

Annual Environmental Report

March 2007 – February 2008



Environmental Management Policy

Albemarle County Public Schools is committed to protecting human health and the environment. This commitment includes meeting or exceeding Federal, State, Local and other applicable environmental requirements; instituting pollution prevention initiatives where practicable and feasible; developing and implementing an Environmental Management System (EMS); continually improving the EMS by setting environmental objectives and targets; and developing management programs to ensure the environmental objectives and targets are met.

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I. 2007 – 2008 EMS OBJECTIVES PROGRESS

Following are progress reports for the objectives and targets for the 2007 - 2008 EMS cycle.

A. Bulk Oil Storage

Objective: Reduce risk of spill from bulk oil storage and improve fuel storage management

Target: Remove applicability of Spill Prevention Control and Countermeasures (SPCC) Plan (40 CFR Part 112) and conduct additional training by May 31, 2007

During the summer of 2007, the Vehicular Maintenance Facility (VMF), located at 110 Lambs Lane, Charlottesville, Virginia 22901, the following actions occurred:

- A 1,000 gallon aboveground tank with motor oil was replaced with a 500-gallon aboveground Lube Cube
- A 1,000-gallon underground tank with used oil was replaced with a 285-gallon aboveground used oil storage tank
- Used antifreeze aboveground outdoor container was removed by Safety Kleen

The sum of these actions brought the total aboveground oil storage capacity below 1,320 gallons, thereby exempting VMF from maintaining a SPCC Plan. Although VMF will continue to follow all best management practices, the SPCC Plan will not need to be recertified.

Figure 1: Oil Storage Capacity at Transportation

| Tank Description | Location | Capacity (gallons) |
|---|---------------------------|--------------------|
| Lube Cube for Motor Oil | Oil Storage Shed | 500 |
| Used Oil Storage Tank | Interior Bay | 285 |
| (8) 55-gallon drums | Oil Storage Shed and Bays | 440 |
| Total oil storage capacity (gallons) | | 1,225 |

VMF will limit the number of 55-gallon drums to eight at any given time to ensure the oil storage capacity remains below 1,320 gallons. If oil storage capacity changes in the future, the SPCC Plan from August 2003 will be updated accordingly.

B. Chemical Management

Objective: Develop plans and training programs to formalize chemical storage, handling and disposal procedures

Target: Develop a Chemical Management Plan (Non-Instructional, County School-Wide) by January 15, 2008

The Safer Chemical Committee was formed in response to a local group's concern regarding the County's use of synthetic chemicals, specifically cleaning products and pesticides, on County property. The goals of the Committee are in line with the Environmental Management Policy, which includes a commitment to protecting human health and the environment.

Mission

The Albemarle County Safer Chemical Committee is charged with the following:

- Assessing current chemical use in the various County departments with respect to cleaners and pesticides

- Researching the effectiveness of “green” and biological-based (“bio-based”) alternative products
- Developing a proposed County-wide policy on the future use of these chemicals and “green” / bio-based alternatives
- Developing an action plan for implementation of the new County policy, if policy is approved by the Board of Supervisors and the School Board

Committee Members

Local Government

- David Slutzky, Member (Board of Supervisors)
- Sarah Temple, Environmental Compliance Manager (General Services)
- Pam Carter (Loss Control Manager)
- Michael Freitas, Chief of Public Works (General Services)
- Pat Mullaney, Director (Parks & Recreation)
- Tim Hughes, Athletic Supervisor (Parks & Recreation)
- Matt Smith, Superintendent (Parks & Recreation)

School Division

- Lindsay Check, Environmental Compliance Manager (Building Services)
- Pam Snyder, Assistant Director for Custodial Services (Building Services)

Other

- Peter Warren, Extension Agent, Agriculture and Natural Resources/Horticulture (Virginia Cooperative Extension)

The Safer Chemical Administrative Policy and SOP will be presented to the Board of Supervisors in June 2008 and subsequently presented to the School Board. All proceedings of the Safer Chemical Committee can be accessed through the Safer Chemical Committee FTP site¹.

C. Medical Waste Management

Objective: *Formalize procedures for Medical Waste Management*

Target: *Develop SOP for managing medical waste by June 30, 2007*

The medical waste is currently managed by the Assistant Director for Custodial Services. A formal SOP is still being developed.

D. Energy Management

Objective: *Reduce natural resource depletion through energy conservation practices*

Target: *Research Energy Conservation-related programs and potential benefit of participating in program*

Building Services has monthly meetings with an energy consultant, Marv Reese, to review utility usage and costs for each school. Marv uses the FASER program to compile energy information for each school and determine where trends indicate problems at a school. Marv has conducted more detailed energy audits where operational problems have been probable.

¹ Go to <http://filetransfer.k12albemarle.org> in Internet Explorer. Enter username: bsrvt and password: 6ynV8rvT. In Internet Explorer, go to “Page”, and click on “Open FTP site in Windows Explorer”.

Proposed energy management goals for 2008 include:

- Implement lighting controls at middle schools
- Implement capability for middle schools to read Virginia Power's meter to assess electric consumption
- Investigate sewer options at Stone-Robinson Elementary School

A new system has been implemented to better determine heating oil usage at applicable schools. Pricing is being obtained to determine if remote access to the Veeder-Root inventory systems is feasible.

HVAC renovations that occurred in the summer of 2007 that may affect energy usage and improve indoor air quality include:

- Albemarle High – Replacement of gymnasium HVAC units, replacement of media center roof top units, new chiller in gymnasium
- Brownsville – HVAC renovation to the original building which included replacement of classroom unit ventilators, replacement of gym and cafeteria unit, (4) new roof top fresh air units
- Woodbrook - HVAC renovation to the original building which included replacement of classroom unit ventilators, replacement of gym and cafeteria unit, (4) new roof top fresh air units, installed one mobile classroom
- Walton – New roof top units for physical fitness room, boys' and girls' locker rooms
- Jouett – New roof top units for boys' and girls' locker rooms
- Western Albemarle – Replaced multizone unit over A-wing to VAV, replaced existing boilers, (2) new hot water heaters, installed rooftop unit for main gymnasium, 2 new mobile classrooms
- Scottsville – Replaced chiller
- Cale – Removed five mobile classrooms, new addition
- Monticello High – New auditorium

E. Audit, Emergency Preparedness and Nonconformance Procedures

Objective: *Virginia Environmental Excellence Program (VEEP) E3 Designation*

Target: *Add Internal Audit, Emergency Preparedness and Nonconformance Procedures to SOP by November 15, 2007*

Albemarle County Public Schools (ACPS) currently has the Virginia Environmental Excellence Program's (VEEP) Environmental Enterprise (E2) designation. The listed SOPs are still in development phase and will be incorporated into the 2008-2009 EMS cycle.

