

SUSTAINABLE SITES: Erosion & Sedimentation Control (SSp10)

5/16/2007 - Credit Interpretation Request

Erosion and Sedimentation Control Plans and Narrative Reports have been submitted to the Centre County Conservation District who is empowered by PA Department of Environmental Protection to review and act on such plans via a "letter of delegation" between agencies.

The Conservation District's recommendation of Erosion and Sedimentation Control approval and Stormwater Management Control Plans and Narratives have been reviewed and approved by the PA Department of Environmental Protection.

The PA Department of Environmental Protection has issued a National Pollution Discharge Elimination System #PAI041406012 for project construction. Additionally, both Erosion and Sedimentation and Stormwater Management Controls comply with local "Spring Creek Watershed" protection design guidelines which have been adopted by the Municipality.

Local requirements, PA State Act 167, and Erosion and Sedimentation Control and Stormwater Management Control requirements meet or exceed the EPA 832-R-92-005 requirements.

5/30/2007 - Ruling

If local requirements meet or exceed the EPA requirements, the project has complied with the prerequisite.

5/3/2005 - Credit Interpretation Request

We are working on a new 165,000 square-foot building for Vista Community College in downtown Berkeley. The building is on an urban-infill site that is completely built-out to the lot line.

The LEED Reference Guide states that the Erosion & Sedimentation Control plan should include the following information:

1. Statement of erosion control and stormwater control objectives.
2. Comparison of post-development stormwater runoff conditions with predevelopment conditions.
3. Description of all temporary and permanent erosion control and stormwater control measures implemented on the project site."
4. Description of the type and frequency of maintenance activities required for the chosen erosion control methods.

Regarding Item 1, we believe that the objectives statement for this project should indicate that the only sedimentation/erosion issues are related to temporary pollution prevention at the public storm sewer during construction. There is no other anticipated means of runoff from this urban infill site during or after construction.

Regarding item #2, we are assuming that post- versus predevelopment runoff will be similar, given that this was previously a developed site with impervious surfaces.

Regarding item #3, we have a Stormwater Pollution Prevention plan submitted by the Contractor that can be provided to describe temporary measures concerning protection of the storm sewer during construction. The project does not include any permanent landscaping or topography subject to erosion.

Item #4 is not applicable since permanent erosion control is not necessary.

Question: Are the above statements and the inclusion of the Contractor's Stormwater Pollution Prevention plan adequate to achieve the pre-requisite?

5/23/2005 - Ruling

Under LEED-NC v2.1, SSp1 requires the submittal of a signed LEED Letter Template declaring whether the project followed local standards or the referenced EPA standard and a list of the measures implemented. Naturally, only certain E&S measures will be applicable to your highly built-out site (soil not exposed to wind and weather is generally not susceptible to erosion). The credit requirements include the preparation

of sediment and erosion control plan which prevents the loss of soil during construction, prevents sedimentation of storm sewers or receiving streams, and prevents air pollution by dust and particulate matter. The "Stormwater Pollution Prevention plan" mentioned above might very well satisfy these requirements. In terms of submitting for review to USGBC, follow the procedures outlined in the Reference Guide and the LEED Letter Template. Although not required initially, inclusion of the E&S plan would be helpful during the review process.

4/8/2005 - Credit Interpretation Request

We are renovating a 50,000 square foot residence hall on a University campus. Our erosion and sedimentation control plan includes several measures that meet the requirements of EPA document number EPA 832/R-92-005 (September 1992). However, we would like confirmation that the scope our plan meets LEEDs intent.

The following is a draft of our erosion and sedimentation control plan. We will submit this narrative along with a site drawing that shows details of silt fences (with and without hay barriers), catch basin sediment traps, and silt sack sediment traps. The plan will also show a soil removal area, slope contours, and major drainage areas of the site.

