Green Your Clean:
Purchase Effective and Affordable Products

Region 3 DEC Headquarters
New Paltz, NY
April 12, 2017
About NYS Pollution Prevention Institute

- Established in 2008 “NYSP2I”
- HQ at RIT
- 15 full-time staff
- P2I funds research, technical assistance, community grants
- Focus on reduction of natural resource consumption (water, raw material, energy), waste, and hazardous chemical use
- Established by New York State
- Funded by Environmental Protection Fund
  - 2016-2017 funding $4M
- Contract administered by NYSDEC
- Reduce environmental impact of NY businesses so that manufacturing jobs are retained or created

New York Manufacturing Extension Partnership
Funding provided by the NYS Pollution Prevention Institute through a grant from the Environmental Protection Fund as administered by the New York State Department of Environmental Conservation. Any opinions, findings, and/or interpretations of data contained herein are the responsibility of the author(s) and do not necessarily represent the opinions, interpretations or policy of Rochester Institute of Technology and its NYS Pollution Prevention Institute or the State.
Green Your Clean
Green Cleaning is for Everyone

Let's Talk Reality, Innovation, State Contracts, Infection Control!

Let's Talk About What You Need and Current Issues

NY DEC Reg. 3 Green Cleaning Seminar April 12th, 2017
Overview of the Day

- Who I am & why I am here
- Green cleaning - lets get it out on the table
  - Why you should try it again
- Where to start, what to do, where do you get your info
- Infection control - cant ignore it
  - Disinfectants, sanitizers, best application
- Training - the missing link that ties it all together
- Innovative technology that can help
- Resources
- Questions
About ME - ASE Services

- Life Long New Englander = GO PATS!!!!
- I can Pahk your Cah in Havahd Yahd
- Microbiologist / Process Engineer
- ALMOST 20 YEARS with the state. Started when I was 5 😊
- Specialize in Janitorial & Custodial cleaning chemicals, equipment, innovative technologies & process
- Want to protect your worker as much as the facility, students, teachers, environment and the public
- They need to have the training, tools & support to do their job correctly

Custodial AFFECTS EVERYONE!!!
Let's Cut to the Chase.....

- What is your biggest cost?
- What is your biggest concern?
- Do you have documented processes & protocols?
- Do you feel in control of your Staff? Spending?
- Do you have a good training program?
- Are you ready for an outbreak? Have you had One?
  - Did you know what to do?
  - What did it cost?
- What do Absences cost you?
Need a Master Plan.....

- Not just a Band-Aid
- Need to fix whole system
- Process, Chemicals, Equipment & Inf. Control
- Think about what will work for years to come
- Sometimes the same old way doesn’t work anymore
  - Buckets & string mops
  - No training, no standardization
  - Not trusting Green Cleaning
  - Not having an infection control process
  - Where you get your information
  - Not staying up on the new things out there
What is your Main Function/Duty?

- TO PROTECT THE STUDENTS
  - Worry about intruders and violence
  - Worry about sexual predators
  - Worry about hunger & safety
  - Worry about education

- If this is correct then ....
  - Why isn’t your custodial department part of the equation?
  - Your are the first line of Health Defense!
  - What about IAQ & Infections?
Would You Like TO....

- Be nationally recognized?
- Be able to brag about your systems?
- Have ONLY LESS TOXIC chemicals in your schools?
- Protect your workers and the environment?
- Possibly do more with less?
  - Less chemicals that do more things, tools
- Be ready for flu & cold season or a MRSA outbreak in your athletic facilities?

WILL YOU INVEST TIME IN ORDER TO HAVE THIS?
Lets Figure This Out Together

- What is stopping you or Who?
- Do you control your own budget or spending?
- Who do you need to convince to let you try new things?
- Are you able to run pilots?
- Where do you get your information from?
- Are you getting enough from your vendor?
- Do you sole source?
OK Lets Talk Green Cleaning....

