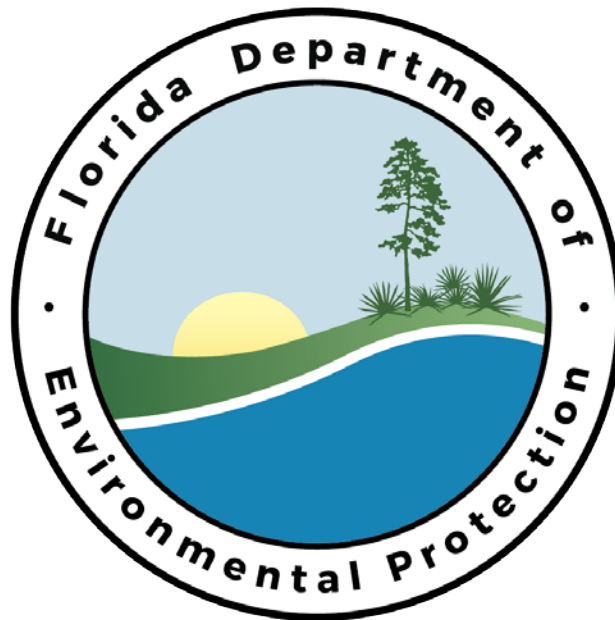


Rate of Reclamation Report

July 1, 1975 through December 31, 2015





Florida Department of Environmental Protection

Division of Water Resource Management
Mining and Mitigation Program
2600 Blair Stone Road, MS 3577
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Ryan E. Matthews
Interim Secretary

RATE OF RECLAMATION JULY 1, 1975 THROUGH DECEMBER 31, 2015

April 6, 2017

Currently, all mining in Florida is subject to reclamation requirements. The Department of Environmental Protection (Department) is the state's lead agency in the regulation of mine reclamation. Reclamation standards are set forth in Chapter 378, of the Florida Statutes (F.S.).

Of the commodities mined in Florida, phosphate mining is the most land intensive. In 2015, 258,576 acres of land were mined since July 1, 1975 or disturbed since January 1, 2011 for phosphate. All phosphate lands disturbed from July 1, 1975, are subject to mandatory reclamation requirements. Reclamation standards for phosphate lands are detailed in Chapter 62C-16 of the Florida Administrative Code (F.A.C.).

We are pleased to present the Rate of Reclamation Report for the period ending on December 31, 2015. The report reflects the status of reclamation for land mined after July 1, 1975 or disturbed after January 1, 2011 to extract phosphate ore. The report is the most current report for the Florida Phosphate Industry. The Rate of Reclamation Report is in accordance with the subsections 62C-16.0075(6)(a-i), F.A.C. Please note that figures indicate that seventy three percent (73%) of the land mined or disturbed for phosphate since July 1, 1975 have been reclaimed.

Data used to generate the Rate of Reclamation Report is compiled from the Annual Mining and Reclamation Reports once deemed complete by Department staff for the year ending on December 31, 2015.

As a result in changes to the report forms, the Rate of Reclamation Report for the period ending on December 31, 2011 was not compiled. The 2012 report presents all cumulative mining and reclamation activities conducted during all previous years.

For general information concerning the mandatory reclamation requirements for phosphate mining, please contact:

Mr. Orlando E. Rivera, PWS
Program Administrator
Division of Water Resource Management
2600 Blair Stone Road, MS 3577
Tallahassee, Florida 32399-2400
Tel: (850)245-8522
E-mail: Orlando.Rivera@dep.state.fl.us

Acknowledgements

The following Department staff listed below contributed their support and knowledge in compiling the data used within this document: Casey Beavers, Katy Collins, Charles Cook, Jessica Duke, Deborah Fiesler, Howard Hayes, Jack Jordan, Christine Keenan, Jacqueline Langston, Mary Grace McClellan, Marisa Rhian, Orlando Rivera, and Gustavo Rodriguez.

DEFINITIONS OF COLUMNS/CATEGORIES

Column A – Company: The mining company or industrial facility (operator).

Column B – Mine(s): The individual mine(s) being operated by the company.

Column C – Mandatory Acres Mined 7/1/75 through 12/31/15: Acreage from which phosphate ore removal occurred from July 1, 1975 through December 31, 2015 or disturbed since January 1, 2011.

Column D – Mandatory Acres Reclaimed & Released: Acreage from which phosphate ore has been removed or disturbed, reclamation has been performed and the area has been released from further reclamation obligation pursuant to Chapter 378, F.S. and Chapter 62C-16, F.A.C.

