



***How to integrate environmental
remediation efforts and future
development
with sustainability and ecological
protection***

OR



**Developing a
Chesapeake Bay-Focused EMS
that integrates
both
future development and
previous construction
remediation**



**...and at the same time
promotes and enhances
your Agency Mission**

...and do this for a VA Medical Center
3 or more hours
&
190 miles from the BAY



Background

- In 2005, the Veterans Health Administration (VHA) issued a Directive requiring all Medical Centers (VAMCs) to implement Green Environmental Management Systems (GEMS)
- The James E Van Zandt was a typical VAMC. The basic culture lacked commitment to any environmental operations
- After all they were the federal government – they weren't subject to all those laws and regulations
- However, the Chief Engineer with responsibility for implementing the environmental program had a Father who was a forester with USDA and came from a family committed to the environment

Background, con't.

- The Associate Director's philosophy was simple: find the best in the field, hire them, give them what they need, and stay out of their way.
- I came in after more than 10 years at Penn State working some of the world's leaders in sustainability
- Together, this created the perfect storm
- James E Van Zandt decided instead of only meeting the letter of the Directive, to meet the intent and add sound ecological management practices.

Background, con't.

- Quarterly mandatory education fairs were conducted for all employees that included regular progress reports for the staff
- Recycling was not just encouraged but made mandatory (including can puncturing to recycle hazardous aerosol cans)
- Staff were encouraged to develop methods to increase sustainability using an awards program
- Sustainable practices were incorporated into project designs and contractors held responsible

The Beginning, cont.

- Green purchasing education was held for all purchasing agents and credit card holders
- Sustainable operations were implemented but not without resistance
- Recycling increased 18% to 45% in the first year - this brought Director on board
- At that point to paraphrase a well known science fiction program: “Resistance became futile”
- So on to protecting the Bay...

The Beginning, cont.

The facility began with a full biological index of the 23 acre facility constructed in the late 1940's. An ecological evaluation of the facility's potential to pollute and previous environmental history followed. With the ecological areas of concern indentified as well as the environmental aspects indentified from the GEMS implementation, the GEMS program was revised to focus on protecting, preserving, and restoring the ecological assets of the surrounding area, including the Chesapeake Bay.

- It began with a spill prevention program requiring secondary containment for all containers larger than 1 quart. Internship affiliations with Penn State Altoona College and Mount Aloysius College followed. Research conducted by the Penn State interns from the Environmental Studies Degree Program and the facility GEMS Coordinator set a stormwater retention goal of 99% .

Steps Taken

1. Biological Index / History
2. Ecological evaluation
 - Potential to pollute
 - Ecological areas of concern identified
3. GEMS mission revised based on findings to include restoring ecological assets (Chesapeake Bay), including:
 - Revamping spill prevention program
 - Environmental internships
 - New storm water retention goals

The Beginning, con't.

- Restoration of wetlands destroyed in the original construction was incorporated into the EMS goals. Enhancing the mission of the VAMC was also paramount in the decision processes, leading to a stormwater management design that uses both wetlands retention and stormwater treatment ponds that restore the wetlands character while providing a recreational resource for long-term care veterans at the facility and their families.
- **Future plans included the creation of a Veteran Memorial Park surrounding the ponds which are adjacent to a permanent installation of the traveling Wall that Heals.**
- Now we needed to establish the needs for a complete changeover

ECOLOGICAL NEEDS!!

- **safeguard fish and aquatic life**
- **protect scenic and ecological value,**
- **restore wetlands character**
- **maintain and enhance groundwater recharge;**
- **minimize pollutants in stormwater runoff from new and existing development**

ECOLOGICAL NEEDS!!

- **maintain the chemical, physical, and biological integrity of the waters of the Commonwealth,**
- **assure the adequacy of stormwater management for existing and proposed culverts including culverts, bridges and other in-stream structures on streams and waterways to which the facility discharges and within the general area;**
- **reduce the facility's role in flood damage, including to life and property;**

VA NEEDS!!

- ❖ **Satisfy Joint Commission standards**
- ❖ **Provide the highest quality care for Veterans**
- ❖ **Improve esthetics for facility grounds**
- ❖ **Enhance approach to THE WALL THAT HEALS**
- ❖ **Meet Regulatory compliance standards**

VA NEEDS!!

