DRAFT MEETING SUMMARY
BAY-WIDE STORMWATER PARTNERS RETREAT

October 16-17, 2008
National Conservation Training Center
Sheperdstown, West Virginia

NFWF Stormwater Session

Prior to the retreat, a half dozen NFWF stormwater grantees made solid presentations on their stormwater demonstration projects in Watts Branch, Watershed 263, Opequon Creek, Rockymarsh Run, Corsica Creek and the James River. Initial results from several of these important projects will be posted on the **CSN website**

State and Federal Stormwater Mini-Updates

Major progress is being made in the Bay states, with respect to new stormwater regulations and municipal storm water permits. In a breathless hour, the Partners heard ten presentations highlighting state and federal progress,

Delaware
District of Columbia
Maryland
Pennsylvania
New York
Virginia
West Virginia
EPA Region 3
EPA Chesapeake Bay Program

A summary of each mini-update presentation will be posted on the CSN website

Cluster 1: MS4 Identification, Targeting and Outreach

1A Progress in Developing Bay-wide MS4 Database

Aligning local, state and federal efforts together is critical to achieving local and Bay-wide stormwater goals. **Paula Estornell** (Region 3 EPA) reported on the status of the development of a Bay-wide MS4 database which can be used to quickly communicate with local stormwater managers. The Partners provided the following perspectives on how such a database can be used, maintained and expanded.

- **Paula** indicated there were more than 1000 MS4s in the watershed, as well as 8000 industrial stormwater permits, and an estimated 25,000 construction permits. Paula also presented data that some 80% of these permits are scheduled to be reissued in the next two years.
- **Partners** agreed that the Bay-wide MS4 database would be quite useful and that **Paula** should continue testing and ground-truthing it, and then make it available upon request to interested partners.
- **Shoreh** (NY) requested that New York MS4s in the Bay watershed be added, and agreed to send **Paula** the data by end of month.
- **Partners** agreed that it would be nice to add a column with each MS4's local website, so that it would be possible to get access to required annual NPDES reports.
- *It was also recommended that federal and state permit writers request localities to post their annual reports on their existing local websites as a condition of the public involvement minimum management measure*.
- **ACB** requested that the database be integrated into their outreach tool chesapeakewatershed.network
- **CSN** agreed to write a blog for them on the stormwater retreat by 10/24
- **EPA CBPO** to integrate MS4 database into a GIS format by end of year
- **Partners** agreed that it would ultimately be great to use database to track progress in meeting the six minimum management measures, but this was not doable in the next year.
- Given the size of the database, several Partners suggested that the database be further segregated by state, phase 1/phase 2 status, and early adopters community

1B Targeting the Highest Growth MS4s

Land development is the fastest growing land use in the Bay watershed. **Reggie Parrish** (EPA CBPO) presented the 2030 Bay growth forecasts in the context of local stormwater management, including the overall estimate of watershed growth in developed land and IC, the list of fastest growing MS4s in each state, and the pre-MS4s that are likely to become subject to permits after the next census. The Partners discussed the following

actions on how the growth forecasts influence their targeting of resources and enforcement.

- **Partners** were interested in getting more forecasting data on MS4s on a statewide or regional basis, for both population and impervious cover. (Particularly the top 5 fastest and slowest growing Phase 2s in each state, and the likely pre-MS4s)
- **Reggie** indicated he would provide it **CSN** who would get it out to the **Partners**
- Once again, **Shoreh** and **Jenifer Fais** noted that she wanted to coordinate with **Peter Clagget and Reggie** on the nature of the New York forecasts for the Bay watershed
- **Partners** agreed that a major issue was that much of the future growth in the watershed was occurring outside of regulated MS4s. *Although the construction general permit can help catch these fish that slip through the mesh, there was debate on whether this approach alone was capable of handling the issue.*
- **Ken** (MDE) noted that IC data is useful, it is much more important to determine the quality of treatment of IC by stormwater practices, which can differ greatly by the era in which the development was originally built
- Several **Partners** requested that the forecasts be used to identify rural areas with high quality streams that are expected to experience rapid growth, to guide anti-degradation efforts under CWA.

