

Item # 2

Agenda date: June 3, 2004

MEMORANDUM

To: Montgomery County Planning Board

Via: Jeff Zyontz, Chief, Countywide Planning
John E. Hench, Natural Resources Manager, *J. Hench*
Park Planning and Resource Analysis Unit

From: Doug Redmond, Principal Natural Resources Specialist,
Park Planning and Resources Analysis Unit

Subject: South Germantown Recreational Park Environmental Assessment
Monitoring Report – 2003

Recommendation:

Approve the report for transmittal to the County Council. A copy of the executive summary is attached.

Background: The Water Quality Monitoring Plan, South Germantown Recreational Park (SoccerPlex), requires that the results of each year's monitoring be reported to the County Council. The report is to be drafted by Park and Planning staff, reviewed by the Maryland Soccer Foundation and the Montgomery County Department of Environmental protection, and presented to the Planning Board prior to transmittal to the County Council. The report has been reviewed as required, and comments incorporated as appropriate.

Indices of Biological Integrity (IBI) are used to evaluate the quality of the biological community at each monitoring site. In 2003, macroinvertebrates were monitored at six sites. Two of the sites were monitored to evaluate impacts from the construction and operation of the model airpark, which was moved from the South Germantown Recreational Park to Little Seneca Stream Valley Unit 1. These sites had lower scores than the previous year, with one rated good and the other rated fair. Two of the four sites within South Germantown Recreational Park were rated fair and the other two were rated poor.

Fish were monitored at the same six sites. The two sites at the model airpark were rated good. Of the four sites within the Recreational Park, two were rated good and one was rated fair. The fourth site was rated poor, as it has been since 1998, but the number of fish found at the site was by far the highest of the six years in which the site was monitored.

In 2003, residential wells were monitored once and on-site wells were monitored twice. Nitrates exceeded the EPA's maximum contaminant level (MCL) in one of the residential wells and one of the on-site wells (both sampling events). Coliform bacteria were found in four of the five residential wells and in five of six samples from the on-site wells. E. coli was found in one residential well and in one of the samples from the on-site wells. No other substances exceeded MCLs in any of the wells.

IBI scores at several sites, especially for macroinvertebrates, indicate that the aquatic communities are under some stress. While there are some indications that sediment, primarily from construction outside of the park, may have impacted the sites, it is likely that the drought conditions experienced in late 2001 and through most of 2002, followed by record high rainfall in 2003, are the major stressors. **At this point, there is no indication that construction or operation of the South Germantown Recreational Park, including the SoccerPlex, is having a significant negative impact on the quality of surface or ground water.**

Pc: Lester Straw
Gordon Rosenthal
Jim McMahon
Mike Riley
Judy Daniels
Trisha Heffelfinger

I. Executive Summary

The Maryland-National Capital Park and Planning Commission (M-NCPPC) acquired the South Germantown Recreational Park (SGRP) in the 1960's. The Park Master Plan was approved and adopted in 1995. In 1999, the Master Plan was amended to include SoccerPlex – a soccer complex to be developed as a public/private partnership between the M-NCPPC and the Maryland Soccer Foundation (MSF).

This document is the sixth report on the progress of the water quality monitoring activities associated with the development of the SGRP/SoccerPlex project. The South Germantown Recreation Park is located in the west-central portion of Montgomery County between Gaithersburg and Poolesville (Figure 1).

The park is located in two watersheds. The northern section of the park is in the Hoyles Mill Tributary sub-watershed of Little Seneca Creek. The southern section of the Little Seneca Stream Valley Unit 1 was added in 2000 due to the construction of the relocated model airpark. The 2 sites monitored are located south of Schaeffer Road. The locations of the streams monitored are indicated in Figures 2 and 3. The Hoyles Mill Tributary is Use III-P (natural trout/public water supply) stream. The biological condition of the stream was rated Good in the 1998 Countywide Stream Protection Strategy (CSPS) document and Fair in the 2003 update. Little Seneca Creek is Use III-P and the Bucklodge Branch is Use I-P. Both the Lower Little Seneca sub-watershed and the Bucklodge Branch sub-watershed were rated Good in the 1998 CSPS. The 2003 update rates the Lower Little Seneca as Excellent and Bucklodge Branch remained Good.

