

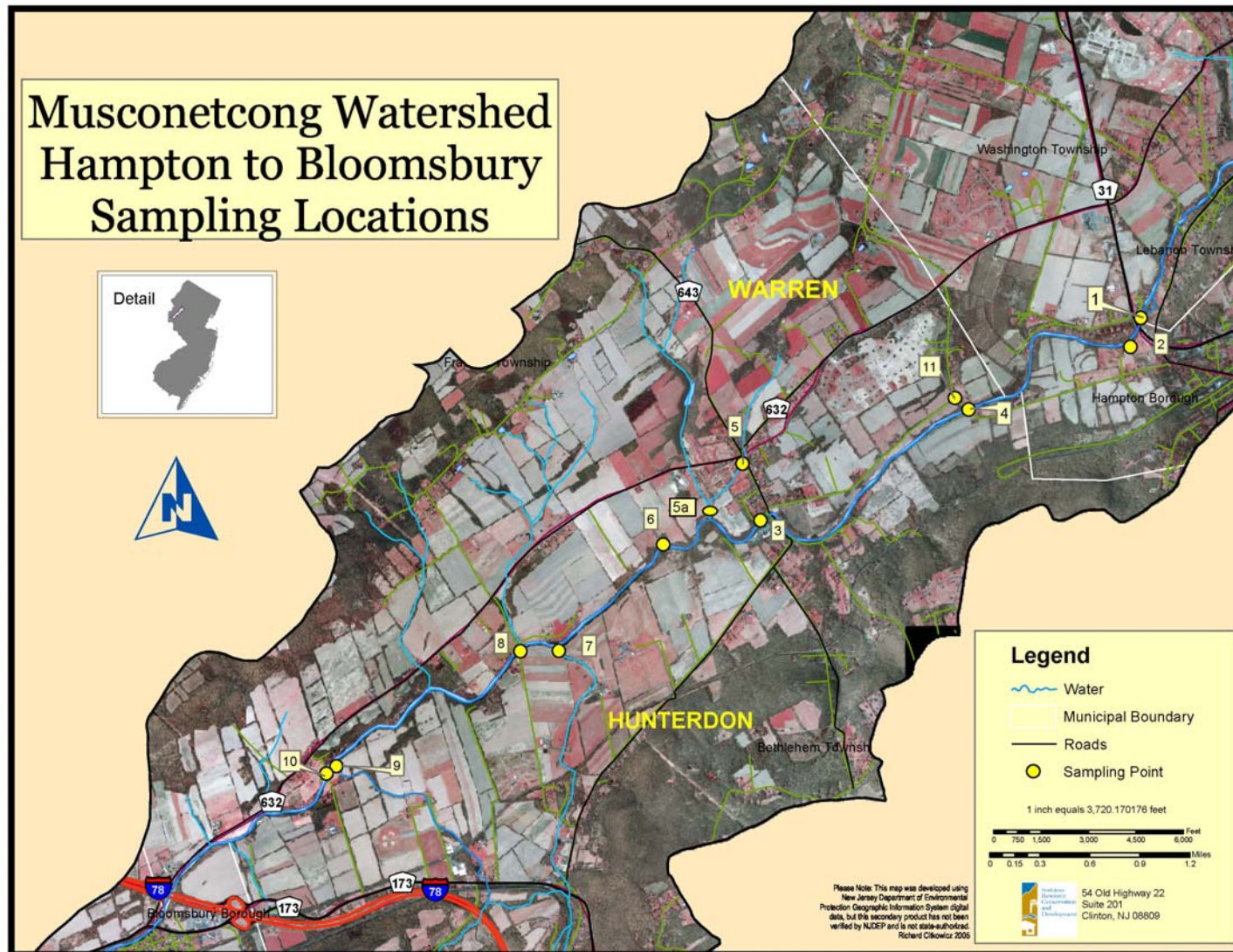
The background of the slide features a large, faint watermark of the Rutgers University seal. The seal is circular and contains the text "RUTGERS UNIVERSITY" around the perimeter and "1823" at the bottom. The seal is centered behind the main text.

RUTGERS

New Jersey Agricultural
Experiment Station

Musconetcong River Watershed Restoration Plan Monitoring Program

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Note that Site 3 and Site 5 on this map are not included in this study.

MONITORING PROGRAM – *Biweekly Surface Water Sampling*

- Samples will be collected from all locations twice (2x) a month, independent of weather, from May through October 2007 (12 events).