1C Existing Phase 2 Outreach Tools and Expanded MS4 Communication

There are nearly 1300 communities which need to build or enhance their stormwater programs in the Bay watershed. **Andy Dinsmore** (EPA) described a range of outreach tools recently developed to assist MS4s meet growing program demands, and distributed a list of technical resources to help them. The Partners shared the following additional MS4 resources and subgroups:

WV MS4 list serve (**Sherry Wilkins**)
VA MS4 list serve (**Doug Fritz** volunteered to send it to CSN)
NVRC MS4 group (**Norman Goulet** to send link to CSN
MD MS4 group (**Ron Bowen**)
CWP IDDE, Post Construction and Municipal Housekeeping Guides available on www.cwp.org
PA nonpoint guidebook – (**Spontak** to get more info)

The Partners also offered the following ideas on enhancing outreach to Phase 2 MS4s.

- **CSN** will distribute the technical resources list developed by **Dinsmore** to the Partners
- Deliver targeted webcasts on Phase 2 MS4 program building
- Develop educational materials for local executives and elected officials on why stormwater is a problem and what needs to be done to fix it

- Several partners noted that there is a deluge of new information, and it will be important to carefully package the best and most concise materials to send to Phase 2 communities

Cluster 2: Bay-wide Stormwater Science and Monitoring

2A Unique Bay-wide Stormwater Science Needs

What are our most pressing needs for applied stormwater science? **Bill Stack** presented recommendations on research needed to provide greater scientific support for local and state stormwater management decisions, and the Partners provided an additional list of priority projects below

- Better sampling of gross solids and trash and debris loads
- Testing of the effect of watershed treatment on the Impervious Cover Model
- Source area monitoring for pollutants of concerns (lawns, roofs, streets, etc.)
- Development and testing of better hydrologic computational methods on ESD and runoff reduction practices
- Consider variability of natural ESD systems, avoid single numbers, or at least provide error bars
- Evaluate potential use of continuous versus event based hydrology models
- Evaluate function/performance and longevity of stormwater practices as actually installed and maintained in localities
- Adapt and test stormwater practices for steep terrain
- Greatly expand monitoring efforts to define bacteria removal for stormwater practices and outreach programs
- Acquire better economic data on the construction and maintenance of existing and new runoff reduction practices
- More process research to improve sizing and design of individual stormwater practices
- Measure tree survival in bioretention areas
- Define actual maintenance needs for practices

2B Organizing a 2009 Bay-wide Stormwater Meeting

Stormwater managers need reliable science to make better decisions. **Norman Goulet** (NVRC) asked whether the group thinks a Bay-wide stormwater science meeting or conference is needed to link stormwater researchers with Bay stormwater managers, and invited the group to share any information on forthcoming conference planning. The partners noted the following upcoming meetings in 2009 or 2010

- CWP Stormwater Institute 2010 or 2011
- 2009 ACB Chesapeake Watershed Forum
- 2009 EPA Region 3 Meeting (**Andy Dinsmore**)
- PA VUSP meeting 2010 and 2011 (**TRS to check with Traver**)

- November 2009 Stream Restoration (**Bill Stack**)
- 2009-2011 Annual NFWF Stormwater Funder Meetings (**Amanda Bassow**)

The following actions were noted:

- **CSN** will coordinate with **Andy** on planning the EPA meeting and coordinating future involvement of interested partners
- **CSN** will post a calendar of upcoming local and Bay-wide stormwater meetings on its website
- The partners had an extended discussion on audience targets, topics and timing, but strong focus on actual implementation

2C Prospects for Developing Bay-wide Monitoring Consortium

Reliable funding for needed stormwater research is always in short supply. **Joe Battiata** presented a concept whereby Phase 1 and 2 MS4s can pool some of the funds for routine outfall sampling to support a consortium of stormwater researchers. The Partners had the following reactions

