DRBC Monitoring and Modeling Activities in Response to Paulsboro Vinyl Chloride spill

MAC Meeting
January 9, 2013

Delaware River Basin Commission
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John Yagecic, P.E.

Delaware Valley Early Warning System

8:43 AM, Friday November 30th

DRBC Actions

- **DRBC supports and coordinates with the Unified Command, but not a first responder;**
- **Ran water quality portion of continuous real-time flow and transport model;**
- **Sampling and analysis for Vinyl Chloride in mainstem Delaware River;**
- **Coordinated with water suppliers regarding results of modeling and monitoring.**

EWS Water Quality Event - ID 357 - Message (Plain Text)

File Message

You forwarded this message on 11/30/2012 9:03 AM.
This message was sent with High importance.

From: Notifications@delawarevalleyews.org
Sent: Fri 11/30/2012 8:43 AM
To: Yagecic, John
Cc:
Subject: EWS Water Quality Event - ID 357

A water quality event was reported to the Delaware Valley Early Warning System on 11/30/2012 at 8:42 AM.

Summary information for the event is shown below.

For more information about this event please visit the Early Warning System website at http://www.delawarevalleyews.org, or call the EWS hotline at 1-866-844-0850 and press 2 to listen to the event.

Event Summary Information:
ID: 357
Reported Risk: High
Date/Time: 11/30/2012 7:00:00 AM
Status: Initial Report
Location: West Deptford Twp, NJ, Gloucester County
Waterway where spill was first observed: Unspecified
Description:
NRC#1031908: Collapse of rail bridge over Mantua Creek which leads to Delaware River. Several rail cars entered the creek and at least one tank car holding 1086 Vinyl Chloride has been compromised.

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Automated Flow and Transport Model

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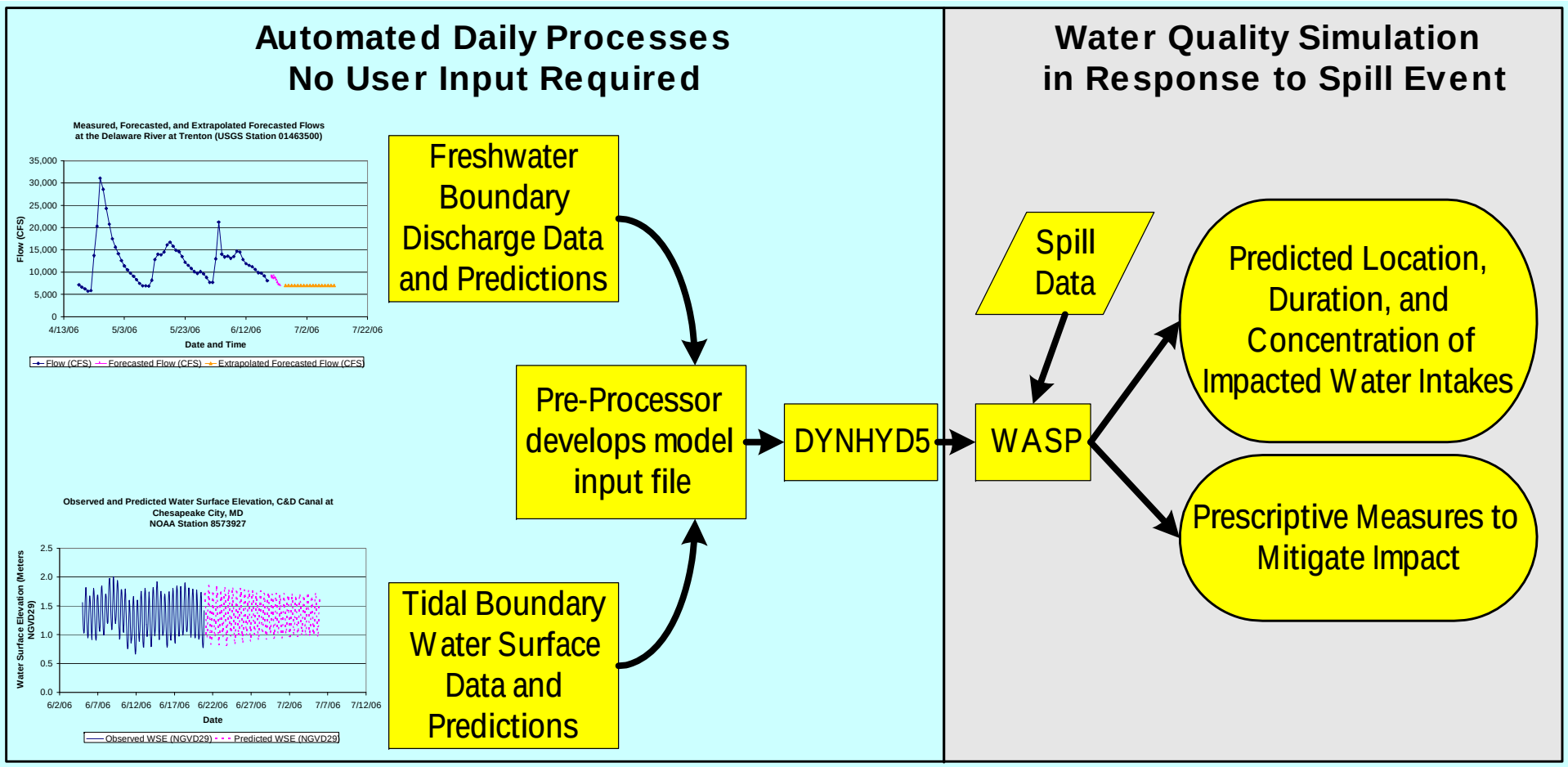

