CHPS Criteria Interpretation Archive

Indoor Environmental Quality Category

Prerequisite or Credit	Applicable Criteria	Background and Interpretation
EQ1.1: Daylighting	High Performance Relocatable Classrooms for the CHPS Prefab Program	**Background and request for interpretation** The goal of this credit is to improve student productivity through quality daylighting and electric lighting design, and provide a connection between indoor spaces and the outdoor environment through the introduction of sunlight and views into the occupied areas of the building. Designs qualify as a daylit classroom by reducing direct sun, preventing sun penetration in skylights, using photocontrols and locating diffusing glazing properly. Should the daylight analysis follow whichever climate zone and orientation is selected for EE1.0/EE1.1, i.e. if California's Division of the State Architect says pick the worst of the 36 permutations, is what we need to go with for the MFR daylight credit (with the option to update with a site-specific analysis once a client and site are chosen)? **Interpretation:** Due to the specific design and orientation requirements needed to properly daylight a building, optimal orientation may be assumed for purposes of this credit. The final siting orientation will need to be investigated after the unit is purchased and sited if the client would like to pursue full CHPS Verified status for the building. At that time, if the building is not sited according to the optimal placement criteria used in the approved day-lighting model the daylight model must be re-run with the accurate siting orientation, or field tested to document compliance.
EQ1.1: Daylighting	2006 CA-CHPS	**Background and request for interpretation** The goal of this credit is to improve student productivity through quality daylighting and electric lighting design, and provide a connection between indoor spaces and the outdoor environment through the introduction of sunlight and views into the occupied areas of the building. Designs qualify as a daylit classroom by reducing direct sun, preventing sun penetration in skylights, using photocontrols and locating diffusing glazing properly. A project's classrooms were designed with manual dimmable switches. In order to achieve general illumination and AV mode the lighting can be adjusted to the user's preference. Additionally the lights have a/b switching for the general lighting (a) and teaching wall lighting (b). If this dimmable configuration is acceptable, how is this normally input for verifiable photometrics since there is a range of lighting levels? **Interpretation:** Even though the Title 24 2008 daylight requirements are a little different than the 2005

		requirements, you can still follow 5.2.1.5 (J) of California's Nonresidential Compliance Manual (PDF). Keep in mind that daylighting is dynamic. There will be times when, even with the electric lighting turned completely off, the daylight areas will be brighter than the designed lighting levels. Other times, the electric lighting will be partially dimmed so that adding the daylighting plus the electric lighting together you will likely have higher than designed lighting levels. If the dimmers are manual, then they can be adjusted real-time to desire of the occupants. In this case, there would never be any question about the appropriateness of the dimming level to daylight availability.
IEQP15: View Windows	2006 CA-CHPS	**Background and request for interpretation:** Administrative spaces are included in the list of spaces that must be counted for view window calculations. Do coaches' or custodians' offices in a school count as administrative spaces? **Interpretation:** [NOTE: This was not submitted as a formal CCI, but is included here for reference and clarity.]The intent of the prerequisite is to address spaces where students and staff spend significant amounts of time. To quote the CA-CHPS criteria, upon which the MA-CHPS criteria was originally based, “View windows are essential to areas where students and staff will be working for extended periods of time.” It seems an oversight that this language was not included in the 2006 MA Criteria, as it does exist in the 2009 update. As such, spaces such as coaches' or custodians' offices, may not be considered administrative spaces only if it can be reasonably expected that those users at the specific school will not spend much of their day there. Any space occupied for a significant portion of the day, such as guidance counselor offices, must still be included.
EQ2.0: HVAC and Construction IEQ Minimum Requirements	All Criteria Editions	**Background and request for interpretation:** The prerequisite asks the team to provide site drawings showing a 50ft. diameter spherical circle (25ft. radius) and elevations for each air intake showing that there are no significant anticipated pollutant sources within the circle, clearly identify on the drawings hazardous and noxious contaminant pollutant sources located in the vicinity of each of the intakes, and indicate the horizontal and vertical distances of the air intake to the nearest edge of any street, driveway, parking lot or contaminant source to ensure that all intake openings are located at least 25 feet horizontal distance and 2 feet below (for point sources) the identified pollutant sources. The project has an Energy recovery unit, which uses classrooms' exhaust for tempering required outside air of A/C units. The restroom has separate exhaust (not mixed with ERV exhaust). Is the exhaust of ERV (energy recovery unit) considered a contaminated source, which has to be 25’ away from intake, or it is an exception?

		Interpretation: Since the Energy Recovery Ventilator is using return air, and return air is normally recirculated when mixing with fresh outside air, the ERV exhaust is not considered a contaminant source and does not need to meet the 25' separation requirement.
EQ2.0: HVAC and Construction IEQ Minimum Requirements	All Criteria Editions	**Background and request for interpretation:** Background is the same as above. Per International Mechanical code where water-heater flue pipes are within 10' away from intake air, flue pipes shall be raised up minimum 3' above the intake air. In our case, when flue is within 25' not closer than 10'; can it be raised up 3'? **Interpretation:** The flue piping is considered a contaminant source, and since it contains combustion gases, it is required to meet the 25' separation.
EQ2.0: HVAC and Construction IEQ Minimum Requirements	All Criteria Editions	**Background and request for interpretation:** Background is the same as above. This school is almost at the end of its construction. There are a couple of the plumbing vents are within 25 feet of intake air openings on roof. per International Mechanical code the contaminated source can be raised up 2 feet above the intake air. Is it acceptable for CHPS to do the same and raise the contaminated source 2' above the intake air? The CHPS manual is not clear at this part. **Interpretation:** In the locations where the plumbing vents are closer than 25 feet to the air intake, the vents may be raised 2 feet above the air intake location, as long as it is at least 10 feet away horizontally from the nearest edge of the intake to the nearest edge of the plumbing vent.
EQ2.0: HVAC and Construction IEQ Minimum Requirements	All Criteria Editions	**Background and request for interpretation:** The prerequisite asks the team to provide site drawings showing a 50ft. diameter spherical circle (25ft. radius) and elevations for each air intake showing that there are no significant anticipated pollutant sources within the circle, clearly identify on the drawings hazardous and noxious contaminant pollutant sources located in the vicinity of each of the intakes, and indicate the horizontal and vertical distances of the air intake to the nearest edge of any street, driveway, parking lot or contaminant source to ensure that all intake openings are located at least 25 feet horizontal distance and 2 feet below (for point sources) the identified pollutant sources. The question is regarding the use of the ASHRAE 62.1-2007 Section 5 as the standard for compliance for Chemical and Pollutant Source Control. Mechanical engineers maintain that the ASHRAE standard is more than adequate to provide superior indoor air quality and that it provides direction for maintaining higher separation distances where pollutant sources may be likely. Many smaller buildings may not be able to provide the 25ft separation distances called for in