- The **Partners** expressed general interest in assembling a monitoring consortium
- The concept may require some flexibility by EPA/State to reduce or modify current stormwater outfall requirements. Several individuals indicated that while outfall monitoring efforts to date have allowed us to accurately characterize runoff quality, they were not particularly useful in assessing MS4 compliance.
- **Locals** generally indicated they might financially support the consortium, but would need a strong signal from EPA and the states to go forward. Likewise, the Bay research community would not want to get involved until there was a strong probability that monitoring funds would actually be available
- **EPA** indicated some concern that outfall monitoring, or an alternate form of monitoring, is still needed to assure compliance with load reductions in future permits
- All agreed that some seed money would be needed to flesh out the consortium concept, and organize the numerous players in order to proceed.
- **Joe Battiatia** and **CSN** volunteered to draft a more detailed proposal with an alternate form of compliance monitoring to **Jon Capacasa/EPA** by the end of year to see if it can be worked into future permits
- **Phase 1 MS4s** are requested to estimate their annual outfall monitoring budgets to CSN to get a sense of economics
- **Bill Stack** indicated that the Maryland Water Monitoring Council is pursuing a similar pooled approach to assess stream restoration practices in the region.

Future Stormwater Trends in the Bay Watershed

Tom presented several future trends that will change how we manage stormwater, which will be posted on the CSN website. **Tom** also gave a quick recap of a recently released

findings and recommendations from the National Academy of Science report on *Stormwater Management in the United States*. The report calls for radical changes in how States and EPA manage stormwater and excerpts will be **posted on the CSN website**

Cluster 3 Getting Better Practices in the Ground

3A Emerging Themes in Sizing Stormwater Practices

At least five of the seven Bay states are currently revising their regulations as they relate to runoff reduction, enhanced water quality and expanded channel protection. **Randy Greer** (DNREC) compared the new sizing rules and computational methods among the states, and discussed the kind of tools needed to implement them, with an emphasis on how they can be better integrated with quantity controls. The partners had the following recommendations.

- The progress being made in most Bay states to reduce runoff from new development is outstanding and is now very close to operationally achieving EPA's aspirational goal of no net runoff.
- When it comes to redevelopment, there is greater variability among the states, with treatment requirements ranging from the runoff volume produce by the 0.2 to 1.0 inch storm
- The real on the ground issue remains: how to integrate quantity control with quality control- and making sure the resulting system of practices can handle extreme storm events
- Randy noted that more recent rainfall statistics show climate change effects…with greater rainfall intensity for design storms of ten year recurrence frequency or greater.
- **CSN** will work with interested parties to set up a one-time technical workgroup to delve into the quantity/quality/integration questions in the next several months. **Anyone interested** in working on this should contact Tom at CSN.

3B Progress in Developing Bay-wide Design Specifications

New stormwater practices are being invented and old stormwater practices are constantly evolving. **Scott Crafton** (VA DCR) updated the group on progress made in updating 15 different stormwater design specifications in Virginia, and wider efforts to gain Bay-wide peer review to perfect them.

- Most **Partners** strongly agree that development of Bay-wide Design Specs were an important initiative
- **Sherry Wilkins** indicated that she will be issuing an RFP in 2009 to produce a West Virginia Stormwater manual, and the specs would be a good resource for her.
- **Scott** indicated that he was organizing a technical advisory committee to get VA peer review of the specifications over the next six months or so.

- **Tom** encouraged partners to encourage their staff and the larger engineering community to help peer review the new practices. The practices are now posted at the CSN website at www.chesapeakestormwater.net. They are open for comment until the end of the year.
- Some states (**MD/DE**) indicated that it may be difficult to incorporate the specs due to the timing of their regulatory processes (although locals may adopt them in their local manuals)
- **Tom** noted that CSN's intention is to provide an updated resource that can be adapted and adopted in part or in full by localities and states.

3C Terrain-Specific Design Guidelines

Each Bay state has at least one unique terrain conditions that greatly constrain or influence how stormwater practices are applied and designed (and often all three). **Jim Lawrence** (VA Tech) presented on karst terrain, **Jenifer Tribo** (HRPDC) talked about coastal plain issues, and **Rebecca Stack** (DDOE) talked about constraints and opportunities in ultra-urban cities. Key outcomes included:

- **Partners** generally agreed that customized guidance for these three kinds of terrain were needed in the Bay watershed.

- Three work groups were formed to develop and adapt customized stormwater guidance for each kind of terrain

- *Karst:* **Jim Lawrence, Wil Orndorf, Joe Hankins. Mike Eller and Sherry Wilkins** will provide comments on CSN Bulletin No. 1, and help organize a regional workshop in the Ridge and Valley area in Ranson, WV on November 6.

