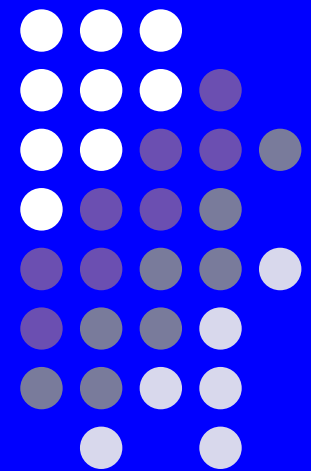
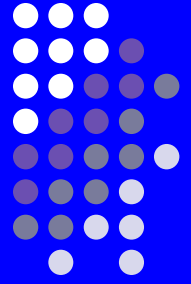


# ESC EMS Management Review

December 13, 2006

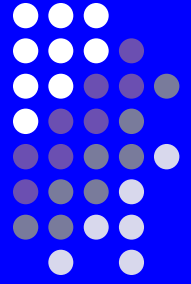


# Today's Agenda



- **Management Review – expectations**
- **Calendar Year's Accomplishments**
- **ISO 14001:2004 Requirements Review**
  - a. Internal Audit, Surveillance Audit, Compliance Results
  - b. External Communications
  - c. Environmental performance
  - d. Objectives and Targets status
  - e. Corrective and Preventive Action Status
  - f. Annual Management Review Follow-up
  - g. Changes/Issues
  - h. Recommendations for Improvement

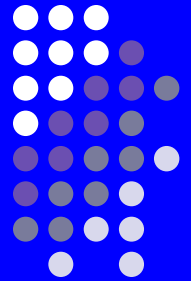
# Expectations – as always...



Determine if the EMS is **suitable,**  
**adequate, and effective**....and...

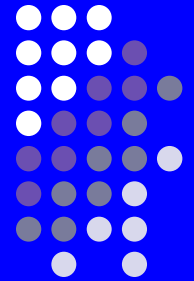
Determine if there is a need for changes or if  
there are opportunities for improvement.

# 2006 Accomplishments



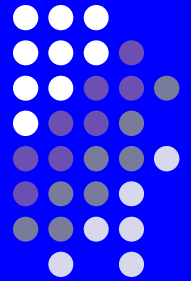
- Four Environmental Procedures revised or updated
- **Added 6 new suggestions (all from audits)**
- EMS website – new and improved!
- **Artwork contest – new EMS “logo” in use (display case, member cubicle signs)**
- New tracking form for annual Aspect/Activity review

## 2006 Accomplishments (cont)



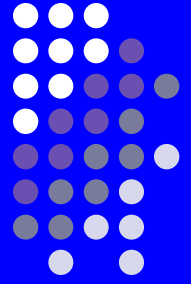
- EMS awareness information bulletin board in lunchroom including artwork contest entries
- **Participated in development of draft SHEMD National Goals**
- Participated in Ft. Meade Earth Day Event
- **Submission of 7 EMS Training Crossword Puzzle for weekend staff (guards)**
- On-line EMS Refresher training launched – almost 90 trained by Dec 1

## 2006 Accomplishments (cont)



- Held an EMS oriented “Bring Kids to Work Day”
- **Display case set up in lobby to showcase the EMS mascot, awards, and artwork.**
- Participation in Federal Environmental Symposium
- **Earth Day Event in April – EMS Awareness and recycling**
- America Recycles Day - held athletic shoe recycling collection

# 2006 Accomplishments (cont)



- Two new Team members
- **New employee orientation given to 28 people**
- Awards for Alaa Kamel and Debbie Branch for contributing/participating Team Members
- **Awards for Chemical Resources Workgroup- Diane Rains, Arnold Turner, Pat Sosinski**
- Awards for Debbie Branch and Mike Whitworth – internal audit team
- Late awards for Internal Audit Team Leaders – Rebecca Schulteiss., Cindy Metzger, Dave Russell



## Environmental Science Center

Serving Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia

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- ESC Home
- Highlights
- Offices
- Environmental Management System
- Lab Services
- Quality Assurance Team
- General Quality Assurance Info
- Kids' Corner
- BOOKS, LINKS & GAMES
- For Kids!**
- EPA En Español

## Environmental Management System



The EPA's Environmental Science Center (ESC) at Ft. Meade, Md. is a state-of-the-art laboratory facility occupied by employees who care deeply about the environment. To help ensure that the ESC is a good neighbor in the Ft. Meade community, we have implemented an Environmental Management System (EMS) that conforms to ISO 14001:2004, the international standard for EMS. We believe that an EMS, such as the one prescribed in ISO14001, provides a management scheme that facilitates incorporating environmental consideration into our daily business activities. The EMS approach fosters compliance with legal requirements, as well as thinking beyond compliance to improve environmental performance for impacts to the environment that are not regulated. Our [EMS Policy](#) was written to show how committed the ESC facility is to this approach and to making EMS a part of our daily business.

We would like to share our EMS tools and products with any interested organization that is implementing an EMS or looking for new ideas. This web page is a collection of documents/links that may prove helpful to others working on their own EMS. Please browse this page for relevant information and contact us if you have questions about the content or if you have other EMS questions we may help you with.

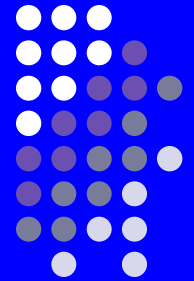
[QUESTIONS or COMMENTS](#)

### EMS Tool Box

- [About PDF Files](#)
- [EMS Manual-PDF \[16pp, 102k\]](#)
- [Aspects](#)
- [Procedures](#)
- [Tip Sheets](#)
- [EMS Refresher Course \(PDF\) \[53pp, 1M\]](#)
- [Accomplishments](#)
- [Presentations](#)
- [Mid-Atlantic EMS](#)

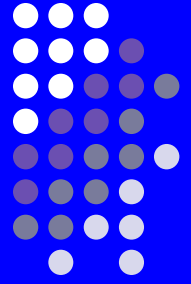
**ESC Staff only: SUGGESTIONS**  
If you have any suggestions or comments, please [submit them to your EMS Team](#).

