THE WINTER VRUEC BUSINESS MEETING WAS HELD AT THE MAYMONT ENVIRONMENTAL EDUCATION CENTER IN RICHMOND.

VRUEC MEMBERS & GUESTS ATTENDING THE BUSINESS MEETING:
Faye Anderson (Three Rivers Environmental Educators), Sheila Barnett (DEQ), Daria Blom (Education Director, Friends Of The Rappahannock), Carol Hopper Brill (VIMS), Denny Casey (VA Museum of Natural History), Dan Cohen (Claytor Nature Study Center), Lisa Deaton, (VA Dept of Forestry), Dee DeRoche (Dept of Historic Resources), Daniel Dickerson (Old Dominion University), Cindy Duncan (Chesapeake Bay Foundation), Tamsey Ellis (Eastern Shore Soil & Water), Jim Firebaugh (VDOE consultant), Betty Gatewood (Augusta County Public Schools), Suzie Gilley (DGIF), Beth Hawse (Douthat State Park), Nicole Hebert (VA Association of Soil & Water Conservation Districts--intern), Page Hutchinson (DEQ), Paula Klonowski (VDOE), Andrew W. Larkin (NOAA B-WET), Candace Lutzow-Felling (State Arboretum of Virginia), Keith Morgan, (VA State Parks), Bonnie Murray (Langely Research Center), Ellen Powell (VA DOF), Bill Portlock (Chesapeake Bay Foundation), Michelle Prysby (Virginia Master Naturalists), Kate Quarles (Maymont), Katie Register (Longwood University), Ann Regn (DEQ), David Ruble (DEQ), Lyn Sharp (VA Tech), Dann Sklarew (Potomac Environmental Research & Education Center, GMU), Cindy Smith (George Mason University), Beth Sokolik (Soil & Water Conservation Districts), Lynn Stadelmeier (Agriculture in the Classroom), Tim Taglauer (Shenandoah National Park), Jennifer Underwood (DEQ), Susan Walton (VA Museum of Natural History), Tamra Willis (Mary Baldwin College), Virginia Witmer, (DEQ Coastal Zone Management), Barbara Young (VDOE), Carol Zokaites (DCR)

REPORTS & ORGANIZATION BUSINESS

1. REVIEW OF MINUTES
Minutes of May 27, 2010 business meeting reviewed & approved

2. TREASURER’S REPORT, ANN REGN & DENNY CASEY SUBMITTED
   • Expenses are organized by projects: EE Leadership, Bay Academy, MWEE, & VA Naturally
   • FY is Oct 1 through Sept 30 (Same as federal government)
   • Funds in the black & healthy

3. NEW MEMBERS WITH VOTING PRIVILEGES
   • Beth Hawse, Douthat State Park (Chief Ranger of Interpretation)
   • Barbara Young, Elementary Education Coordinator, VDOE
   • Members gave unanimous approval of these two new members. Welcome!
   • Membership is open to educators in state and federal environmental education agencies, state non-governmental environmental agencies, & institutes of higher education.
• VRUEC serves as a leaders’ council to help facilitate and encourage environmental education in the commonwealth.
• Send Suzie an email if you would like to see a copy of the by-laws, etc.

4. Project Reports

Bay Academies (Paula Klonowski)
RFP issued for 2011 Bay Academy proposals. Institutions that hosted academies in 2010 are welcome to submit a proposal for 2011 academies. New proposals are welcome, as well.

Classroom & Partner Grants (Ann Regn)
January 30th is the deadline for the next round of application. Presently funded by NOAA; content needs to be focused on Chesapeake Bay.

NOAA B-WET (Andrew Larkin, NOAA)
Andrew works in the NOAA Chesapeake Bay Office.
Chesapeake Bay exploration: relates to CB buoys, will be tied into future B-WET grant solicitations.
Academy proposal submissions are encouraged to incorporate buoys into next round of proposals.

MWEE Capacity Building (Page Hutchinson)
This is a NOAA funded project. The aim is to create a MWEE network & a leadership group to create a framework for MWEE field work. The project includes a web page, a watershed educators’ institute & MWEE workshops for teachers.

2010 LOVE-A-TREE (Ann Regn)
• New web-based curriculum for 6th grade launched November 18, 2010: “Window into a Green Virginia”
• New web page created: Learn about Virginia’s environment
• The 2011 Love-A-Tree theme is Virginia Native Plants; project due to VDOE in the fall. This may be the last year for funding.