		the criteria due to floor plan and HVAC system type. **Interpretation:** CHPS has determined that the requirements of ASHRAE 62.1-2007 Section 5 are adequate to meet the intent of the CHPS criteria and that a 25ft separation does not need to be provided unless specifically called for in the ASHRAE standard.
EQ2.0A.P2: Building Flush-out	Edition	**Background and request for interpretation:** Flushing out the building with 100% outside air will help remove indoor pollutants prior to occupancy. After construction ends, and with all interior finishes installed, flush-out the building by supplying continuous 24 hour ventilation with all air handling unit dampers at their maximum outdoor air position and all supply fans at their maximum position and maximum rate for at least 14 days while maintaining an internal temperature at the most energy efficient temperature above 60°F, and relative humidity no higher than 60%. For the case where a potential CHPS project has fallen behind schedule and may be unable to complete all of the 14 day flush out prior to planned school occupancy date, the school may alternatively conduct the flush-out while the building is occupied provided all of the included measures to protect building occupants are taken (see the 2009 CA-CHPS Criteria for the complete list). Should items 2-4 under the alternative approach be performed even if the requirements in item 1 are met? If utilizing the alternative flush-out method, do the systems have to be run 24 hours a day for 14 days (during occupied hours)? **Interpretation:** If a project has fallen behind and can not meet the 14-day flush out period before occupancy, the project may opt to use the alternative method. If a certified Industrial Hygientist is hired, and the project meets requirements a-g under item 1, then items 2-4 do not need to be performed (the building does not need to be flushed out if the testing shows no contamination). If the project elects not to hire an Industrial Hygienist, or all of the conditions in requirements a-g are not met, then the project must comply with items 2-4 of the alternative compliance method. The project may elect to run the systems during non-occupied hours as long as the building is flushed-out for 336 continuous hours over a course of no more than 28 days.
EQ2.0B P4	2009 CA-CHPS	**Background and request for interpretation:** Entryways: Overhanging roofs or eaves shall be installed for exterior doorways, to prevent rainwater entering buildings. Porous flooring materials shall not be installed in vicinity of exterior doorways, operable windows, or plumbing fixtures except for flooring that provides a barrier to moisture penetration as verified by third party or manufacturer testing. We are not clear on the size (depth and width) of the entryway overhangs and eaves. While this may vary a bit per project are there some minimum

		dimensions? **Interpretation:** The overhang shall be at minimum the width of the doorway plus one foot on each side. The depth of the overhang shall be at minimum 4 feet.
EQ2.6.1	2009 CA-CHPS	**Background and request for interpretation:** Control surface dust by providing hard-surfaced paving not less than eight feet by eight feet at all outside entrances or doorways to any school room (concrete or equivalent), together with covered walkways or entry canopies to keep rain from the walkway surface (see EQ2.0 P6 - Moisture Control (entryways) While the hard surface paving outside outside entrances and doorways to school rooms, is clearly 8' x 8', the size of the covering or canopy is not clear? Please define the minimum dimensions for this credit. **Interpretation:** The minimum size of the walkway cover or canopy shall be at least the width and length of the walkway, and no less than the minimum 8' x 8' size of the hard surface paving.
IEQ 2.1: Low Emitting Materials	2006 MA-CHPS	**Background and request for interpretation:** Design teams must specify materials that have been tested and certified for low emissions of volatile organic compounds (VOC's). The project specification calls for a water-based finish for wood athletic flooring, which is the only product on the market to our knowledge that is Greenguard certified. The flooring installer for this project raised concern about failures with this product in several recent New England schools, including a project we are familiar with. The problem seems to be that water in the finish does not fully evaporate, even with the addition of temporary ventilation to the space. This water exacerbates the seasonal contraction and expansion of the wood flooring. This causes gaps to form between planks which are unacceptably wide. The installer recommends using a solvent based finish instead, which does not exhibit this problem and which is more durable. Would it be acceptable to substitute a LEED-compliant (275 g/L or less) product without jeopardizing IEQ2.1? **Interpretation:** Products used for compliance with IEQ2.1 must meet the test requirements outlined in the criteria. Alternate compliance paths will not be accepted where compliant products exist.
IEQ 2.1: Low Emitting Materials	2006 MA-CHPS	**Background and request for interpretation:** Design teams must specify materials that have been tested and certified for low emissions of volatile organic compounds (VOC's). The project specification calls for a water-based finish for wood athletic flooring, which is the only product on the market to our knowledge that is Greenguard certified. The flooring installer for this project raised concern about failures with this product in several recent

		New England schools, including a project we are familiar with. The problem seems to be that water in the finish does not fully evaporate, even with the addition of temporary ventilation to the space. This water exacerbates the seasonal contraction and expansion of the wood flooring. This causes gaps to form between planks which are unacceptably wide. The installer recommends using a solvent based finish instead, which does not exhibit this problem and which is more durable. Would it be acceptable to substitute a LEED-compliant (275 g/L or less) product without jeopardizing IEQ2.1? **Interpretation:** Products used for compliance with IEQ2.1 must meet the test requirements outlined in the criteria. Alternate compliance paths will not be accepted where compliant products exist.
EQ2.2: Low-Emitting Materials, and all low-emitting materials prerequisites and credits	2009 CA-CHPS, 2009 CO-CHPS, 2012 HI-CHPS, 2006 MA-CHPS, 2009 TX-CHPS, 2011 VA-CHPS, CHPS Prefab	**Background and request for interpretation:** The intent of this credit interpretation is to determine which products on the CHPS Product Database are eligible for some credits in the CHPS Criteria. Because self-declared products are listed alongside third-party-certified products, it is important to make clear to the public which products are eligible for certain credits and which are not. The interpretation request asks what the requirements are for products to qualify for the credits in general, and CHPS will apply the answer to products in the database. What testing requirements are necessary in order for a product to qualify for low-emitting materials credit EQ2.2 in CA-CHPS, the CA-CHPS 2011 Addendum for Cal Green prerequisite EQ2.0D, and low-emitting materials credits and prerequisites from other CHPS Criteria? **Interpretation:** The following scenarios are acceptable for meeting the low-emitting materials credit EQ2.2 in CA-CHPS, the CA-CHPS 2011 Addendum for Cal Green prerequisite EQ2.0D, and low-emitting materials credits and prerequisites from other CHPS Criteria: - A product that is physically tested by an approved third-party, accredited Laboratory. - A product that is third-party certified by an approved third-party, accredited Certification Body. - A product that is not physically tested but is self-certified as compliant by the manufacturer based on third-party testing of a related, representative or worst-case product and for which the manufacturer has made a written emissions declaration using the CHPS Low-Emitting Materials Self-Certification form and signed by an authorized senior manager (e.g., environmental, quality, or operations manager).