5/29 & 5/30; 6/4 & 6/18; 7/2 & 7/16
8/6 & 8/20; 9/10 & 9/24; 10/8 & 10/22

- Three (3) additional samples will be collected from all sampling locations, independent of weather, in June, July, and August 2007 for fecal coliform and *E. coli* analyses for nine (9) additional sampling events.

6/11, 6/13, 6/25; 7/9, 7/23, 7/30; 8/2, 8/13, 8/27

MONITORING PROGRAM – *Wet Weather Surface Water Sampling*

- Three (3) wet weather sampling events, at a minimum, will be conducted between May and October 2007 at each station.
- The wet weather samples for this plan will be in addition to the 12 biweekly sampling events.
- Collection of samples will begin at the onset of the storm (i.e., a storm predicted to produce a minimum of ½ inch of precipitation), and an attempt will be made to span the course of the event.

*No suitable wet weather sampling events
have occurred to date!*

Wet Weather Samples?

- USGS program PART used to estimate base flow
- 36 hour rainfall totals from local weather stations

Based on flows above calculated base flow and rainfall within 36 hours of sample collection, probable storm events include:

1. June 4, 2007
2. July 30, 2007
3. August 13, 2007

MONITORING PROGRAM – *Biological Sampling*

- Samples of the benthic macroinvertebrate community will be collected in accordance with the Rapid Bioassessment Protocol (RBP) procedure used by the NJDEP Bureau of Freshwater and Biological Monitoring.
- Benthic macroinvertebrates will be collected from Sites #1 and #10 two (2) times (i.e., once in early summer and once in late summer).

6/21 & 9/6

PARAMETERS

- *In situ*
 - dissolved oxygen
 - temperature
 - pH
- Nitrogen
 - ammonia
 - TKN
 - nitrate
 - nitrate
- Phosphorus
 - total
 - dissolved ortho-P
- Bacteria
 - fecal coliform
 - *E. coli*
- Solids
 - total suspended solids (TSS)
 - total dissolved solids (TDS) –
only as part of benthic monitoring
- flow
 - stream width
 - stream depth
 - stream velocity
- Benthic monitoring