STEM Initiatives at ODU’S Darden College of Education (Daniel Dickerson)
• NSF ITEST Grant: career development focus; working with MS & HS students and teachers
• Internet 2 evaluation: video conferencing; manages huge amounts of data rapidly; can stream video and conversations with scientists working in the field
• NOAA B-WET grant, final year: students built observational buoys and placed them in the Elizabeth River
• New STEM school: developing a course for masters and PhD programs; restructuring teacher ed program

VDOE (Paula Klonowski)
• New standards have begun to be implemented.
• Curriculum framework will be posted within the next month (February or March); edited version is available on the DOE web site. To find it go to: www.doe.va.gov Click on science subject area: 2010 standards. This will take you to a table with the 2010 standards and framework draft.
• Science Scope & Sequence is in the planning stages. It is important to integrate math & technology & engineering into the curriculum.
• VA animals & their habitat cross-disciplinary curriculum for 2nd grade is now on VDOE web site

**Virginia Naturally Schools (Suzie Gilley)**
This is the 11th year of the program. 4 schools have applied for recognition of 11 years in the program.
The goal of the program is to recognize the efforts of Virginia schools to increase the environmental awareness and stewardship of its students.

**EE Leadership Program (David Ruble)**
• This program began two years ago.
• Education profiles have been revised to make it easier for folks to obtain recognition for professional development training. Profiles are now on the DEQ web site. The web profile is easy to navigate with drop down menus under the various categories.
• Certificates of Completion will be given for the various content areas in which proficiencies have been obtained.
• The goal is to train a high quality cadre of non-formal environmental educators in Virginia. This is a voluntary certification program for environmental literacy.

**EE Regional Team Updates (David Ruble)**
• Teams were established to help develop professional development communities for VA environmental educators.
• Project is funded through EPA.
• A final report template will be distributed to regional teams shortly.

**Other VA Naturally Program Updates (Sheila Barnett)**

**VA Naturally Annual Report, 2010**
• Environmental Education Conference at Montpelier: ~ 185 attendees
• 82 new partners signed up in 2010

**EE Conference**
• Virginia EE Conference will not be held this year because two national conferences will be held in or close to VA this year. In lieu of attending the VA EE Conference, VRUEC members are encouraged to attend one or both of these meetings. The conferences are the Marine Mid-Atlantic Marine Education Association Annual Conference (to be held in Williamsburg, VA) & NAAEE conference (to be held in Raleigh-Durham, NC; Feb 1st is the deadline to submit a presentation proposal).
• VRUEC should be a co-sponsor for the Mid-Atlantic Marine Education Association (MMEA) annual conference; the motion was moved & approved.
• MMEA conference: Will be a lot of emphasis on MWEE this year. Watershed types emphasized will include coastal & inland systems.
• 2011 Watershed Education institute: for info, please contact Page Hutchinson
SUBCOMMITTEE BREAK-OUT SESSION
Attendees selected one of four VRUEC project sessions. The topics and session leaders were:

- Bay Academy (Paula Klonowski)
- Love-A-Tree (Virginia Witmer & Betty Greenwood volunteered to lead the development of this year’s kit)
- MWEE Classroom & Partner Grants (Page Hutchinson)
- EE Leadership Program (David Ruble)

GUEST SPEAKER: Russ Baxter, Chesapeake Bay Coordinator
(Mr. Rick Weeks, DEQ introduced the guest speaker)

**Topic:** Chesapeake Bay TMDL (EPA), Watershed Implementation Plan (WIP; DEQ)
TMDL (total maximum daily load) is defined as the maximum sum of pollutants that a water body can accept & still meet the water quality standards. Water quality standards depend upon the designated uses for the water, such as a fishable or swimmable condition.

**State’s reaction to the WIP:** the state will work with EPA and other state agencies to plan how VA will meet the allocations proposed in the TMDL

James, York Rappahannock, Shenandoah/Potomac, eastern shore: 5 main watersheds in VA
6 states: MD, NY, VA, WVa, PN, Delaware & DC
SNR, SAF, DEQ, DCR, VDACS, DOF, VDH: VA agencies directly involved in WIP
N, Phosphorus, & sediments: pollutants considered in the TMDL
Final WIP submitted to EPA (Nov 29, 2010); accepted by EPA with slight revisions

**Water quality standards measured:** DO, nitrogen, phosphorous, turbidity (clarity), chlorophyll a
TMDL is necessary because the deadline to clean up the Bay has not been met.