		The following scenario is NOT acceptable for meeting the aforementioned criteria and requirements: - A product that is self-declared with no third-party testing or certification referenced at all or is self-declared as compliant based on third-party testing of another product but for which there is no documentation and signed declaration regarding the extension of the claim to the product that are consistent with Sections 8.1, 8.3.1, and 8.7 of the Guidelines (shown below), and for which there is no signed CHPS Low-Emitting Materials Self-Certification form. Qualified Laboratories and "third parties" have not changed in definition. The requirements for each can be found in the current version of the *Procedures and Minimum Standards for Product Inclusion into the CHPS Database.*
EQ2.2.6: Low Emitting Materials - Ceiling & Wall Systems	2009 CA-CHPS	**Background and request for interpretation:** This credit requires all ceiling and wall systems installed in the project totaling 90% or more of the total area of such products to be tested for emission of VOC's of concern with respect to chronic inhalation exposures following the specifications of the CDPH Standard Practice. For systems consisting of more than one distinct layer, all layers shall individually meet the requirements of the Standard Practice. The question is regarding acoustical wall panels. The client would like to use Fabric-wrapped Tectum wall panels. These panels have not been tested to CDPH Standard as an assembly. However, the Tectum wall panel material has been tested, an adhesive with testing can be used. The Guilford of Maine FR701 Terratex 100% recycled plastic soda bottle (woven polyester) fabric has not been individually tested to CDPH standards, but has been tested by Air Quality Sciences as part of a compliant acoustical wall panel assembly by another manufacturer. Will the assembly of a compliant Tectum panel, compliant adhesive, and the FR701 fabric be considered by CHPS as meeting the requirements of the EQ2.2.6 credit? Secondly, is the fabric required to be tested at all under this credit, or is woven polyester fabric considered organic-free and thus not subject to testing requirements? **Interpretation:** The approach that you have specified will be sufficient for compliance with the credit. You will need to provide the compliance reports for each of the materials since it is not being submitted as a compliant assembly. The fabric does need to be tested, the organic free qualification is for ceramic, metal or mineral based materials.
IEQC2.3: High Efficiency Filters	2006 MA-CHPS	**Background and request for interpretation:** Design the HVAC system with particle arrestance filtration rated at Minimum Efficiency Reporting Value (MERV) of 13 in all mechanical ventilation systems. Install new filters

		immediately prior to occupancy. Does the requirement for MERV 13 filters only applies to filtration of outside air entering the building, or would it also apply to recirculated air within the building? The project has a building with outside air provided by a ducted system from rooftop units. The outside air from those units WILL be MERV 13 filtered. However, once that air reaches the distribution points, it is put through and then recirculated through a Fan Coil Unit, whcih is similar to a unit ventilator, in that it heats the room air and circulates it, but it does not get any outdoor air directly from the outside. These FCU's do not allow for MERV 13 filters (or if they do allow for them, they cause them to run inefficiently). Since the air is already filtered to MERV 13 before it enters the building, what is MA CHPS's position on this question? **Interpretation:** The requirement for MERV 13 filters does not include the re-circulation of indoor air once the outdoor air has already been filtered. The MERV 13 requirement applies only to equipment that brings outside air to occupied spaces. IEQP.13 provides further information on filtration requirements for unit ventilators.
EQP2.3	2011 HI-CHPS	**Background and request for interpretation:** Do not install duct liners to maintain clean ducts and avoid particulate accumulation and/or mold in the ductwork. Our design includes duct insulation installed on the inside of the ductwork for acoustical reasons. Ducts are exposed in our learning spaces for educational purposes. Could you please confirm if our assumptions are correct and that our duct insulation inside of our ductwork will meet the EQP2.3 pre-req. **Interpretation:** No internal duct liners are allowed without special exception by the Department of Education.
EQP4	2011 HI-CHPS	**Background and request for interpretation:** For mechanically ventilated and conditioned projects, the condensate removal systems that rely on gravity drainage are strongly preferred to systems that use pumps due to the reduced maintenance associated with gravity systems. The project is prohibited from specifying HVAC systems that use evaporation drip pans for condensate removal. Would it be sufficient if we design an HVAC system that provides a slope in condensate pans so that water does not stand, provides access for cleaning coils and other components. **Interpretation:** Yes, sloped condensate pans with gravity drains are the preferred installation method.
EQ 2.4: Ducted Returns	2006 CA-CHPS	**Background and request for interpretation:** Prevent dust and microbial growth issues associated with plenum returns. The project uses the above ceiling space of each classroom as a plenum; but each classroom is isolated from the rest and has an individual unit. Will this approach

		comply with the intent of the credit? **Interpretation:** This approach does not comply with the intent of the credit. While this approach will eliminate cross contamination from other spaces, it does not address the issue of dust and microbial growth associated with plenum returns. The project must utilize fully ducted returns from the diffuser in the space back to the the air handling unit.
EQ.P3: Pollutant & Chemical Source Control	2009 MA-CHPS	**Background and request for interpretation:** Our project is a heavy renovation and additions to an existing school facility. We will specify electric ignitions for the following new equipment: water heaters, boilers, air-handling units, and cooking stoves. There are several existing cooking stoves that are still viable for many more years of use and we would like to keep them, their replacement is not a planned in the scope of the project, however they have existing standing pilot lights and cannot be converted. Will this interfere with our compliance with this pre-requisite? The district is willing to adopt a policy of providing equipment with electric pilot lights for all future replacement of this equipment when the time comes. If this will help with compliance. The expense of replacing this equipment is substantial and would be a significant hardship to the district. Will this [existing equipment with pilot lights] interfere with our compliance with this pre-requisite? **Interpretation:** If existing equipment is not beyond its useful life, the use of existing equipment with pilot lights is permitted and will not interfere with achieving the prerequisite. CO detectors are suggested, but not required, by CHPS in these circumstances.
EQ.P3.4: Pollutant & Chemical Source Control	2009 MA-CHPS	**Background and request for interpretation:** Air intake locations shall follow those specified in ASHRAE Standard 62.1-2007, 5. All intakes must be 6 feet above landscaped grade including soil, lawn, shrubs, or any plant life within 1.5 feet horizontally of intake. Exception: For projects where, locating an air intake within 25 feet of a contaminant source is unavoidable, such as a renovation project, the intake opening shall be a minimum of 2 feet below the contaminant source and 10 feet horizontally from the nearest edge of the air intake to the nearest edge of the contaminant source. Due to budget limitations, the existing or to be replaced Unit Ventilators (UV) will remain in its currenct location at the renovated school building. The UV's air intake at the First Floor is less than 6' above landscape grade. There are no contaminant source within 25' of the UV's air intake. Can the Design Team can by-pass the "air intake must be 6' above landscape grade" requirement and still meet the intent of the prerequisite EQ.P3.4? **Interpretation:** The requirements of this prerequisite will