# Audit status ISO14001:2004



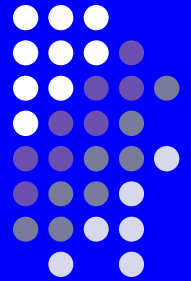
- **Internal audit July 5-6, 2006 (led by ERG)**
  - **7 observed non-conformances - 6 minor , 1 major**
    - **Major non-conformance: current Management Plan formatted incorrectly - closed**
    - **New review form for annual significant aspects review - closed**
    - **Operational Controls still need to be reviewed-*open***
    - **EMS new employee training process updated - closed**
    - **Reviewing of legal requirements clarified - *open***
    - **EMS website updated - closed**

# Audit status ISO14001:2004



- **Internal audit July 5-6, 2006 (led by ERG)**
  - 10 opportunities for improvement – 9 were responded to by EMS Team.
  - **One still open:**
    - Management could consider additional mechanisms and outreach to portray their support for the EMS.

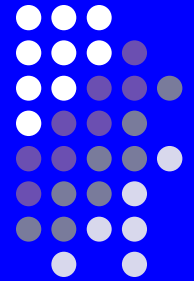
# Audit status ISO14001:2004



- **External Surveillance audit July 24-27, 2006 (QSR)**
  - 2 observed non-conformances – **minor**
    - Record keeping procedures need to be better documented - *open*
    - EMS training procedures better defined - *closed*
  - 5 opportunities for improvement – not responded to yet

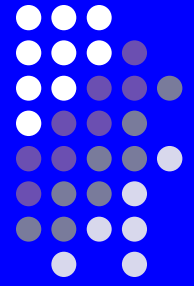
**ESC is recommended for continued registration by QSR!**

# External Communications

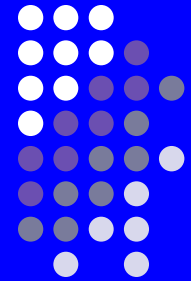


- **Communications from external parties....no complaints!**
  - Maintaining contact with Ft. Meade Cross Functional Team as they develop their EMS, ie. communications with EMS Coordinator Heather Carolan.
  - Maintaining contact with José Jiménez of the EPA Federal Facilities Program, Region III, Philadelphia
  - Website new and improved....someone from India took the Annual Refresher training on-line!
  - Participated in National EMS Coordinators monthly calls.
  - Participated in Federal Environmental Symposium

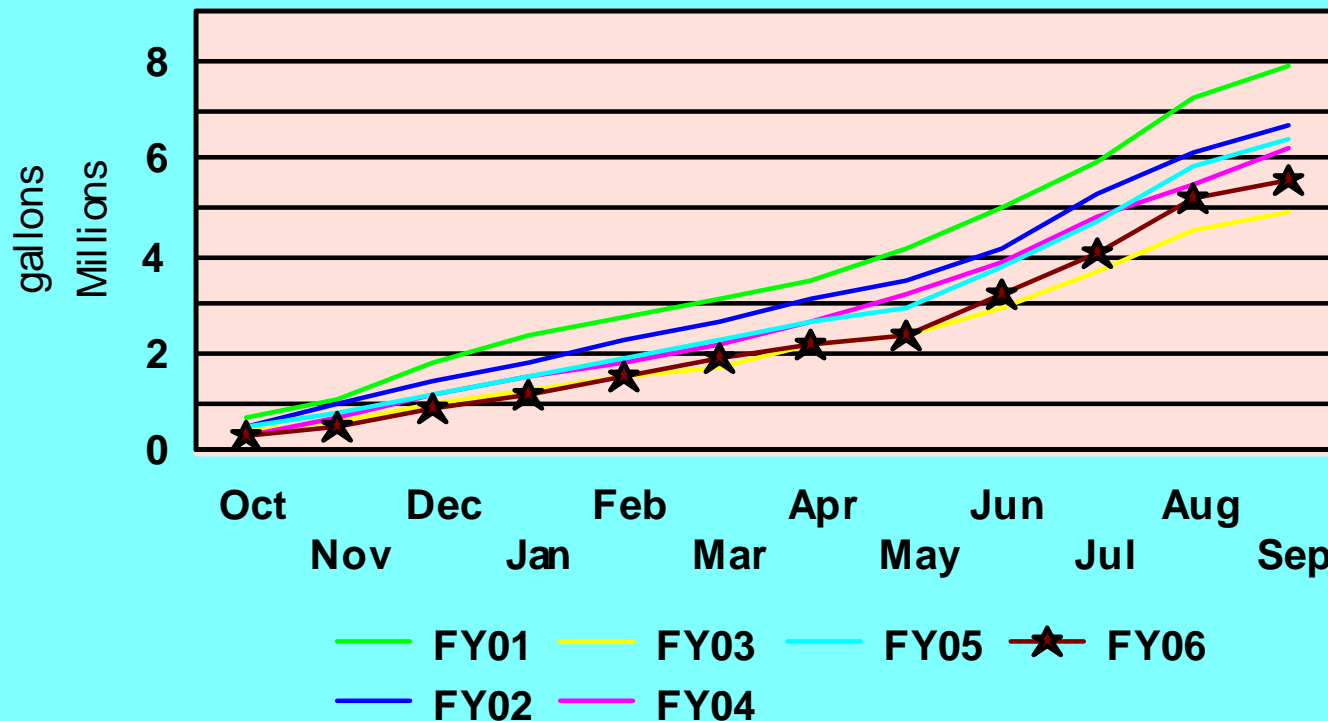
# Environmental Performance:



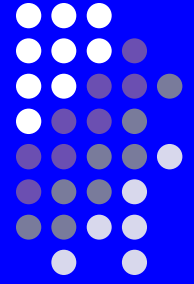
- **Water (from OPM ESC EOY report FY06)**
- **Energy (from OPM ESC EOY report FY06)**
- **Hazardous Waste Generation ((from OPM ESC EOY report FY06)**
- **Recycling (see handout)**



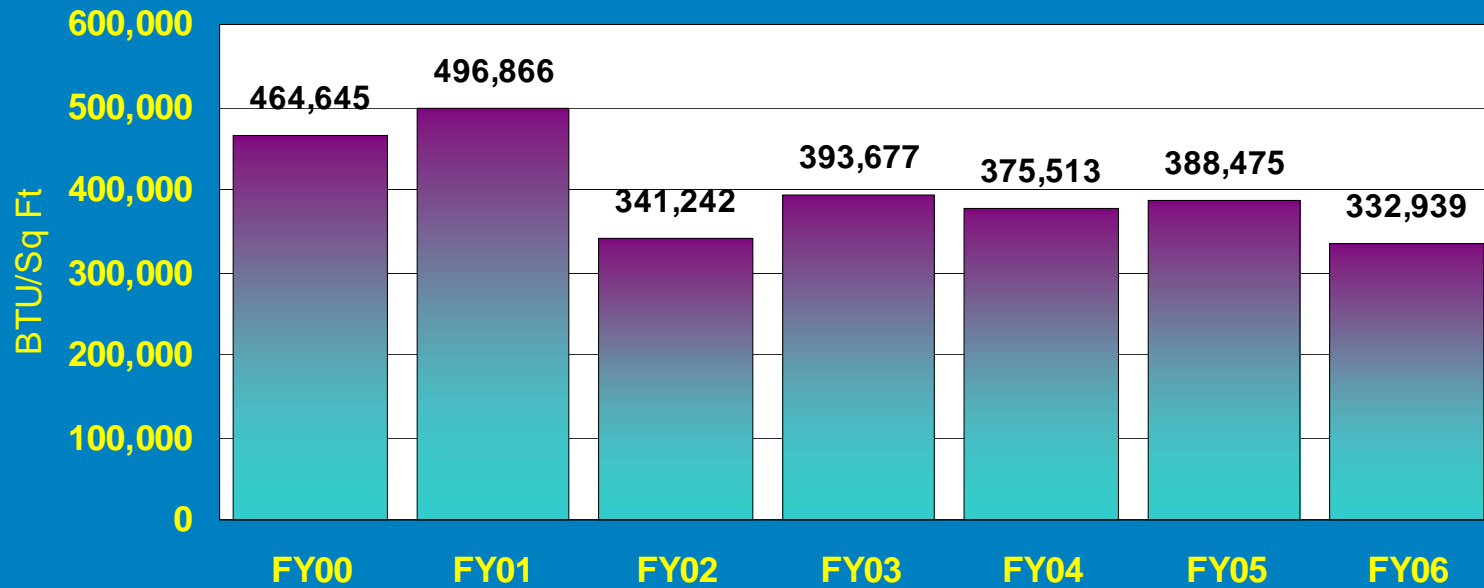
## Cumulative Water Consumption Total Water Intake



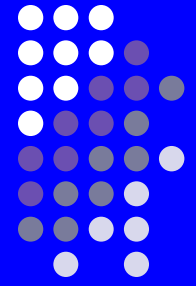
FY06 saw a drop over FY05 primarily in cooling tower and boiler water consumption. Total water consumption is dependent on the amount of water used for cooling in the summer months. The cooling tower water dwarfs other water use



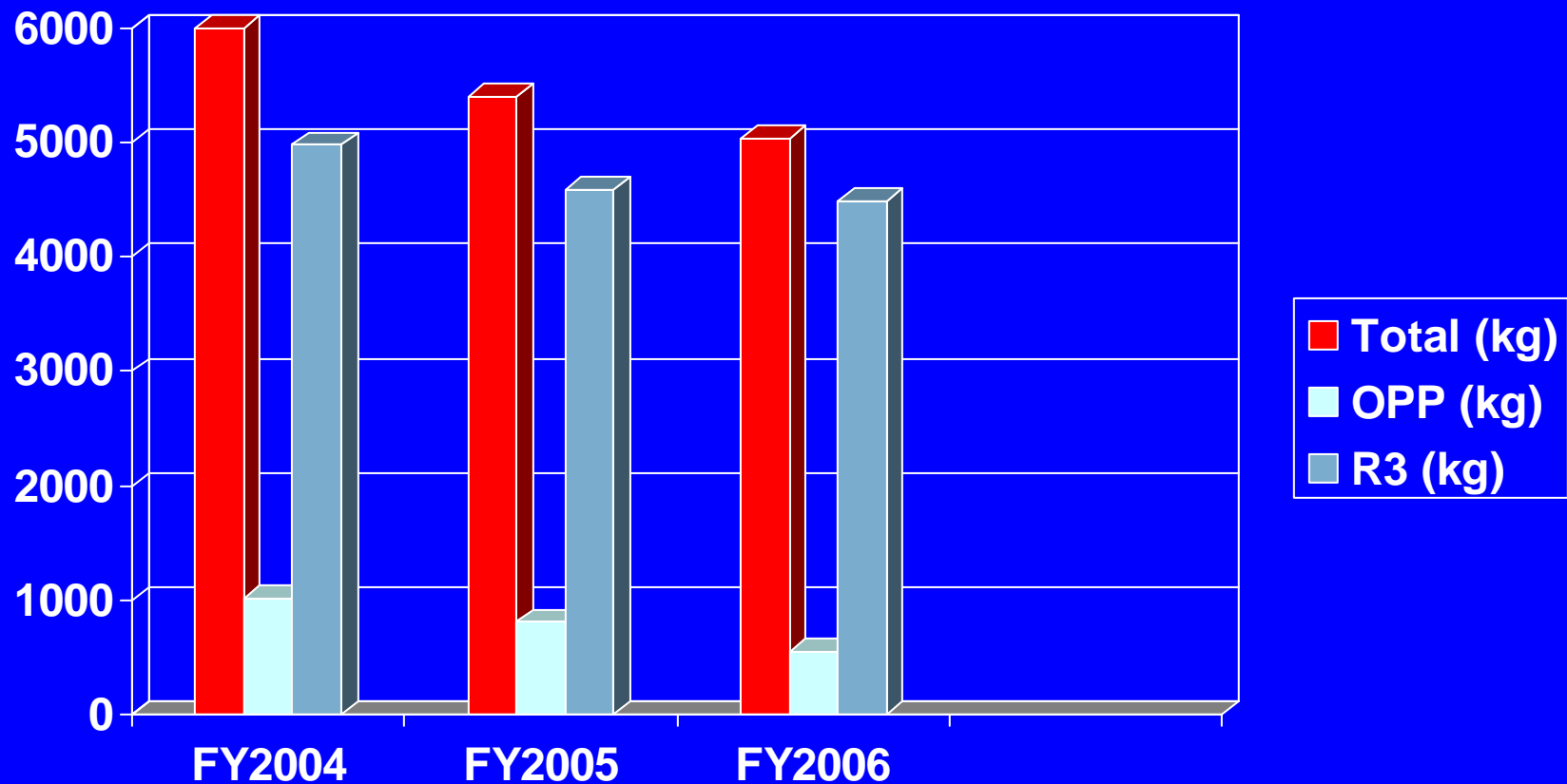
## ESC Energy Total Consumption Average per Year



