology & APES teach a limnology/water resources unit utilizing Lake Mendota then compare to Trout Lake on a 2-day field trip to Northern Wis. *Field biology, offered in 2012-13, is designed to spend the majority of class periods in the field with biologists studying wildlife, forestry, stream and lake ecology. The course will be centered on the Pheasant Branch Conservancy and watershed. *Environment students monitor Pheasant Branch Creek as Water Action Volunteers. They have raised purple loosestrife beetles for release in a wetland and been trained to monitor Blandings turtle for Middleton.

Q 3C4: Please describe your partnerships with the local community (e.g., academic, business, government, nonprofit and informal science institutions) to help advance your school, other schools (especially schools with fewer resources) and the greater community toward the 3 Pillars. Include both the scope and impact of these partnerships. (Maximum 300 words)

*Ecology Club is partnering with Growing Food and Sustainability, a grant funded program founded by two recent MHS graduates, which will enhance organic gardens on the school grounds to become community gardens. A garden expo is being planned for spring to educate the public on sustainable agriculture and food choices. *Environmental Studies partnered with the Rosemary Garfoot Library to have student designed and built native gardens at the library. Students wrote and won a grant to fund the project. *Ecology Club hosts an organic dinner for the community to showcase sustainable dining. Local CSA farms donate food, businesses donate items for silent auction, Willy St. Coop and Whole Foods have donated organic food and proceeds are donated to groups such as Operation Migration, International Crane Foundation, and Friends of Pheasant Branch for environmental field trips and land purchase. The Friends have received over \$12,000 in recent years. *Sociology students have raised vegetable seedlings organically in the school's greenhouse and transplanted them to local farms. The vegetables are harvested for a local food pantry. *One APES student in each of the last four years has represented MHS on the city's Sustainability Committee helping to make recommendations (and take action) for sustainable practices in Middleton. *APES students designed an elementary school using LEED concepts with the help of architects and presented to the school board that was moving toward referendum with their own design. *To educate the community, APES wrote environmental, locally based articles for their column, Nuts About Nature, in the Middleton Times Tribune. *Two independent study students worked with WDNR counting bats to increase the database before White Nose Syndrome invades Wisconsin. They informed the public about bats through the newspaper and presentations. *The environment students partner with Friends of Pheasant Branch on 4 Saturday mornings, fall and spring to restore Oak Savannah at the Conservancy.

Q 3C5: This is the end of Pillar 3. Please describe other methods and measurements your school uses to ensure matriculating students are environmentally and sustainability literate. (Maximum 200 words)

*World languages link environmental standards to their cultural and geographical standards. *Social studies link their standards to the environmental consequences of decision-making. *Ecology Club and Envirothon are two offerings that educate participants on a variety of environmental topics. Since 1999, MHS Envirothon teams have placed first in Wisconsin six times, and thirteenth, eighth, and sixth place at the Canon Envirothon. *Middleton High School has increased the science requirement for graduation to three years. While environment classes are not required, the increased science requirement may lead to increased enrollment in these classes. Also more environmental topics have been added to biology, AP biology, biotech and chemistry in recent years. Each course has assessments to ensure the material was mastered. *Environment classes studied fair trade as a method to empower women, reduce poverty, and encourage smaller, healthier families. A speaker was brought in to discuss the concept and provided interested students volunteer opportunities in fair trade events. Ecology club hosted a fair trade show at MHS and brought a proposal to the Middleton Sustainability Committee to push for Fair Trade City status. All of these students are literate in the value of fair trade because they experienced it.

18. Thank You!

Submit Application