Column E – Percentage of Acreage Reclaimed & Released: Acreage released from reclamation obligations as outlined in Chapter 378, F.S. and Chapter 62C-16, F.A.C. Data in Columns C & D are used to determine the percentage of acreage reclaimed and released ($D/C \times 100 = E$). Percentages are rounded up to the next percentage point.

Column F – Mandatory Acres Reclaimed through Revegetation or Under Industrial Use Criteria: Acreage from which phosphate ore has been removed or disturbed for phosphate ore removal and on which contouring and final revegetation has been completed through December 31, 2015. Some of the acres include lands the Department granted permission to allow reclamation of mandatory lands to an alternate use (i.e. industrial) and have subsequently been reclaimed for its intended use. Acreage disturbed by mining operations, but not mined, are not included in this column even though the acres were revegetated.

Column G – Total Reclamation: Mandatory mined or disturbed acreage that has been reclaimed, released from reclamation obligation, and acreage that has been reclaimed through final revegetation or industrial use (Columns D+F = H).

Column H – Percentage of Acreage in Reclamation: Acreage mined or disturbed divided by acreage that has been reclaimed through final revegetation or for industrial use. Data in Columns C and G are used to calculate the percentage of total reclamation that has been completed at each site ($G/C \times 100 = H$).

| A Company | B Mine(s) | C Mandatory Acres Mined or Disturbed 7/1/75 thru 12/31/14 | D Mandatory Acres Reclaimed & Released | (E = D/C X 100) Percentage of Acreage Reclaimed & Released | F Mandatory Reclaimed Acres Through Revegetation or Under Industrial Use Criteria | (G = D + F) Total Reclamation | (H = G/C X 100) Percentage of Acreage Reclaimed |
|-----------------------------|-------------------------------------|--|--|--|---|-------------------------------------|--|
| Agrifos Mining, LLC (1) | Nichols | 4,951 | 2,146 | 43% | 2,086 | 4,232 | 85% |
| Brewster Phosphates (2) (3) | Haynesworth (a) (k) | 3,754 | 3,760 | 100% | 0 | 3,760 | 100% |
| Brewster Phosphates (2) (3) | Lonesome (b) | 3,788 | 3,788 | 100% | 0 | 3,788 | 100% |
| Mosaic Fertilizer, LLC* | Big Four (e) | 4,892 | 4,122 | 84% | 770 | 4,892 | 100% |
| Mosaic Fertilizer, LLC* | Bonny Lake (b) | 1,956 | 1,956 | 100% | 0 | 1,956 | 100% |
| Mosaic Fertilizer, LLC* | Clear Springs (a)(l) | 6,770 | 6,770 | 100% | 0 | 6,770 | 100% |
| Mosaic Fertilizer, LLC* | Green Bay | 719 | 719 | 100% | 0 | 719 | 100% |
| Mosaic Fertilizer, LLC* | Fort Green | 26,907 | 12,714 | 47% | 8,602 | 21,316 | 79% |
| Mosaic Fertilizer, LLC* | Fort Meade (l) | 11,233 | 7,637 | 68% | 2,488 | 10,125 | 90% |
| Mosaic Fertilizer, LLC* | Four Corners/Lonesome | 39,016 | 5,852 | 15% | 11,952 | 17,804 | 46% |
| Mosaic Fertilizer, LLC* | Hookers Prairie (l) | 14,507 | 6,532 | 45% | 5,409 | 11,941 | 82% |
| Mosaic Fertilizer, LLC* | Hopewell (f) | 3,842 | 2,299 | 60% | 1,518 | 3,817 | 99% |
| Mosaic Fertilizer, LLC* | Kingsford Complex | 18,648 | 9,972 | 53% | 8,671 | 18,643 | 100% |
| Mosaic Fertilizer, LLC* | New Wales (g) | 1,085 | 1,085 | 100% | 0 | 1,085 | 100% |
| Mosaic Fertilizer, LLC* | Noralyn/Phosphoria (a) (h) | 7,843 | 7,239 | 92% | 0 | 7,239 | 92% |
| Mosaic Fertilizer, LLC* | North Pasture (b) | 1,480 | 1,227 | 83% | 0 | 1,227 | 83% |
| Mosaic Fertilizer, LLC* | Payne Creek | 13,553 | 10,886 | 80% | 2,651 | 13,537 | 100% |
| Mosaic Fertilizer, LLC* | Pebbledale (b) | 2,210 | 2,210 | 100% | 0 | 2,210 | 100% |
| Mosaic Fertilizer, LLC* | South Fort Meade Polk County (c)(l) | 14,230 | 2,409 | 17% | 5,339 | 7,748 | 54% |
| Mosaic Fertilizer, LLC* | South Fort Meade Hardee County | 3,004 | 0 | 0% | 412 | 412 | 14% |
| Mosaic Fertilizer, LLC* | South Pasture | 13,031 | 180 | 1% | 3,551 | 3,731 | 29% |
| Mosaic Fertilizer, LLC* | South Pasture Extension | 154 | 0 | 0% | 0 | 0 | 0% |
| Mosaic Fertilizer, LLC* | Wingate Creek (j) | 3,680 | 352 | 10% | 793 | 1,145 | 31% |
| Estech Incorporated | Silver City (b) | 470 | 470 | 100% | 0 | 470 | 100% |
| Estech Incorporated | Watson (b) | 2,853 | 2,853 | 100% | 0 | 2,853 | 100% |
| Progress Energy (7) | Hines Energy Complex | 1,695 | 1,695 | 100% | 0 | 1,695 | 100% |
| Mobil / Exxon | Fort Meade (b) | 6,220 | 6,246 | 100% | 0 | 6,246 | 100% |
| PCS Phosphate | Hamilton County (i) | 38,404 | 5,661 | 15% | 17,140 | 22,801 | 59% |
| TECO (9) | Polk Power Station | 2,460 | 2,460 | 100% | 0 | 2,460 | 100% |
| US Agri-Chemicals | Rockland (b) | 3,689 | 3,689 | 100% | 0 | 3,689 | 100% |
| Williams Company (10) | Saddle Creek (b) | 1,532 | 1,532 | 100% | 0 | 1,532 | 100% |
| Total | | 258,576 | 118,461 | 46% | 71,381 | 189,842 | 73% |