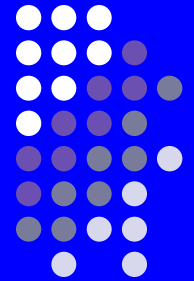
ESC reduced the energy used by over 14% and used less natural gas and no fuel oil to heat the facility in FY06. In addition, fewer electric KWHs were used during the same period. This reduced the BTU/ft<sup>2</sup> footprint of ESC and resulted in ESC's lowest energy demand since FY02.







# Hazardous Waste Generation

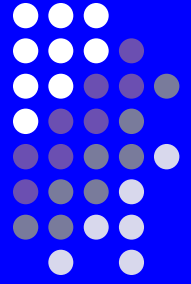






## Performance Measures- FY05 vs FY06



- Can, Bottle, Paper recycling - ? (bags to lbs)
- Lab Bottle recycling 
- Lab Plastics recycling 
- Copies made (total) 
  - 3630/person to 4192/person 

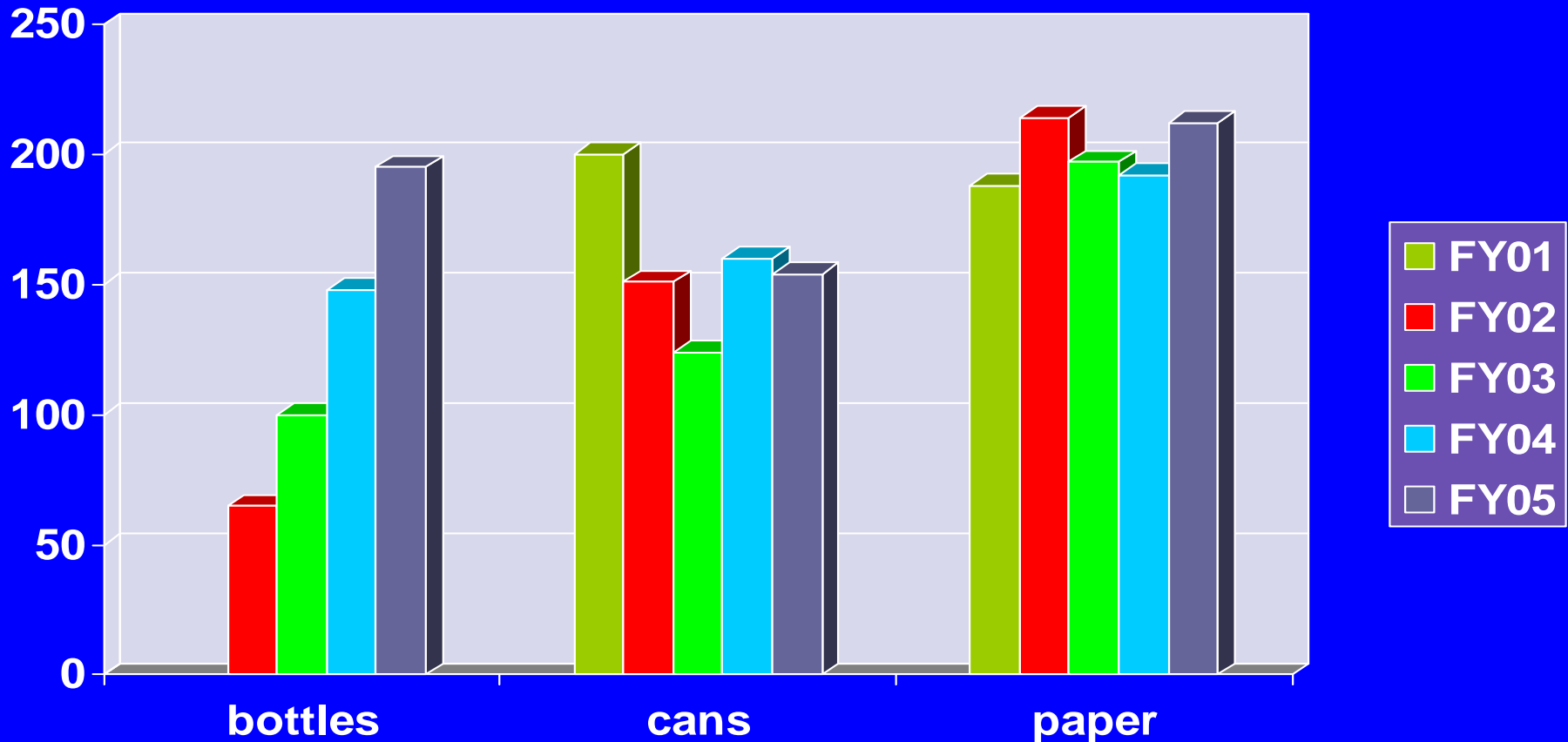
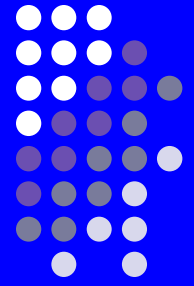
## Performance Measures- FY05 vs FY06



