



Agenda date: May 1, 2003

MEMORANDUM

To: Montgomery County Planning Board

Via: *Migs Damiani*
Migs Damiani, South Germantown Recreational Park Project Manager

JZ
Jeff Zyontz, Chief, Countywide Planning

John E. Hench, Natural Resources Manager, *John E. 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 – 2002

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 2002, 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 were both rated excellent. Two of the four sites within South Germantown Recreational Park were rated fair and the other two were rated poor.

The streams within the recreational park are smaller than those at the model airport, and were more significantly impacted by the drought of 2001 and 2002.

Fish were monitored at four of the six sites. The two sites at the model airport could not be monitored due to water levels – the water level in Bucklodge Branch was too low due to the drought, and the water level in Little Seneca Creek was too high because water was being released from Little Seneca Creek to augment water supply flows in the Potomac River. These sites had been rated excellent for the two previous years. Of the four sites within the Recreational Park, three were rated good. 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 five years in which the site was monitored.

In 2002, residential wells were monitored once. On-site wells were not monitored during 2002, but were sampled early in 2003. Nitrates did not exceed the EPA's maximum contaminant level (MCL) in any of the residential wells. Coliform bacteria (but no E. coli) were found in one residential well. 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 are the major stressor. As would be expected under these conditions, the smaller streams are stressed more than the larger streams. **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 fifth 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 is rated Good in the Countywide Stream Protection Strategy (CSPS) document. 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 are rated Good by the CSPS.

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, cross MD 118, and flows southeast then south into Seneca Creek State Park).

This report contains the results of monitoring conducted during 2002. 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, 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 in were made to more closely follow MBSS monitoring procedures.

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 three of the macroinvertebrate IBIs showed little change from the previous year. The biological integrity classification for LSHM101b remains Fair but its score has increased by 4 points from the previous year. GSLS102 continues to be Poor, with a score of 10 (down 2 points), and is not expected to improve significantly unless flow can be maintained throughout the summer months. GSLS202 is still Fair but has dropped 6 points to 20. The other SoccerPlex site, LSHM101a, has dropped significantly since rebounding from the drought in 1999. The IBI went down from Fair in 2001 to Poor in 2002.

2001 was the second year of sampling at the Model Air Park. LSBL305 maintained its classification of Excellent and LSLS411 rose from Good to Excellent.

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 received a classification of Poor with an increase of four points. No fish had been found at this site in 2000, 21 were found in 2001, and 197 were found in 2002. LSHM101a increased from Fair to Good. Neither of the Model Air Park sites was sampled in 2002. Flows in LSBL305 were too low to allow for fish collection and flow in LSLS411 were too high due to water releases from Little Seneca Lake.

Water temperatures at the four SoccerPlex sites were about the same in 2002 and 2001. The Model Airpark sites were higher overall in 2002 than in 2001. The LSLS411 site experienced four periods of sudden temperature drops. These temperature changes coincide with WSSC water releases from the dam at Black Hill Regional Park.

