

Keeping the Peace: Avoiding the Worst-Case Scenario

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If we want to keep the Peace River and Charlotte Harbor healthy, we need a complete understanding of the effects of strip mining on water flows. Strip mining results in the total disruption of surface and underground water flows in the surficial aquifer. Common sense tells us that this must have an effect downstream. Demonstrating the relationship, however, is a complex matter. Still, as part of the effort to understand the phosphate risk to the Peace River, we've developed a means to do just that.

While our methods and findings will be debated among experts in court, this one thing is certain: if we continue to allow strip mining and reclamation as we have in the past, we can expect greater environmental impacts to the tributaries feeding the Peace River and Charlotte Harbor. These impacts will diminish the volume and timing of water flow, affecting water quality, aquatic life, wildlife and even our drinking water supply.

In some studies, flow in the Peace River has been compared to flow in the Alafia River. In one respect, this is a poor comparison because the flow in the Alafia River has been impacted by many manmade activities, including phosphate mining. However, if we're trying to assess the potential impacts of future activities, the Alafia River can provide useful information. Like the Peace, parts of it are urbanized; like the Peace, parts of it are not.

The South Prong of the Alafia River has seen no urban development, but it has been extensively mined and partially reclaimed. Comparing streamflow in the South Prong to other unmined and undeveloped watersheds, we can estimate the impact of strip mining on streamflows. By understanding what has happened in the South Prong of the Alafia River watershed, we can estimate the historical impact and the future potential impacts of strip mining on the Peace River tributaries, the Peace River, and Charlotte Harbor.

To assess potential impacts, we identified three future mining and development scenarios.

The Existing Future Scenario — assumes the existing, permitted mines will have mined out their permitted areas with no additional areas being permitted and mined.

The Identified Future Scenario — assumes the existing, permitted mines will have mined out their permitted areas, plus identified, but unpermitted mines will obtain permits and will also have mined out their permitted areas. Other manmade impacts would increase in the same proportion as mining.

The Worst-Case Scenario — assumes that the Identified Future Scenario and all remaining minable areas within the watersheds that contribute streamflow to upper Charlotte Harbor will have been mined out. Other manmade impacts would increase in the same proportion as mining.

Based on our evaluation, we believe that the Existing Future Scenario will reduce flows to the Peace River and Charlotte Harbor by 15 percent. In the Identified Future Scenario, flows will be reduced by 23 percent, and in the Worst-Case Scenario, flows to the Peace River and Charlotte Harbor will be reduced by 34 percent.

Here's what that means for people—there will be more days when the Peace River/Manasota Regional Water Supply Authority cannot take water from the river for people.

The delicate environmental balance in the Charlotte Harbor Estuary will change, likely driving salt water further upstream in the river for longer periods of time. We can expect populations of fish and shellfish to change as a consequence.

Our impact analysis includes other manmade activities that will affect the Peace River and Charlotte Harbor. Several agencies have completed studies that demonstrate how decreased rainfall over time has had an effect. We agree, but it is not the only cause.

We cannot control rainfall, but we can better understand and quantify the actual impacts of strip mining on streamflows, and take steps to limit and mitigate the damage.

IMC and Cargill, two major phosphate companies, are in the process of merging. Their new publicly-traded entity will emerge as the major owner of existing and potential strip mines in the Peace River watershed. Setting aside arguments regarding the specific companies and their histories, we need a comprehensive mine development plan that shows us their future planned mining activities. We also need improved reclamation, better than IMC has done in the past. By doing so, we won't have to live with our worst-case analysis.

It's time for a comprehensive study of reduced flows to Charlotte Harbor. It's time to take stock of what we have and to define what we want. We can't do anything about reduced rainfall, but if we want to keep the Peace, we need to do something about the long-term impacts of phosphate strip mining.