F. Pesticide Management

Objective: *Use, store and dispose of all pesticides in a way that ensures compliance and pollution prevention*

Target: *Develop Integrated Pest Management Program*

Dr. Dini Miller, the Urban Pest Management specialist for the state of Virginia, conducted Integrated Pest Management (IPM) training for the lead custodians and child nutrition staff of ACPS on October 26, 2007. ACPS are switching from monthly pesticide applications to IPM. Before IPM is implemented, each building exterior is thoroughly examined on by Building Services to minimize physical entries for the pests (caulking, weather strips, etc.). After the physical prevention, glue traps must be placed in areas to monitor the presence or

absence of pests. If a problem is discovered under an IPM program, non-chemical means are first used to remedy the problem. If non-chemical means are not effective, then the least toxic and most effective chemical is used.

An IPM pilot was started at Agnor-Hurt Elementary in May 2007. The schedule for IPM implementation was expedited to include the conversion of at least 2 schools per month beginning in November 2007. Until schools are converted to IPM, only baits and gels are used to control pests. A SOP was developed for IPM and is included as Attachment 1.

Figure 2: IPM Conversion Schedule

| School | IPM Program Deadline |
|------------------------------------|----------------------|
| Agnor-Hurt Elementary School | May-07 |
| Hollymead Elementary School | November-07 |
| Greer Elementary School | November-07 |
| Jouett Middle School | November-07 |
| Ivy Creek/PREP School | December-07 |
| Baker-Butler Elementary School | December-07 |
| Broadus Wood Elementary School | December-07 |
| Brownsville Elementary School | January-08 |
| Cale Elementary School | January-08 |
| Crozet Elementary School | January-08 |
| Meriwether Lewis Elementary School | February-08 |
| Murray Elementary School | February-08 |
| Red Hill Elementary School | February-08 |
| Scottsville Elementary School | March-08 |
| Stone-Robinson Elementary School | March-08 |
| Stony Point Elementary School | March-08 |
| Woodbrook Elementary School | April-08 |
| Yancey Elementary School | April-08 |
| Burley Middle School | April-08 |
| Henley Middle School | May-08 |
| Sutherland Middle School | May-08 |
| Walton Middle School | June-08 |
| Monticello High School | June-08 |
| Albemarle High School | July-08 |
| Western Albemarle High School | July-08 |
| Building Services | August-08 |
| Vehicular Maintenance Facility | August-08 |

G. Recycling

Objective: *Improve and expand current recycling program to include recycling more types of materials*

Target: *Formalize current recycling program to ensure effectiveness, and evaluate recycling opportunities for other/more materials*

In 2007, 256.7 tons of materials were recycled, which is approximately 168 tons more than amounts recycled in 2006. The increase in recycling quantities during 2007 was a

combination of improved recordkeeping and the following added recycled and reused materials:

- Oil-water separator debris and waste fuel mixtures
- PCB-containing ballasts
- Scrap metal delivered to Coiner's
- Unsold auction materials
- Paint donated to Habitat for Humanity
- Household batteries

Figure 3: Recycled Quantities for Albemarle County Public Schools in 2007

| Material | Amount (tons) | Vendor |
|----------------------------|--------------------------|--------------------------------|
| Used Oil | 12.95 | Siemens |
| Chemicals/Waste Fuel | 36.53 | Reco/Siemens |
| Scrap Metal | 7.08 | Coiner's |
| Paint | 0.64 | Habitat for Humanity |
| Batteries | 0.10 | Big Green Box |
| Electronic waste | 15.01 | Computer Recycling of Virginia |
| Cardboard/Paper | 170 | Allied Waste |
| PCB Ballasts | 0.23 | AERC |
| Auction Waste ¹ | 10.05 | 1-800-GOT-JUNK |
| Fluorescent, Hg, Na Bulbs | 3.23 | AERC |
| Aluminum Cans | 0.83 | Coiner's |
| Total (tons) | 256.7 | |

1. Pickup and recycling conducted by 1-800-GOT-JUNK. Recycling rate reported on 4/20/2007

Cost savings resulted from avoiding landfill fees for all recycled and reused materials. The electronic waste and materials delivered to Coiner's are recycled at no cost, and therefore the cost of landfill disposal is eliminated.

A commingled recyclable compactor is currently being procured for Albemarle High School. The commingled compactor can accept the following materials in the same container:

- Cardboard
- Newspapers
- Office paper
- Magazines
- Catalogs
- Old forms/files
- Aluminum cans
- Steel/tin cans
- Plastic bottles #1 and #2 (water, soda, juice, milk jugs)
- Glass bottles/jars (brown, clear, green)

The school is working on advertising the pilot program. The goal of the program is to cover the cost of the compactor due to the decreased frequency of trash collection.

School-specific recycling solutions were developed for Henley due to a large generation of newspapers and Murray High/Albemarle Resource Center due to large amounts of drink containers. Pricing has been obtained for adding a commingled 90-gallon toter to each middle and elementary school.

H. Electronic Database for Material Safety Data Sheets (MSDS)

Objective: *Implement an electronic database for MSDS maintenance*

Target: *Inventory all chemicals in school system and add to electronic database; train all school employees on use of electronic system and access to MSDS information*

Per OSHA Hazard Communication regulations², employers are required to maintain Material Safety Data Sheets (MSDS) for any data sheets that are received with incoming shipments of the sealed containers of hazardous chemicals, and must ensure that the material MSDS are readily accessible during each work shift to employees when they are in their work area.

Because the paper MSDS binders at each school became difficult to maintain, an electronic database was implemented by the County of Albemarle and ACPS. The MSDS electronic database allows access to chemical information at each school. MSDS for each school are categorized by custodial, laboratory, and kitchen chemicals/cleaners.

MSDSOnline training was conducted for the following groups:

- Science Teachers: The Environmental Compliance Manager trained each Chemical Hygiene Officer on the MSDS database and conducted training for all science teachers at the high schools.
- Custodial Staff: The Environmental Compliance Manager and Director of Custodial Services conducted hands-on training for all custodial shifts at each school.
- General Population – Instructions for the new system were sent in the Superintendent's Advisory Bulletin on 10/15/2007.

