

Facilities & Infrastructure CONNECTIONS



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How do you make sustainable a project that produces **no** buildings?

The **Sustainable Sites Initiative Rating System** assesses using a 250-point scale site selection, materials used, restoration of soils and vegetation, and sustainable practices in construction and maintenance. ¹²

5.8

U.S. Energy-Related Greenhouse Gas Emissions in 2008

in Billions of Metric Tons Carbon Dioxide Equivalent

According to the Energy Information Agency ¹³

Real Property Management and EO 13514

On October 5, 2009, President Obama signed Executive Order (EO) 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*.¹ This order represents a transformative shift in the way the government will operate by establishing greenhouse gas emissions (GHGs) as the integrating metric for tracking progress toward Federal sustainability. The new order does not replace EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*. Like previous orders, the new

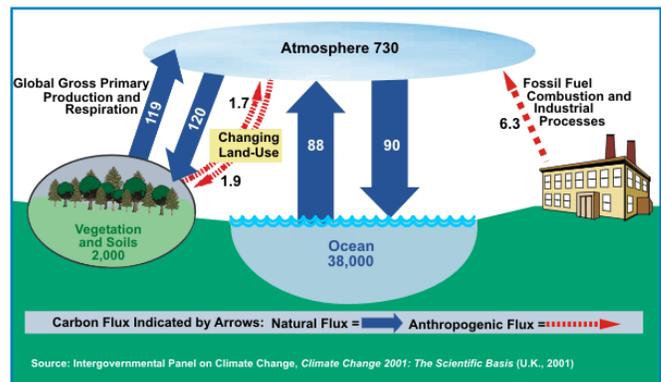


Figure 1: Global Carbon Cycle in Billion Metric Tons Carbon (Courtesy of the Energy Information Agency)

order relies heavily on effective real property asset management practices to achieve its goals. It provides new direction in these areas:

- Stormwater, potable, industrial and landscaping water
- Waste including

- recycling and composting
- Integrated planning
- Sustainable acquisition

The order views reducing deferred maintenance and the consolidation and disposal of existing

(Continued on page 3)

FIMS FY 2010 Data Validations

The time to prepare for FY 2010 FIMS data validations approaches. First, programs will submit their validation schedules to OECM no later than December 30, 2009. Then, sites will compile source documentation and arrange contacts with

phone numbers and email addresses for each data element, should any questions arise during the validation.

Sites will validate buildings, real property trailers, and other structures and facilities (OSFs) through a single data pull on a single

scorecard. The latest FIMS Validation Guidance ² appears on the FIMS website.

Validations this year will for the first time include these data elements: sustainability (assessment status, and as necessary, LEED

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Highlights from the Project Management Career Development Program (PMCDP)

410

Daily water consumption in the United States in billions of gallons per day in 2005

According to the U.S. Geological Survey ¹⁴

*"The drought that caused so much trouble was pathetically **normal** and short, far less than what the climate system is capable of generating. The problem is, in the last 10 years population has grown phenomenally [Georgia's population grew 50% between 1990 and 2007], and **hardly anyone**, including the politicians, has been paying any attention."*

- Richard Seager, a climate modeler, at Columbia University, discussing his paper studying the recent drought in the Southeast (2005-2007) ¹⁵

RPAM Course Open for Registration

The updated real property asset management (RPAM) training course will reflect DOE O 430.1C, *Real Property Asset Management*, now in RevCom.

Federal DOE personnel involved in the planning, operation, maintenance, and disposition of real property assets will gain the most from the course.

The course takes a systematic, integrated approach to the management of Department real property

while highlighting RPAM roles and responsibilities and reporting mechanisms. It reviews changes to the asset condition and utilization indices while introducing operating cost and sustainability indices. The course will cover procedures for program offices to transfer facilities to the Office of Environmental Management for clean-up and disposition, revised to regain consistency with current practices.

The previous version of the RPAM course had 15

deliveries since 2004 to more than 300 people who gave the course high marks. The revised course will maintain its superlative quality.

The updated PMCDP RPAM course will meet twice in 2010: March 9 - 11 in Lakewood, CO and again May 25 - 27 in Oak Ridge, TN. You will need the correct codes to register in CHRIS ¹⁰.

Nestor Folta ✎

LEED Course for New Construction and Existing Buildings

The Green Building Certification Institute through its Leadership in Energy and Environmental Design (LEED) green building rating system offers a recognized and accepted third-party verification of sustainable buildings. The Department requires new construction and major renovations greater than \$5M attain LEED-NC Gold certification.

LEED certified buildings use resources more efficiently when compared to conventional buildings built to code. Studies ¹¹ suggest that an initial up-front investment of 2% extra will yield over ten times the initial investment over the life cycle of the building. However, their design and construction may cost even more due to the design and construction professionals' unfamiliarity with

sustainable design and construction principles and options.

Increase the likelihood of finishing your next LEED project successfully by taking the PMCDP course *LEED for New Construction and Existing Buildings*. The course will run next May 18-19, 2010 in Washington, DC.