- *Coastal Plain.* **Jenifer Tribo** (HRPD) will assemble comments from tidewater communities on CSN Technical Bulletin No. 2, and **CSN** will work with **Frank and Randy Greer** (DNREC) to arrange a meeting by early winter to help finalize the guidance

- *Ultra-urban*: **Rebecca Stack** (DDOE), **Ted Graham and Chris French** volunteered to form a work group to help **CSN** write a Technical Supplement No. 5 on stormwater design guidance for ultra-urban terrain by the end of 2008

- **Scott Crafton** (DCR) indicated a willingness to forward the finalized guidance in each area to the DCR Technical Advisory Committee for potential inclusion, and other states and localities are encouraged to adopt them as they roll out their guidance in coming years.

- Several partners indicated an interest in developing similar guidance for trout streams. **CSN** will draft some guidance in the first quarter of 2009**.**

Cluster 4: Innovative MS4 Permit Implementation

4A Phase 1 MS4 Permit Implementation Issues

A new generation of Phase 1 stormwater permits is being implemented across the watershed, in response to TMDLs, litigation and other forces. **Hamid Karimi** (DDOE) and Tom (impersonating **Steven Shofar** MCDEP) briefly reviewed the new permit conditions for Montgomery County and the District of Columbia and the practical implementation challenges they present. The Partners discussed coordinated approaches to meet these new permitting challenges, since it is likely that numeric permit conditions will soon migrate to other Phase 1 MS4s in the watershed.

- New permit conditions, particularly those that attach pollutant reductions to permits to address the wasteload allocation of TMDLs to restore impaired urban waters, will increase the complexity and cost of Phase 1 permit compliance.

- Several individuals indicated that greater State help was needed to define pollutant reduction benefits of numerous structural and non-structural practices, such as education and outreach. Others noted that MS4 Phase 1 and 2s will need to work together regionally to help reduce costs. Yet others indicated that a standardized protocol was needed to manage stormwater on a watershed basis, and many others grouched about the lack of local financial resources to comply with permits.

- Several individuals noted the importance of EPA and state enforcement to help backstop budgets for their Phase 1 programs. EPA noted that there had only been one enforcement action in the Bay watershed for a municipality, and that was for a community that refused to apply for required permit coverage

- There was not much consensus on permit implementation issues, but many Partners indicated that it would be good to revisit the topic at a future, and spend more time resolving them

4B Phase 2 MS4 Permit Implementation Issues

Nearly a thousand small MS4s in the Bay watershed are now in the process of adopting the six minimum management measures. **Doug Fritz** (VA DCR) and **Sherry Wilkins** (WVDEP) presented some ideas and challenges to help these small communities in developing effective local programs. The partners offered several ideas below:

- While there were a few violations of ground rules relating to whining, bashing or wind-bagging, the Partners had a lively discussion on how to build local stormwater programs in small communities with limited state or local resources, and weak political support.

- **Bill Stack** volunteered to work with **CSN** on an education/policy message to deliver to executives and elected on the urgency of the stormwater problem, the

benefits of clean streams, and why it is important to allocate budgets to solve the problem.

4C Providing Local Flexibility in Permit Compliance

Several MS4s in the Bay watershed have been national innovators in the restoring the quality of their urban watersheds. **Kevin Magerr** (EPA) led a discussion among the local innovators attending this meeting on how permits can be flexibly structured to foster creative approaches. Some of the highlights of the Partner's discussion included:

- Many progressive Phase 1 MS4s across the Bay are implementing watershed restoration or protection plans, investing in stream restoration and watershed forestry, and monitoring the biological conditions in their streams.

- It was noted that few MS4s were including these important voluntary activities in their permits or annual reports, because they didn't want to have them incorporated within their permits, and prefer to continue them as a voluntary activity rather than a regulated one

- There was a lot of productive dialogue on flexibility issues, but not much consensus in the short time available for discussion

Cluster 5: Collaborating Together in the Future

5A Delivering Stormwater Training Resources

Conservative estimates indicate that more than 5000 engineers, planners and program managers in the watershed will need intensive stormwater training. **Paul Sturm** (CWP) presented a concept for a Bay-wide stormwater training alliance that utilizes existing professional societies, NGOs and private sector design consultants to deliver customized training to both audiences. Paul also asked the Partners about existing training efforts and resources. Key highlights and action items are provided below.