❖ **Maintain public image**

❖ **Satisfy the mission statement:**

To fulfill President Lincoln's promise “To care for him who shall have borne the battle, and for his widow, and his orphan” by serving and honoring the men and women who are America’s veterans.

PROBLEMS!!

Convincing upper management

Enhancing care for veterans

Mosquito control

Including BMPs

Obtaining funding

Design misconceptions

&

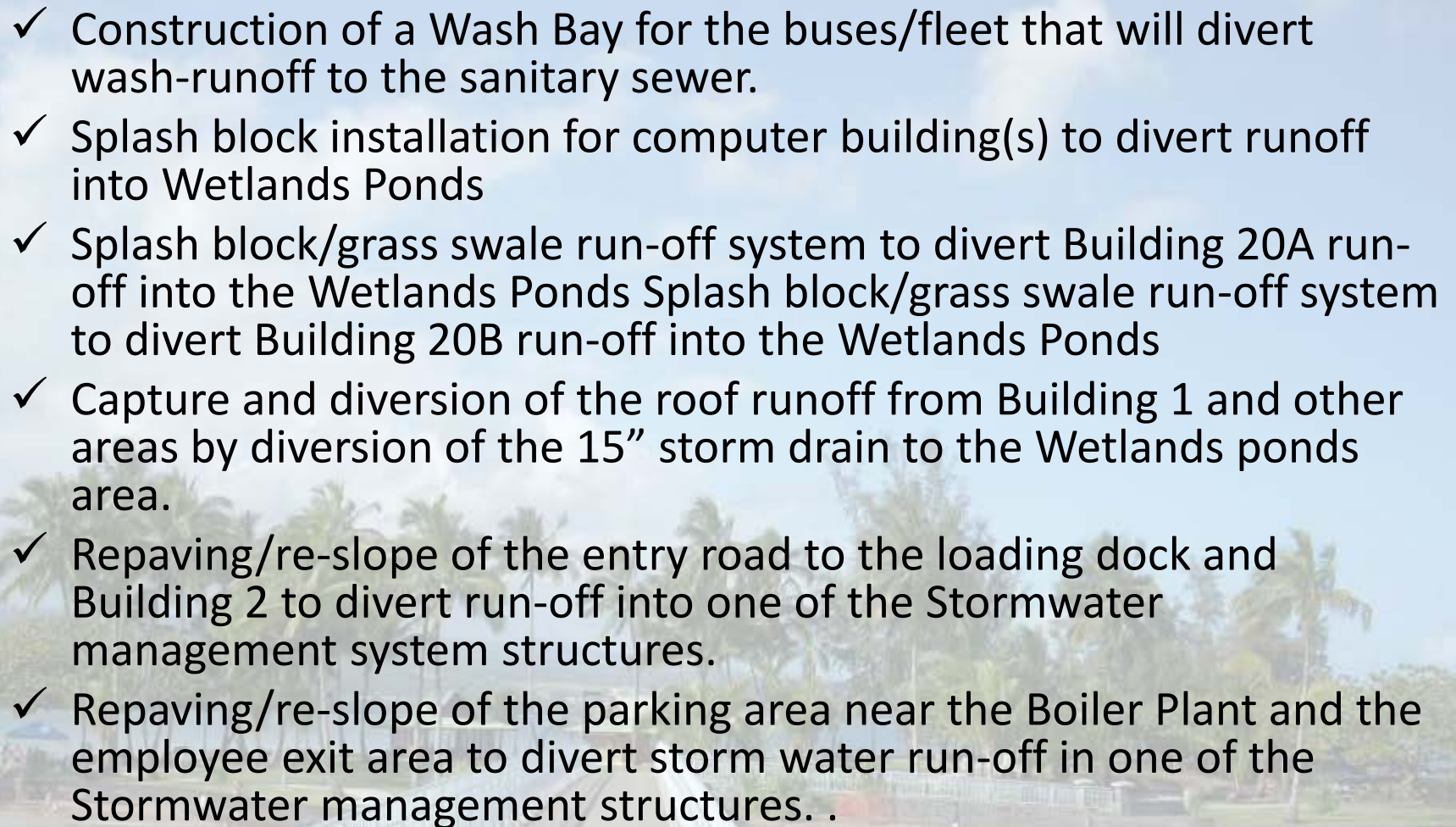
Making it all work within the design

and

the funding limitations

Small-Moderate Plans Incorporated

- ✓ Rain Gardens for Building 2, 4, 5, 6, 7, & parking lot runoff from lot behind the Victory Garden
- ✓ Stormwater diversion from the main patient parking lot and entry road into one of the Stormwater management structures
- ✓ Diversion of the Stormwater from the Building 3/Building 16 complex into the Wetlands Ponds of the Stage I Water Diversion Project.