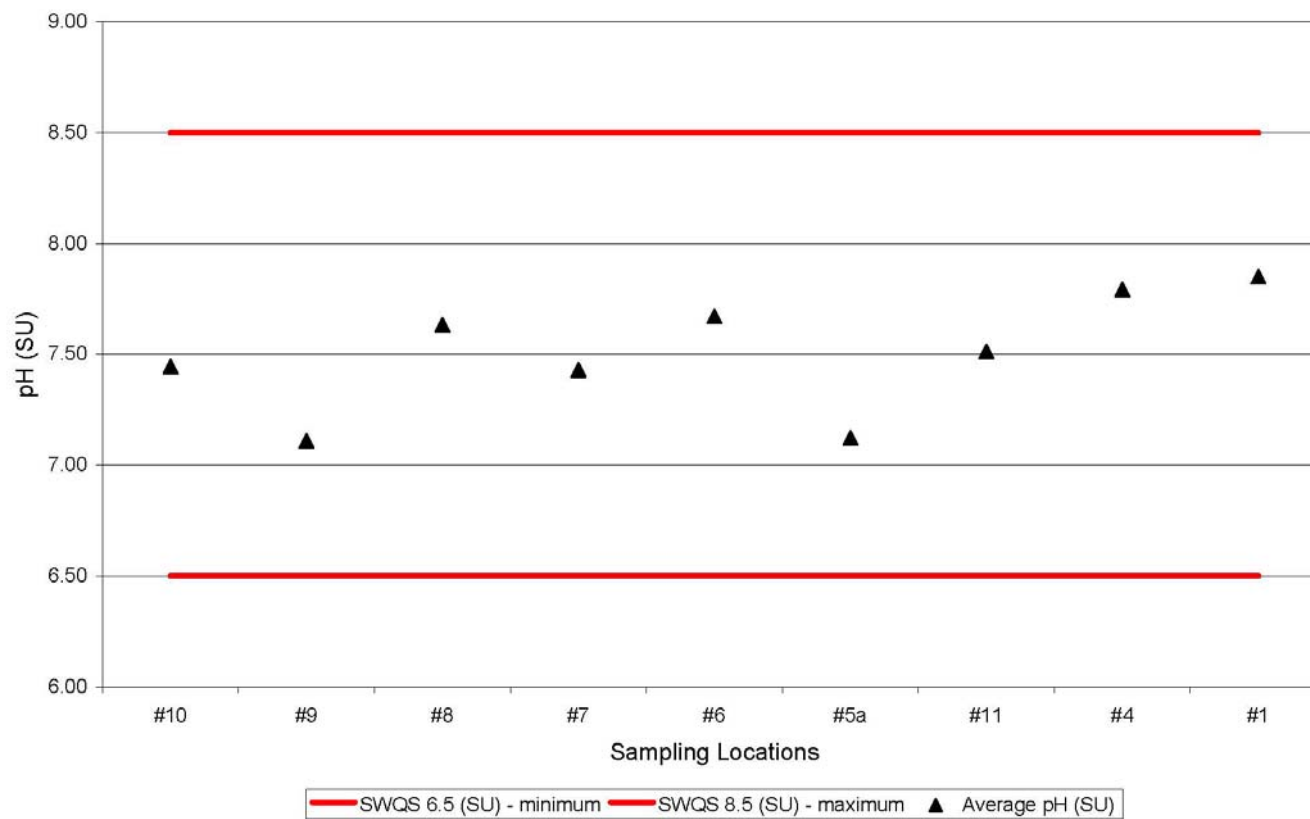
2004 & 2006 INTEGRATED LISTS and TMDL

- *2004* – Sublist 5 for non-attainment of aquatic life, pH, and fecal coliform
- *2006* – Sublist 4 for fecal coliform
- *TMDL* – 93% reduction in nonpoint source fecal coliform loads

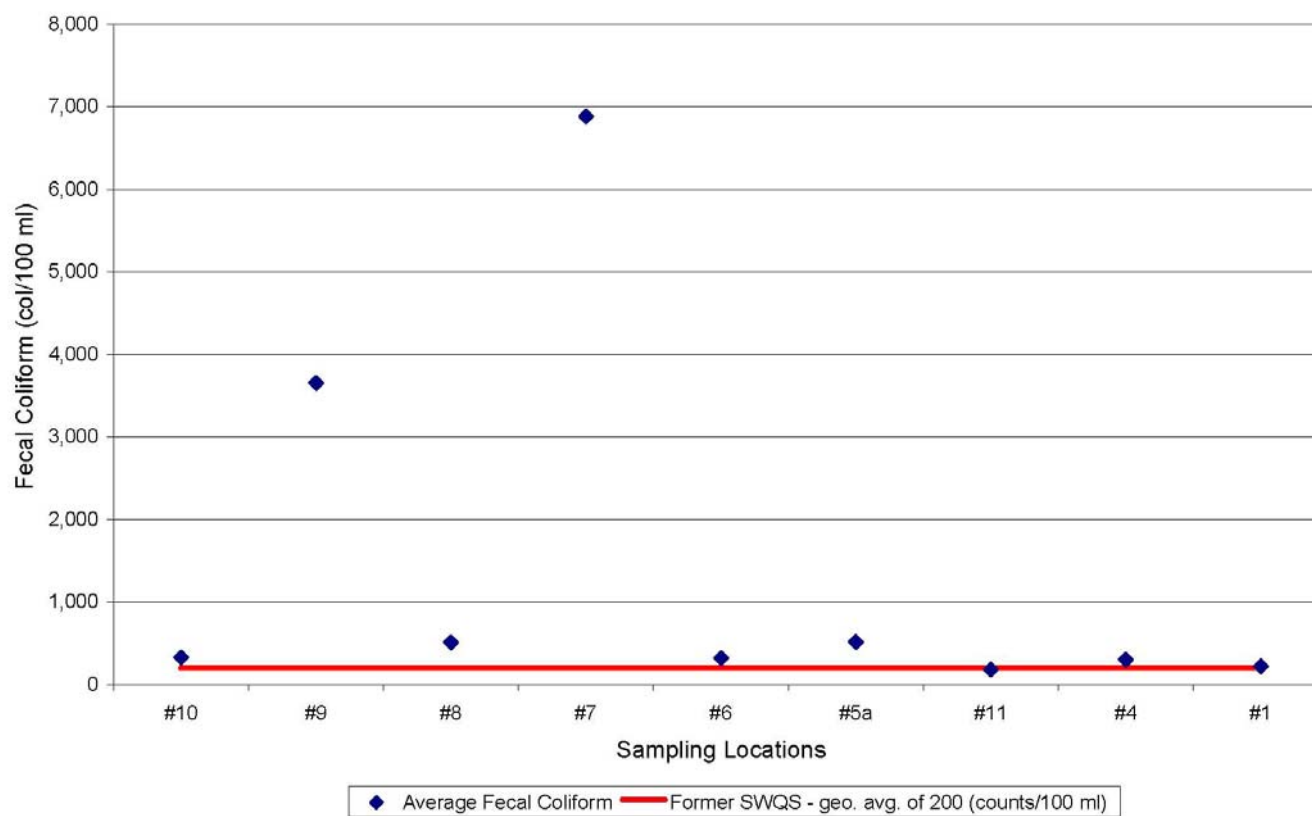
MONITORING PROGRAM – *Biological Sampling – Preliminary Results*