- Delaware was the only state that was actively working to develop a stormwater training program, although other states are contemplating new training efforts as they roll out new regs and or manuals.

- The **Partners** generally agreed with the concept of a Bay-wide stormwater training alliance, although they indicated it had to be customized within each State to reflect differences in their stormwater regulations and requirements

- **CWP** will go forward with drafting a pre-proposal for consideration by NFWF to develop a stormwater training alliance by 10/30/08. Several partners such as **VADCR, DDOE** were supportive of the idea. Should the pre-proposal advance to

the next round, **CWP and CSN** will share the pre-proposal with Partners, involve them in the design of the training program and seek letters of support.

- Several partners indicated that the audience for training should be expanded beyond plan reviewers and engineering consultants. Some audiences include landscape architects, contractors working on federal projects, state and local highway engineers, and elected officials

- Several partners indicated that it would be useful to include a stormwater training needs survey to help design the training effort.

- **Ron Bowen** (AA County) volunteered to set up a meeting in Maryland to address training and related implementation issues

5B Industrial Stormwater Issues

For a number of reasons, industrial stormwater permits are not yet a strong tool to meet local and Bay-wide water quality objectives. Time did not permit any discussion on new regulatory and incentive based approaches to improve the quality of compliance at stormwater hotspots. **Therefore, this topic will be shifted to a future meeting**.

5C Standard Methods for Measuring Program Performance

Local, state and federal agencies will increasingly need to measure or compute the pollutant load reduction achieved through their stormwater programs. Time did not permit any discussion on how scientifically defensible estimates of MS4 pollutant reduction could be developed of addressing the WLA in TMDLs, and whether standardized methods can shared among Bay stormwater managers.

- **CSN** will work up some ideas and share them with the Partners in the second quarter of 2009, and check with Phase 1 MS4s, regulator, and **Luc Classen** (VA Tech) on whether a meeting is needed to discuss it further.

Cluster 6 Next Steps for Bay-wide Stormwater Partners?

Jenn Aiosa (CBF) led a discussion about next steps for the Bay-wide Stormwater Partners, what topics need to be addressed in the future, and whether it makes sense for the group to meet again in 2009.

- **Partners** indicated they enjoyed the meeting, loved the facility, had a great time networking with their peers, learned a lot, and were able to connect the dots about what was happening in other areas of the Bay, and that it was amazing that the group had never been assembled before.

- Tom gave kudos to **Chris French**, **Lou Etgen** and **Donna Morrelli** of ACB for all their help in organizing the meeting

- **Tom** indicated that a draft meeting summary would be produced by the end of October and sent to the Partners for their review, as well as an updated contact list. **Partners** will have until 11/13 to provide any changes or alterations. The summary, as well as the powerpoint presentations and related materials will then be posted on the CSN website by the third week of November. **Tom** will also send a monthly update to the Partners to keep them apprised on the status of follow-up actions that individuals had volunteered to do.

- The **Partners** strongly supported the notion of having a second Bay-wide stormwater partners meeting in 6 to 12 months, and if possible, hold it at NCTC again.

- **Lou Etgen** (ACB) and **Tom** indicated that their organizations would be happy to organize a second meeting, but would need a total of 15 to 20K to make it happen. It is unclear whether some of the great funders who supported this first meeting can do it again, so **Partners** are requested to contact CSN if they have additional sources of funding support

- The Partners indicated a few additional groups should be invited to the next meeting, if it is held. They include DOD folks, state DOT agencies, more Phase 1 and 2 MS4s, and homebuilder representatives, more academics.

- Jenn asked individuals to make commitments to strengthen the Partnership, and these have been included earlier in the text.

- Two commitments could not be slotted, The first is that **CSN** and J. **Spontak** will travel to Harrisburg to brief PADEP stormwater staff who could not come due to travel restrictions on the key retreat outcomes. Also, **CSN** will work with **Jenifer Fais** to set up a meeting with key New York MS4s in the watershed