



## MEMORANDUM

**TO:** Kristina Handt, Administrator, City of Scandia

**FROM:** Jed Chesnut, Wetland/Natural Resource Specialist

**DATE:** December 4, 2013

**RE:** **Zavoral Mining and Reclamation Project – Monitoring and Inspection Report 2 – December 3, 2013**

As per the contract (13-01) between the Washington Conservation District (WCD) and the City of Scandia (City), WCD staff performed site inspection and monitoring tasks pertaining to Technical Services of Exhibit B. This memorandum serves as a summary of applicable activities and reviews. The site inspection took place on Tuesday, December 3, 2013. Christina Morrison of Tiller Corporation (Tiller) was present and provided a descriptive tour of the project area. Each service area is listed below with a summary description of results.

1. Technical Service 3 – Erosion and Sediment Control Inspections
  - a. Task 1 – Site Inspection
    - i. Active mining and movement of material within the site were occurring during the site visit. Silt fence had been installed as per the stormwater pollution and prevention plan (SWPPP) in a majority of the site, primarily where land disturbing activities were taking place.
    - ii. The construction of the new access road had been completed.
    - iii. In the northern portion of the project area, just north of the old access road, no land disturbing activities had occurred and therefore, silt fence was not installed. Additional detail was provided in the October inspection report. The old access road was actively being removed. Since the removal of the old road will not take much time, the ground is freezing, and there is a very large vegetated buffer between that activity and the project boundary, the installation of silt fence was deemed unnecessary (see attached photo). I asked Christina to keep me informed as to when the old road is removed and the grading in that area is complete. At that time, the drainage of disturbed areas will be internal to the mining area and not offsite to the north and northeast.
    - iv. In the active area near where Mr. Zavoral's driveway begins its descent down the bluff to the railroad tracks, the previous inspection noted the need for perimeter control. Tiller had quickly installed bio-rolls in this area and since then has installed the silt fence (see attached photo).
    - v. A new silt fence has been installed where an internal mine road meets Mr. Zavoral's driveway. This silt fence is placed to ensure sediment doesn't enter the driveway and flow downhill (see attached photo).
    - vi. In areas along the southern project limits (along Mr. Zavoral's driveway), Tiller has installed additional rows of silt fencing (see attached pictures).
    - vii. There was an area along the southern project limits where a gap in perimeter control could allow for sediment to leave the project area and flow onto the driveway toward the entrance on Quinnell Ave. I asked for perimeter control to be installed in this area and Christina said that either bio-rolls or silt fence (if the ground isn't too frozen) will be installed. If bio-rolls are installed, they will be adequate for the winter, but silt fence should be installed as soon as possible in the spring.

2. Technical Service 4 – Threatened and Endangered Species
  - a. Task 2 – Annual Inspection of Site and Monitor T&E Listing Status of Butternut Tree  
The status of the butternut tree (*Juglans cinerea*) has been changed to “endangered” as of August 19, 2013. As a result, removal of a butternut tree after August 19, 2013 would require permitting from the Department of Natural Resources. One non-diseased tree has been identified on the property. WCD staff attempted again to locate the tree during this site visit to verify its presence. Christina noted that the tree was flagged, but its location was not verified and it is likely that the flagging had been removed. Tiller will be reflagging the tree.
  
3. Technical Service 5: Reclamation Plan Review and Inspection
  - a. Task 2 – Conduct Site Inspections to Verify Implementation of the Restoration Plan  
Phase 1 of the reclamation was underway during the December 3rd site visit.
    - i. It appeared that most of the grading for Reclamation Phase 1 had been completed.
    - ii. The prairie seed installation was scheduled for the day of the site inspection, but may have been delayed due to the weather conditions.
    - iii. As previously stated in the October report, Tiller’s representative noted that the tree transplantation efforts have been challenging due to the poor soil conditions on the site. Most of the transplanted trees have been placed along the northern boundary of the project area (see attached photo). WCD asked Tiller to summarize the final numbers of transplanted trees in their annual report.

This ends the reporting of WCD’s December monitoring activities. Please call me with any questions at 651-275-1136 x25.