		not be waived for the project in question. Air quality has a direct correlation to the performance and health of building occupants, and is therefore a very important piece of the CHPS High Performance criteria for schools.
EQ.P3.4: Pollutant & Chemical Source Control	2009 MA-CHPS	**Background and request for interpretation:** Air Intake locations shall follow those specified in ASHRAE Standard 62.1-2007, 5. All intakes must be 6 feet above landscaped grade including soil, lawn, shrubs, or any plant life within 1.5 feet horizontally of intake. Exception: For projects where, locating an air intake within 25 feet of a contaminant source is unavoidable, such as a renovation project, the intake opening shall be a minimum of 2 feet below the contaminant source and 10 feet horizontally from the nearest edge of the air intake to the nearest edge of the contaminant source. The proposed or replaced Unit Ventilators (UV) air intake location is below 6' above landscaped grade. The CHPS interpretation for criteria EQ.P3.4 requires Unit Ventilators to comply with ASHRAE Standard 62.1-2007, Section 5. Please advise the Design Team which interpretation or action is correct: 1. The UV air-intake located below 6' above finish grade meet the EQ.P3.4 requirement because ASHRAE 62.1, Section 5 refers to natural ventilation. 2. Provide a 2' concrete pad in front of the UV air-intake to separate plant life or landscape grade. **Interpretation:** The Unit Ventilator air-intake location must be located 6' above landscaped grade. If the UV's are below 6' above finished grade, the project's request to place a 2' concrete pad in front of the UV air-intake to separate plant life or landscaped grade is an acceptable solution for compliance.
EQ.P7: View Windows	2009 MA-CHPS	**Background and request for interpretation:** This project is a Vocational High School. Most classes have a Classroom and Shop component of the program in separate rooms. For example, the Electronics class has two separate spaces, an Electronics Shop and an Electronics Classroom. Please clarify if vocational shops should also be treated like classrooms when doing calculations for this prerequisite, given that there is actually a separate classroom designated for that course. **Interpretation:** Vocational spaces do need to be included in the view calculations. Views are equally important in these settings. Please note that the 70% requirement is based on the total area included in the school -- you do not need to meet the 70% requirement in every room. While the vocational spaces may add floor space to the calculations, you can add windows in other classrooms to compensate if you cannot build enough window space into the vocational classrooms.

EQ P9: Minimum Acoustical Performance	MA-CHPS 2009 Edition	**Background and request for interpretation:** Design teams must design classroom spaces to meet the reverberation time requirements of ANSI S12.60 and design all walls, roof-ceiling, and floor-ceiling assemblies separating classrooms and other core learning spaces to meet the STC requirements as defined in ANSI Standard S12.60-2002, except windows which must meet an STC rating of at least 35, and for enclosed core learning spaces the exterior windows many comprise no more than 25% of the area of the partition. For enclosed core learning spaces, interior windows may comprise nor more than 10% of the area of the demising partition. Design classrooms and other core learning spaces to meet an Leq of 45 dBA for HVAC system noise in an unoccupied classroom during normal hours of classroom operation, and floor-ceiling assemblies over classrooms must meet Impact Insulation Class (IIC) of 50 or greater where occupied spaces is over a classroom. There is a major change in the 2009 version of MA CHPS which is EQ. P9 Minimum Acoustical Performance. The exterior wall is only allowed to have 25% glazing and the interior partition can only have 10% glazing. In the past, we have always designed our walls to meet the STC by double glazing the interior glass or using an exterior glass with a higher STC rating. If we are limited to how much glass we can use then how do we meet other requirements such as views (especially for interior (core)spaces that need to look though perimeter spaces) and daylighting (how can we provide an even distribution of daylight if we are limited to the amount of glass that we can use)? **Interpretation:** This prerequisite is designed to ensure appropriate acoustical environments are achieved in all projects. For projects that are pursuing Daylighting and Views credits, the glazing requirements may be waived with a report from an acoustical engineer confirming that the design of regularly occupied spaces meets the requirements for reverberation and dBA Leq as outlined in ANSI Standard S12.60.
EQ.P9.1: Minimum Acoustical Performance	2009 MA-CHPS	**Background and request for interpretation:** For each classroom and core learning space, the project team must document that the reverberation time meets the requirements of ANSI S12.60. Calculations are to assume a fitted out and furnished but unoccupied classroom, and design all walls, roof-ceiling and floor-ceiling assemblies separating classrooms and other core learning spaces to meet the Sound Transmission Class (STC) requirements as defined in ANSI Standard S12.60-2002, except windows which must meet an STC rating of at least 35, and for enclosed core learning spaces the exterior windows may comprise no more that 25% of the area of the partition. For enclosed core learning spaces interior windows may comprise no more than 10% of the area of the demising partition. Classrooms and other core learning spaces should be designed to meet an Leq 45

		dBA for HVAC system noise in an unoccupied classroom during normal hours of classroom operation, and floor-ceiling assemblies over classrooms must meet Impact Insulation Class (IIC) of 50 or greater where occupied space is over a classroom. There are multiple carpet and non-carpet strategies to achieving this performance level.The district supports a collaborative learning process which allows for teachers and students to share experiences to enhance the academic learning environment. The school has an existing building which reinforces this educational objective through the integration of barn doors between the classrooms. The barn doors are predominately left open between general classrooms to encourage interaction. The barn door feature, however, precludes the space from achieving the STC rating requirements between adjacent spaces indicated in EQ. P9- Minimum Acoustical Performance. The barn doors proposed for the project cannot achieve this acoustical performance. During building programming sessions, the community has stated that the barn doors are one of their highest educational objectives in order to support the visual and physical connection between spaces. There is a strong understanding that capitalizing on the resources of the adjacent classroom would enhance the educational experience. For the reasons stated above, we request this project be given relief from compliance with EQ P9 requirements. **Interpretation:** The requirements of this prerequisite will not be waived for the project in question. It is understood that there are products in the marketplace that will achieve the requirements of the program while still meeting the CHPS criteria. Acoustical performance is a very important piece of the CHPS criteria and it is the opinion of CHPS that minimum acoustical performance may not be compromised.
EQ.P9.1: Minimum Acoustical Performance	2009 MA-CHPS	**Background and request for interpretation:** The Indoor Environmental Quality credit EQ.P9 “Minimum Acoustical Performance” included in the MA-CHPS 2009 version requests that “floor ceiling assemblies over classrooms must meet Impact Insulation Class (IIC) of 50 or greater where occupied space is over a classroom.” We note that this requirement exceeds by 5 points the IIC requirement established by the ANSI S.12-60-2002 standard “Acoustical Performance Criteria, Design Requirements and Guidelines for Schools” (see section 4.5.6). This standard is at the basis of all other CHPS acoustical requirements. It is our experience with projects observing the ANSI S.12-2002 standard that achieving IIC 45 between classrooms and the spaces above is suitable and sufficient. Moreover we note that, for this project, the spaces above classrooms which do not meet the IIC 50 requirement are the Science Labs, where the use of carpet is not suitable as a floor material. These labs will

