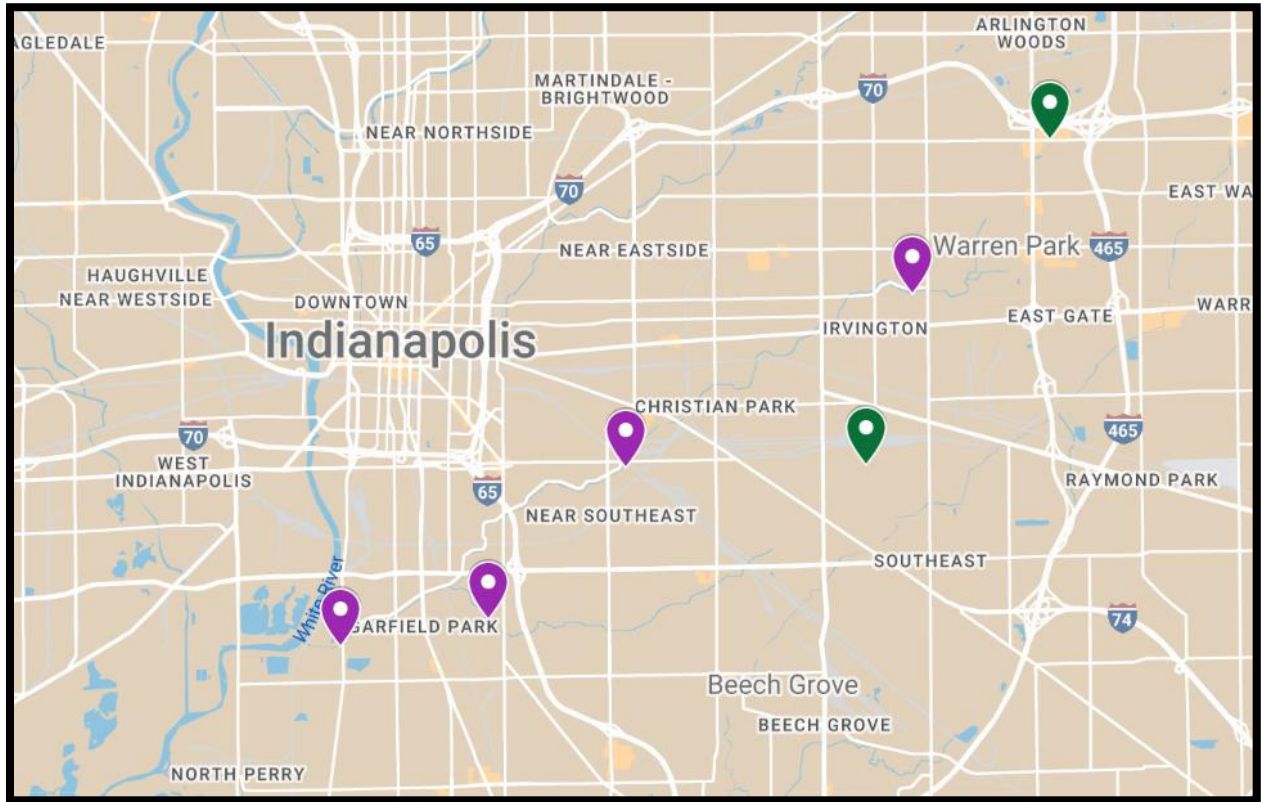


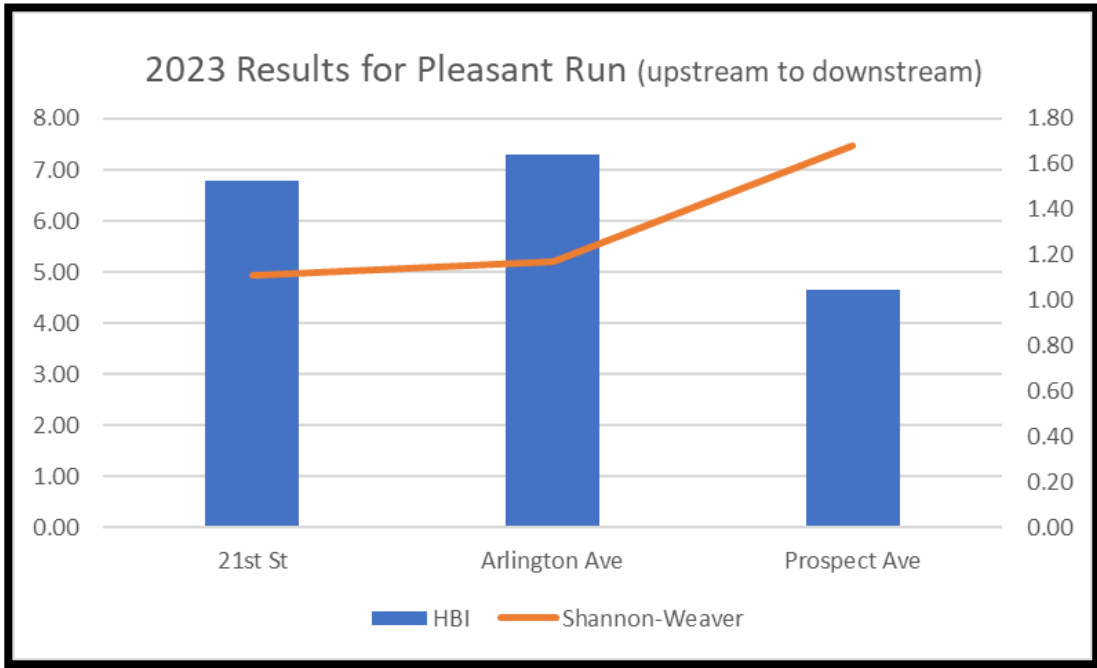
2023 Pleasant Run Macroinvertebrate Sampling Summary

Macroinvertebrate sampling is conducted annually on Pleasant Run at four sites and on Bean Creek at two sites. Metrics, such as HBI and Shannon-Weaver Diversity are monitored and compared from year to year to track any possible trends in the macroinvertebrate community. These trends can help identify possible water quality issues. Sites are selected both upstream and downstream of combined sewer overflows to compare results. Sites with green markers are upstream, and those with purple are downstream.



SITE	COORDINATES
Pleasant Run @ 21 st St	39.47836, -86.02557
Pleasant Run @ Arlington Ave	39.46555, -86.03860
Pleasant Run @ Prospect St	39.45119, -86.07115
Pleasant Run @ Bluff Rd	39.43644, -86.10117
Bean Creek @ Orange St	39.75206, -86.0751
Bean Creek @ Manker St	39.73081, -86.1428

