

**North Carolina Division of Water Quality
Water Quality Section
Environmental Sciences Branch**

January 23, 2004

MEMORANDUM

To: Michelle Woolfolk
Trish MacPherson

Through: Dianne Reid *Dmr*

From: Kurt Trumbower *KT*

Subject: Perry Creek Stressor Study Reconnaissance Survey

A stressor study reconnaissance survey of the Perry Creek (NEU02) watershed was performed on January 15, 2004. This survey was performed to assist the Biological Assessment Unit with study design for the summer of 2004 and should be considered as a reconnaissance to facilitate site selection for biologists and for a more intensive stressor study watershed survey to be conducted later in 2004. The survey consisted of visual observations, sampling for physical parameters (temperature, DO, conductivity, pH), and mid-channel depth and surface water velocity. A map of the stations surveyed is also attached.

Physical measurements, depths and velocities were performed at each station and are listed as follows in upstream to downstream order (numbers correspond to stations in Figure 1):

<u>Location</u>	<u>Time</u>	<u>Temp.</u> (°C)	<u>D.O.</u> (mg/l)	<u>pH</u> (s.u.)	<u>Cond.</u> (u./cm)	<u>% sat.</u>	<u>depth</u> (ft)	<u>velocity</u> (ft/sec)
PC1. Perry Creek at Rainwater Road 35°52'50.23"N 78°36'20.83"W	1215	9.1	10.3	6.3	78	89.4	0.60	0.23
PC2. Perry Creek at Litchford Road (SR 2012) 35°52'29.47"N 78°35'44.76"W	1200	8.2	10.0	6.1	125	84.9	0.35	1.07
PC3. Perry Creek at Power Line off Jacqueline Lane 35°52'31.93"N 78°34'12.15"W	1120	6.7	11.9	7.7	149	97.3	1.15	0.13
PC4. Unnamed Tributary to Perry Creek downstream of I-540 35°52'32.80"N 78°34'6.98"W	1110	4.6	11.9	6.8	87	93.6	0.75	0.42
PC5. Unnamed Tributary to Perry Creek at Fox Road 35°52'17.19"N 78°33'9.30"W	1010	7.8	10.7	6.2	85	89.9	0.40	0.40
PC6. Unnamed Tributary to Perry Creek at Berkshire Downs Drive (SR 3514) 35°52'48.44"N 78°33'8.89"W	0950	6.0	11.6	6.5	90	93.2	0.42	0.61
PC7. Perry Creek at Perry Creek Road (SR 2006-historical biologically impaired site) 35°52'46.95"N 78°32'52.76"W	0915	5.8	10.9	6.6	117	87.2	0.65	0.78

Sandy creek bottoms, sandbars, stream bank erosion and other indicators of sedimentation were seen at several stations monitored. This was especially prevalent at the most downstream stations and at the unnamed tributaries monitored. At the two most upstream stations, Perry Creek at Rainwater Road (station PC1) and Perry Creek at Litchford Road (station PC2), the creek bottom was more rocky in nature. Water clarity was good at most stations, except Perry Creek at the power line off Jacqueline Lane (station PC3) where the creek was more turbid. At this station, a pool area followed by a small rocky waterfall was present. Periphyton was observed at several stations including the unnamed tributary to Perry Creek at Berkshire Downs Drive (station PC6). At this station, residential lawns were located right next to the creek. Large amounts of commercial and residential development associated with the City of Raleigh are located in the watershed. Sewerlines, manholes, and stormwater drains were observed near several stations monitored.