The South Germantown sub-watershed of Great Seneca Creek contains approximately 15 small tributaries, two of which originate within the SGRP. All the tributaries in this sub-watershed are Use I-P (water contact recreation/public water supply) streams and their biological condition is rated Good by the CSPS. The two tributaries, which originate within the park, are designated as the Schaeffer Road Tributary (crosses Schaeffer Road and flows south-west into Seneca Creek State Park) and the Route 118 Tributary (begins south of Schaeffer Road, crosses MD 118, and flows southeast then south into Seneca Creek State Park).

This report contains the results of monitoring conducted during 2003. The monitoring sites of the streams are specifically located to provide information for SGRP/SoccerPlex and Little Seneca SVU1. Monitoring followed the Montgomery County Department of Environmental Protection (MCDEP) protocol (Van Ness, et al. 1997) and a portion of the Maryland Biological Stream Survey (MBSS) protocol. The protocols include fish, macroinvertebrate, habitat, water chemistry, and water temperature monitoring. Ground water was collected by a consultant and analyzed according to state and federal drinking water guidelines.

Changes to the monitoring protocol were made in the 2001 season and four of the six sites were renamed. Of the two sites on the Hoyles Mill Tributary the upstream site is now LSHM101a and the downstream site is LSHM101b. LSL410 is now LSL411 and LSBL303 is now LSBL305. These changes were in nomenclature only, not location. Macroinvertebrate collection is now done with a D-net and 20 samples are taken, instead of 2 samples with a kick seine. Fish monitoring has changed from a 3-pass protocol to a 2-pass protocol. The changes were made to more closely follow MBSS monitoring procedures, and are supported by an EPA study comparing the two methodologies (Roth, et al., 2001)

Indices of biological integrity (IBI) measure how closely the biological communities at specific sites resemble reference or best attainable conditions in the County. Of the four SoccerPlex sites two of the macroinvertebrate IBIs showed an improvement from the previous year. The biological integrity classification for LSHM101b remains Fair but its score has decreased by 6 points from the previous year. GSLS102 continues to be Poor, with a score of 12 (up 2 points). GSLS202 fell to Poor with a drop of 6 points. The other SoccerPlex site, LSHM101a, has increased significantly from last year. The IBI went up from Poor in 2002 to Fair in 2003.

2003 was the fourth year of macroinvertebrate sampling at the Model Air Park. LSBL305 dropped from Excellent to Good and LSL411 dropped from Excellent to Fair.

Fish IBI's for three of the SoccerPlex sites remained the same with some variation in score. LSHM101b continues to be Good with a score of 38. GSLS202 maintain its score of Good but dropped four points. The GSLS102 site maintained its classification of Poor. However the total number of fish collected has increased considerably since 2000. No fish had been found at this site in 2000, 21 were found in 2001, 197 were found in 2002, and 276 were collected in 2003. LSHM101a decreased from Good to Fair. Neither of the Model Air Park sites had been sampled in 2002. Flows in LSBL305 were too low to allow for fish collection and flows in LSL411 were too high due to water releases from Little Seneca Lake. In 2003 both sites received a score of Good.

