

**Mosaic Fertilizer
Integrated Land Management Plan
Restoration Review Agency Meeting
Meeting Summary
September 19, 2007**

Participants:

Clayton Robertson, VHB
Warren Reuschel, VHB
Jeff Stewart, Mosaic
Pat Milam, Milam Environmental

Peter Owens, EPC
Mike Thompson, EPC
William Rupp, Mosaic

Attachments: Meeting Handouts

Clayton Robertson welcomed the participants to the meeting at approximately 8:35am. He requested sign-in of participants and, together with Jeff Stewart, provided an introductory statement regarding the Development Order and the role of the Restoration Review Agency's (RRA) role. He reminded participants that, while recent RRA meetings tended to focus on the Archie Creek relocation and adjacent mitigation, continued success was apparent in the restoration parcels and they should continue to be considered during RRA meetings and review.

A series of handouts were provided as interim updates regarding on-site conditions of the restoration and mitigation areas, as follows:

- 1) Archie Creek Mitigation oblique aerial photos
- 2) Archie Creek Mitigation monitoring sites map
- 3) Time-zero (September 2006) and 1-year (September 2007) photo station images for the Archie Creek Mitigation areas
- 4) Surface water datalogger charts for 3 stations within the relocation Archie Creek and adjacent mitigation areas
- 5) Surface water datalogger charts for 3 stations within the restoration parcels; Northeast A, Northwest A, Northwest B.

Mr. Robertson provided an overview of continued success and growth of planted mitigation areas. The group was able to review the 2006 and 2007 comparison photos on a station-to-station basis and noted the obvious progress in vegetative cover. Warren Reuschel gave a brief narrative statement summarizing water level differences throughout the Archie Creek and adjacent mitigation and reviewed the surface and groundwater charts provided in the handout.

Mr. Reuschel provided a summary of intended site visits for the day and all attendees proceeded to the site tour via a passenger van. The tour entered near the Archie Creek southern mitigation area from 78th Street, progressed to the northern mitigation area, and exited the site along the southern bank of Archie Creek. There was a great deal of discussion of the observed water levels within the northern mitigation area, the northern portion of the relocated Archie Creek and the southern mitigation area. Mike Thompson and Pete Owens expressed concern regarding higher water levels than expected in the northern mitigation site and further concern regarding continued tree survival. It was agreed that no significant tree mortality was

evident to-date. Mr. Reuschel reported tree survival continued to exceed 90% of original plantings, based on monitored subsamples. Mr. Reuschel further described the expansion of herbaceous plant communities from both planted species and recruitment of native seeds source. The water level in the northern mitigation area was essentially contiguous with the adjacent creek water level. In the area of the southern mitigation area, the water level of the creek was clearly lower than the mitigation area allowing the control structure to regulate the water level.

As the group traveled the east-west segment of the relocated Archie Creek, the benefit of the repairs to the Creek weir structures was recognized and noted the weirs appeared to be functioning as designed. The tour then passed Northeast A, Northwest A, and followed the shoulder of US 41 southward to the plant entrance. Pete Owens indicated the hydrology appeared appropriate for these areas.

Both Mike Thompson and Peter Owens reiterated concerns regarding long-term survival of installed maples. While no mortality was evident, discussions covered potential options in the event of a worst-case mortality scenario, with options geared towards preserving the intact, relatively stable (vegetatively and hydrologically) system while providing appropriate trees. Possible tree planting options included changes in hardwood swamp species mix and/or planting in other locations within the northern mitigation area and/or along Archie Creek. It was agreed that for the present and in the absence of any real mortality, continued monitoring would suffice. Mike Thompson described various alternative mitigation options, and recommended that, in the event of tree mortality, the RRA representatives and EPC in particular, would seek a logical and common sense solution.

Peter Owens recommended comparing datalogger data with USGS real-time data as well as potentiometric contours for the area, to further investigate the higher water levels at the northern mitigation area. Three factors were discussed as potential contributors: offsite surface water contributions, groundwater contributions, and possible flow restrictions/increased channel roughness associated with midstream stands of *Eleocharis* sp.

All present were pleased with the overall condition of the site and continued success, particularly with the limited exotic infestation for a flowing system. Channeled apple snails were briefly discussed, however, it was apparent that the on-site population was kept in check by wading birds and possibly hydroperiod.

Peter Owens commented favorably regarding the mitigation and restoration criteria being met for a variety of targets including specific mitigation conditions and restoration of oligohaline habitat. He termed the site overall as a "big success story." He requested additional information regarding the status of other Development Order requirements. Mr. Robertson committed to follow-up with him regarding the location or development of such information.