*Mosaic Fertilizer, LLC, Footnotes (3), (4), (5), (6), (7), (8), (11), and (12)

COMPANY FOOTNOTES

1. Agrifos Mining, LLC, purchased the Mobil Nichols Mine on June 28, 1996. On December 3, 2002, IMC Phosphates Company, Agrifos Mining, LLC, and The Mims Group entered into an agreement to document their respective reclamation obligations for the Nichols Mine. In 2004, IMC Phosphates Company changed its name to Mosaic Phosphates Company. On July 29, 2005, Mosaic Phosphates Company became Mosaic Fertilizer, LLC.
2. Brewster Phosphates (now Cytec Industries) is no longer engaged in mining operations and has transferred the remainder of its reclamation obligation to Kovacs Brothers, Inc., as of September 27, 2000.
3. On June 12, 1991, the Governor and Cabinet approved a request by IMC Fertilizer, Inc. (now Mosaic Fertilizer, LLC) and Brewster Phosphates (now Cytec Industries) to consolidate their mines. Currently, the Kingsford Complex Mine includes the Kingsford Mine, the Haynesworth Mine, and portions of the Lonesome Mine, which lies north of the south prong of the Alafia River. The Four Corners/Lonesome Mine now includes the Four Corners Mine and portions of the Lonesome Mine lying below the south prong of the Alafia River.
4. Ownership of the Gardinier Fort Meade Mine was transferred to Cargill Fertilizer, Inc., on March 4, 1991. In 2004, Cargill Fertilizer, Inc., transferred its obligations to Cargill Fertilizer, LLC, and subsequently Mosaic Fertilizer, LLC, on July 29, 2005.
5. Ownership of the Bonny Lake and Hookers Prairie Mines was with W.R. Grace and Company until November 1, 1988, when Seminole Fertilizer Corporation took over operation. On May 4, 1993, Seminole Fertilizer Corporation transferred ownership of the Bonny Lake and Hookers Prairie Mines to Cargill Fertilizer, Inc. In 2004, Cargill Fertilizer, Inc., transferred its reclamation obligations to Cargill Fertilizer, LLC, and subsequently became Mosaic Fertilizer, LLC, on July 29, 2005.
6. The reclamation and financial responsibility for 719 acres of mined land within the Noralyn/Phosphoria Mine was transferred to the Farmland Green Bay Chemical Complex by action of the Governor and Cabinet on September 11, 1990, and modified by the Department of Environmental Protection on February 8, 2001. Cargill Fertilizer, Inc., acquired ownership and reclamation responsibility from Farmland Hydro, LP, of the Green Bay Chemical Complex on November 6, 2002. Acreage from which phosphate ore removal has occurred from July 1, 1975 through December 31, 2008, but reclaimed for industrial purposes (chemical, power generation facilities, etc.) are included in Column G, Mandatory Acres Reclaimed Under Industrial Use Criteria. Final reclamation of these industrial use sites remain the responsibility of the individual company pursuant to the rules and guidelines of the Phosphate Management Program, under Chapter 62-671, 62-672, and 62-673, F.A.C. In 2004, Cargill Fertilizer, Inc., transferred its reclamation obligations to Cargill Fertilizer, LLC, and subsequently became Mosaic Fertilizer, LLC, on July 29, 2005.