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- ✓ Construction of a Wash Bay for the buses/fleet that will divert wash-runoff to the sanitary sewer.
 - ✓ Splash block installation for computer building(s) to divert runoff into Wetlands Ponds
 - ✓ Splash block/grass swale run-off system to divert Building 20A run-off into the Wetlands Ponds
Splash block/grass swale run-off system to divert Building 20B run-off into the Wetlands Ponds
 - ✓ Capture and diversion of the roof runoff from Building 1 and other areas by diversion of the 15" storm drain to the Wetlands ponds area.
 - ✓ Repaving/re-slope of the entry road to the loading dock and Building 2 to divert run-off into one of the Stormwater management system structures.
 - ✓ Repaving/re-slope of the parking area near the Boiler Plant and the employee exit area to divert storm water run-off in one of the Stormwater management structures. .

Review



Facility history review
/ environmental
impact

Ecological evaluation &
issue identification

Incorporate
into the GEMS

Cultural
change

For the Big Question

**What
Happened?**















What happened cont.

- 85% of toxic cleaning chemicals eliminated
- All bio-based parts cleaners in the garage
- Recycling rate is current 63.9% C&D 92%
- Electricians decided to change fixtures to LEDS instead of replacing fluorescent
- All purchases are reviewed for EPP alternative
- Mercury eliminated from the facility
- Major changes toward healthy foods in Dietary and Canteen
- *Cultural change; staff thinks green*

Construction



Electric Vehicles



LEDs and Motion Sensors



Use of Recycled Plastic Lumber



Condensate used to water flowers



Water Saving Sensors



Poster Campaigns



Replacing with LEDs





But

Should we be satisfied with
changing one facility when there
are over 160 VA Medical Centers
nationwide

We weren't

SO.....

It doesn't end

- Every industry has an organization devoted to developing and rewarding sustainability
- All government agencies endure far too many data calls
- Why not combine these
- This year the VHA instituted a policy using the Practice GreenHealth Sustainability Awards as the data call for sustainability

Advantages

- A professionally produced report from Practice GreenHealth benchmarking every facility in the process
- Every facility can win a major national award for their efforts in providing the data
- Great publicity and recognition instead of just hours of crunching and reporting data
- Made sense to us.

Objectives

- Educate Senior Leadership:
 - Importance of GEMS Program
 - GEMS Program Manager's activities
 - Benefits to having a robust sustainability program
- Improve Communications
 - GEMS Managers must communicate with other departments to be successful
 - Develop system pride in winning an award

Practice GreenHealth is a

- Means to identify the many ways National Agency Programs are implemented in field
- Means to identify GEMS Sustainability Program efforts and projects
- Means to evaluate the effectiveness of the GEMS Sustainability Program – Locally, Regionally and Nationally.
- Means to Compare our Agency to other Agencies and Private Institutions

The Process

- Submitting Applications
 - GEMS is Primary Point of Contact
 - All Departments play a role
 - Reviewed By local Senior Leadership
- Benefits
 - Better Communication of program
 - Ownership of Sustainable Projects
 - Senior Leadership can better appreciate GEMS Manager role in organization

Data

- Puts a number/value on sustainable accomplishments
- Can be generic, detailed, and/or targeted
- Can look at individual facility, region or nation
- Can evaluate various sustainable efforts
- Benefit:
 - Numbers show successes as well as areas for improvement to move the program forward

Outcome

- GEMS Managers understand all aspects of their program
- GEMS Manager communicate with other departments
- Leadership understands the many facets of the GEMS world
- Senior Leadership likes to compete to see who is doing better

Presentation of PGH System Award to the Under Secretary for Health