Sampling for Vinyl Chloride

November 30, 2012 and December 3, 2012

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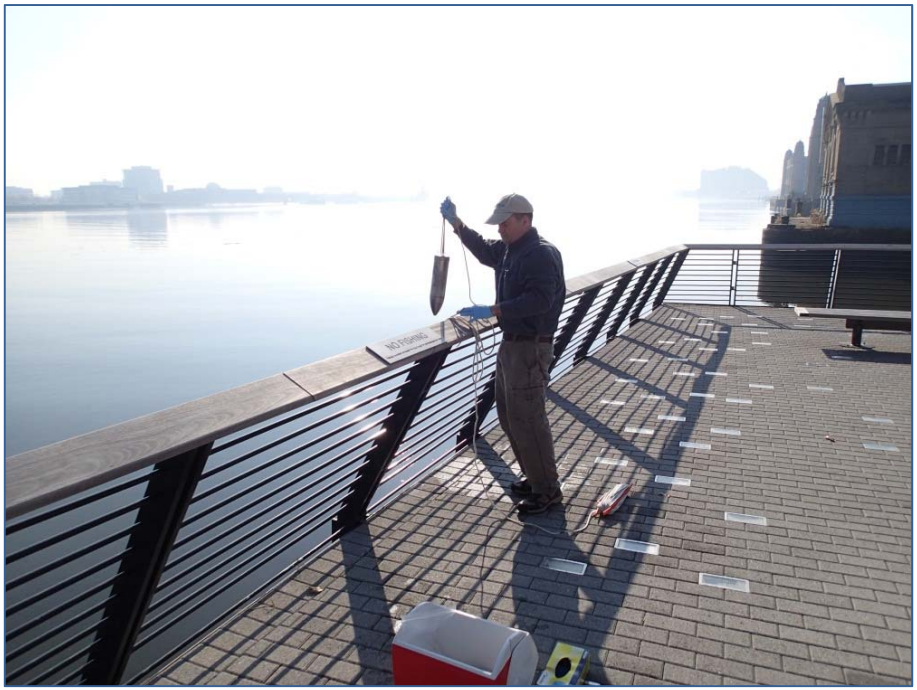
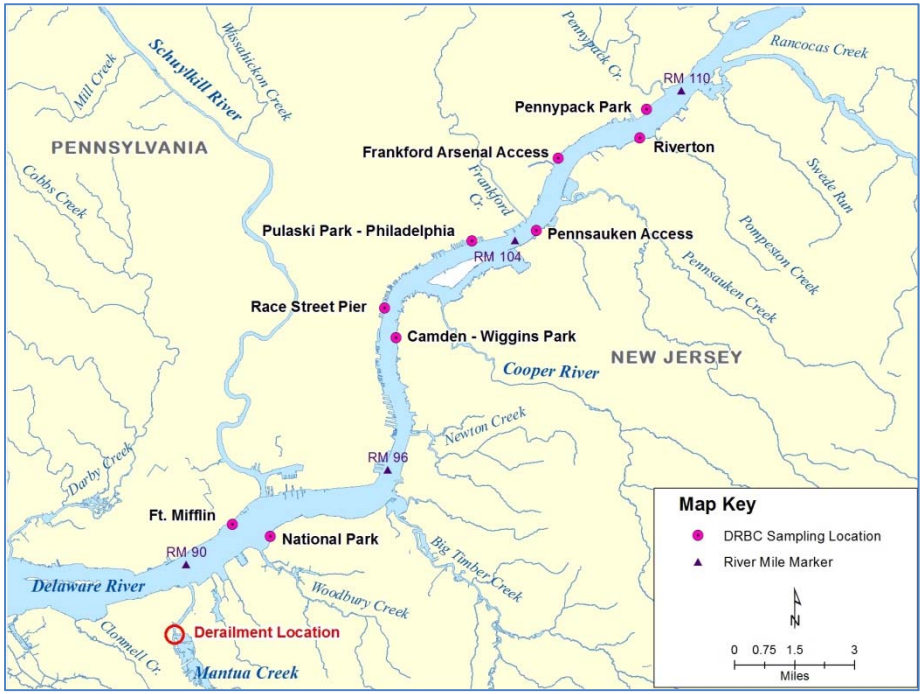
Date	Site	Landmarks	River Mile
Nov. 30, 1423 hours	Fort Mifflin	ACOE Pier	91.5
Nov. 30, 1230 hours	National Park	Pier	92.0
Nov. 30, 1319 hours	Camden - Wiggins Park	Inlet to marina	99.3
Dec. 3, 1102 hours	Race Street Pier	Ben Franklin Br., PA side	100.0
Dec. 3, 1024 hours	Pulaski Park	PA side	103.0
Dec. 3, 1305 hours	Pennsauken Access	Near train bridge, NJ side	104.5
Dec. 3, 1220 hours	Frankford Arsenal Access	PA side	106.5
Dec. 3, 1339 hours	Riverton Yacht Club	NJ side	108.5
Dec. 3, 1427 hours	Pennypack Park	PA side	109.0