7. Florida Power Corp. Progress Energy Florida, Inc., on September 30, 2002. The Progress Energy Hines Facility is located on Mandatory and Nonmandatory phosphate mined lands. All of the Mandatory Phosphate Reclamation requirements have been satisfied through variances associated with the Site Certification for the power facility or through releases of reclamation. The 2006 Rate of Reclamation data for the Progress Energy Facility was revised to explicitly show only the Mandatory Acres Mined 07/01/75 through 12/21/06 and the Mandatory Acres Reclaimed through Revegetation or for Industrial Use. Progress Energy assumed responsibility for final closure of the industrial sites variances from mining reclamation responsibility for construction of the power facility pursuant to the rules and guidelines of the Office of Siting Coordination, as stated in Chapter 62-17, Part I, F.A.C.
8. Any remaining areas to be mined at the Haynesworth or Lonesome Mines were to be mined by IMC Phosphates Company. IMC Phosphates Company accepted responsibility for reclamation of the following areas which were previously part of the Brewster Phosphates (now Cytec Industries) mining operation: BP-H-SPA(3), southeast of O Pond; BP-H-LB(2A), south of Doc Durance Road; BP-H-86(3), North County Road 630; BP-L-SP(8), DL Pond and IMC-KC-BOG(5), AL/BL Pond. In 2004, IMC Phosphates Company changed its name to Mosaic Phosphates Company. On July 29, 2005, Mosaic Phosphates Company became Mosaic Fertilizer, LLC.
9. Tampa Electric Corporation (TECO) sited power generation on lands mined for phosphate. IMC-Agrico, American Cyanamid, and Brewster Phosphates mined the present location of the TECO Polk Power Station Site and completed a portion of the reclamation. However, the remaining reclamation responsibility was assumed by TECO under the Department of Environmental Protection Power Plant Site Certification. All mine reclamation/restoration/mitigation requirements and agreements have been completed. Acreage from which phosphate ore removal has occurred from July 1, 1975 through December 31, 2009, but reclaimed for industrial purposes (chemical, power generation facilities, etc.) are included in Column G, Mandatory Acres Reclaimed Under Industrial Use Criteria. Final reclamation of these industrial sites remain the responsibility of the individual company pursuant to the rules and guidelines of the Office of Siting Coordination, as stated in Chapter 62-17, Part I, F.A.C.
10. The Polk County North Central Landfill is located on land that was mined for phosphate in the former Saddle Creek Mine. The last remaining reclamation requirements in the Saddle Creek Mine for parcel AGR-SC-84(3) were released to allow for expansion of the landfill. Due to the industrial nature of the landfill expansion, the Department issued a variance for the reclamation requirements and determined that the site should be under the oversight of the Southwest Florida Water Management District and the Department's Solid Waste Section for management as a solid waste facility.
11. IMC Fertilizer, Inc., and Agrico Mining Co. merged on July 1, 1993 forming IMC Agrico. IMC Agrico assumed the reclamation responsibility for lands mined by both IMC Fertilizer and Agrico Mining Company. On August 7, 2000, IMC Agrico became IMC Phosphates Co. and assumed reclamation responsibility for the mines listed under IMC Agrico. In 2004, IMC Phosphates Company changed its name to Mosaic Phosphates Company. On July 29, 2005, Mosaic Phosphates Company became Mosaic Fertilizer, LLC.

12. NuGulf's Wingate Creek Mine was purchased by Cargill Fertilizer, Inc., in 2004. Later on that year, Cargill Fertilizer, Inc., transferred its reclamation obligations to Cargill Fertilizer, LLC. This company subsequently became Mosaic Fertilizer, LLC, on July 29, 2005.