		have linoleum flooring. The Science labs have been located on the 4th (top) floor for ease of exhausting the fume hoods through the roof and for unifying the building into an integrated, energy efficient structure. These labs will be in session on the same schedule as the classrooms below, and therefore we do not anticipate that excessive impact activity will take place that can disturb the classroom activities. Scraping chair noise, which may be the only noise of concern during class time, can be prevented by installing a product such as Flexi Felt, which are durable pads for the chairs' feet. This is a considerably more cost effective measure. We request that the project be allowed to achieve an IIC 45 rating between classrooms and science lab classroom spaces above, with the note that, where necessary, chair scraping noise will be addressed locally as described above [by adding felt pads to chair legs]. **Interpretation:** The request to fulfill EQ.P9 by achieving an IIC of 45 has been denied. The CHPS requirement of an IIC of 50 is intentional. While chair scraping is a source of noise, it is not the only one. Because labs are in session at the same time as classes below, footfalls and general movement are also noise sources. Additionally, felt pads on chair feet are not considered part of the floor-ceiling assembly. The project will need to achieve an IIC of 50 between the classroom spaces in order to be compliant.

Energy (Efficiency) Category

Prerequisite or Credit	Applicable Criteria	Background and Interpretation
EE1.0 - Minimum Energy Performance	CA-CHPS 2009 Projects Using HPI joint review	**Background and request for interpretation:** The credits give points for achieving superior energy performance and producing energy on-site to reduce the amount of load placed on the electric grid. What methodology should be used to accurately determine the energy efficiency of schools that do not provide mechanical cooling? Title 24, Part 6 includes a default value for cooling that assumes the least efficient code compliant equipment, which generally penalizes projects without cooling. The CHPS Criteria includes a note that allows the ASHRAE 90.1 standard to be used as an alternate. Our teams attempt to apply ASHRAE determined that 90.1 includes a similar default assumption and associated penalty. For CHPS purposes would it possible to remove the TDV associated with cooling from both the standard and proposed when calculating the energy efficiency. **Interpretation:** "Any newly constructed building in

California must show compliance with Title-24 Part 6, Building Energy Efficiency Standards (Energy Standards), which is currently the 2008 Energy Standards. Buildings can show compliance by following two possible paths: Prescriptive Path or Performance Path. For both compliance paths, Sections 110 through 139, mandatory requirements also must be met.

The prescriptive path compliance requirements are provided in Sections 142 through 148 of the Energy Standards. The performance path compliance requirements are provided in Section 141 of the Energy Standards or by using California Energy Commission approved Compliance Software to simulate the energy performance of the building according to established Alternative Calculation Method (ACM) specifications. When simulating a building with Natural Ventilation you would be simulating the building by not specifying mechanical cooling equipment for the analysis. However, the Compliance Software checks the building indoor thermal comfort for each hour and determines whether the building has Unmet Load Hours (UMLH) that fall below the threshold value (annual basis).

Indoor thermal conditions are based on ASHRAE Standard 55 guidelines. When the building has exceeded the threshold UMLH, the Compliance Software assigns a preselected cooling equipment type as listed on Table N2-13 of 2008 Nonresidential ACM Manual. Then the Compliance Software will size the necessary cooling equipment based on Sections 2.5.3.8 and 2.5.3.9 of the 2008 Nonresidential ACM Manual. The best way to avoid having to use mechanical cooling equipment added automatically by the software and having to take the associated energy penalty against the proposed building budget is to design the building so that the indoor comfort conditions are not outside required comfort levels. For additional information on this subject, please refer the two attached work-papers: Emmerich et al, 2001 (NIST Report # NISTIR 6781) and Brunswick et al, 2012 (a recent paper published at IBPSA's SimBuild conference 2012 in Wisconsin).

The building can also be designed with a compressor-less cooling system to maintain the space within acceptable comfort conditions. This may be possible if the outdoor wet-bulb temperatures are conducive to such a cooling system for the climate at the project location. In coastal climates both Natural Ventilation and mixed-mode ventilation can be used to reduce the impact of the cooling energy on the proposed energy budget. Additional strategies include solar assisted or other hybrid ventilation to minimize the UMLH from going beyond the threshold values, thus eliminating the need for mechanical cooling equipment for schools and many building types. This may be further enhanced by intelligent shading or user controlled low-energy shading

		and lighting systems without compromising thermal comfort. Guidance by Sabaratnam 'seran' Thamillseran, P.E., California Energy Commission, (916)651-2927.
EE1.1 - Superior Energy Performance	CA-CHPS 2009 Projects Using HPI joint review	**Background and request for interpretation:** The credits give points for achieving superior energy performance and producing energy on-site to reduce the amount of load placed on the electric grid. What methodology should be used to accurately determine the energy efficiency of schools that do not provide mechanical cooling? Title 24, Part 6 includes a default value for cooling that assumes the least efficient code compliant equipment, which generally penalizes projects without cooling. The CHPS Criteria includes a note that allows the ASHRAE 90.1 standard to be used as an alternate. Our teams attempt to apply ASHRAE determined that 90.1 includes a similar default assumption and associated penalty. For CHPS purposes would it possible to remove the TDV associated with cooling from both the standard and proposed when calculating the energy efficiency. **Interpretation:** Once compliance is established for the project with the 2008 Title 24 Energy Standards, as determined by EnergyPro 3.1 or a similar computer program approved by the California Energy Commission, and the EE.P1, Minimum Energy Performance requirements are met, the team may use an alternate compliance approach to earn credits for EE1.1 Superior Energy Performance for CHPS credit. For naturally ventilated buildings, Energy Plus may be used to model the energy performance and take advantage of the savings associated with the elimination of mechanical cooling equipment. For HPI Incentive Grant points, a California Energy Commission (CEC) approved modeling softward must be used.
EE1.0 - Minimum Energy Performance and EE1.1 - Superior Energy Performance	CA-CHPS 2006 & 2009 non HPI projects	**Background and request for interpretation:** The prerequisite requires compliance with T24 energy performance guidelines. The credits give points for achieving superior energy performance and producing energy on-site to reduce the amount of load placed on the electric grid.What methodology should be used to accurately determine the energy efficiency of schools that do not provide mechanical cooling? Title 24, Part 6 includes a default value for cooling that assumes the least efficient code compliant equipment, which generally penalizes projects without cooling. The CHPS Criteria includes a note that allows the ASHRAE 90.1 standard to be used as an alternate. Our teams attempt to apply ASHRAE determined that 90.1 includes a similar default assumption and associated penalty. For CHPS purposes would it possible to remove the TDV associated with cooling from both the standard and proposed when calculating the energy efficiency.