- Who is using it?
  - What works for you and what doesn’t?
- Who isn’t using it?
  - Why?
- Why you should give it a shot again
  - New formulation
  - New Technology
  - Green is the new normal
- Who can you trust?
- Questions to ask
Green Cleaning Applies Everywhere

- Schools, universities, daycares
- Office buildings, airports,
- Grocery stores, markets, restaurants
- Buses, trains, cars
- Homes, hotels, motels, B&Bs
- Hospitals, assisted living
- Apartment buildings

LET'S KEEP IT EASY, EFFECTIVE, COST EFFECTIVE
How Do You GO Green?

- If your state has an EPP program use it
  - Most use third party certified products
- Check to see what regulation or executive orders exist for your state or the federal govt. - EO 04 NY
- Use products from the Third Party Certifiers
  - Green Seal, Ecologo, EPA DfE
  - There is some toxicity and performance testing done
- Use your National Resources &/ OR Me
  - IEHA, ISSA, PC4HS
  - Trade Mags - CMM, EHT, Cleanlink,
  - Trade shows - regional & national
**NY EO & Multistate FAC 85 Can Help**


- **Under Executive Order 4**, state agencies, public authorities and public benefit corporations are required to purchase cleaning products that meet environmental specifications for Hand Cleaners/Hand Soap and Industrial/Institutional Cleaning Products. Review the EO4 specifications at: ogs.ny.gov/EO/4/ApprovedSpecs.asp

- **Who to Ask for Help** The following individuals are available to assist you with questions about the contract:
  
  - **Cheri McCullough**, NYS OGS Procurement Services
    
    (518) 402-5552 | cheri.mccullough@ogs.ny.gov
  
  - **Melissa Gretten**, NYS OGS Procurement Services
    
    (518) 402-5978 | melissa.gretten@ogs.ny.gov
  
  - **Todd Gardner**, NYS OGS Procurement Services:
    
    (518) 474-3540 | todd.gardner@ogs.ny.gov
FAC 85 Contract

- Green Cleaning, Multi State Contract
  - MA, NY, VT, CT, RI
- Ability to Add New & Innovative Products
  - Just added NaDCC Tablets - GREAT!!!
  - TUR Taskforce - TURI, OSD, OTA, DEP, DPH, DOL
- Vendor Oversight
  - If caught not living up to contract warned & possibly taken off
- 12 Categories
FAC 85 – NY & NE Multistate Contract

Why use one of the 13 vendors? Why use it?
- Vendors were heavily screened
- Extra added value
- All products were researched
- Recycled content
- National standards
- Certified & tested chemicals & Equipment
- Gives you process and backup to refer to
  - If someone questions what you are doing & why
  - Everything has a standard, a regulation etc..
Benefits of FAC 85

► Health & Safety
  ► Safer handling for cleaning staff & IAQ for occupants
  ► Safer ingredients
  ► Automatic dispensing systems reduces exposure to employees

► Environment
  ► “Approved Products” are 3rd party certified
  ► Have some level of toxicity review & performance testing done

► Savings
  ► Use single product with different dilution rates
  ► Automatic dispensing systems - reduces over use of products
  ► Microfiber – reusable, sustainable
  ► Chem-free options: equipment eliminates the need to buy chemicals, or reduces use (e.g., steam cleaning, on site generators)
FAC85 Green Cleaning Products!

- Category 1: General Purpose Cleaners
- Category 2: Other Floor Maintenance Chemicals
- Category 3: Sanitizers and Disinfectants
- Category 4: Specialty Cleaners
- Category 5: Powered Janitorial Equipment & Service
- Category 6: General Cleaning Supplies, Equipment, and Service
- Category 7: Hand Soap, Hand Sanitizer, & Personal Care Products
- Category 8: De-Icing and Snowmelt Products
- Category 9: Waste/Recycling/Composting Liners
- Category 10: Disposable Janitorial Paper Products
- Category 11: Entryway and Other Matting Systems
- Category 12: Microfiber Cleaning Service
FAC 85 & Green Cleaning

- FAC 85 & its over 20 person Sourcing Team worked to:
  - Protect worker & building user’s health
  - Reduce Environmental Impact of Cleaning
  - Reduce Costs

- The contract also:
  - Vetted the Vendors for many attributes;
    - Training, demos, customer service
    - Knowledge of green cleaning and resume
    - Materials in multiple languages
  - Was progressive - did not allow bleach & quats
IT CAN BE CONFUSING...