Cindy Hunt ✎

Implementing Integrated Pest Management

Executive Order (EO) 13514 in Section 2(e)(vii) calls on agencies to “promote pollution prevention and eliminate waste by implementing integrated pest management and other appropriate landscape management practices.” What does integrated pest management (IPM) entail and how would a facility demonstrate compliance with the EO’s direction?

IPM is a strategy to control detrimental organisms that uses a variety of complementary

mechanical, biological, or chemical approaches. It begins with prevention, calls for regular inspections, and prescribes incremental, escalating intervention. It seeks the significant reduction or elimination of pesticides while still managing pest populations at an acceptable level.

IPM, introduced to federal agencies in a 1979 presidential memorandum ⁵ directing its implementation, remains misunderstood 30 years later. Cooperative

Extension ⁶ offers primers on the subject. The University of Minnesota has planned an IPM course ⁷ specifically for managers of federal facilities.

The IPM Institute of North America has developed a two-track “Green Shield” certification program, one for applicators and another for facility managers. An October 2009 article in *Maintenance Solutions* ⁸ summarizes the program. The Institute offers a facilities IPM evaluation form ⁹.

Ivan Graff ✎

6%

Percentage operations and maintenance costs **grew** across DOE between FY 2008 and FY 2009

SAVE THE DATE!

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EO 13514 (continued from page 1)

assets as a means to reduce consumption of energy, water and materials.

It sets far reaching goals by challenging agencies to design only zero-net-energy buildings by 2030 and to transform their

entire portfolio of buildings to 100% conformance with the Guiding Principles referenced in EO 13423.

Milestones appear throughout the order. Agencies must set scope 1 and 2 targets by early January 2010 and scope 3

targets in early June 2010. Concurrently in June, the Department must submit a Strategic Sustainability Performance Plan (SSPP). OMB has indicated that it will review the SPSP and agency budget requests together.

Cindy Hunt ✎

GHG Emissions Terminology

Scope 1: direct greenhouse gas emissions from sources that are owned or controlled by the Federal agency

Scope 2: direct greenhouse gas emissions resulting from the generation of electricity, heat, or steam purchased by a Federal agency

- EO 13514, Sec. 19

Issue Reference Web Links

- | | | |
|--|---|---|
| 1. http://bit.ly/8HmPeq | 6. http://bit.ly/8O097z | 11. http://bit.ly/7oODd2 |
| 2. http://bit.ly/5NNUt2 | 7. http://bit.ly/5VOFRX | 12. http://bit.ly/1btgv4 |
| 3. http://bit.ly/6Re2Jj | 8. http://bit.ly/fH6Tm | 13. http://bit.ly/8jKEvM |
| 4. http://bit.ly/5LCsPC | 9. http://bit.ly/4CoYlg | 14. http://bit.ly/3ZSx28 |
| 5. http://bit.ly/4DaIOW | 10. http://bit.ly/7fK3li | 15. http://bit.ly/4jjjqS |

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Drywall Subject of Government Investigation

Health symptoms or the corrosion of certain metal components have prompted some 2,000 complaints from 32 states, with about 70% from Florida, to the Consumer Products Safety Commission (CPSC), mostly from homes built in 2006 and 2007 following the hurricanes of 2004 and 2005. Initial findings reported by the CPSC based on a study conducted at the Lawrence Berkeley National Laboratory suggest that the gypsum wallboard installed in these locations and produced in China releases more hydrogen sulfide gas than its non-Chinese counterparts.

Sandia National



Figure 2: Two air conditioner coils showing discoloration of the copper U-bends and corrosion of the end plate (Courtesy of CPSC)

Laboratory's (SNL) Materials Science and Engineering Center found that hydrogen sulfide gas has caused copper and silver sulfide corrosion. Other factors, including air exchange rates, formaldehyde and air contaminants contributed to the reported problems. Intact electrical insulation on copper wiring appeared to protect the underlying copper conductor from corrosion.

The study determined

that hand-held x-ray fluorescence (XRF) and Fourier Transform Infrared (FTIR) instruments detect markers associated with Chinese-made dry wall at a sheet level.

CPSC suggests in impacted spaces to increase ventilation and fresh air and lower temperatures and humidity levels. The CPSC Website ⁴ offers technical reports.

Ivan Graff ✎

FIMS FY 2010 Data Validations *(continued from page 1)*

certification or Guiding Principle points), outgrant indicator, excess indicator, estimated disposition year (populated through at least 2020), and number of employees.

All sites with train and public access vehicle bridges will additionally verify that safety inspection reports remain current and comply with

issued guidance. ³

Scoring will occur separately from the FIMS validation, but on the same scorecard.

Bridge safety inspections must occur as follows:

Railroad bridges, **annually**; public access vehicle bridges, **bi-annually**.

Verification will consist of

checking the following:

- Inspection date
- Signature of a certified bridge inspector/team lead, and,
- Operational status of bridge

Phil Dalby ✎