		Interpretation: Once compliance is established for the project with the 2008 Title 24 Energy Standards, as determined by EnergyPro 3.1 or a similar computer program approved by the California Energy Commission, projects that are not pursuing DSA High Performance Incentive (HPI) Grant funding may use an alternate compliance approach to meet the Minimum Energy Performance Prerequisite and earn credits for EE1.1 Superior Energy Performance. For naturally ventilated buildings, Energy Plus or other CHPS approved alternative modeling software may be used to model the energy performance of the building and take advantage of the savings associated with not installing mechanical cooling equipment.
Credit EEC.3 - Renewable Energy	2006 MA-CHPS	**Background and request for interpretation:** These credit gives points for on-site alternative energy sources for electricity production or heating/cooling. The table below shows the point levels corresponding to the percentage of energy cost savings supplied by alternative energy sources as compared to the total energy cost of the as-designed school, regulated loads only. With the roof area of the design, the team had originally aimed to reach the 1% goal for EC 3 to achieve (2) points to contribute to the total. Is it possible to get partial credit if 0.05% is provided in lieu of the full 1%? **Interpretation:** The criteria was written to require a minimum of 1% renewable energy to achieve 2 points under this credit. Points will not be awarded for renewable energy production under the minimum level of 1%.
Prerequisite EE.P1, Credit EE.C1 - Superior Energy Performance	MA-CHPS 2009	**Background and request for interpretation:** The credits give points for achieving superior energy performance and producing energy on-site to reduce the amount of load placed on the electric grid. May a project enter into a PPA (Power Purchase Agreement) with a 3rd party to purchase the renewable energy at a reduced cost and use the associated energy and cost savings in the energy model to meet the requirements for Energy Efficiency? **Interpretation:** A project may enter into a PPA with a 3rd party and use the energy produced to achieve the prerequisite and credits for energy efficiency.

Climate Change Category

Prerequisite or Credit	Applicable Criteria	Background and Interpretation
Credit CL1.1: Climate	2009 CA-CHPS, 2009 CO-CHPS,	**Background and request for interpretation:** Districts must commit to join a CHPS-Approved Climate Registry that uses GHG accounting methodologies. When a school pursues this

Change Action	2009 TX-CHPS, 2011 VA-CHPS	credit and their board submits a Statement of Intent, what are they committing to? Are they providing the GHG information for the life of the building, or a specific length of time? **Interpretation:** The project must commit to reporting GHG emission to a CHPS-approved Climate Registry that uses GHG accounting methodologies for a period of one year of full operation. Currently, the only CHPS-approved climate registry is "The Climate Registry".

Water (Efficiency) Category

Prerequisite or Credit	Applicable Criteria	Background and Interpretation
Prerequisite WE1.0: Create Water Use Budget	2009 CA-CHPS	**Background and request for interpretation:** Design teams must develop a water budget for landscape (both non-recreational and recreational) and ornamental water use to conform to the local water efficient landscape ordinance. If no local ordinance is applicable, then the budget outlined by the California Department of Water Resources shall be used. According to the 2009 Edition CHPS Criteria, when building a new building on an existing campus, the scope of the Water Use Budget is determined by the scope of the project. The project is located on 2 acres at the southwest corner of an existing 39.72 acre high school campus. The site is currently an asphalt parking lot without any irrigation. A new irrigation system, independent from the campus' existing system, will be installed for the building. The project encompasses just 5% of the entire campus, so is the scope of the budget limited to the site? **Interpretation:** The scope of the project will determine if the project needs to comply with this prerequisite. If an irrigation system is being installed, the water use budget will need to be calculated for the entire project site. If there is no irrigation being installed, then this prerequisite does not apply to the project, and can be eliminated from the scope.
WE3.1.2 - Water Management System	2009 CO-CHPS	**Background and request for interpretation:** For this credit, the team shall install a Water Management System to monitor water use of all indoor and outdoor water uses. Water meters should have a pulsed output for automatic meter readings (AMR). Separate water meters (also called sub-meters) should monitor and report on water usage for the following: indoor water usage (except gyms with showers that should be monitored separately); gyms with showers; landscaping if irrigated; recreational fields if irrigated; swimming pool; and cooling towers. Can credit WE3.1.2 be claimed if all water uses are being metered, but the only uses are domestic water and irrigation? The domestic water is only bathrooms and a kitchen sink, which is basically a staff break room. There are no playing fields

		for the exterior irrigation. **Interpretation:** Yes, the project may claim the credit since all water uses are being metered.
WC2.1 - No Permanent Irrigation for Landscaping	MA-CHPS 2006	**Background and request for interpretation:** Do not install permanent irrigation systems for watering non-playing field landscaped areas AND specify drought resistant plants or grasses in these areas so that irrigation is not needed beyond plant establishment. The project is proposing installation of a rainwater catchment system that would be used for irrigation of one non-playing field area at the south courtyard. There is no potable water supply used for this irrigation system. Although drought resistant plants and grasses are specified in the south courtyard, it was decided to use an irrigation system for the south courtyard because this is a focal point for the building. Water from roof drains, NOT potable water, will be used for this irrigation system which also includes a rainwater sensor. Although Water Credit 2.1 does not specifically mention the consideration of a rainwater catchment system for permanent irrigation, this approach does comply with the spirit of this credit as stated in the preamble to the MA-CHPS criteria for Outdoor Water Systems: "Use of potable water for irrigation can be minimized by specifying water conservative plants and grasses, collecting and using rainwater for irrigation and/or using highly water-efficient irrigation systems where irrigation is absolutely necessary... (page 29 MA-CHPS Criteria 2006)". Can this project, with a non-potable water irrigation system at the south courtyard, qualify for Water Credit 2.1? **Interpretation:** The project is proposing a rainwater harvesting system for compliance with this credit. A rainwater harvesting system is an acceptable compliance approach as long as there is no connection of the irrigation system, or the rainwater cistern to a potable water source.
WC2.1 - No Permanent Irrigation for Landscaping	MA-CHPS 2006	**Background and request for interpretation:** Do not install permanent irrigation systems for watering non-playing field landscaped areas AND specify drought resistant plants or grasses in these areas so that irrigation is not needed beyond plant establishment. Is a mix of perennial ryegrass, fescues and Kentucky Bluegrass considered drought resistant for the purpose of this credit? According to the University of Massachusetts Extension Service, certain cultivars of perennial ryegrass and tall and fine fescues have a high tolerance for environmental stress and are drought tolerant, while Kentucky Blues grass is considered moderate for environmental stress and drought resistance. Does MA-CHPS consider Kentucky Bluegrass to be drought tolerant for the purpose of this credit? Although Kentucky Bluegrass is not rated at the same level of drought tolerance, the landscape architect would prefer to include Kentucky Bluegrass in the mix because Kentucky Bluegrass performs better in full sun conditions while fescue grasses