- What do you have to / want to do?
  - What regulations do you have to follow?
  - Are they law or recommendations?
- When to sanitize and / or disinfect?
  - Do you need both? Two products?
- What product to use? What Process?
  - ALWAYS CLEAN FIRST
- What do you do during flu & cold season?
- Everyone tells you to do it, no one tells you HOW!
Actual Steps to Help You Start

- Inventory what you have in your facility
- What is each item used for? Do you need them all?
- Are they Green? Third Party Certified?
- Are they old or expired?
- Identify how many people are purchasing
- Who makes the decisions on what is bought? Does it make sense?
- Set up a Green or Sustainability team to address needs
- What does your vendor do for you? Is it enough?
- Pick the right products! Pilot! Talk to peers
Break Time

- Bio break
- Phone calls
- Clear your head - questions? Comments?
- 10 minutes
Let's get back to IT!

- Questions?
- Thoughts?
- Things you forgot to say or ask?

- Let's talk Infection control
- Lunch
- Training
- Innovative Technologies
Why I Do What I Do, Who I Want to Protect
How Do We Do That?????

- By cleaning or removing soil daily
- Use the correct chemicals, equipment & processes
- Sanitize and or disinfect each day to prevent spread of illness
- Set up a proactive infection control system
- Communicate with administration
- Train people well to Clean for Health
- Invest in systems and change when you can
- Use resources and ask peers
- Infectious outbreaks cost money
Why Do We Do This?

- 90% of time indoors
- IAQ - 2 - 5 up to 100x worse than outside
- Increase IAQ - Increase productivity & performance of mental tasks
- Correct cleaning & Infection control essential for health & super bug reduction / control
- Innovation in industry makes switch to green cleaners & chemicals economical & easy
Lets talk Products....

- This is about decreasing exposure to hazardous chemicals to you, students, teachers etc.
  - Mold and the toxins / allergens they can produce
  - Toxic or non green chemicals - Don’t need or use them any more
  - Sanitizers / disinfectants - EPA registered to work on what they say they will - PESTICIDES
    - They kill things, they are dangerous, some are less dangerous then others
    - Use when needed, don’t over use, be proactive so you don’t have to use as much as often
    - Major types are Chlorine Bleach and Quaternary Ammonium compounds
      - Have issues of causing asthma, caustic to materials, irritate eyes, skin and respiratory system, causing superbugs and affecting aquatic life
    - There are alternatives like Hypochlorous acid, Hydrogen Peroxide Citric, Lactic and Capryllic Acid
Disinfection / Sanitizing Work

- Worried About OVER Disinfecting or Sanitizing
  - Do you always need to?
  - Are there regulations you HAVE TO follow?
  - Do they make sense? Are they old?

- Cleaning vs. Disinfecting & Sanitizing
  - Removal of soils & biologics - cleaning (up to 90%)
  - Dwell times - reality in actual work vs. labels
  - EDUCATION - what to use when
  - Less toxic products exist
  - Disinfecting & sanitizing are definitions......
Sanitizer vs Disinfectant

- These words are definitions - EPA Reg
  - Refer to what chemicals kill what organism
  - In what concentration
  - In how much time - dwell time
- They are technically Pesticides
  - Should be used as little as possible
  - Used as label says
  - Ventilation needed
- One product can be used as both
  - Concentration, dwell time
Trad. & Less Toxic Sanitizers / Disinfectants

Traditional
- Bleach, Quats main bad actors
- Asthmagens, corrosive, must rinse
- Bleach isn’t a cleaner
- *Smell doesn’t equal clean or safe*

