

# Kevin Erwin Guest Editorial



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## The Cost Of Reclamation, The Price Of Failure

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IMC-Cargill wants to strip-mine in the Peace River Basin, and the Florida Department of Environmental Protection has indicated that it intends to issue the permit to do so.

The strip-mining process completely alters soils and hydrology. Strip mining's complete disturbance of the land represents a significant challenge to restore the natural system type by type, function by function - but it's the law. In Florida, land is reclaimed after mining through the construction of upland and wetland habitats, but successfully reclaiming strip-mined land is an expensive undertaking. The costs to do it right can easily exceed \$25,000 per acre.

It was my responsibility to review IMC's reclamation plan and budget for the proposed 20,000-acre Ona Mine in Hardee County. In virtually every area, IMC has grossly underestimated the costs of successful reclamation. Its failure to plan and budget properly will be reflected in the failure of its "restoration" of the natural system. IMC has not been able to demonstrate that its plan to reclaim the land will offset the adverse impacts associated with strip mining. This failure may ultimately put the public at risk for the cost of the proper restoration and maintenance of these lands.

In 2003, I evaluated 50 IMC reclamation projects. I have observed no improvement in conditions since the completion of our 1997 study for the Florida Institute of Phosphate Research. The very poor conditions I observed on most of IMC's reclamation projects mean that its methods and budgets for reclamation, management and monitoring are inadequate. In short, neither its budgets nor its methods are working - and they haven't for years.

Among the areas affected by the lack of funding are soils, planting, maintenance and monitoring.

Soils provide the basic ingredients required for restoration. Without soil, habitat restoration is destined to fail. IMC needs to strip, segregate and stockpile the native soils so they can be properly relocated and contoured after mining. This will cost substantially more than IMC has budgeted, but the results will be substantially better.

The demands of restoring different habitats - oak scrub, freshwater swamps, pine flatwoods, prairies and streams - are very different. The difference between doing it right and doing it as IMC proposes amounts to thousands of dollars per acre - millions of dollars for a project. The diversity of plants creates habitat and increases the likelihood of success, but it costs more.

The major form of maintenance performed by IMC on its reclaimed lands is the application of herbicides to remove nuisance plants. Many of the unmined lands adjacent to reclaimed strip-mine areas are being impacted by overdrainage and exotic plant infestations. Vast areas reclaimed by IMC are now fields of cogon grass with very little value to wildlife.

Finally, IMC is required to provide DEP monitoring reports to demonstrate the progress of its restoration efforts. It is not required to monitor groundwater hydrology, surface water hydrology, water quality, soils, aquatic fauna, wildlife and ecosystem diversity. Again, the cost of doing it right far exceeds what IMC has budgeted.

I estimated the costs of reclamation and restoration by using the DEP's own success measures, established by rule:

- \* All applicable water quality standards are met;
- \* The mitigation area achieves viable and sustainable ecological and hydrological functions;
- \* And specific success criteria contained in the permit are met.

The DEP also requires proof of financial ability to accomplish reclamation. Of course, that proof is based on the approved reclamation plan. In my opinion, the plan to reclaim Ona - the next proposed mine - is inadequate and doesn't even include clay settling areas or stream restoration.

Restoration is part of the cost of the business of strip mining. If IMC is not held to standards that are tangible, measurable and successful, then the public may pay for its failure. The investment made by Charlotte County and its supporters to challenge IMC Phosphate's permits is significant, but it is small compared with the long-term costs

of allowing IMC to strip-mine without proper restoration.

IMC pays now or Floridians are sure to pay later.

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