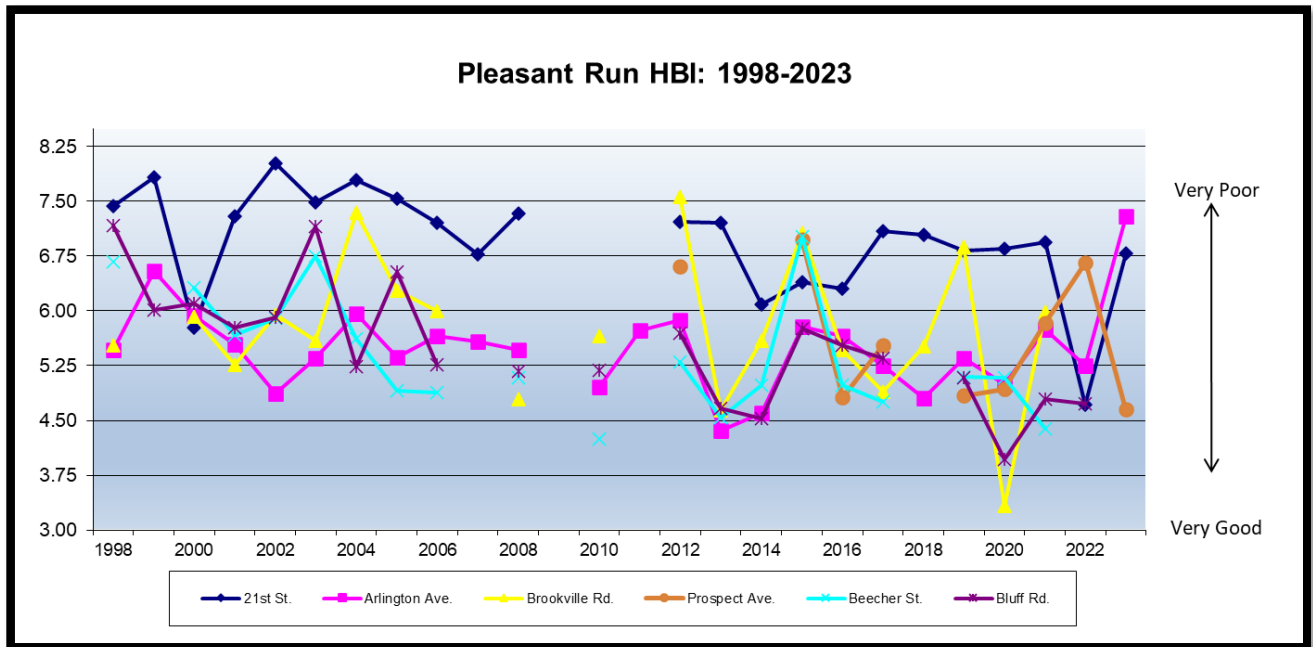
Note: Bluff site not sampled in 2023



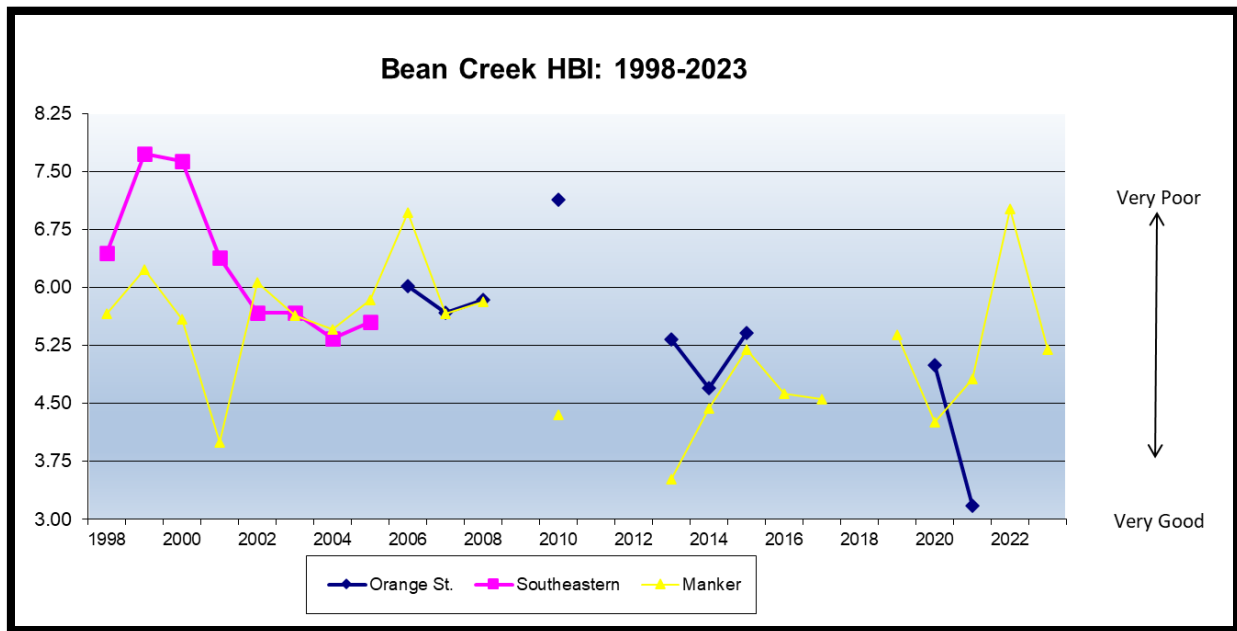
Note: Good water quality is indicated by low HBI and high Shannon-Weaver values.

Hilsenhoff Biodiversity Index (HBI)

HBI is one parameter that is used to determine the overall health of each stream sampled. This index is calculated by using the tolerance levels of various aquatic macroinvertebrates to estimate the overall water quality of the stream. The lower the HBI, the higher the water quality (less pollutants, etc.). HBI totals for 2023 were consistent with previous years.