General instructions for MSDSOnline access are included as Attachment 2.

I. Safety Training

Objective: *Ensure employees implement safe work practices*

Target: *Develop Confined Space, Lockout/Tagout, and Hazard Communication Programs for affected school employees*

A confined space inventory and SOP were developed to implement safety procedures to comply with OSHA regulations³. Training was conducted for each person that may be required to enter a confined space. The confined space SOP is included as Attachment 3.

A Lockout/Tagout program must still be developed, and the Hazard Communication Policy will be updated by the Environmental Compliance Manager to reflect the online MSDS database.

² 29 Code of Federal Regulations (CFR) Section 1910.1200(b)(4)(ii).

³ 29 CFR 1910.146.

II. ENVIRONMENTAL PROGRESS

A. EMS SOP Development

During calendar year 2007, SOPs to address the following practices were developed:

- Asbestos Management
- Confined Space
- Crane Safety
- Integrated Pest Management

The following SOPs are in draft format, and are expected to be incorporated into the EMS in 2008:

- Animals in the Classroom
- Medical Waste Management
- Safer Chemical Management
- Well Water Sampling and Maintenance

B. Biodiesel Pilot

On January 7, 2008, the Transportation Department began piloting the biodiesel program. In an effort to support the environmental benefits of using biodiesel as a fuel that meets clean diesel standards according to the Environmental Protection Agency (EPA), the Transportation Department is piloting 10 school buses to assess performance.

The test process will use a B20 blend, which is 20% biodiesel and 80% petroleum diesel. The following figure lists the selected buses and school feeder patterns for the pilot.

Figure 4: School Biodiesel Pilot Buses

| Bus Number | Model | Engine | School Feeder Pattern |
|------------|-------------------------|-----------------|-----------------------|
| Bus 9 | 2005 Freightlin Thomas | Mercedes Engine | Northern |
| Bus 18 | 2007 Thomas Thomas (C2) | Mercedes Engine | Western and Post High |
| Bus 13 | 2005 Thomas MVP | Mercedes Engine | Northern |
| Bus 83 | 2001 Freightlin Thomas | Cummins Engine | Northern |
| Bus 69 | 1997 IHC Bluebird | IHC Engine | Western / Northern |
| Bus 122 | 1997 IHC Bluebird | DT466 Engine | Northern |
| Bus 62 | 2006 Bluebird/Bluebird | CAT Engine | Northern |
| Bus 184 | 2005 Thomas/Thomas | 7.2 CAT Engine | Northern |
| Bus 96 | 2006 Bluebird/Bluebird | 7.2 CAT Engine | Southern |
| Bus 4123 | 2002 GMC-SAVANA | GMC Engine | Northern/Western |

Transportation has historical information on the test vehicles regarding fuel economy and service history. The baseline will be the one-year period prior to switching to biodiesel. On a monthly basis, the year-to-date fuel economy and service repairs will be compared to historical data.

Current year data will be compared to the same time period from the previous year. Data analysis will be based primarily on miles driven and will use time as a secondary evaluation factor. This information will be used to determine if the entire fleet will convert to a B20 blend.

C. *Green Building*

In 2007, ACPS joined the U.S. Green Building Council (USGBC). The Brownsville Elementary and Albemarle High School additions, beginning construction in summer 2008, have been Leadership in Energy and Environmental Design (LEED)-registered through the USGBC. The LEED Green Building Rating System™ encourages and accelerates global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria.

The Environmental Compliance Manager recently obtained LEED Accredited Professional (AP) Certification, which will aid the LEED certification process for the additions.

D. *Cool Counties Initiative*

On December 5, 2007 the Board of Supervisors unanimously adopted the U.S. Cool Counties Climate Stabilization Declaration, recognizing the critical role and responsibility we have as a County in responding to the issue of climate change. Cool Counties was launched on July 16, 2007 at the National Association of Counties (NACo) Annual conference by 12 pioneering counties, including King County, Washington and Fairfax County, Virginia. Counties adopting Cool Counties pledge to reduce their greenhouse gas emissions by 80% below current levels by 2050, an average annual reduction of 2%. Counties participating in the program commit to developing a County-wide inventory of greenhouse gas (GHG) emissions in order to: 1) reduce county *internal operational* GHG emissions, 2) reduce *county geographical* GHG emissions (including the residential, commercial and industrial sectors) and 3) develop an Action Plan to meet these goals. The commitment also includes urging Congress and the Administration to enact a multi-sector national program of requirements, market-based limits, and incentives for reducing GHG emissions to 80% below current levels by 2050.

The Environmental Compliance Manager for the schools is coordinating school energy and water data to aid in the greenhouse gas baseline inventory for the County. The Environmental Compliance Manager will implement the Action Plan as it relates to ACPS.

E. *Biofilter at Broadus Wood*

In August 2007, construction began for a biofilter at Broadus Wood Elementary to manage stormwater runoff from the rear parking lot and roof drains. Historically, runoff from the site flowed down-gradient in all directions and eventually into various small channels. Over many years, as the school was developed, almost all of the impervious surfaces associated with the school (rooftops, parking lots) has been redirected to just two directions: north and south within the ditch lying along the west side of State Route 663 and then through roadway culverts and eastward onto private property. Generally, runoff from approximately the northern quarter of the site flows north while runoff from the southern three-quarters of the site flows south. However, the northern and southern portions of the on-site storm sewer system are connected near the front of the school so there is some mixing of flows.

The biofilter was constructed near the walking/running track located on the south side of the school. Stormwater is now intercepted from the manhole located in the southern parking lot and channeled into the biofilter. Additional runoff from this parking lot is captured at the curb and directed into the biofilter on the surface. The underdrain of the biofilter discharges through a new sewer system into the roadside ditch.