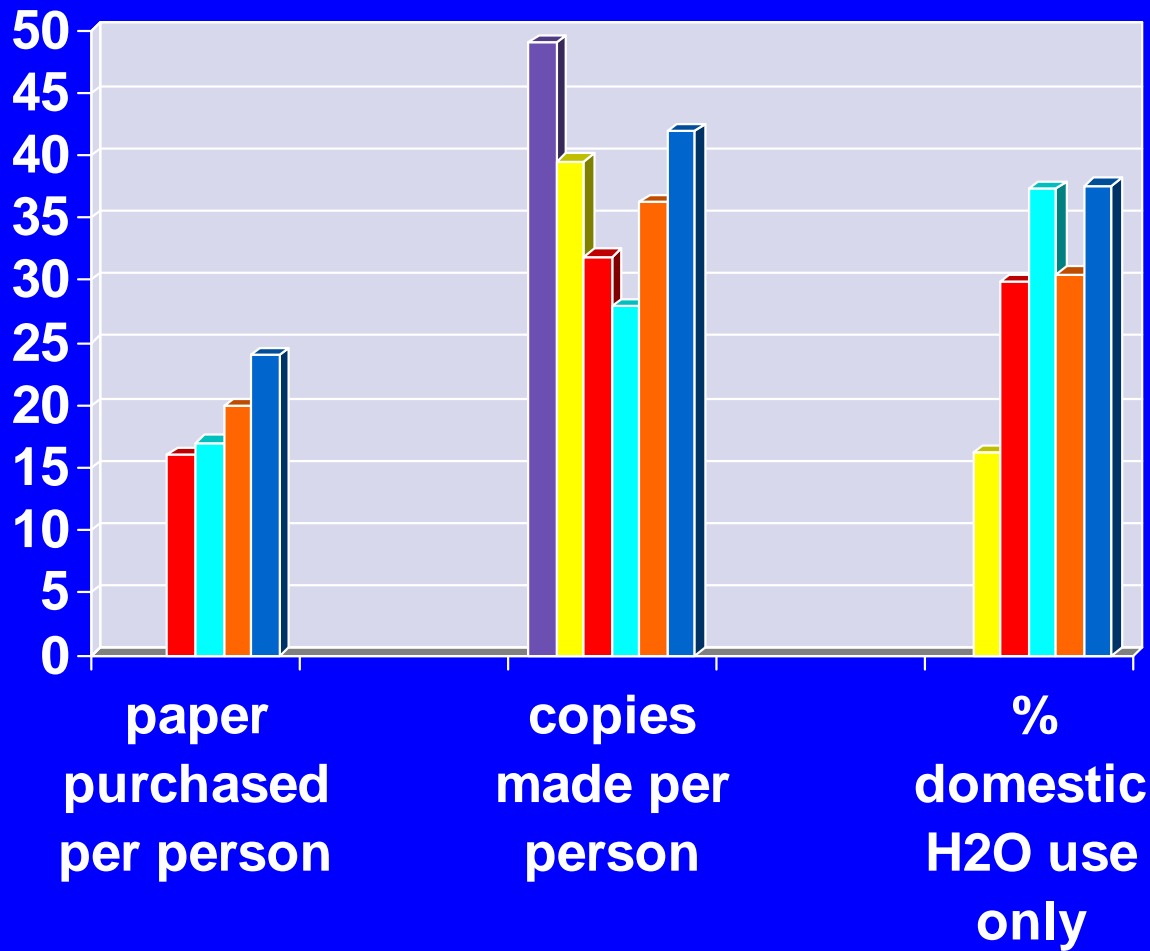
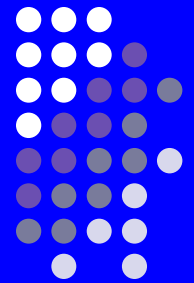
- Energy used 
- Total Water used 
- Paper purchased (total) 
  - 1.02 cartons/person to 1.43 cartons/person 
  - FYI .....Staff went from 196 to 168

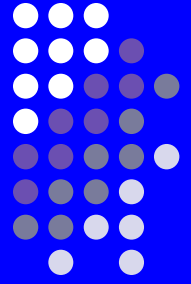
# Recycling trends

not updated because of unit change (bags to pounds)



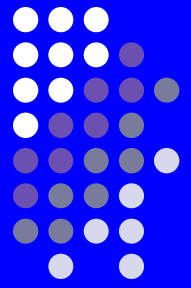
# Another way to look at trends





## Current Objective and Target

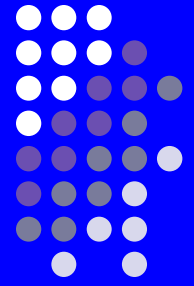
- Chemical Resources wkgp: Target b.2: workgroup meetings started 12/2005. Joined core EMS group 3/2005. Meets monthly.