"All sitework for the project will take place on the north side of the building. We will be removing approximately 8800sf of lawn and topsoil. Per EPA 832/R-92-005, Section 3.2.1, the removed material will be replaced with a free draining gravel type material. This will allow truck access and lay down areas with minimal soil displacement.

Per EPA 832/R-92-005, Section 3.2.2, we will install a silt fence with hay bale barrier along the North, East and West elevations. The South elevation will have a silt fence barrier without hay bales. Given that the South elevation has no excavation or soils disruption the need for hay bales would not be required.

The silt fences will be inspected on a weekly basis for any damage or deterioration of the hay bales or fabric.

There are 2 existing catch basins, 1 located to the West and 1 located to the North, along with 9 smaller catch basins located on the South elevation. Per EPA 832/R-92-005, Section 3.2.2, each catch basin will have catch basin sediment traps. 1 existing catch basin located within the site perimeter fence will have a catch basin sediment trap with the hay bale barrier. The existing grades currently pitch toward this catch basing and will remain the same.

The catch basin sediment traps will be checked once a week for any silt build up. In the event of a significant rainfall the traps will be checked at the end of the workday or the following morning. If there is a build up of silt within the trap it will be replaced at that time. Once a month the traps will be replaced with new filter fabric and hay bales where required.

Per EPA 832/R-92-005, Section 3.2.1, once the project is completed the site will be immediately seeded and planted with permanent vegetation.

Per EPA 832/R-92-005, Section 3.2.1, the site plan shows areas along the building perimeter that will not be disturbed during the construction phase, along with the trees will be protected from truck and vehicle traffic.

The summary of our erosion and sedimentation control plan, as it will appear on the LEED Letter Template, is as follows:

- > Wetting of debris removal to dumpsters: 3.2.1 Dust Control
- > Minimize disturbance of current vegetation: 3.2.1 General Stabilization Practices
- > Use of free draining gravel on temporary roadway: 3.2.1 Dust Control
- > Silt fence along North, East, West, and South elevations: 3.2.2 Silt Fence
- > Silt fence with hay bales along North, East, and West elevations: 3.2.2 Silt Fence
- > Catch basin siltsack sediment trap: 3.2.2 Sediment Trap

- > Catch basin hay bale sediment trap: 3.2.2 Sediment Trap
- > Minimize disturbance of current vegetation: 3.2.1 Permanent Seeding and Planting
- > Prompt planting of permanent vegetation upon completion: 3.2.1 Permanent Seeding and Planting

4/18/2005 - Ruling

The project's erosion and sedimentation plan, as described here, meets the criteria set forth for this prerequisite. The measures listed meet the requirements of the EPA 832/R-92-005 document.

11/18/2004 - Credit Interpretation Request

The project requires the demolition of existing buildings prior to any groundwork for new construction of the library. The owner is planning on contracting the demolition work separately from the construction work and there may be up to three months after demolition before construction will begin on the library.

The question is: In seeking LEED certification for the construction of the new library building, that is only 25% of a larger development, can the Sustainable Sites prerequisite be met without regard to the manner in which the site is cleared under the separate demolition contract, or does the process of demolition need to meet the prerequisite for the project, as a whole, to qualify for certification?

12/8/2004 - Ruling

The demolition work is being undertaken to prepare the building site for the construction of the new library. Any work done must comply with the prerequisite requirements, irrespective of the fact that only 25% of the overall area is related to the library. A sediment and erosion control plan, specific to the site, must be adopted with measures taken to control erosion to reduce negative impacts on water and air quality. This is also a federal (USEPA) requirement if the site is greater than one acre.