Removal of old  
access road



Undisturbed,  
vegetated buffer



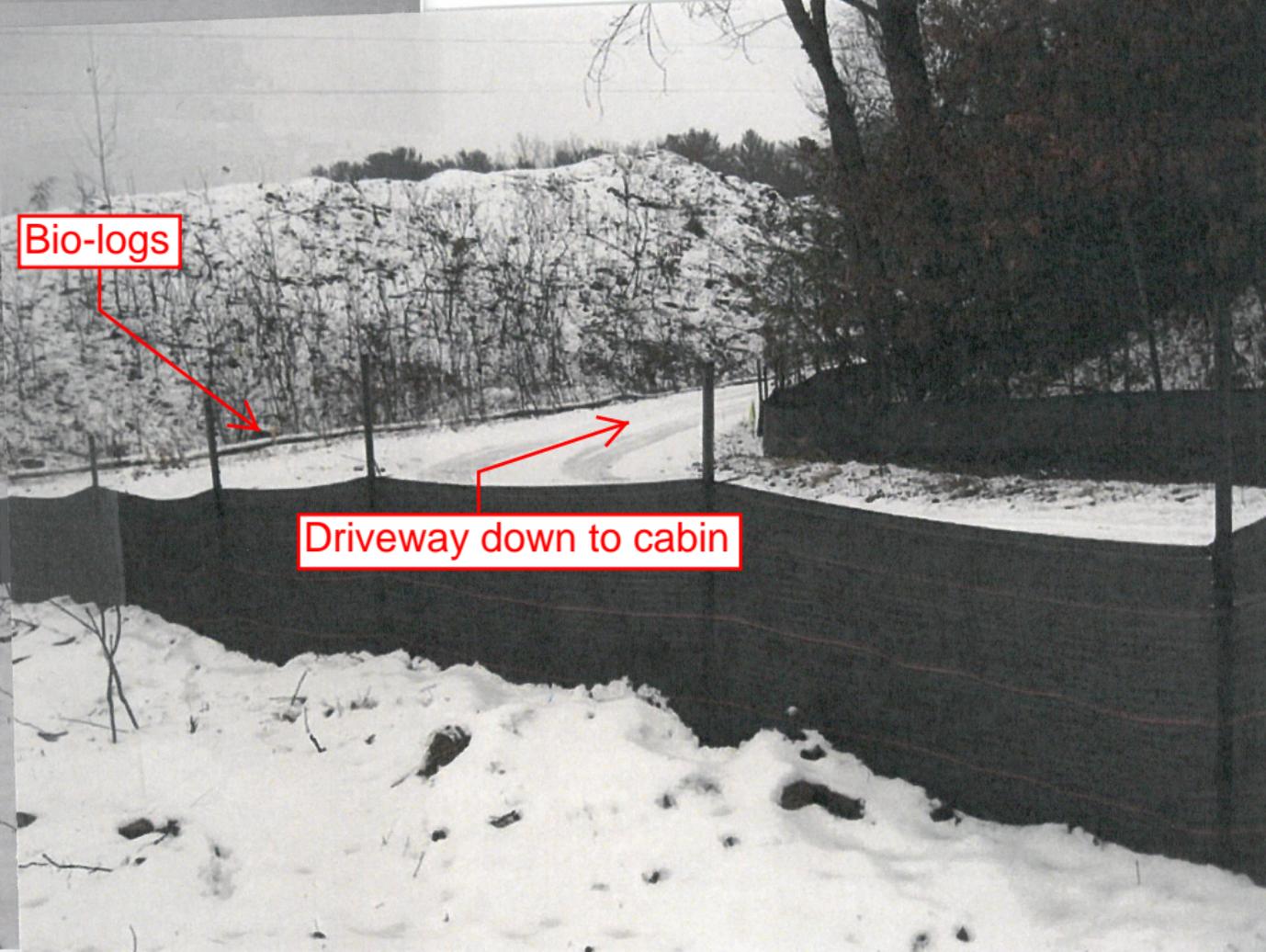


Bio-logs on slope to remain in place

Silt fence installed where driveway begins descent to the railroad



To mining area



Bio-logs

Driveway down to cabin





Transplanted pines