**Regulated point sources examples are:** waste water treatment plant, industry; urban/suburban stormwater
Unregulated activities examples are: agriculture, atmospheric deposition

WIP has TMDL allocation benchmarks with timelines; it functions as an accountability framework (for nitrogen, phosphorus, etc.) permitted to enter the Bay.

**Virginia Urban Stormwater:** EPA has enhanced its oversight and has applied contingencies

**WIP:** VA plan for nutrient and sediment reductions from source sectors; proposes management strategies and sector allocations; bills will be introduced in the General Legislature to obtain legal and regulatory authority to fulfill portions of the plan

**2017 target loads:** 60% of reductions need to be accomplished for the 2025 allocations; this is an important check point in the course of the TMDL program

1985 is the baseline year for TMDL measurement.

Chesapeake Bay is on the impaired watershed list due to chlorophyll a, clarity, and D.O. levels; therefore, the TMDL’s focus is on these three water quality parameters.
VABAYTMDL@dcr. Virginia.gov for comments and questions

For More Information:
www.dcr.virginia.gov/soil_and_water/baytmdl.shtml
www.deq.virginia.gov/tmdl/chesapeakebay.html

TMDL info & links to all state WIPs:  www.epa.gov/chesapeakebaytmdl/

Chesapeake Bay Program web site: www.chesapeakebay.net has data that can be used by the general public and by students.

**GUEST PRESENTATION:** *Keep Virginia Beautiful (KVB)*

Mike Baum, *Keep Virginia Beautiful*, Executive Director

Founded around 1953; more than 50 years old; recently revitalized
Five areas of emphasis are: litter prevention, waste reduction, environmental education, beautification, recycling
Web Site: www.keepvirginiabeautiful.org
*Keep Virginia Beautiful* has a Facebook page, too.
For more information, contact Mike Baum at mbaum@keepvirginiabeautiful.org

How can VRUEC help with the plastic bag recycling and other initiatives?
- Sell the KVB stickers (helps raise money for green initiatives)
- Friend KVB on Facebook
- Inform our VRUEC contacts about KVB

**ACTIVITY REPORTS FROM VRUEC MEMBERS & GUEST AGENCIES:**

- **Chesapeake Bay Foundation**: PD opportunity coming up; check CBF web site for information
- **Holspring Farm (Westmorland County)**: pilot program for HS students to conduct field research; wetland restoration
- **Shenandoah National Park**: 75th anniversary this year; June 25th celebration
- **Maymont**: thousands of students come for environmental education programs each year
- **DGIF**: busy with VA Naturally schools
- **George Mason University**: Youth Outdoor Leadership Summit; regional effort to bring together formal and informal educators in northern VA to encourage outdoor-based programs
- **Dept Historic Resources**: planning a 1-day intensive workshop for state personnel who have historic resources as part of their properties (how to id and protect these resources); let Dee DeRoche know who might be interested and particular topics to cover; old buildings, cemeteries
- **VA Museum of Natural History**: annual Jefferson Awards; please send in nominations for natural science education (can get the form from the web site); recognize contributions to natural science education
- **VA Museum of Natural History, Community Nature Initiative Program**: focus on youth leadership; June; for environmental education leaders and teachers to train them in youth leadership; to create sustained environmental leadership in youth; week long intensive training; adult leader training
• State Arboretum of Virginia: developing a climate science symposium for the VA Science Education Leaders’ June, 2011 meeting; developing a series of 5 outdoor-based watershed investigations for all the 6th grade public school students of Frederick County
• Dept of Forestry: New Kent cypress swamp, March 19th forestry event; first green schools training for VA Naturally schools coming up; trained 62 facilitators to deliver early childhood ed; Holiday Lake Forestry Camp coming up in June (for age 13-16)
• VA Master Naturalists: Co-sponsoring an invasive species removal day in May; three new VMN chapters getting started;
• Soil & Water Conservation Districts: State Envirothon program coming up, theme is salt and freshwater estuaries & CB TMDL
• 3 Rivers Environmental Educators: wetlands programs for the public
• Friends of the Rappahannock: Spring break program for HS students traveling the entire R. River
• VA Institute of Marine Science: monthly lectures open to the public; monthly lab activities for families; MWEE capacity building workshop for teachers; May open house science day all labs open; NSF-GK12 program working with 4 schools (2 MS and 2 HS) focus is to get the students outside to do field work
• Central VA EE Alliance: TMDL lecture series
• Claytor Nature Center: more classrooms participating in MWEE’s
• VA State Parks: Partnering with AmeriCorp developing interpretation and outreach education; Youth Ambassador Program: encourages youth aged 16-26 to become volunteer ambassadors at state parks to communicate nature activities at the parks
• Ag in the Classroom: 2011 agriculture literacy week, purpose is to encourage reading about the diversity of agriculture products in VA; looking for new sites to conduct teacher workshops
• Project Underground: 10 workshops in 2010; DCR still doing as much karst work as possible even though federal funding has topped
• VA Air and Space Center: two climate change workshops coming up; teaching teachers to use NASA information on web sites; GPS units are available to lend to educators; lots of free resources available for educators at Langely (come and browse)
• Mary Baldwin College: Master of Education in environment based learning, masters degree, going well; Two teachers in Virginia featured in the Natural Teachers Network sponsored by the Children and Nature Network (Richard Louv)
• Old Dominion University: Conducting research related to climate change or science communication; also provide evaluation and consulting
• NOAA B-WET: stay turned for rfp & workshops and webinars on application process
• DEQ Coastal Zone Management: new issue of CZM magazine is now on-line; first issue since 2008; includes some work on climate change happening in Virginia
• VAST: no formal VRUEC representative on the VAST board; environmental science and resource education needs more of a voice in Virginia science education; networking needs to be more coordinated