# Current Objective and Targets

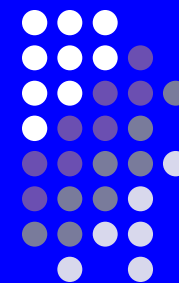
- **Determine whether opportunities exist** to reduce the facility use of chemical resources (both hazardous and non-hazardous materials) by employing source reduction, substitution, recycling and reuse.
- If opportunities exist, **develop strategies** to reduce the use of chemical resources. Strategy to include procedures to ensure least operable quantity of chemicals are kept in inventory and that all unusable/expired chemicals are disposed of in a timely manner.

# Current Objective and Target accomplishments



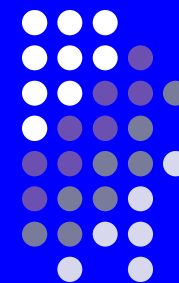
- **Chemical Sharing program with High Schools in place and documented**
  - Researched what other EPA labs are doing
  - Asked for legal advice
  - Put together list of schools in our vicinity
  - Developed list of contacts: names, phone numbers, email
  - Developed offer letter and transfer letter
  - Researching GSA regulations regarding transfers of chemicals
  - So far, two schools have responded positively
  - Awaiting approval from GSA before completing transfers

## Current Objective and Target accomplishments (cont)



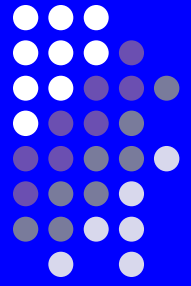
- Wording added to OPP SOPs to encourage analysts to consider recycling of excess solvents (distillation)
- **A message will be sent to the facility each year (thru OPM “tickler” system to remind staff about existence of ChemShare group and what it can do for them.**
- Initial efforts failed to get SHEMD to fund a second single VIM inventory that could be shared by entire building to increase efficiency. Current NTAC request to SHEMD pending.

## Chemical Workgroup Status



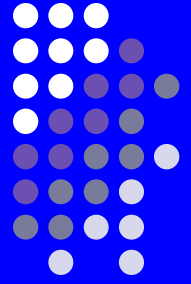
- No new tasks will be taken on by workgroup as of Dec 2006.
- **Workgroup will finalize the process for the Chemshare program (chemical donations to schools).**
- Final report will be completed documenting accomplished activities, including the entire Chemshare process.

# Corrective Actions and Preventive Actions (suggestions)



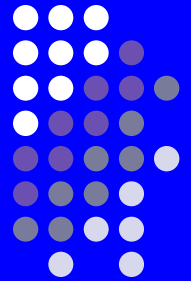
- Corrective Actions – none issued
- Suggestions - a total of 29 received since 2003
  - ✧ 16 have been addressed and closed, 13 remain open

# A Peek Inside the EMS Suggestion Process



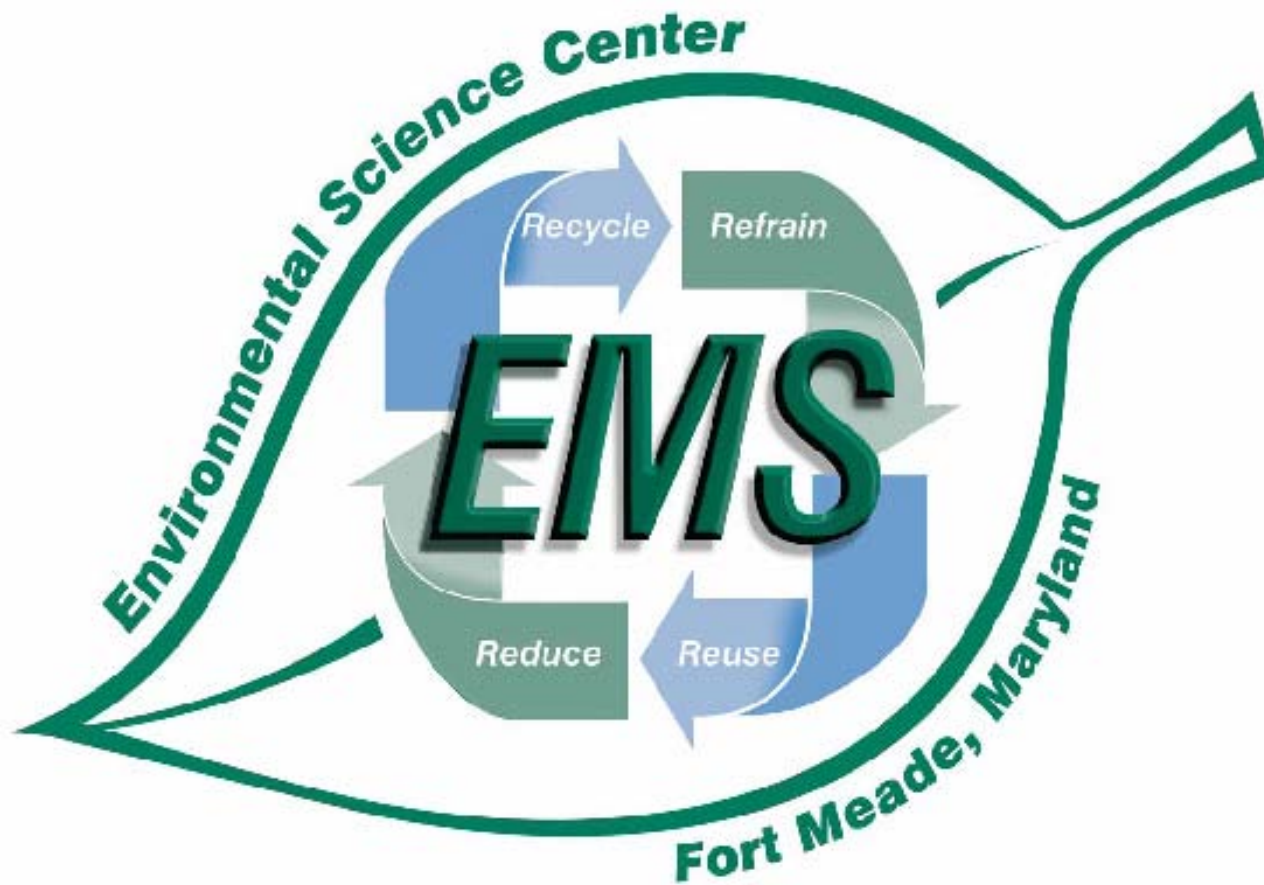
- **Where do these suggestions come from?**
  - ✧ ESC employees
  - ✧ Auditors
  - ✧ EMS team members
- **How are suggestions currently addressed?**
  - ✧ Time is spent during each EMS meeting to discuss several open suggestions.
  - ✧ After one suggestion is discussed and considered/implemented, it is closed.
- **Most recent suggestions being discussed:**
  - ✧ Carpooling incentives
  - ✧ Quantify environmental advantages of Flexiplace and use to market to managers
- **Where can ESC staff go to make suggestions?**
  - ✧ <http://www.epa.gov/region3/esc/ems/comments.htm>