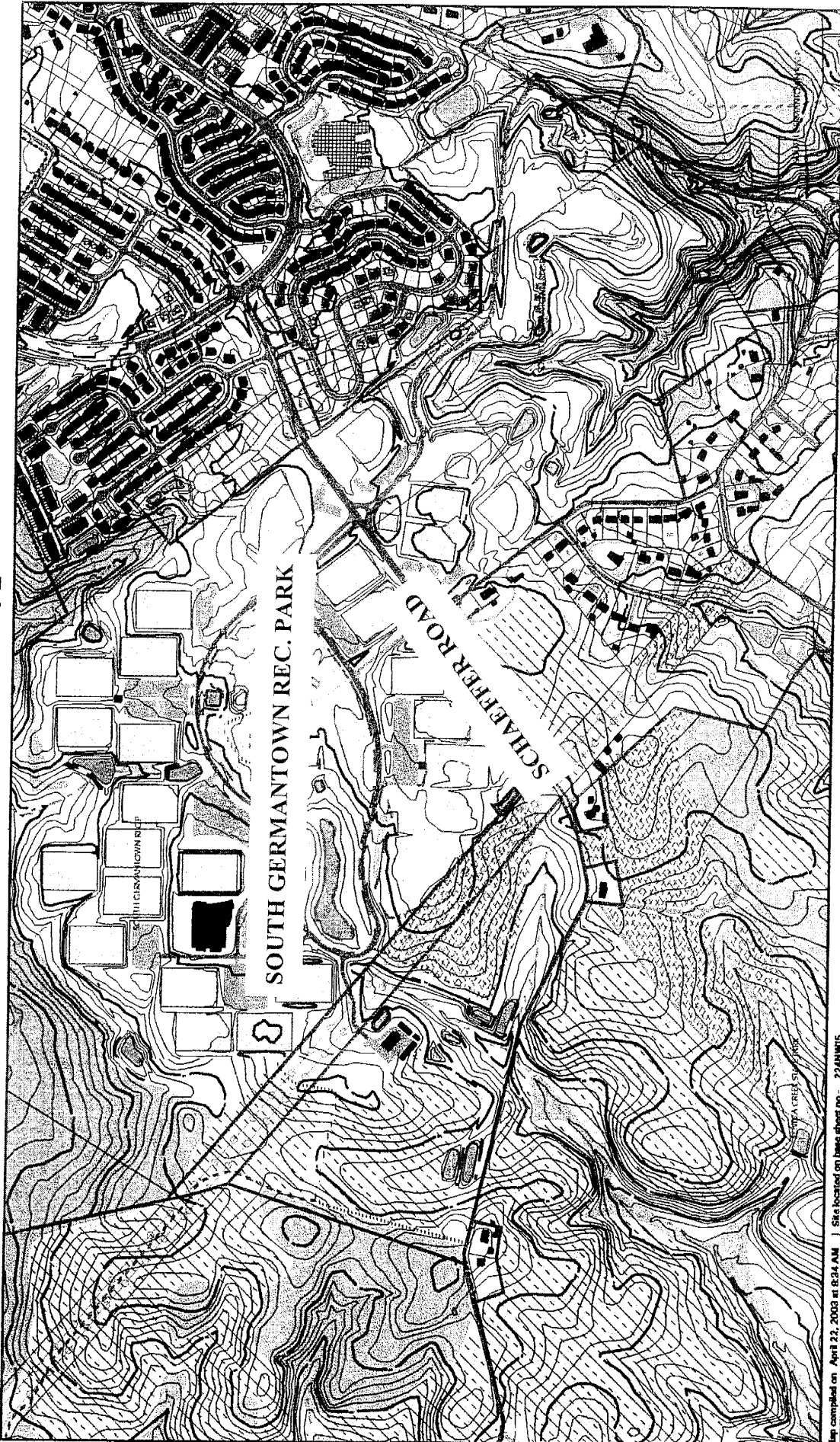
Water temperatures at two of the four SoccerPlex sites were on average cooler in 2003 than 2002. The 2002 data for GSLS202 is incomplete due to the loss of the temperature meter mid-summer. Therefore no conclusions can be drawn between the two years. The average temperature at GSLS102 was slightly warmer in 2003 than in 2002. The Model Airpark sites were cooler overall in 2003 than in 2002.

Comparison of the habitat data for the six sites from 1998 through 2003 indicate only slight changes in the stream cross-sections. In 2003 LSHM101a and LSHM101b indicated slight scouring toward their right banks. LSBL305 has seen a continual increase in sedimentation of the streambed and erosion of both banks since 2001. Only minor changes in the median substrate size were seen at most of the sites. GSLS102 saw the greatest change with an increase of two size classes.

Five residential wells were sampled in 2003. Three on-site wells were sampled twice in 2003, due to the sampling scheduled for 2002 being delayed until January 2003. The only new substance found in the residential wells was naphthalene in very low concentrations (in 3 wells). No new substances were found in the on-site wells. Coliform bacteria were found in four of the five residential wells, and one of the samples contained fecal coliforms. Coliform bacteria were also found in five of the six samples from the on-site wells and one sample contained fecal coliforms. Nitrates were detected in all samples from 2003 (as well as from all previous samples); Chloride was detected in all samples except one of the on-site wells in January 2003. There is no indication that groundwater quality is changing from pre-construction conditions.

Overall, the 2003 monitoring data indicate little change in the conditions of the two sites located in Little Seneca. There does appear to be a decrease in the quality of the macroinvertebrate habitat at one of the four sites in the Recreational Park. However, thus far there do not seem to be any significant negative environmental impacts from either the operation or construction of the SoccerPlex.