Please send your agency updates to Sheila Barnett for uploading on the VA Naturally web site.
NO CHILD LEFT INSIDE UP-DATE (Bill Portlock)
Legislation didn’t make it out of committee; over 2000 organizations are now members of NCLI; go to NCLI or CBF web site to become a member
This legislation is tied in with ESEA; funding proposed at $100 billion nationally, about $2 mill/state; must have an environmental literacy plan for each state to receive this funding

MASTER PLAN DISCUSSION (Ann Regn)
Master plan for environmental education in Virginia currently is being up-dated.
About 79 surveys have been received to provide input for the plan.
Several ideas suggested & several current programs were evaluated.
Ann passed out a list of the ideas: for review, to provide suggestions & to prioritize

Discussion:
• Many of the items on the list are being offered already in our state; need to get the word out more effectively
• How can we increase the impact of PD efforts already happening now? Need on-going connection between schools (teachers) and professional environmental educators.
• Work with what you have: i.e., encourage backyard classrooms.
• Make better connections between available resources and potential users.
• NCLI needs do conduct some intensive marketing with teachers to instill the importance and value of outdoor experiences.
• SOL’s must be firmly in place to encourage/stimulate outdoor-based learning activities
• More outdoor centers that teachers can use would be helpful.
• Funding is essential to promote outdoor, environmental education
• PD for teachers and environmental educators together
• Getting multi-age groups outside together; diverse age groups
• Need to recruit more minorities into environmental education; Natural Teachers’ Network has been successful in recruiting a divers population of environmental education leaders (age and ethnicities)
• Use social media to promote environmental education
• Provide training in outdoor classroom management
• Four focus areas: family and community; schools (students and teachers); environmental educators; outdoor classrooms
• Include faith-based organizations to provide input for environmental education
• Need to recruit private schools, too

Big ideas for master plan focus:
Broaden focus from MWEE to more general environmental education; use social networking more effectively; broaden diversity

Contact Ann if you would like to be involved with the next draft of the plan or if you would like to know more.
ANNOUNCEMENTS
1. Community Nature Initiative Program (Denny Casey). This program has made Denny aware of several initiatives across the country to get kids outside. Search Google for an outdoor bill of rights to get an idea of what is happening. Virginia should discuss what we would like to see in terms of support to get children and adults outdoors more.

Let Denny know if you would like to get involved.

2. VA Bay Education Plan (Ann). Needs to be up-dated. If interested in Bay education let Page Hutchinson know that you are interested in the discussion of the revision of this plan. Page will organize a meeting of interested parties.

VRUEC members were invited to tour the Maymont Nature and Visitor Center at the end of the meeting.

The next VRUEC meeting will be some time in the spring, May or June 2011. Paula Klonowski will send an email to members notifying them of the next meeting place and date.

Respectfully submitted,

Candace Lutzow-Felling

Candace Lutzow-Felling
VRUEC Secretary