Location	Date	NJIS Score	Biological Assessment
AN0072 – upstream of study area	8/5/92	27	Non-impaired
	7/8/97	15	<i>Moderately Impaired</i>
	11/20/02	24	Non-impaired
Location 1	6/21/07 & 9/6/07	27 & 27	Non-impaired
	9/6/07	27	Non-impaired
AN0073 - Location 10	2/22/93	24	Non-impaired
	7/8/97	30	Non-impaired
	11/7/02	30	Non-impaired
	6/21/07 & 9/6/07	30 & 27	Non-impaired

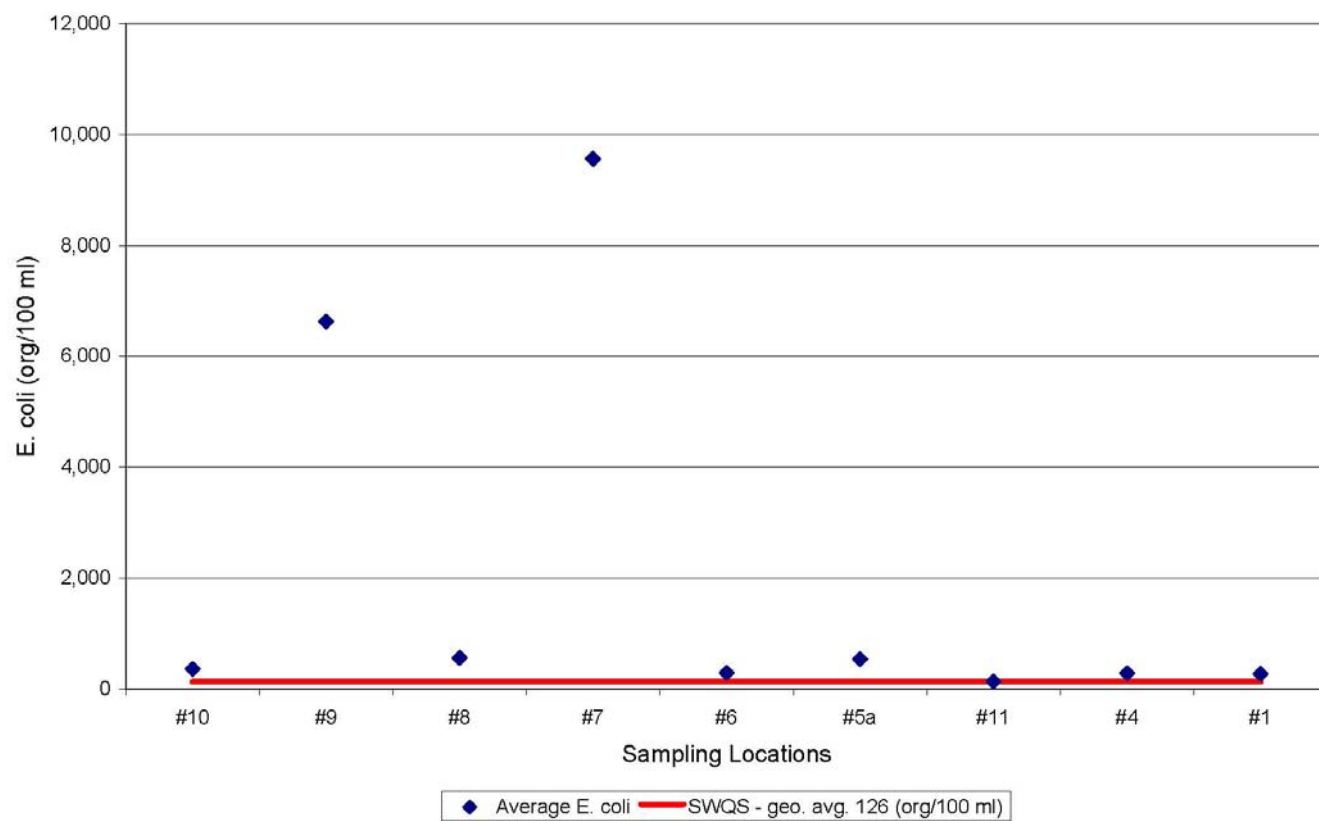
Musconetcong River - Average pH



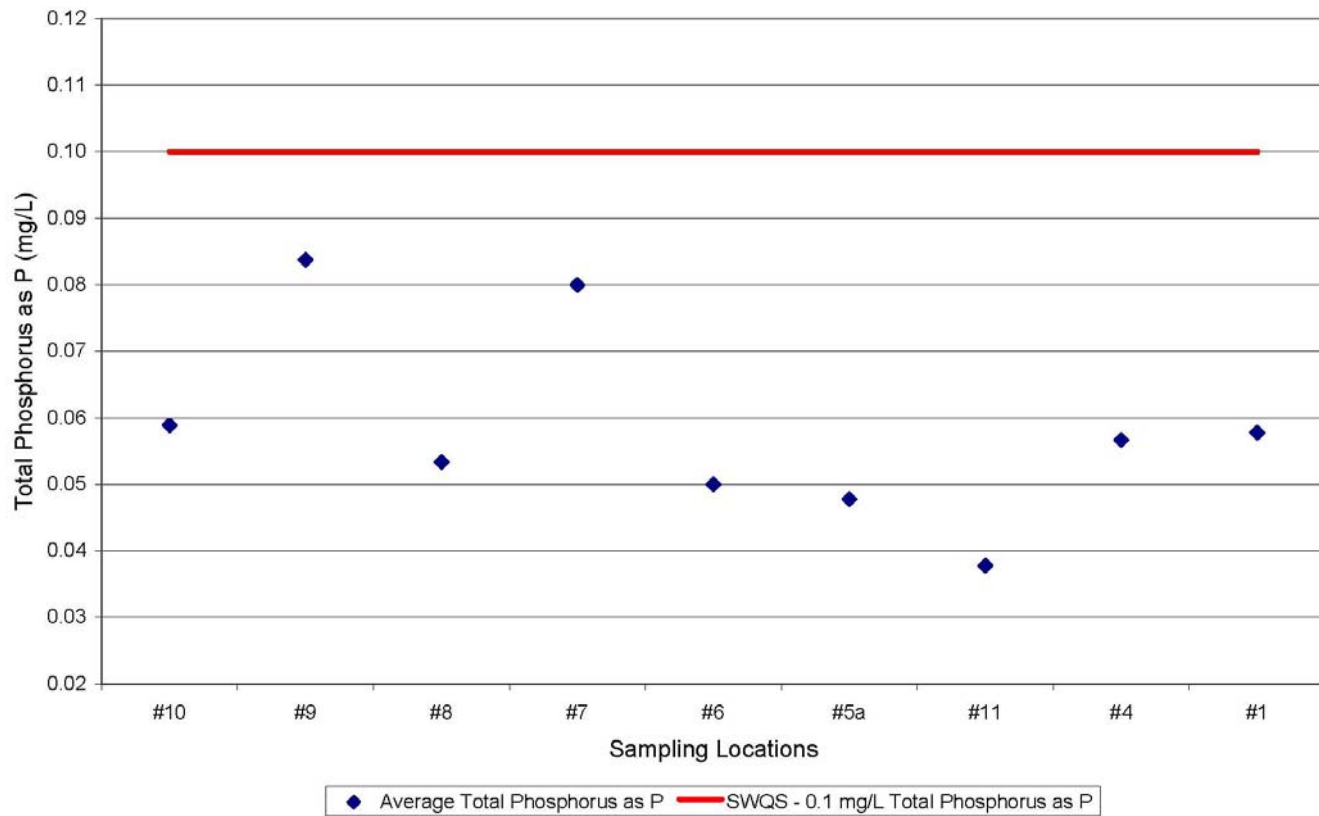
Musconetcong River - Average Fecal Coliform



Musconetcong River - Average E. coli



Musconetcong River - Average Total Phosphorus



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QUESTIONS?

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Thank you!