VICINITY MAP FOR
SOUTH GERMANTOWN REC. PARK MONITORING



Map compiled on April 22, 2003 at 8:24 AM | Site located on base sheet no. 224NWT5

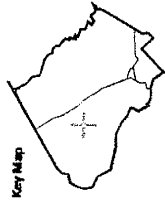
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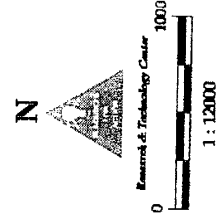
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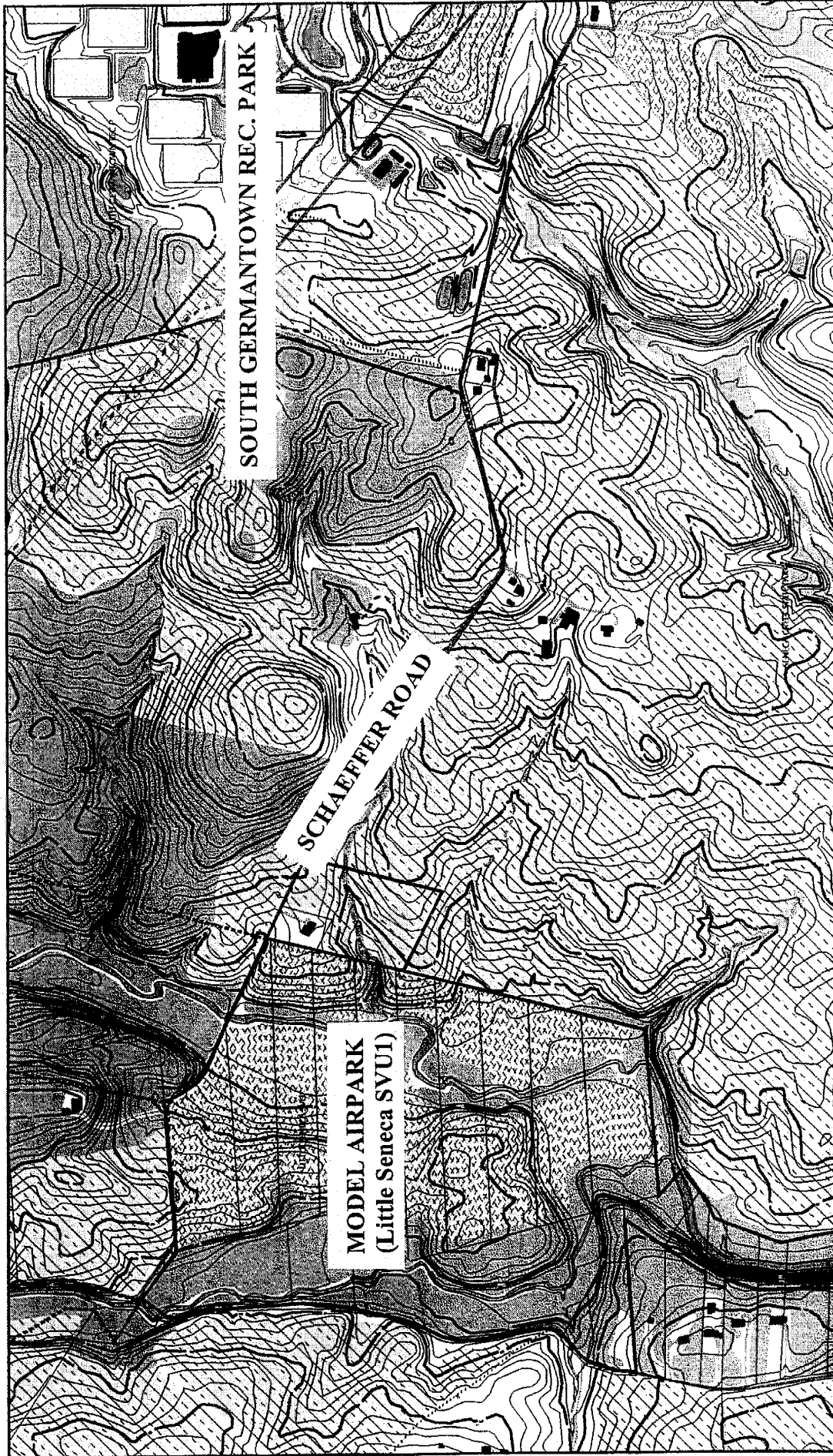
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Key Map



VICINITY MAP FOR
MODEL AIRPARK MONITORING



Map compiled on April 22, 2003 at 8:17 AM | Site located on base sheet no. 224NWF8

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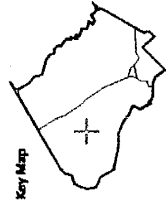
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Key Map