Figure 5: Typical Biofilter Cross-Section

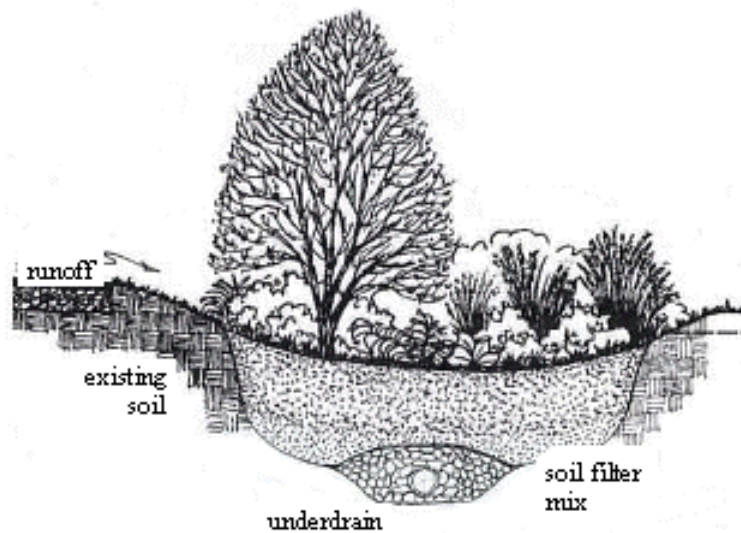


Figure 6: Biofilter at Broadus Wood Elementary (November 2007)



Figure 7: Biofilter at Broadus Wood Elementary (November 2007)



F. VPDES Permit Renewals

In 2007, the Virginia Pollutant Discharge Elimination System (VPDES) permit renewals were completed for the car wash at VMF (VA0076244) and the sewage treatment plant at Stone-Robinson Elementary (VAG751004). The VPDES permit for VMF has been renewed until October 15, 2012. The VPDES permit for the sewage treatment plant at Stone-Robinson has been renewed until November 30, 2012.

G. Waterworks Operation

Ground Water Withdrawal permits are currently held for the following schools:

- Stony Point Elementary – Public Water Supply Identification (PWSID) 2003810
- Broadus Wood Elementary – PWSID 2003170
- Murray Elementary – PWSID 2003885
- Red Hill Elementary – PWSID 2003660
- Walton Middle – PWSID 2003880
- Yancey Elementary – PWSID 2003162
- Scottsville Elementary – PWSID 2003680

Red Hill Elementary School will soon be included on the community well operated by Albemarle County Service Authority and will no longer be a Class VI private waterworks operation.

After installing four additional monitoring wells to monitor the extent of a past heating oil spill at Scottsville Elementary, a new well location was selected, and drilling commenced on February 25, 2008. Water quality analyses for the new well will be conducted for total coliform, metals, inorganics, nitrate/nitrite, volatile organics, radiologicals, and cyanide.

H. Ambient Air Monitoring Station

The Virginia Department of Environmental Quality (DEQ) recently installed an ambient air monitoring station at Albemarle High School (AHS). Electrical service and monitor installation should be completed before March 2008. The ambient air quality monitoring station will be used as the monitoring station for the entire Charlottesville area. The monitored pollutants will include ozone (O_3), particulate matter less than 2.5 microns ($PM_{2.5}$), and particulate matter less than 10 microns. Real-time data will be available online at <http://www.airnow.gov/>. Additionally, meteorological data will be collected from the station.

Figure 8: Air Monitoring Station (February 2008)



Figure 9: Air Monitoring Station (February 2008)



I. Asbestos Floor Tile Removal & 3-Year Reinspections

During the summer of 2007, the asbestos-containing floor tile from the following areas was removed:

- Albemarle High – (4) stairwells, Room 257-C closet, Classrooms 205 and 209
- Burley Middle – Closet across from auditorium, mechanical and electrical closets on 2nd floor, bathroom in administrative area, Classroom 220
- Greer – Teachers’ Lounge Bathroom and Hallway Bathroom
- Western Albemarle – Chorus Room and adjoining spaces
- Jouett – Classrooms A8 through A13
- Red Hill – Stage
- Woodbrook – Dry storage room

Three-year reinspections were conducted and notices of availability were posted at each school with asbestos-containing materials (ACM). ACM at all schools was found to be in good condition.

J. Radon Testing Results

Radon testing for the new additions at Cale Elementary and Monticello High School was conducted from December 27 through December 29, 2007 by Joel Loving of Environmental Health Consultants. None of the radon measurements were found to be above the EPA “action level” of 4.0 picoCuries per liter (pCi/L).

K. Digital School Plans

One set of drawings is being scanned each week to add to the Building Services electronic drawing database. The drawings can be accessed by contacting Lindsay Check or on the Building Services network at: S:\SHARED FOLDERS\CIP\Drawings\Digital Plans.

L. Environmental Program Website and EMS Access

The website includes all SOPs that are part of the EMS and program information. The website for the environmental program can be accessed at:

<http://schoolcenter.k12albemarle.org/environmental>

Environmental Compliance Manager: Lindsay Check

Contact Information:

Building Services

(434) 975-9340

lcheck@k12albemarle.org

III. 2008 – 2009 Goals and Objectives

The following are the updated objectives and targets for the 2008-2009 EMS cycle:

A. Safer Chemical Management

Objective: Implement Safer Chemical Management SOP and Administrative Policy

Target: Phase out all non-approved cleaners by May 2008. Conduct training for custodial and maintenance staff on new cleaners and herbicides by September 2008.

B. Medical Waste Management

Objective: Formalize procedures for Medical Waste Management

Target: Develop SOP for managing medical waste by June 30, 2008

C. Energy Management

Objective: Reduce natural resource depletion through energy conservation practices

Target: Implement lighting controls at middle schools by August 2008 and conduct after-hours energy inspections at each school by December 2008 to identify consumption problems

D. Audit, Emergency Preparedness and Nonconformance Procedures

Objective: Virginia Environmental Excellence Program (VEEP) E3 Designation

Target: Add Internal Audit, Emergency Preparedness and Nonconformance Procedures to SOP by November 2008

E. Pesticide Management

Objective: Minimize pesticide use in and around schools

Target: Fully implement Integrated Pest Management Program by August 2008

F. Recycling

Objective: Improve and expand current recycling program to include recycling more types of materials

Target: Expand commingled recycling to all schools and track amounts of recycled materials

G. Green Building

Objective: Obtain LEED for Schools Certification for Brownsville and AHS additions

Target: Obtain USGBC approval for design credit templates by June 2008 and create webpage to describe green features by December 2008

IV. Public Outreach and Best Practices



A. Public Outreach and Recognition

- ACPS is a member of Rivanna Regional Stormwater Education Partnership (RRSEP). As a member of this group, ACPS conducted an automotive food industry initiative, which involved educating restaurants throughout Albemarle County about waste streams and proper disposal and reduction. Please refer to Attachment 4 for additional details.
- ACPS currently has the Virginia Environmental Excellence Program's (VEEP) Environmental Enterprise (E2) designation.
- ACPS became a member of the US Green Building Council in March 2008. Membership allows a subscription to the award-winning GreenSource magazine, access to USGBC Credit Interpretation Rulings (CIRs), and members-only access to a number of online resources and green building data.
- ACPS was awarded the Virginia Fluorescent Lamp Recycling Challenge Certificate of Appreciation for the recycling of all fluorescent bulbs generated.
- Lindsay Check discussed recycling in October 2007 with the Friends of Earth and Nature Club at Crozet Elementary.
- Lindsay Check discussed composting with a vermicomposting demonstration at Murray Elementary with Jessica Maupin's 3rd grade class in January 2008.