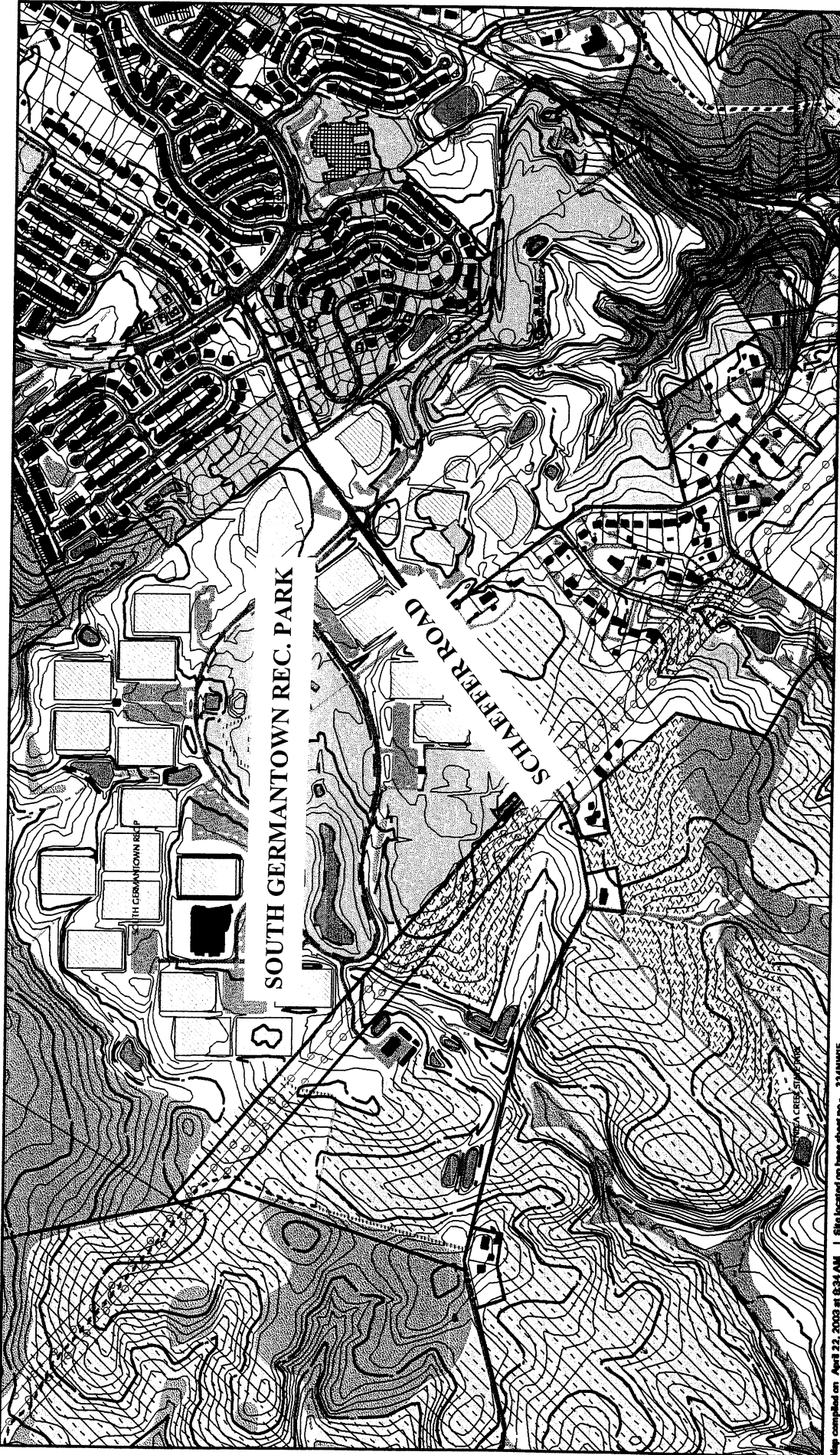
Comparisons of habitat data for the SoccerPlex sites from 1998 through 2002 show little or no change in four of the stream cross-sections. In 2002 LSHM101b indicated a significant increase in sedimentation, restricted primarily to the streambed. GSLS102 also indicated increased sedimentation, in the streambed and along the banks as well. Only minor changes in the median substrate size were seen at most of the sites. Pebble size at LSHM101a increased two size classes and GSLS102 fell from medium gravel to very fine gravel.

Five residential wells were sampled in 2002. Three on-site wells were scheduled to be sampled in 2002 but sampling was delayed until January 2003 due to contractual issues. No new substances were found in the residential wells. Coliform bacteria were found in only one of the five residential wells, but none of the samples contained fecal coliforms. Chloride and nitrates were detected in all samples from 2002 (as well as from all previous samples). There is no indication that groundwater quality is changing from pre-construction conditions.