		generally do better in shade conditions. By using a combination of grass seeds the lawn will be able to adapt to full sun, part shade and full shade conditions by having a mix that includes perennial grass (starter grass); fescue, a shade and part sun grass; and Kentucky Bluegrass, a full sun to part shade grass. If this mix of perennial ryegrass, fescues and Kentucky Bluegrass is allowable, is there any particular percentage mix of these three grasses that is required? If this mix is not allowable, what reference can be used to confirm that the proposed grasses and proposed mix of grasses meet the MA-CHPS drought tolerant requirement for this credit? What level of drought tolerance and environmental stress tolerance is required? **Interpretation:** Kentucky Bluegrass is acceptable for compliance with this credit. The MA-CHPS 2006 Criteria offers the following guidance on turf grass mixes for playing fields. Specify athletic field grasses for new fields to be a mixture of 80% Kentucky bluegrass cultivars and 20% perennial rye grass cultivars, spread at a rate of 3 to 4 lbs/1000 ft2. While this mix is specified for durability of playing fields, it may be adapted for use in non playing field areas. The landscape architect should develop a mix to most appropriately fit the use of the space while also reducing irrigation water consumption.
WC 2.3 - Irrigation System Commissioning	MA-CHPS 2006	**Background and request for interpretation:** Create an irrigation commissioning plan and complete installation review during construction, performance testing after installation, and documentation for ongoing operations and maintenance. We would like to confirm that the scope of the commissioning would be limited to the new irrigation system and not include commissioning of the existing irrigation system. The scope of work on the existing irrigation system is limited to maintaining the existing system, replacing heads and piping where affected by new irrigation installation and the addition of a rainwater catchment system to augment the existing well water supply for the existing irrigation system. Given this limited scope of work, it would not be possible to properly commission the entire existing irrigation system. **Interpretation:** The project will need to commission the new irrigation system, as well as any new piping and heads that are required to be installed on the existing system. The new rainwater collection system will need to be commissioned as well.

Leadership, Education and Innovation Category

Prerequisite or Credit	Applicable Criteria	Background and Interpretation

LEI1.2.2 Integrated Design	2009 CA-CHPS	**Background and request for interpretation:** The goal of this credit is to integrate high performance goals into district planning in early programming and in on-going decision-making to maximize system integration, and the associated efficiencies and benefits of high performance schools. Projects can achieve one point by including at least one CHPS Educated Professional. However, there is currently no CHPS Educated Professional Program available. **Interpretation:** The CHPS Educated Professional credit is not available to projects, as there are no immediate plans to develop this program. Other accreditation programs such as LEED AP, NAHB Certified Green Professional and Build It Green's Certified Green Building Professional do not count towards this credit. Projects will not be able to achieve a point for LEI1.2.2.

Site Category

Prerequisite or Credit	Applicable Criteria	Background and Interpretation
Credit SP2: Joint Use of Parks	2006 MA-CHPS	**Background and request for interpretation:** The goal of this credit is to share parks or recreation space with local park boards or other organizations.Currently, the athletic fields at (Massachusetts HS) are open to community use on a fee basis subject to availability and filling out of a Use of Facilities Form. Sports equipment owned by the school is not accessible to the community. Is this use pattern consistent with the credit intent? **Interpretation:** Any fees should be for actual overhead costs incurred like utilities, Facilities staff time, etc. These fees should not be used for generating income. The equipment use would be left to the discretion of the District but would follow similar considerations.
SC5.3: Exterior Light Pollution Reduction	2006 MA-CHPS	**Background and request for interpretation:** Regarding the level/extent footcandles of light are allowed across a boundary of a public way: if the photometrics show that the light trespasses across the public street at vehicular access points to the site. Does this meet the requirements of the credit, or will the lighting at the access points need to be reworked? **Interpretation:** If the trespass happens at points of vehicular access to the street, then the intent of the credit has been achieved.

Materials Category

Prerequisite or Credit	Applicable Criteria	Background and Interpretation
Credit MC3: Combined Materials Attributes	2006 MA-CHPS	**Background and request for interpretation:** "Combined Attributes" is the term used to recognize the many facets of environmentally-friendly materials including recycled-content, salvaged, bio-based, and Forest Stewardship Council certified materials. The credit is designed to capture the value of environmentally friendly materials even if modest amounts or specified for the project.The template as structured compares products installed, excluding MEP items, to a total project cost that includes MEP items. This differs from the LEED approach to calculating materials credits, which is referenced in the credit description of the 2006 Criteria book. LEED excludes MEP from the baseline cost number. The total construction cost, pulled from the Registration tab at the beginning of the template set, is multiplied by 0.45 to estimate exclusion of labor costs from the total. There does not seem to be any factor used to estimate exclusion of MEP costs from that total. Is it appropriate to count MEP in the baseline cost for the MC3 credit? This greatly differs from the previous MA-CHPS and previous/current LEED materials accounting approach. The current edition of the template compares apples to oranges: the MA-CHPS guideline language for MC3 clearly indicates that it follows the LEED method, excluding MEP costs. However, the template applies only a single multiplier to the total cost, which is 0.45—the number used in LEED to exclude labor costs. MEP costs typically account for up to a third of the project cost; this portion does not appear to be accounted for in the current template, and obviously represents a substantial change to the percentages used to determine number of points achieved. Is this a simple omission in the template set-up? **Interpretation:** The 2006 MA-CHPS templates include a .45 multiplier to remove "labor and installation" costs from the total project cost. The templates also include a weighting factor for each material type. The advisory committee created these multipliers specifically for each material type, and the labor and materials costs specific to Massachusetts. It was the intent of the committee that the multiplier factors would take all factors into consideration to make template use as simple as possible for design teams. The template links to the total project cost in the registration template and material costs without labor are entered into the templates. The templates will then calculate the value of said material. It is the opinion of the committee that this system fairly assesses the projects use of sustainable materials without the need for additional calculations by the team.
Credit ME4.1: Recycled Content	2009 CA-CHPS	**Background and request for interpretation:** For the prescriptive approach to credit ME4.1 it refers you to Table A4 - Minimum Recycled Content Levels and is also adapted from the US EPA Comprehensive Procurement Guidelines.