B. Best Practices

ACPS has segregated the light ballast waste streams into "PCB-containing" ballasts, "No PCB" ballasts, and electronic ballasts. ACPS has recently found a company that recycles non-leaking PCB ballasts, and portions of this waste stream have been recovered. Additionally, a recycling company has been identified for "No PCB" ballasts and electronic ballasts.

ATTACHMENT 1
Integrated Pest Management SOP

| | | | | | |
|--|----------------------------------|------------------------------------|--|----------------------------|------------------------------------|
|  Albemarle County Public Schools | | |  Subject: Integrated Pest Management | | |
| Document No.: SOP-IPM-01 | Issue Date: 11-16-2007 | Last Revised: 11-16-2007 | Page: 1 of 3 | Prepared By: LAC | Approved By: EDB, GS, JL |

1.0 PURPOSE

This Standard Operating Procedure (SOP) outlines the Integrated Pest Management (IPM) Program for Albemarle County Public Schools. Albemarle County Public Schools will be converted to this IPM program by September 2008. This procedure only covers IPM for pests in schools and does not address the use of herbicides on school grounds.

It is the goal of Albemarle County Public Schools to control pests in the school environment. Pests such as cockroaches, fleas, ants, stinging wasps, termites and rodents are potentially dangerous and can disrupt the learning environment in schools. Pests are known to bite, sting, transmit diseases, or cause allergic responses.

As schools are converted to an IPM program, Albemarle County Public Schools will employ non-chemical methods first, as a means of pest prevention. These methods include sanitation, exclusion, and monitoring. The application of chemical control products will be used only "as needed" to correct verified pest problems. Products that are the least hazardous and most effective for the control of targeted pests will be used.

2.0 DEFINITIONS



A. *Integrated Pest Management* is the use of combined pest control alternatives, most effective to prevent or reduce to acceptable levels pests and damage caused by pests.

B. *Pesticide* as defined by law, means any substance or mixture of substances intended for:

1. Preventing, destroying, repelling or mitigating a pest
2. Use as plant regulator, defoliant, or dessicant
3. Use as a spray such as a wetting agent or adhesive

Pesticide does not include:

1. An antimicrobial agent, such as a disinfectant, sanitizer or deodorizer, used for cleaning purposes
2. A bait station

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|--|----------------------------------|------------------------------------|---|----------------------------|------------------------------------|
|  Albemarle County Public Schools | | |  Subject: Integrated Pest Management | | |
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3.0 PROCEDURES

Responsibility: Environmental Compliance Manager

The Environmental Compliance Manager will be the point of contact. The Building Services staff will manage all information on pest control, including material safety data sheets and product label of each pesticide or bait station that may be used in schools and site-specific information on pest control activities at each school. Building Services staff will conduct an annual inspection to determine if sanitation and exclusion measures are adequate.

Responsibility: School Administrative Staff and Principal

At the beginning of each school year or at the initial implementation of a new IPM program, schools will include notice of the school's integrated pest management system in information to parents.



The notice will include the following information:

1. A statement that explains the school's integrated pest management system and a list of any pesticides or bait station that may be used in the school building or on school grounds as part of the integrated pest management system
2. A statement that:
 - a. The contact person maintains the product label and material safety data sheet of each pesticide or bait station that may be used by the certified applicator in buildings and on school grounds
 - b. The label and material safety data sheet is available for review by a parent, guardian, staff member, or student attending the school
 - c. The contact person is available to parents, guardians, and staff members for information and comment
3. The name, address, and telephone number of the contact person
4. Instructions for accessing information for planned and emergency pesticide applications.

Responsibility: Pest Control Contractor

The pest control contractor is responsible for the following portions of the IPM program:

1. Establishing monitoring areas within each school and recording pest activity on a monthly basis in the IPM log book in the front office
2. Determining if a physical entry needs to be corrected by Building Services.
3. If non-chemical means fail, the Environmental Compliance Manager must be notified 48 hours before a pesticide application.

| | | | | | |
|--|----------------------------------|------------------------------------|---|----------------------------|------------------------------------|
|  Albemarle County Public Schools | | |  Subject: Integrated Pest Management | | |
| Document No.: SOP-IPM-01 | Issue Date: 11-16-2007 | Last Revised: 11-16-2007 | Page: 3 of 3 | Prepared By: LAC | Approved By: EDB, GS, JL |

Responsibility: Lead Custodian

The following sanitation duties are to be conducted or delegated by the lead custodian:

1. Mop kitchen floors daily
2. Ensure trash cans are emptied daily from kitchen and cafeteria area
3. Clean any residue from the bottom of the trash cans
4. Do not mop over or reposition glue boards in kitchen area
5. Report any pest activity outside of glue boards in IPM Log Book in front office
6. Report any structural deficiencies to Building Services
7. Keep areas surrounding dumpsters free of debris

Responsibility: Kitchen Manager

The following sanitation duties are to be conducted or delegated by the kitchen manager:

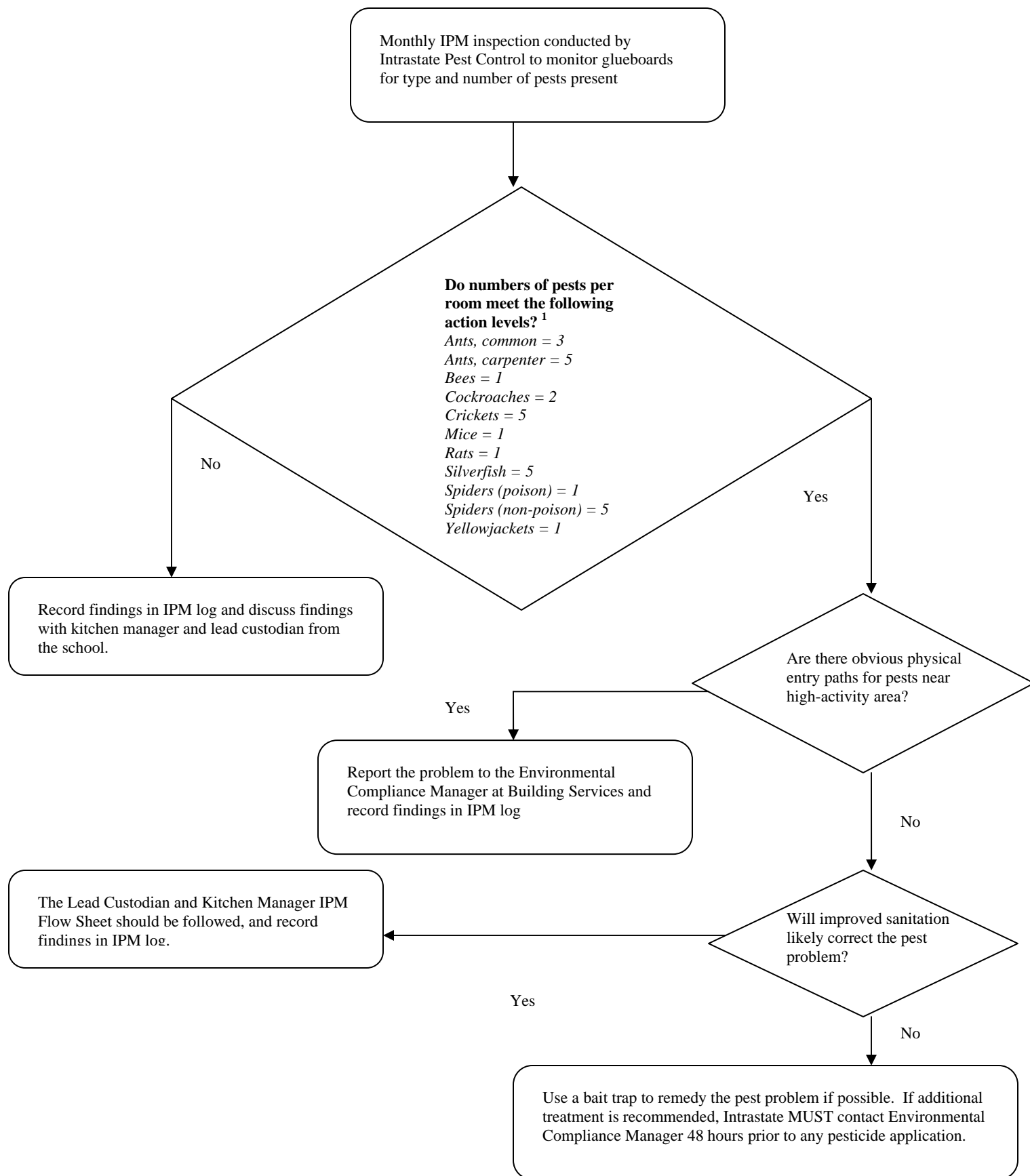
1. Clean kitchen equipment
2. Clean tables and counters
3. Do not place liquids in trash cans
4. Floors swept free of all debris
5. Ensure ovens and fryers are clean
6. Report any pest activity outside of glue boards in IPM Log Book in front office
7. Do not reposition glue boards in kitchen area
8. Store all food properly in sealed containers
9. Run floor drain traps through dishwasher every month and fill drain traps with water

IPM Flow Charts:

The following flow charts are to be followed for IPM decisions:

- Flow Chart for Pest Control Contract (F-SOP-IPM-01)
- Flow Chart for Custodial and Child Nutrition Staff (F-SOP-IPM-02)

Pest Contractor IPM Flow Sheet



1. If Intrastate Pest Control thinks that an action level is too high or too low for a particular school, the Environmental Compliance Manager should be consulted.

Lead Custodian and Kitchen Manager IPM Flow Sheet

If the pest control contractor determines that there are no obvious physical entries for pests and better sanitation could correct the pest problem, the technician will discuss findings with lead child nutritionist or custodian from the school. The Custodial and Child Nutrition Staff IPM Flow Chart should then be followed.

Have all items on the custodial and child nutrition IPM task lists been completed?

Yes

Ensure all pest sightings are reported in IPM Logbook in front office.

No

Correct any unfinished items on the checklist. If there is a problem completing any of the listed tasks, contact the Director of Child Nutrition or the Director of Custodial Services.

Custodial IPM Task List

- Mop kitchen floors daily
- Ensure trash cans are emptied daily from kitchen and cafeteria area
- Clean any residue from the bottom of the trash cans
- Do not mop over or reposition glue boards in kitchen area
- Report any pest activity outside of glue boards in IPM Log Book in front office
- Report any structural deficiencies to Building Services
- Keep areas surrounding dumpsters free of debris

Child Nutrition IPM Task List

- Clean kitchen equipment
- Clean tables and counters
- Do not place liquids in trash cans
- Floors swept free of all debris
- Ensure ovens and fryers are clean
- Report any pest activity outside of glue boards in IPM Log Book in front office
- Do not reposition glue boards in kitchen area
- Store all food properly in sealed containers
- Run floor drain traps through dishwasher every month and fill floor drains with ~2 gallons of water

ATTACHMENT 2
MSDSOnline Access Instructions

How To Use MSDSOnline®

Employee Version

Accessing the Database



1. Double click on the MSDS icon  on your desktop to access the database or, if unavailable, go to:

<http://hq.msdsonline.com/countyofalbemarle/>

Go to the following Location:

Division: School Division; **Facility:** Your school

Reminder!

Let Lindsay Check know if you order a new product or dispose of an old one.



Accessing Material Safety Data Sheets (MSDS)

Searching Tips

- Use only one or two words from the product name when searching. This will be enough to easily find the MSDS.
- Look carefully at the fine print on the back of the product if you are unsure of the manufacturer.
- Sometimes what appears to be the manufacturer name is actually part of the product name.
- Double-check that you are spelling each word correctly and pay attention to punctuation.