9/3/2004 - Credit Interpretation Request

The site is approximately 8 acres in area. Approximately 2 acres of the site have been developed with buildings and impervious surfaces. The site is occupied by a single owner and is comprised of: 2 small office buildings, a repair garage building, a storage garage building, and 3 support buildings. The built compound surrounds a parking area (approx. 1/3rd of an acre) which has a 75% occupancy year round. The building program calls for the construction of a new 6300 sq.ft. office building. The proposed building is to be located on a greenfield portion of the site and an existing paved area which is directly adjacent to the developed area and the highway. The owner has agreed to accommodate the new parking and vehicular/pedestrian circulation within the existing paved areas, so only the new office building footprint would disturb the greenfield area. The total amount of impervious surfaces on the site has been reduced as a result of this project where some existing asphalt surfaces have been replaced with vegetated areas where the project site borders a previously developed area.

The inquiry is: can just this area of the property be considered as a greenfield site, defined as the specific site area where construction will take place as the extent of the site area for the purposes of LEED? If not, how should we define the boundaries of our project site as it relates to LEED in this specific case?

9/20/2004 - Ruling

This inquiry relates to SSc5, as opposed to SSp1 (under which it has been submitted).

In order to determine if the mixed site should be classified as a greenfield or previously developed site, the team must clarify the site conditions. As noted in various previous CIRs on this issue, if the greenfield portion of the site had been mass graded then it would actually be considered previously developed. If truly a greenfield, then the project should draw their site boundaries, determine if the majority is greenfield or previously developed, and then follow the path that the majority of their site falls into (based on square footage). Once established, the site definition and boundary must be consistent across all LEED credits.

7/18/2002 - Credit Interpretation Request

The project is located on a narrow infill lot(30ft x 105ft) in downtown Seattle. The site is flat and is bordered on two sides by existing buildings, and by the street and an alley on the other two sides. The permitted plans included an Erosion/Sedimentation Control Plan, developed by the Civil Engineer, that meets City of Seattle code requirements. Reviewers at Seattle Public Utilities and the Department of Design Construction and Landuse have determined that compliance with the City of Seattle Construction Stormwater Control Best Management Practices results in equal or more stringent stormwater protection than EPA best management practices. The reviewers are preparing a document specifically addressing

compliance with this LEED credit. We will have that verification available when we submit for certification.

The project has just begun construction and the contractor has developed a revised Erosion and Sedimentation Control Plan that works better with their access needs. The revised plan has been verbally approved by the city's inspector as meeting the intent of Seattle's Best Management Practices. The contractor has provided us with the revised plan, and is in the process of obtaining written approval from the city inspector as well as a geotechnical report documenting the soils.

Our question is as follows: Given that the City of Seattle Best Management Practices meet or exceed the EPA best management practices and that the City of Seattle has approved the contractor's revised Erosion and Sedimentation Control Plan as being in accordance with the intent of the City's requirements, will the documentation described above be sufficient to meet the requirements of this LEED credit?

7/19/2002 - Ruling

Yes, as long as the information provided 1) states that Seattle's standards have been followed in the project, 2) briefly lists the measures adopted for your project, and 3) briefly describes how Seattle's standards exceed the EPA BMPs. In addition, a plan should be submitted; this can be in the form of a site drawing with the erosion and sedimentation controls highlighted accompanied by the specifications, or a written erosion and sedimentation control plan document.

2/28/2001 - Credit Interpretation Request

This project (designed 1996-7, completed 1999) is located in New Orleans on a very level, if not dead flat, site. The soils on the site are extremely clayey [contain large percentages of clay].

The Civil Engineer, a local firm, appears to have cited neither EPA nor local regulations regarding erosion and sedimentation control in the documents. There were requirements regarding stockpiling of topsoil. The Contractor provided hay bales around catch basins.

Is it possible to petition for and be granted a variance for this prerequisite, given the peculiar local site conditions?

2/28/2001 - Ruling

While there is insufficient information in the inquiry to make a definitive ruling on this credit, other pre-LEED vintage projects have been granted relief from absolute compliance with Version 2 requirements. As an applicant for Certification you will need to make a strong case as to why these measures were not needed. If you can show that due to the soil make-up, the site topography and the placement of the hay bales that soil erosion problems were prevented, it would be possible to pass this prerequisite.