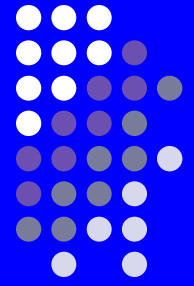
# 2005 Mgmt Review Follow up



- Continue work on Chemical Resources EMP until team feels it is complete
  - **Completed Dec 2006 (see review –earlier slide)**
- Select a new target by March to begin when Chemical Resources is complete.
  - **Accomplished – (see Recommendations)**
- Implement the web-based EMS Refresher Training.
  - **Accomplished – 90 people taken training by Dec 1**
- Awareness activities to include artwork contest
  - **Accomplished – see display case**
- Install cubicle plaques to identify team members
  - **Accomplished**

# EMS Team Member

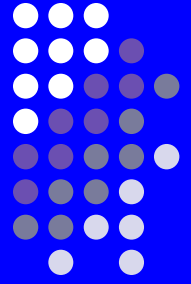




# Current Team

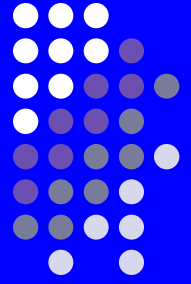
- Co-coordinators (2 organizations)
  - 1 OPP
  - 1 R3
- Facility representation – 6 standing team members
  - 1 MLB-OPP
  - 0 ACB-OPP
  - 2 OPM-R3
  - 3 ASQAB-R3
- Core group meets once a month and with workgroup once a month.

# Annual EMS activities



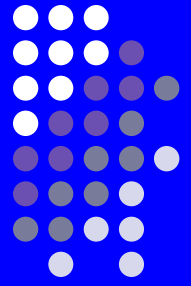
- Respond to audit reports
- Activity/Aspect analysis
- Update EMS web site
- Conduct new-employee briefings on EMS
- Conduct EMS awareness activities
- Review EMS documentation
- ISO 14001 Surveillance Audit
- Internal Audit
- Management Review
- Meet EMP objectives & targets

# Changes/Issues



- Limiting the number of active targets is a big improvement!
- **There still is not enough time to handle some items, ex. suggestions**
- ISO 14001:2004 standards are burdensome and time-intensive
- **Not able to find new Co-coordinator within the team**
- Unclear how SHEMD National Objectives and Targets will effect us
- **Uncertain future of our Internal Audit considering the difficulty getting trained volunteers**

# Recommendations for Improvements

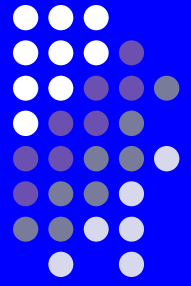


- 1) **A new significant aspect was selected for focus of next year's work. The EMS Team requests concurrence to tackle new aspect.**

## *Fuel Consumption of Mobile Sources and Exhaust Emissions Associated with Their Use*

- U of Md student project:
  - Research alternative fuel options
  - Suggest objectives and targets

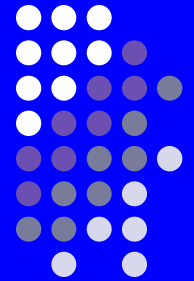
## Recommendations for Improvements (cont)



### 2) **Need direction on how to conduct next internal audit.**

EMS Team recommendation: Continue to contract out the lead auditor role and support him/her with internal volunteers. The volunteers will not need formal training and a contractor will ensure that a quality audit is performed. (ERG contract was \$10,000 but maybe we can scale this back.)

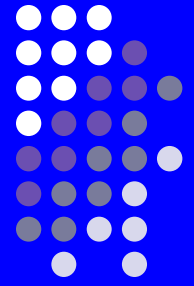
## Recommendations for Improvements (cont)



### 3) Consider impact of ISO commitments:

- annual audit: contract renewal, update/complete non-conformances/suggestions, participate in audit, respond to report
  - Internal audit: assemble team (find contractor and put together contract), explain/instruct purpose/goals, participate in audit, respond internally to report
  - Ensure all documentation is complete, accurate, clear, and thorough (possibly to excess)
  - Time commitment: 0.1 FTE for SHEM, 0.4 EMS co-coordinators, 0.05 per EMS Team member.
  - Funding commitment: \$6000 first year and \$3000 each 2<sup>nd</sup> and 3<sup>rd</sup> year
- 
- **Does the additional ISO registration of our EMS actually improve environmental stewardship at ESC?**

## Recommendations for Improvements (cont)

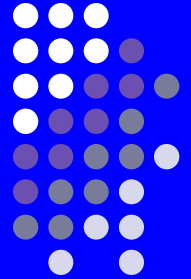


- 4) Need to revise our succession plan, especially because of inability to find a new Co-coordinator – request management help.**

Original plan is not working .....