Less Toxic Alternatives
- Peroxides, hypochlorous based (salt), Citric / Lactic Acids
- Not Asthmagens
- Irritating but not corrosive
Protexus Cordless Electrostatic Sprayer

- (1.1) - Tank
- (1.2) - Tank Release
- (1.3) - 16.8V Battery
- (1.4) - On/Off Trigger
- (1.5) - On/Off Trigger Lock
- (1.6) - Electrostatic On/Off
- (1.7) - Tank Lock
- (1.8) - Headlight
- (1.9) - 3 in 1 Tri-Nozzle Head
- (2.0) - Grounding Strap
Hypochlorous Acid - safest less toxic EPA registered sanitizer / disinfectant

WHAT'S THE CATCH - CONS
- Tablet form not dilutable bottles
- Solid form can be corrosive so use gloves

WHY MAKE THE SWITCH - we make it in our bodies - less harmful
- Shelf stable as a tab for 3 years, sustainable, not shipping water, saves space
- Stable in a closed container for 7 plus days
- Can use it on food contact surfaces with no rinse up to and OR room depending on conc.

IT IS A DIRECT REPLACEMENT FOR CHLORINE BLEACH THAT WONT BLEACH!!!!
Together they Equal = the EVACLEAN SYSTEM

**APPLICATION COMPARISON:**
Based on 450 sq/ft of office space across all surfaces

- **Protexus Sprayer (FX200ES):**
  - 12 oz
  - 2.20 minutes
  - 5.03 minutes
  - Product Usage: 38 oz
  - Application Time: 12.17 minutes
  - Dry Time: 11.13 minutes

- **Trigger Sprayer (32 oz Hand Powered):**
  - 38 oz
  - 2.20 minutes
  - 5.03 minutes

**The Protexus Advantage:**
- 68% Product Savings
- 81% Time Savings

**Versatility of Puretabs**

<table>
<thead>
<tr>
<th>Kill Claims</th>
<th>Concentration</th>
<th>Dilution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food contact surface sanitizer (No Rinse)</td>
<td>100 ppm</td>
<td>(1) 0.3g tab / 1qt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1) 3.3g tab / 2.5 gal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1) 13.1 tab / 10 gal</td>
</tr>
<tr>
<td>Hospital grade disinfectant claims (Bleach alt.)</td>
<td></td>
<td>(5) 0.3g tb / 1 qt</td>
</tr>
<tr>
<td>Cold &amp; flu virus’ (including H1N2)</td>
<td>538 ppm</td>
<td>(1) 1.7g tab / 1 qt</td>
</tr>
<tr>
<td>Salmonella &amp; Staph.</td>
<td></td>
<td>(1) 3.3g tab / 2 qts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1) 6.55g tab / 1 gal</td>
</tr>
<tr>
<td>Bloodborne pathogen, Herpes &amp; Polio Norovirus,</td>
<td></td>
<td>(10) 0.3g tabs / 1 qt</td>
</tr>
<tr>
<td>MRSA &amp; Ecoli</td>
<td></td>
<td>(1) 3.3g tab / 1 qt</td>
</tr>
<tr>
<td>HIV &amp; Hep B claims</td>
<td>1076 ppm</td>
<td>(1) 13.1 tab / 1 gal</td>
</tr>
<tr>
<td>Many Animal pathogens</td>
<td></td>
<td>(4) 1.7g tabs / 1 qt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2) 13.1 g tabs / 1</td>
</tr>
<tr>
<td>C. Diff 10 minute claim</td>
<td>2153</td>
<td></td>
</tr>
<tr>
<td>C. Diff spore 4 minute claim</td>
<td>4306</td>
<td></td>
</tr>
</tbody>
</table>
Other Hypochlorous Options

- **Brulin Bru Tabs** - made by same company our of Ireland
  - Working on more kill claim and exposure data

- **Onsite Generation**
  - Orbio, Geneon, pathosans, Annihilare / Paradigm
  - Not a new product or technology
  - Needs Innovation
  - Capital upfront cost but more sustainable
  - Lease or buy

- **HOCL** - I believe BEST, SAFEST, LESS TOXIC sanitizer / disinfectant on the market today.
Clean for Health & Appearance Follows
LUNCH......yum! 45 minutes

- Feel free to come talk to me
- Check out sprayer
- I wont bite unless you reach for my food!
And We are Back……..

