

Monitoring activities include monthly water quality sampling as well as biological sampling three times a year at all stations. In addition, continuous measurement of stream flow and physical water quality properties is recorded at the northernmost station adjacent and downstream of Mosaic's active mining operation.

Monitoring data collected through the program is utilized to accomplish three main goals:

- To monitor and report on current stream conditions
- To ensure Mosaic's mining activities do not result in adverse changes to the physical, chemical and biological integrity of the Horse Creek system
- To identify, react to and correct conditions related to Mosaic's mining activities that have the potential to result in adverse changes to Horse Creek

The HCSP, in place since 2003, has been a highly successful program and clearly demonstrates that stakeholders can work together to promote economic activities while protecting Florida's natural resources for future generations.



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HORSE CREEK

Stewardship Program

The Horse Creek Stewardship Program (HCSP) was created through a settlement agreement between the Peace River Manasota Regional Water Supply Authority (PRMRWSA) and Mosaic, establishing both parties as long-term stewards of Horse Creek.

The program, funded entirely by Mosaic with oversight by the PRMRWSA, requires ongoing monitoring of water quantity and quality at permanent stations along the Horse Creek system, stretching from Hardee to DeSoto counties.



Stewardship Program monitoring stations are located along Horse Creek and its tributaries.

THE HCSP IS UNIQUE

The HCSP does not wait until water quality standards are exceeded before action is required by Mosaic. The program sets trigger-levels, often more stringent than state water quality standards that, if exceeded, require immediate evaluation and action by Mosaic. In addition, the program also requires routine analysis of temporal trends, which also require the same evaluation and corrective action.

WATER QUANTITY & QUALITY MONITORING

Water quantity is monitored in the basin through:

- Continuous stream flow monitoring by U.S. Geological Survey (USGS)
- Continuous rainfall gauging stations
- Continuous monitoring of Mosaic National Pollutant Discharge Elimination System (NPDES) discharges
- Periodic stream-level stage recordings throughout the basin

Water quality sampling is conducted on a monthly basis and includes:

- Physical parameters (temperature, pH, conductance)
- Chemical parameters (inorganics, organics)
- Radiochemical parameters (Gross Alpha, Radium)
- Biological parameters (chlorophyll a)

BIOLOGICAL SAMPLING

The program also requires three yearly biological sampling events. The program includes both benthic macroinvertebrate and fish sampling. These sampling events are utilized to gauge whether or not Mosaic's mining discharges to Horse Creek are resulting in any adverse changes to the biological community. As a result of these ongoing biological sampling events, Horse Creek is now one of the most well-studied creeks in the state of Florida.

REPORTING AND DATA EVALUATION

On a monthly basis, Mosaic provides program-generated data to the PRMRWSA for review and, if required, conducts an impact analysis of any trigger level exceedance or temporal trend. If mining is found to be the cause of the exceedance or trends, Mosaic would be required to implement a corrective action plan developed in collaboration with PRMRWSA.

In addition to monthly reports, Mosaic prepares an annual monitoring report which details all monitoring efforts for the prior year.

HORSE CREEK TECHNICAL ADVISORY GROUP (TAG)

The TAG is comprised of various stakeholders including Mosaic, the PRMRWSA and representatives from the PRMRWSA's member counties. The TAG is responsible for review and final approval of all annual reports and provides technical feedback to Mosaic and PRMRWSA to improve and modify the program as needed.