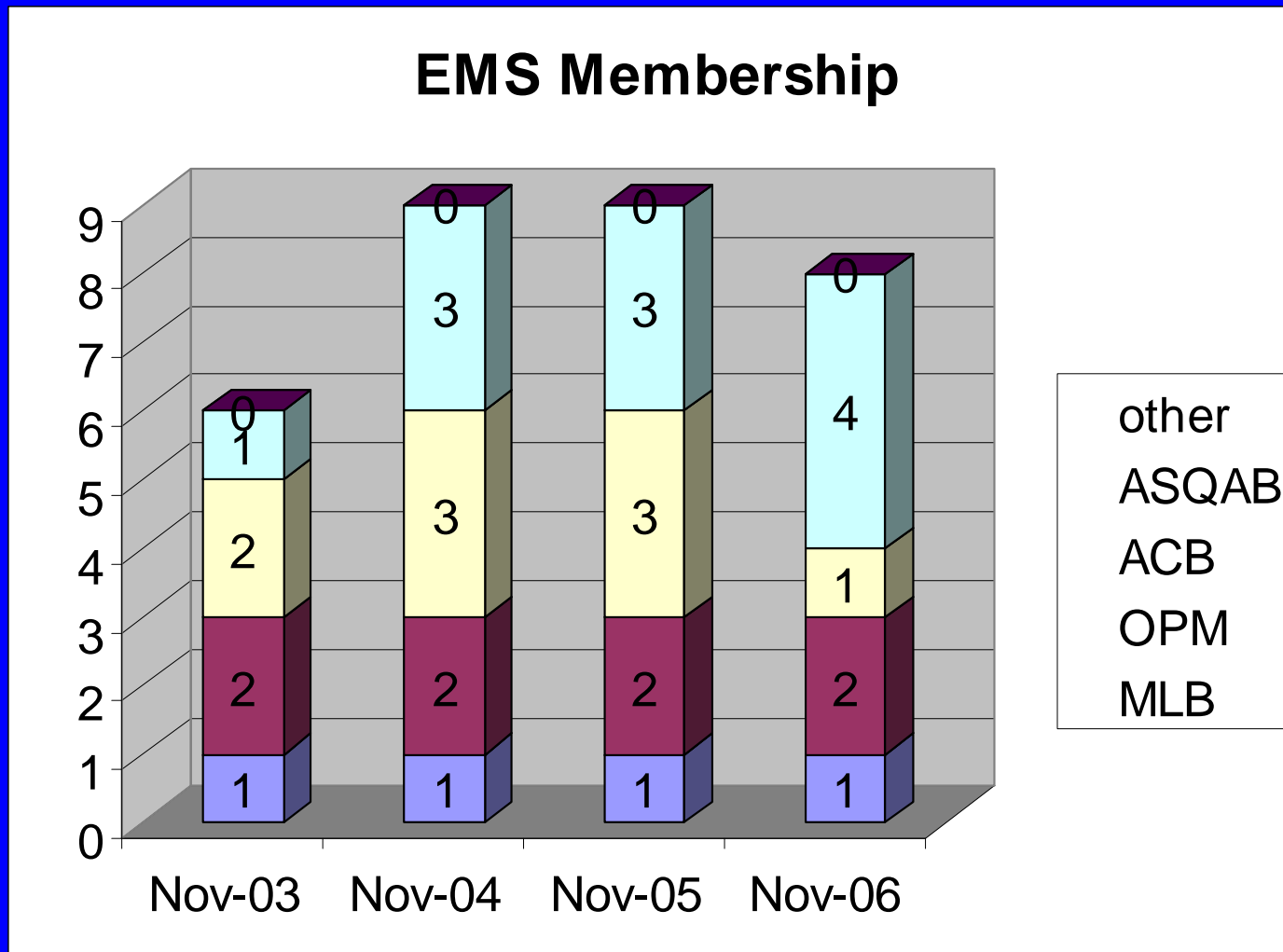
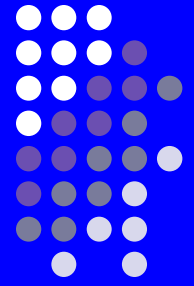
- FYI: Lynda and Robin became co-coordinators starting in November 2003

# Team Succession plan – adopted at 2004 Mgmt Review

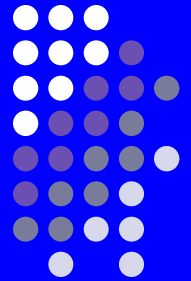


- **Co-Coordinator Positions (2)**
  - **Overlapping Term 3 years: one from Region 3 and one from OPP**
  - **Add to Performance Plan: EMS duties - 20% of time**
  - **Recognition: performance evaluation; annual award (money/time-off/possible promotion?)**
  - **Transition determined by team: will prepare new coordinator at halfway point**
  
- **Team members:**
  - **Representatives from most organizations: at least 8 members**
  - **Add to Performance Plan: EMS duties - 5% of time**
  - **Term 2 years (can extend)**
  - **Recognition: annual award (money/time-off)**
  - **Management will solicit for new members when Team makes a request.**
  
- **Note: the idea would be to try this structure knowing that we could re-evaluate it at the annual EMS Management Reviews.**

# EMS Team Membership by Organization



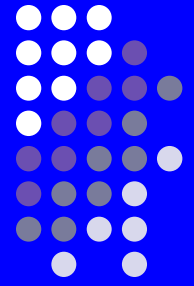
# So what do you think....?



- Is the EMS suitable, adequate, and effective?
- Feedback time.....

# Individual Members Time

**Commitment** (since Jan 2003 after Lynda and Robin took over)



**Member terms**