- Questions? Comments? Anything?

- Let's talk Training - issues, needs, wishes
- Can we get every custodian to clean the same
- Can we save Labor = time = money
- Can we afford innovative technologies that can help
Training – The Not so Secret, Dirty Secret of Cleaning

- Labor is most of budget
- Can you keep track of everyone?
- Does everyone clean the same?
- A lot of stops and starts and wasted time
- What if you could do more with the same
- Work easier and smarter not harder
- Look at ergonomics - days out or on disability costs department
- Invest in tools that help
- Green system doesn’t matter if it isn’t being done right
- Two sides of same coin
Process Cleaning

- Invented in Nevada, 30 yr custodian needed standard process for district
- Based in Team Cleaning
- Uses technology to save time & therefore money
- Ergonomical, work better not harder
- Eliminates stops & starts saving time
- Gives accountability, easy way to check work
- Everyone cleans the same
- In schools, universities. Can be adapted to any facility
- Leaves you a trainer of your own
More on PC4HS......

- Equipment saves time & allows for better cleaning
  - Backpack vacs are up to 50 to 80% faster
  - Touchless restroom machines are up to 50% faster
    - Kaivac (proprietary chemicals), Clark, Cleancore (Ozone)
- Microfiber clothes & pads
  - With extendable pole & mopster bucketless mop allow you to clean desks EVERY night & actually clean floors
- Cleaning functions are stacked like dominos
  - Each cleaning task builds on the next to save time
- Increase level of cleanliness, decrease cost
More on PC4HS - basics

- **Primary cleaning of classrooms**
  - Lock door, clean door glass, door handle, light switch, phone
  - Clean all desk tops, check soap, check paper towels, clean sink
  - Clean countertops, empty trash, empty pencil sharpener
  - Pick up large items on floor that vac wont pick up
  - Clean white and black boards
  - Dust room and do other quad items if room is part of that nights quad

- **Secondary cleaning of classrooms**
  - Vac all classrooms using loop method, 5 min per room
  - Spot mop rooms
  - Clean Restrooms
# Quad Cleaning Log

**Housekeeping Process Cleaning for Health**  
**Service Assessment Log**

<table>
<thead>
<tr>
<th>Site Name:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custodian Name</td>
<td></td>
</tr>
</tbody>
</table>

**Instructions:** Service assessment logs are to be completed each night by the Night Custodians, Site Facility Coordinator and Lead Custodians, are intended to be used to ensure Process Cleaning for Health is being followed. **Items in Bold must be completed daily**

<table>
<thead>
<tr>
<th>QUAD CLEANING</th>
<th>Monday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rest Rooms, scour sinks, remove rings</td>
<td>Spot Mop Floors</td>
</tr>
<tr>
<td>Dusting</td>
<td>Scour Sinks</td>
</tr>
<tr>
<td>Desks Tops, remove glue, pencil marks</td>
<td>Other</td>
</tr>
<tr>
<td>Clean Cabinets</td>
<td>Counter Tops</td>
</tr>
<tr>
<td>Vacuum Intake Vents</td>
<td>Keys Boards</td>
</tr>
</tbody>
</table>

**Comments:**

**TIME EVERYWHERE**
Quad Cleaning Map
More P4HS Fun Facts

- ISSA - International Sanitation Supply Assoc. says a custodian should be able to clean ~ 22k sq ft in a shift
- PC4HS can give you 27k to 30k sq ft / custodian & can push it even further
- Process Cleaning is a study of time & motion & applying it to cleaning a class and rest room
- 501 © 3 non profit
- A process does not work with chemicals
Other Training Systems