DRBC Monitoring Results

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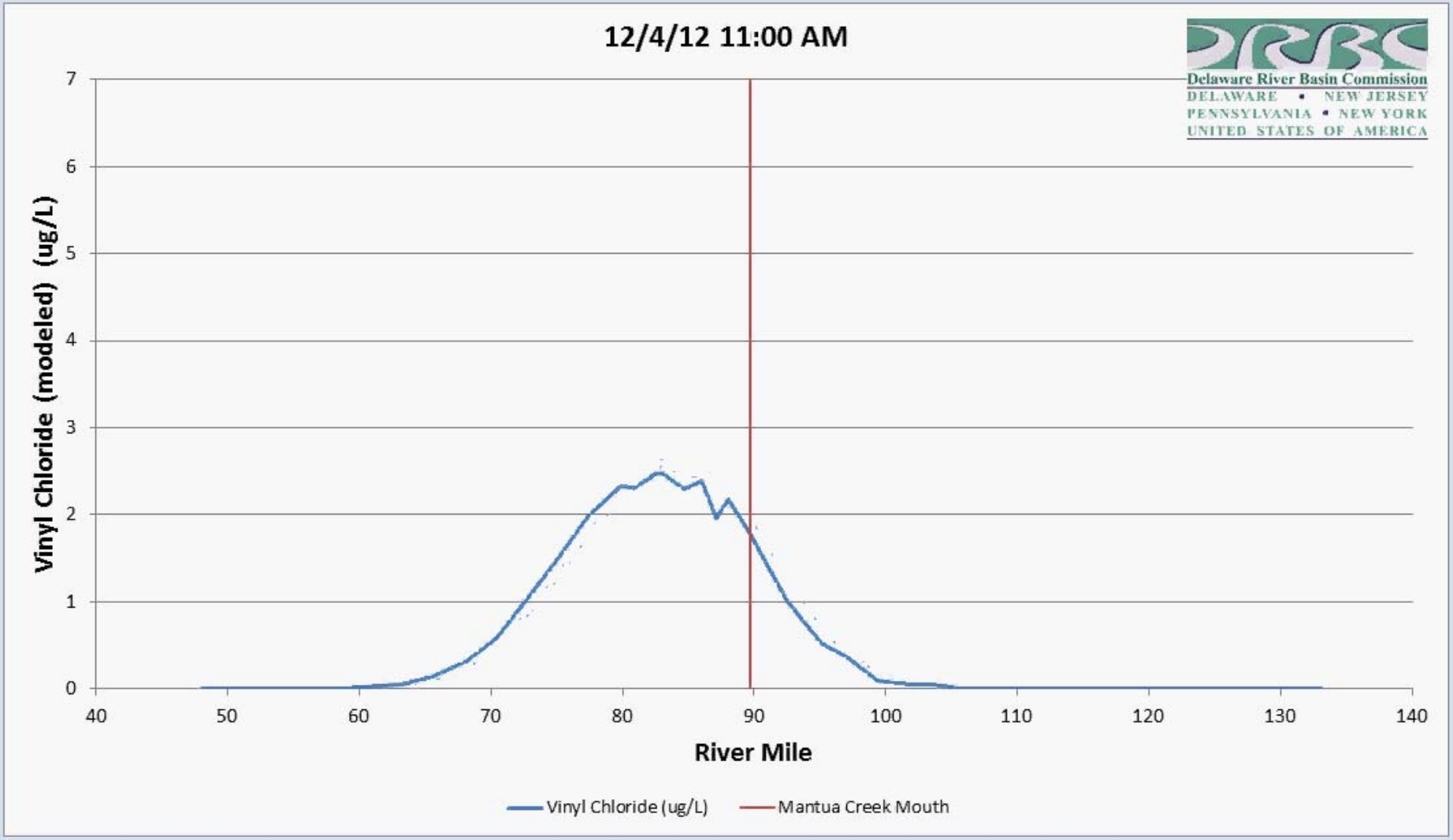
- All samples Non-Detect for Vinyl Chloride at an MDL of 0.24 ug/L;
- All others Method 524.2 non-detect except as shown below:

Sample Location	Parameter	Result	ReportingUnits	Qualifier
Pulaski Park - PA	1,2-Propadiene (CAS) $$ Allene $$ Propadiene $	0.284	ug/L	J
Race St. Pier -PA	Toluene	0.19	ug/L	JR
Frankford Arsenal Access - PA	Ethyl Benzene	0.18	ug/L	JR
Frankford Arsenal Access - PA	m,p-Xylene	1.39	ug/L	
Frankford Arsenal Access - PA	o-Xylene	0.6	ug/L	
Pennsauken Access - NJ	6-Nitrobenzimidazole-1-acetic acid hydrazide	0.312	ug/L	J
Pennsauken Access - NJ	Acetone	0.63	ug/L	
Pennypack Park - PA	2-Methylpyrrolidino[4,3-f]perhydroisoquinoline	0.578	ug/L	J
National Park - NJ	Tetrahydrofuran	0.84	ug/L	
Fort Mifflin - PA	7-(1-n-hexylethenyl)bicyclo[4.1.0]heptane	0.336	ug/L	J
Fort Mifflin - PA	Naphthalene	0.18	ug/L	JR
Fort Mifflin - PA	Propanal, 2-methyl-, (2,4-dinitrophenyl)hydraz	0.324	ug/L	J



Modeled concentration of vinyl chloride in the Delaware River from the release in Mantua Creek, near Paulsboro, NJ on November 30, 2012.

http://www.youtube.com/watch?v=gAYjWld4cn0

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Questions?

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