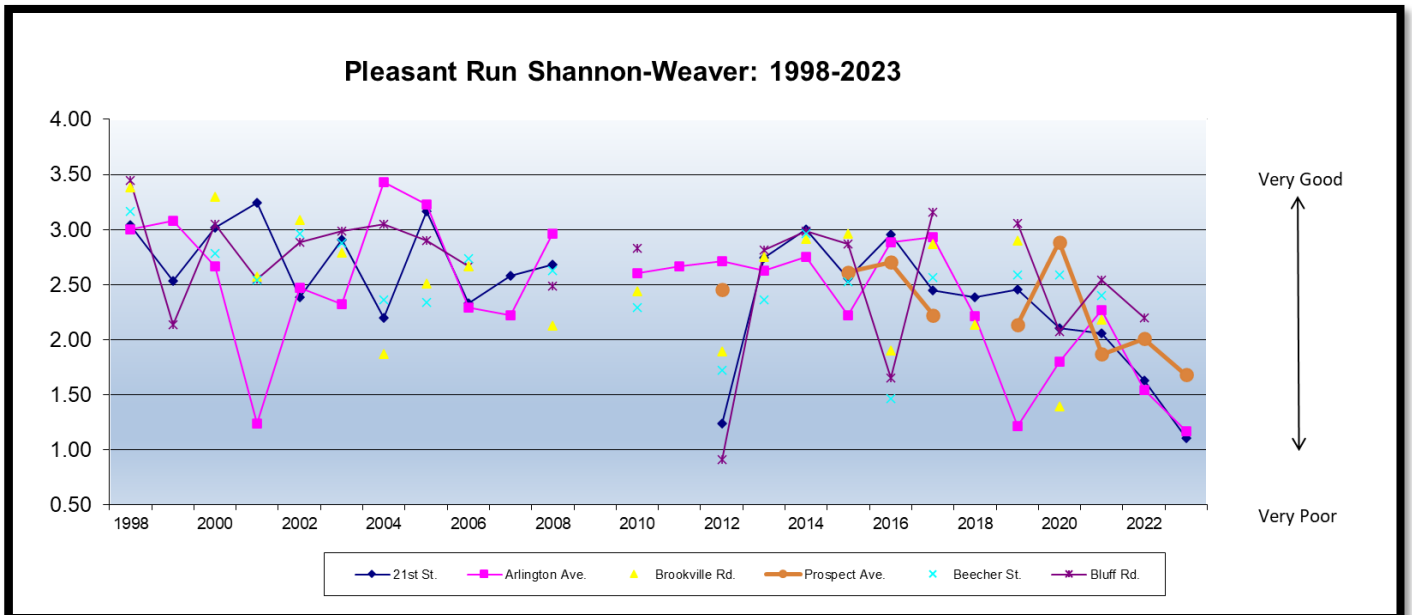
Note: breaks in line indicate years where the site was not sampled due to circumstances such as weather, construction, habitat degradation, etc.



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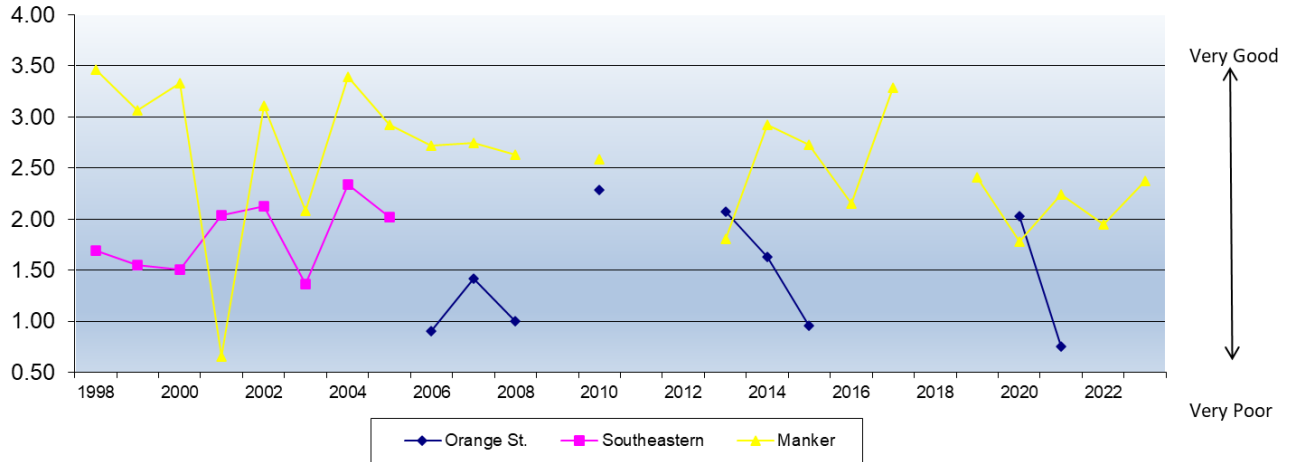
Shannon-Weaver Mean Diversity

This parameter is designed to gauge the diversity of each site by using both the total number of individuals and the number of species found. The higher the number, the more diverse the stream’s macroinvertebrate community, indicating healthier habitat and water quality. Diversity numbers for 2023 were also fairly consistent with previous years.



Note: breaks in line indicate years where the site was not sampled due to circumstances such as weather, construction, habitat degradation, etc.

Bean Creek Shannon-Weaver: 1998-2023



Note: breaks in line indicate years where the site was not sampled due to circumstances such as weather, construction, habitat degradation, etc.