Overall, the 2002 monitoring data indicate little change in the conditions of the two sites located in Little Seneca. There does appear to be a minor decrease in the quality of the macroinvertebrate habitat at three 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 8:34 AM | Site located on base sheet no. 2248W15

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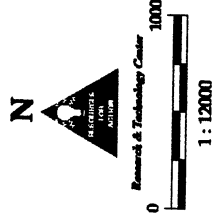
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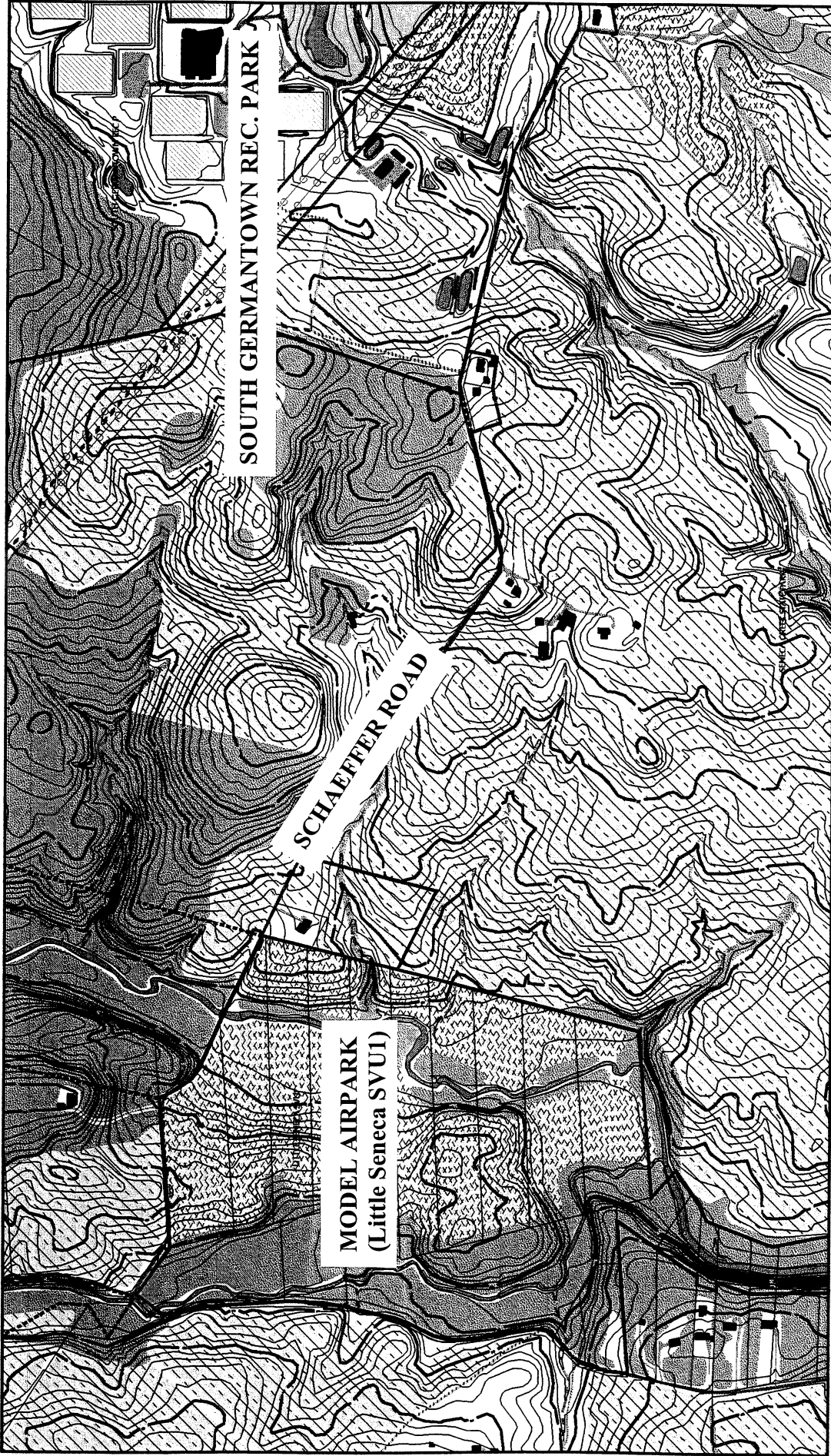
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Key Map



VICINITY MAP FOR
MODEL AIRPARK MONITORING



Map compiled on April 22, 2003 at 8:47 AM | Site located on base sheet no. 224NWF6

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Key Map