		The US EPA CPG has the standard set for building insulation using polyisocyanurate rigid foam at 9% total recovered materials content. The prescriptive approach table A4 does not have a standard for polyiso. Can the US EPA CPG standard be used for polyiso rigid foam building insulation? **Interpretation:** The project team is requesting clarification on claiming credit ME4.1 by using polyisocyanurate rigid foam insulation at a recycled content rate of 9% as defined by the Comprehensive Procurement Guideline (CPG). The CHPS 2009 CA-Criteria does not define recycled content levels for plastic insulation and lists the CPG as a referenced standard. Target recycled contents have been defined in the CPG for plastic insulation, including polyisocyanurate rigid foam insulation. Therefore, it is acceptable for the project team to receive credit for using polyisocyanurate rigid foam insulation at a minimum recycled content rate of 9% as defined by the CPG. The material must meet the requirements of a "major" material is defined as those materials covering more than 50% of a major building surface. The recycled content product with the minimum recycled content levels must be used throughout the project for that major building surface.
Credit ME5.1: Environmentally Preferable Products	2009 CA-CHPS	**Background and request for interpretation:** Interior finish materials must meet EQ2.2: Low Emitting Materials requirements to attain points under this credit. Salvaged materials are excluded. Additional points for each major product that is certified by a CHPS approved 3rd party auditor as an Environmentally Preferable Product (EPP) under a CHPS-approved EPP program. Additional points for each major product that is certified by one of the following mulit-attribute standards: NSF/ANSI 140 Platinum for Carpet and NSF/ANSI 140 Platinum for Carpet.The definition of “major” material is defined as those building products covering more than 50% of a building surface. For a project totalling 81,920 sf we were planning on using carpet tile which meets NSF/ANSI 140 Platinum for Carpet. Does this mean carpet is not considered a “major” material and therefore cannot be used for this credit? **Interpretation:** To achieve this credit, greater than 50% of the materials that comprise a major building surface (such as flooring, roofing, walls, ceilings, parking areas) require EPP Certification. In this case, more than 50% of the flooring materials could include the carpet (10,800 sf) and the biobased resilient tile (39,000 sf), which the project was also using. 49,800 sf is 60% of the flooring and therefore would comply. This is a similar approach to breaking out the categories for the prescriptive approaches in the other materials credits (see, for example, the credit for using rapidly renewable materials), where all flooring is grouped together.

Credit MC.2 - MC.6: Single Attribute Materials Credits	2009 MA-CHPS	**Background and request for interpretation:** The single attribute materials credits are designed to reward the use of materials with reduced impacts on human health and the environment. Credits for recycled content, rapidly renewable materials, certified wood, regional materials and material re-use are offered based on the value of their installed cost as a percentage of the total installed cost of all materials on the project. During the design phases of the project, it is difficult to determine what the installed cost of a material will be as it related to the installed cost of all materials on the project. How can a project team estimate the installed cost of all materials during the design phases of the project? **Interpretation:** The installed cost of all materials may be calculated as 45% of the entire project cost.
Credit MW.C2: Single Attribute Recycled Content	2009 MA-CHPS	**Background and request for interpretation:** Several criteria's require manufacturer receipts/proof of purchase for each products installed. The General Contractor voiced concerns in difficulty of obtaining receipts from sub-contractors. Are General Contractor invoices and/or purchase orders acceptable proof of purchase? **Interpretation:** In the case in which invoices from contractors are unavailable, the project team may use the sub-contractor's submittals in lieu of actual invoices. If material cost is unavailable for the calculation, the project team may use a 45% material cost default rate compared to the overall sub-contractors fee.

Policy and Operations Category

Prerequisite or Credit	Applicable Criteria	Background and Interpretation
P&OC5 - Innovation	2006 MA-CHPS	**Background and request for interpretation:** The innovation credits offer an opportunity to earn credits that follow in the spirit of the Massachusetts High Performance Green Schools program requirements. These points can also be garnered to reward efforts that greatly exceed the existing credit parameters. Can the use of a rainwater catchment irrigation system be used for Credit - P&OC 5 - Innovation?
OM.P3: Green Cleaning	2009 MA-CHPS	**Background and request for interpretation:** The Green Cleaning Prerequisite attempts to eliminate harmful chemicals from the school by requiring the school committee to pass a resolution adopting a green cleaning policy. Does the School Committee have to be the group to pass the resolution to adopt the green cleaning policy? Can it be the School Council? A School Council is required in each school in Massachusetts and their job includes adopting educational goals, reviewing the

		annual budget, and formulating a school improvement plan. They often take on other responsibilities, including policymaking. With information to support their duties, is the School Council an acceptable group to approve this credit? Thanks. **Interpretation:** The school council can be the group that passes the resolution.

Integration and Innovation Category

Prerequisite or Credit	Applicable Criteria	Background and Interpretation
II.C3: Life Cycle Cost Analysis	2009 MA-CHPS	**Background and request for interpretation:** Please consider accepting a 20-year life cycle cost analysis in lieu of the stated required 30-year for this project for the following reasons; Denying the credit based on the fact that 20 rather than 30 year period was chosen for the analysis seems unnecessarily rigid in this case. While the credit language does indeed state a 30 year period, the 20 year period was chosen for the analysis based on the actual typical life of HVAC equipment that was analyzed (as stated in the report). While some building systems (flooring, etc) will last 30 years that is typically not the case for HVAC equipment of the type that was evaluated. In addition, the trend shown in the results (an option with lowest LCC etc) based on 20 years was very clear and would not change if the analysis were based on a 30 year period; it would just make even a stronger case for the selected option. Therefore the use of 20 vs. 30 year period in this particular case does not make any difference; using a 30 year period would not change the outcome or the conclusions of the analysis. Can the project submit a 20-year life cycle cost analysis rather than the required 30-year analysis? **Interpretation:** Performing a 20-year life cycle cost analysis is allowable if an independent source confirms that the anticipated useful life of the specific system is only 20 years. For instance, BOMA has published these life expectancy numbers and would provide a more sound basis for evaluation. The project team should provide such an independent confirmation with their Verified submission to CHPS, along with a statement indicating that they are pursuing the credit using this interpretation.