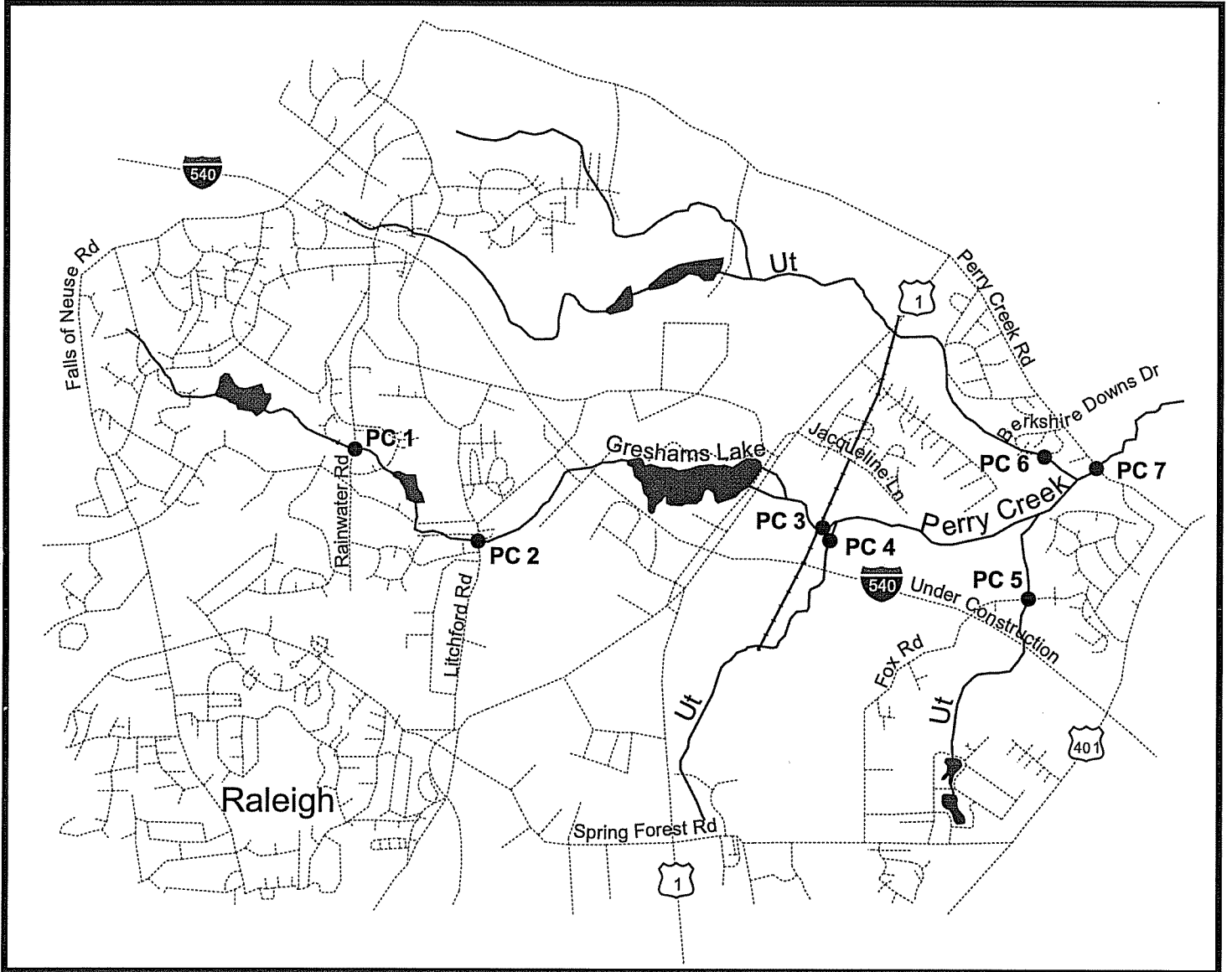
Please feel free to contact me at 919-733-6510 if you have any questions or desire additional information. Please also note that on the memorandum concerning the Heatherly Creek Stressor Study Reconnaissance Survey (December 19, 2003) mid-channel depth units were mistakenly listed as meters rather than feet.

cc: Darlene Kucken

Kem Schuster, RRO

Figure 1

Perry Creek Stressor Study Reconnaissance



- Sites
- Lakes
- ~ Powerline
- ~ Streams
- ~ Roads