Note that the left-hand column ("Division") identifies each building, the center column ("Facility") identifies the department, and the right-hand column ("Storage") identifies a specific area within that department.


• ***Accessing By Location***

1. On the home page, you should see this . Note that you can always return here by clicking "Back to Search Home" or "MSDS Search".
2. You should be viewing a list of locations. Look for the correct building on the left, before finding the correct department and/or specific area within that department where your product is located.
3. A list of all chemicals stored within the location you chose will appear on screen. In order to view the MSDS for a particular product, click on the PDF icon  in that product's leftmost column.

• ***Accessing By Product***

1. Click the Products tab.
2. Type the product name in the Product field with "Full Text" selected in

the drop-down menu.

3. Leave the "Manufacturer" field blank and search. More results are likely from a broader search (e.g. "Pledge" is better to start with than "Pledge Natural Beauty")
4. A list of matches should appear if we have the chemical. Find the correct product and click on the PDF icon  in the product's leftmost column to view the MSDS.

In either case, an Adobe Reader file will come up in your web browser. Choose to print by clicking the print icon



or to save by clicking the save icon





♦ If you cannot find the MSDS, please email lcheck@k12albemarle.org! ♦

In Case of an Emergency

If you have an emergency related to a hazardous product (such as chemical burns or ingestion), **immediately call 911**. If you do not have internet access due to a power outage or other reason, MSDSOnline can fax you the Material Safety Data Sheet 24 hours a day, 7 days a week by calling **1-888-362-7416**. People are standing by in the case of an emergency. The following poison control centers are also excellent resources:

| | |
|------------------------------------|----------------|
| UVA Hospital Poison Control Center | (434) 924-5543 |
| Blue Ridge Poison Center | (434) 924-0347 |

ATTACHMENT 3
Confined Space SOP

| | | | | | |
|--|--------------------------------|-----------------------------------|--|----------------------------|--|
|  Albemarle County Public Schools | | |  Subject: Confined Space Entry | | |
| Document No.: SOP-CSE-01 | Issue Date: 2/8/2008 | Last Revised: 11-1-2007 | Page: 1 of 4 | Prepared By: LAC | Approved By: EDB, JL, GS, AK |

1.0 PURPOSE

This Standard Operating Procedure (SOP) outlines the Confined Space Program for Albemarle County Public Schools.

2.0 DEFINITIONS

Confined space - A space that:

- Is large enough and so configured that an employee can bodily enter and perform assigned work; and
- Has limited or restricted means for entry or exit (for example, tanks, silos, storage bins, hoppers, vaults, pits, steam tunnels, and manholes are spaces that may have limited means of entry) and;
- Is not designed for continuous employee occupancy.

Engulfment - The surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction or crushing.



Entry - The action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in the space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

Entry Supervisor - The person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by OSHA's 1910.146 (j).

An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by OSHA's 1910.146 for each role he or she fills. Also the duties of the entry supervisor may be passed from one individual to another during the course of an entry operation.

Hazardous atmosphere - An atmosphere that may expose employees to the risk of death, incapacitation, impairment or ability to self rescue (that is, escape unaided from a permit space) injury, or acute illness from one or more of the following causes:

- Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);
- Airborne combustible dust at a concentration that exceeds its LFL;
- Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;

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- Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart G, Occupational Health and Environmental Control, or in Subpart Z, Toxic and Hazardous Substances, of 29 CFR 1910, and which could result in employees exposure in excess of its dose or permissible exposure limit;
- NOTE: An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment or ability to self-rescue, injury or acute illness due to its health effects is not covered by this provision.
- Any other atmospheric condition that is immediately dangerous to life or health (IDLH).



Non-permit confined space - A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Oxygen deficient atmosphere - An atmosphere containing less than 19.5 percent oxygen by volume.

Oxygen enriched atmosphere - An atmosphere containing more than 23.5 percent oxygen by volume.

Permit-required confined space (permit space) - A confined space that has one or more of the following characteristics:

- Contains or has the potential to contain a hazardous atmosphere;
- Contains a material that has the potential for engulfing an entrant;
- Has an external configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or
- Contains any other recognized serious safety or health hazard.

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3.0 PROCEDURES

Responsibility:

Environmental Compliance Manager and Assistant Director of Facilities

The Environmental Compliance Manager and Assistant Director of Facilities in Building Services will manage the Confined Space training, record keeping and issuance of entry permits. The Environmental Compliance Manager will maintain the inventory of confined spaces (F-SOP-CSE-01), the permit form for the permit-required spaces (F-SOP-CSE-02), and calibration of the gas monitors each month and maintain records of calibration (Form F-SOP-CSE-03).

Maintenance Crew Foremen

Each foreman must ensure his crew is obtaining permits for work required in permit-required spaces.



- A permit must be obtained from the Environmental Compliance Manager or the Assistant Director of Facilities in Building Services.
- In an emergency event when the Environmental Compliance Manager and Assistant Director of Facilities in Building Services cannot be contacted for a permit, an emergency Confined Space Entry permit can be issued by the crew foreman.
- All completed permits must be turned in to the Environmental Compliance Manager the day following the expiration date of the permit.

Training:

Building Services will provide training so that all employees whose work may require entry into a confined space have understanding, knowledge, and skills necessary for the safe performance of the duties assigned.

Training shall be provided to each affected employee during each of the following situations:

- Before the employee is first assigned duties under this section;
- Before there is a change in assigned duties;
- Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained;
- Whenever the employer has reason to believe either that there are deviations from the permit space entry procedures or that there are inadequacies in the employee's knowledge or use of these procedures.

| | | | | | |
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|  Albemarle County Public Schools | | |  Subject: Integrated Pest Management | | |
| Document No.: SOP-CSE-01 | Issue Date: 2/8/2008 | Last Revised: 11-1-2007 | Page: 4 of 4 | Prepared By: LAC | Approved By: EDB, JL, GS, AK |

Permits and Forms:

The following forms are maintained by the Environmental Compliance Manager as part of the Confined Space Program:

- Inventory of confined spaces (F-SOP-CSE-01)
- Permit form for permit-required confined (F-SOP-CSE-02)
- Calibration records for the QRAE Multi-gas Monitors (F-SOP-CSE-03)

Equipment List:

The following equipment is utilized as part of the Confined Space Program for Albemarle County Public Schools.