CUMULATIVE TOTALS RATE OF RECLAMATION REPORT 2015

| B COMPANY | C Mandatory Acres Mined or Disturbed 7/1/75 thru 12/31/15 | D Mandatory Acres Reclaimed & Released | (E = D/C x 100) Percentage of Acreage Reclaimed & Released | F Mandatory Acres Reclaimed Through Revegetation or Under Industrial Use Criteria | (G = D + F) Total Reclamation | (H = G/C x 100) Percentage of Acreage Reclaimed |
|--|---|--|--|--|-------------------------------------|--|
| Agrifos Mining, LLC (1) | 4,951 | 2,146 | 43% | 2,086 | 4,232 | 85% |
| Brewster Phosphates (2) (3) | 7,542 | 7,548 | 100% | 0 | 7,548 | 100% |
| Mosaic Fertilizer, LLC (3) (4) (5) (6) (7) (8) (11) (12) | 188,760 | 84,161 | 45% | 52,156 | 136,316 | 72% |
| Estech Incorporated | 3,323 | 3,323 | 100% | 0 | 3,323 | 100% |
| Progress Energy (7) | 1,695 | 1,695 | 100% | 0 | 1,695 | 100% |
| Mobil / Exxon | 6,220 | 6,246 | 100% | 0 | 6,246 | 100% |
| PCS Phosphate | 38,404 | 5,661 | 15% | 17,140 | 22,801 | 59% |
| TECO (9) | 2,460 | 2,460 | 100% | 0 | 2,460 | 100% |
| US Agri-Chemicals | 3,689 | 3,689 | 100% | 0 | 3,689 | 100% |
| Williams Company (10) | 1,532 | 1,532 | 100% | 0 | 1,532 | 100% |
| INDUSTRY TOTALS | 258,576 | 118,461 | 46% | 71,381 | 189,842 | 73% |

INDIVIDUAL MINE FOOTNOTES

- (a) Mine is shut down and final reclamation is ongoing.
- (b) Mine is shut down and final reclamation is complete (Bonny Lake, Lonesome, Mobil Ft. Meade, North Pasture, Pebbledale, Rockland, Saddle Creek, Silver City, and Watson).
- (c) The Mobil South Fort Meade Mine was sold to Cargill Fertilizer, Inc., on December 15, 1995. In 2004, Cargill Fertilizer, Inc., transferred its reclamation obligations to Cargill Fertilizer, LLC, and subsequently became Mosaic Fertilizer, LLC.
- (d) Mine is temporarily shut down.
- (e) The Mobil Big Four Mine was sold to IMC Agrico on June 28, 1996. On August 7, 2000 IMC Agrico became IMC Phosphates Company and assumed reclamation responsibility. IMC Phosphates Company is completing the mining and reclamation of the mine site. In 2004, IMC Phosphates Company changed its name to Mosaic Phosphates Company. On July 29, 2005, Mosaic Phosphates Company became Mosaic Fertilizer, LLC.
- (f) The Hopewell Mine was owned and operated by the Hopewell Land Corporation. However, in October 1989 mining operations and the reclamation responsibility was transferred to IMC Fertilizer, Inc., (now IMC Phosphates Company). In 2004, IMC Phosphates Company changed its name to Mosaic Phosphates Company. On July 29, 2005, Mosaic Phosphates Company became Mosaic Fertilizer, LLC.
- (g) The reclamation and financial responsibility for 1,074 acres of mined land within the Kingsford Complex was transferred to the New Wales Chemical Plant by action of the Governor and Cabinet on December 19, 1989. Acreage from which phosphate ore removal has occurred from July 1, 1975, through December 31, 2008, but reclaimed for industrial purposes (chemical, power generation facilities, etc.) are included in Column G, Mandatory Acres Reclaimed Under Industrial Use Criteria. Final reclamation of these industrial use sites remain the responsibility of the individual company pursuant to the rules and guidelines of the Phosphate Management Program, under Chapter 62-671, 62-672, and 62-673, F.A.C.
- (h) The Fort Meade Mine owned by Mobil Mining & Minerals was sold to Glawson Investments Corporation on December 21, 1998. Mobil Mining & Minerals remains responsible for all reclamation obligations for all mined and disturbed land at the Fort Meade Mine through final release. Mobil merged with Exxon Corporation in December 1999 and Exxon has now assumed the reclamation obligation through final release of the remaining unreleased portions of the Fort Meade Mine.

- (i) Occidental Chemical Company (Oxy) was sold to PCS Phosphate on October 31, 1995. On January 5, 1996, PCS Phosphate combined the Suwannee River and Swift Creek Mines into the Hamilton County Mine.
- (j) NuGulf's Wingate Creek Mine was purchased by Cargill Fertilizer, Inc., in 2004. Later on that year, Cargill Fertilizer Inc., transferred its reclamation obligations to Cargill Fertilizer, LLC. This company subsequently became Mosaic Fertilizer, LLC.
- (k) There was an error in the numbers reported in the 2008 Rate of Reclamation Report for the Brewster Phosphates' Haynesworth mine. The acres were reported as 2,325 Mandatory Acres Reclaimed and Released and 891 acres Reclaimed Through Revegetation. They were actually 2,198 acres and 956 acres, respectively.
- (l) Some acres have been updated due to improvements in mapping techniques and GIS capabilities.