- OS1
- ManageMen
- Team Cleaning
- All are standardized processes
- Some are proprietary some aren’t
- Costs Vary
- Vendor systems are their own for added value, can be ok but generally not industry acknowledged
Break

- Stretch - 10 minutes please
- When we come back we will talk Innovation
Innovation…….. You Wont Believe Your Ears

- New Formulation and invention has come to Jan San
- Dilution systems & high concentrates
- Cleaners w/ probiotics, with ceramic coatings that can
- Machines that make chemicals on demand
- Floor machines that use only water
- Floor maintenance that take less time & less chemical
- Electrostatics, ozone, DI systems, Carbon poles
- Microfiber, poles & pads, bucketless mops, steam, UV lights with air purifiers, UV hand dryers and on and on and on
Other Cool Products

- Glass cleaner with a clear ceramic coating & TIO2 to clean the air - CRAZY
- Clear ceramic coating helps soils not adhere & makes glass easier to clean
- TIO2 = titanium dioxide - product is naturally occurring and is in makeup and sunscreen
  - A metal but the use of it reduces the exposure - unless you like to lick glass 😊
  - It uses humidity in the air and UVA in the sunlight to form radicals
- Great on glasses, cell phone screens, windshields for road haze and more. Great for Buses
Ozone Caddie - Ozone on Demand

- Clean core
- Doing it right, a new touchless restroom cleaner
- Make on demand, non synthetic cleaner
- Issue with ozone is it isn’t stable
- Used widely to purify water, pools. Deodorize in hotels
- Good cleaner, how do we use for jan san
- Sustainable
Floor Technology

- Floorcare is time consuming, highly chemical dependent, costs time which = money.
- How do we do better?
- Pressure orbital scrubbers - no stripper needed
- Uses technology not chemicals
- New ideas in floor maintenance
  - No need to strip and wax every 6 months if wax and floors maintained
  - Some facilities getting years between major stripping of floors
- Try technology instead of chemicals
- Look for longer warranties, good service, peer reviews
Other Neat things

- Carbon poles that eliminate the need to routinely climb ladders
- DI water system for cleaning windows - sustainable & env
  - Unger
- Bucketless mops
- Poles and pads - cheap, save time
- UV technology
  - Lights
  - Hand dryers
How Do You Know Something Works

- Testing using industry standards to produce data, paid for, third party testing
- Testing is reproducible & not a fluke
- Analytical methods are used in the lab
- ATP meters - trend tool to show cleaning efficacy in field and lab. LIMITATIONS

- Field work, antidotal info & data in field in addition to 3rd party, no biased testing, case studies with references
- If you don’t know if its true - as someone - ME!
Why Test???  Green Washing

- False Claims, what is true
- Need to do your homework
- Third party certified? Check MSDS
- Many terms are used but aren't policed by the Federal Trade Commission
  - Environmentally friendly / safe
  - Natural, Eco Safe
  - Earth Friendly
- Testing Help prove claims
- Clients should ask for Testing before they buy & have someone technical explain
Have You Been Fooled???

- We all have
- Simple Green - not green
- Orange oil products - VOCs, respiratory and dermal issues
  - Goo Gone - full of petroleum / oil
- Lysol and Clorox wipes
  - Don’t clean or kill well - no dwell time
- Chlorine Bleach
  - Only good for hours, impure (yellowing)
  - Dangerous to people, materials, environment
- Clean does NOT smell
  - Fragrances some of worst chemicals in jan san
Resources......Be Informed

- ISSA - https://www.ieha.org/
- IEHA - https://www.ieha.org/
- IFMA - http://www.ifma.org/
- BOMA - http://www.boma.org/Pages/default.aspx

These associations have magazines and forums where you can ask questions and read articles.
Many have shows regionally or nationally during the year.
Some have certifications on Jan San management and performance to progress careers.
Thank You!! Questions?

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