| Equipment | Serial No. | Purchase Date | Location |
|---|-------------------|----------------------|-------------------------------|
| QRAE Multi-gas Monitor Model Number 027-0000-011 | 270-420693 | 10-2007 | Building Services |
| QRAE Multi-gas Monitor Model Number 027-0000-011 | 270-420682 | 10-2007 | Western Albemarle High School |
| DBI-SALA Tripod and Winch System | | 10-2007 | Building Services |
| Allegro Forced Air Confined Space Kit Model Number 9514 | 9513-14751 | 10-2007 | Building Services |

ATTACHMENT 4
Public Outreach Materials



Pollution Prevention in the Food Service Industry

www.rivanna-stormwater.org

We all depend on clean water. Restaurants and cafeterias generate food wastes and cleaning wastes that can pollute stormwater. Anything that goes down a stormdrain can end up in a stream or river. Use these best management practices to keep our waterways clean and healthy:

- 💧 Stormdrains connect directly to state waters, including local streams and rivers, without treatment. Never dump anything down a stormdrain.
- 💧 Clean floor mats, air vents, hoods, meat trays, garbage cans, and other equipment indoors at the mop sink or near a floor drain that is plumbed to the sanitary sewer.
- 💧 Do not dump waste mop water outdoors, in a parking lot, or down a stormdrain.
- 💧 Toxic waste must be disposed of properly. This includes used cleaners, and rags soaked with solvents, floor cleaners, and detergents.
- 💧 Never dump oil and grease wastes down storm drains, in parking lots, or on the ground. Maintain grease traps to insure proper functions.



The Rivanna Regional Stormwater Education Partnership



County of Albemarle
296-5816



Albemarle County
Public Schools
975-9340



City of Charlottesville
970-3631



Rivanna Water and
Sewer Authority
977-2970



University of Virginia
982-4901



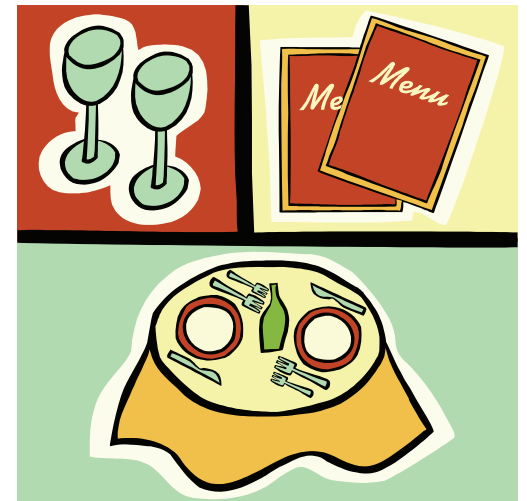
Virginia Department
of Transportation
(549) 829-7500



Thomas Jefferson
Soil & Water
Conservation District
975-0224

The Food-Service Industry & Pollution Prevention

Steps you can take to help keep Virginia's waterways healthy and clean



www.rivanna-stormwater.org

Employee & Client Education

Employees can help prevent pollution when urban runoff training is included in employee orientations and reviews. Promote these Best Management Practices (BMPs) to insure compliance with federal, state and local regulations.

- Stormdrains connect directly to state waters, including local streams and rivers, without treatment. Never dump anything down a stormdrain.
- Storage containers should be regularly inspected and kept in good condition.
- Place materials inside rigid, durable, water-tight, and rodent-proof containers with tight fitting covers.
- Store materials inside a building or build a covered area that is paved and designed to prevent runoff from entering storm drains.
- Post BMPs where employees and customers can see them. Showing customers you are working to protect local waterways is good public relations.



This brochure paid for in part by the sale of Chesapeake Bay license plates.

How can practices in the food-service industry impact local streams and rivers?

Virginia's waterways are a vital source of the clean water used in our daily lives - and are also important for recreational opportunities we want our children and their children to enjoy, such as swimming, fishing, boating, and hunting.

Restaurants and cafeterias generate food wastes and cleaning wastes. These wastes contain organics and nutrients that can pollute stormwater, which flows down stormdrains and into local waterways. These materials can cause algae blooms and deplete oxygen, harming fish and wildlife. Cleaners used during food handling operations can contain caustic materials that can harm aquatic life and degrade water quality. Pathogens from decaying food can also harm animals and humans. Federal, state and local regulations prohibit activities allow pollutants into state waters.



Adopt these practices to help prevent pollution

Parking Lot Drainage

Cover, repair, or replace leaky dumpsters and compactors. Rain can wash oil, grease, and other substances from dumpsters into the storm drain system. Wash greasy equipment such as vents and fans before storing outside. Wash only in designated wash areas that are properly connected to the sewer system equipped with an appropriate oil/water separator

Minimize Wastes

Use re-usable products. Serve food on ceramic dishware rather than paper, plastic, or styrofoam and use cloth napkins rather than paper ones. If you must use disposable products, use paper instead of styrofoam.

Toxic Disposal

Toxic waste must be disposed of properly. This includes used cleaners, rags (soaked with solvents, floor cleaners, and detergents), and automotive products (such as antifreeze, brake fluid, radiator flush, and used batteries).

Recycle the following materials:

- ♣ Food waste (non-greasy, non-animal food waste can be composted);
- ♣ Paper and cardboard;
- ♣ Container glass; aluminum and tin;
- ♣ Pallets and drums;
- ♣ Oil and grease.

Spills

Immediately clean up spills using dry methods. Do not rinse them down.

Clean Equipment Indoors

Clean floor mats, air vents, hoods, meat trays, garbage cans, and other equipment indoors at the mop sink or near a floor drain that is plumbed to the sanitary sewer. Portable equipment may also be cleaned in dishwashers or public car washes.



Do not clean floor mats, air vents, hoods, meat trays, garbage cans, and other equipment **outdoors**. Dispose of waste mop water in the mop sink, floor drain, or toilet. **Do not dump waste mop water** outdoors, in a parking lot, or down a stormdrain.

Recycle oil & grease wastes

Never dump them down storm drains, in parking lots, or on the ground. Maintain grease traps to insure proper functions.

Buy the Least Toxic Products Available

Look for "non-toxic," "non-petroleum based," "free of ammonia, phosphates, dye or perfume," or "readily biodegradable" on the label. Avoid chlorinated compounds, petroleum distillates, phenols, and formaldehyde. Use water-based products. Look for "recycled" and "recyclable" containers.