Figure 6. Southerly view of the off-site portion of Wetland D from the property edge.

Figure 7. Much of Wetland D is under a dense canopy and dominated by skunk cabbage.

Figure 8. The unnamed tributary at the edge of Wetland E.

Figure 9. Wetland F is a series of forested seeps along an unnamed tributary to Hosensack Creek.

Figure 10. The only open area within Wetland F is the area adjacent to West Mill Hill Road that had been recently cleared of vegetation. The tire ruts created a mucky substrate that did not persist throughout the survey season.

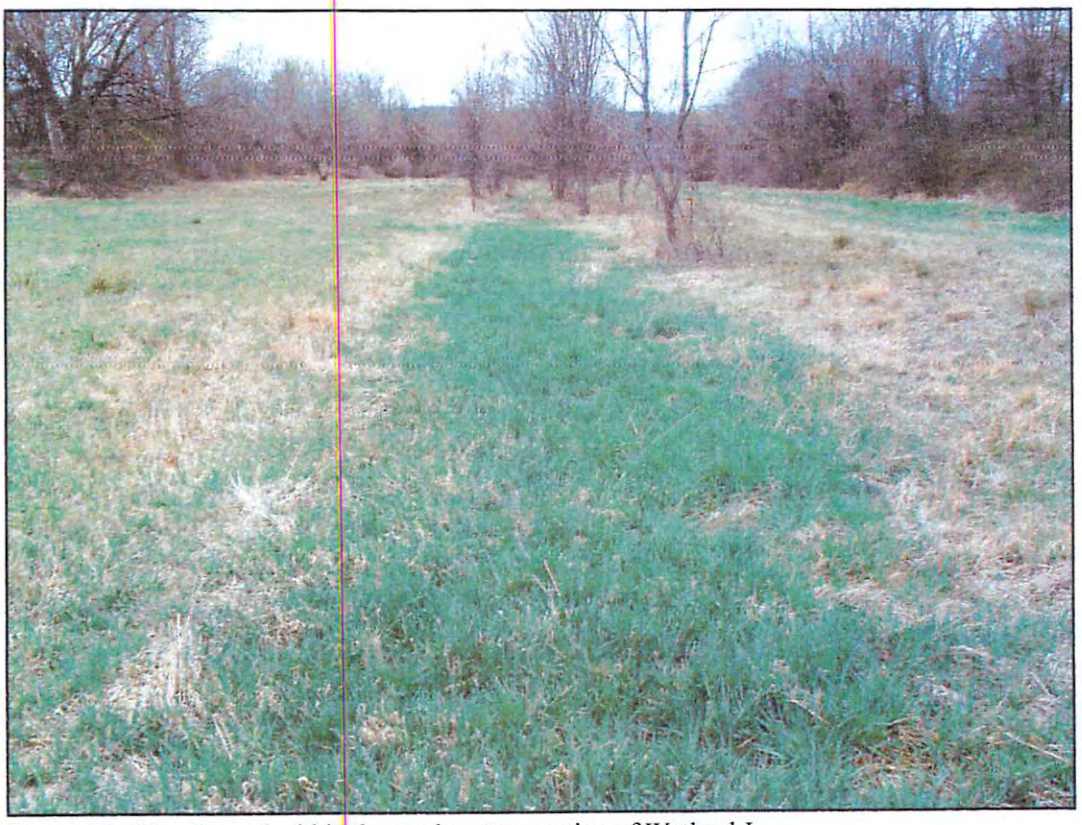

Figure 11. The channel within the northeastern portion of Wetland J.

Figure 12. The wet meadow portion of Wetland J, which has an open canopy and is dominated by tussock sedge.

Figure 13. Cattail dominated portion of Wetland J.

Figure 14. The off-site wetland within the powerline ROW.

Figure 15. The tributary within Wetland K is bordered by a thicket of trees and shrubs, but has mucky seeps dispersed throughout.

Figure 16. The man-made pond within Wetland L.

Figure 17. The emergent wetland on the northeastern edge of the pond, within Wetland L.

Figure 18. The remaining length of Wetland L is the forested corridor of the unnamed tributary.

Figure 19. Wetland M is a narrow forested intermittent channel for much of its length.

Figure 20. The unnamed tributary is channeled through a spring house within Wetland M.

Figure 21. A small man-made pond just west of the spring house in Wetland M.

Figure 22. Wetland O is the forested corridor of an unnamed tributary to Hosensack Creek. The tributary is situated in the valley and is oriented left-right in the photograph

BOG TURTLE SURVEY

Phase II Survey of Wetland D: The Phase II bog turtle surveys of Wetland D on the Geryville Materials, Inc. site were conducted on May 17, May 29, June 3, and June 8, 2006 by HA. The entire 2.59 acres of Wetland D and the adjoining off-site portion of the wetland (approximately 2.0 ac) were included in the designated survey area, however permission to enter the off-site portion of the wetland was denied on the last survey day (6/08/2006). A total of 104 person-hours of search effort were expended for the approximately 4.5 ac designated survey area. Neither bog turtles nor evidence of their presence (i.e. shell, tracks, nests) were observed. A summary of the Phase II site visits is presented in **Table 4**.

Table 4. Phase II Bog Turtle Survey Summary for Wetland D.

Date	Time	Surveyors	Search Effort	Total Hours of Search Effort	Weather	No. Bog Turtles Found
05/17/06	0900-1500	M. Torocco T. Bickhart M. McGraw W. Callaghan	6.0 6.0 6.0 6.0	24.0	**In**: 17.2°C, Partly cloudy, 60% cloud cover. **Out**: 19.1°C, Rain, 100% cloud cover.	0
05/29/06	0900-1200 and 1300-1700	M. Torocco T. Bickhart M. McGraw M. Myers W. Callaghan	7.0 7.0 7.0 7.0 7.0	35.0	**In**: 21.0°C, Sunny, 0% cloud cover. **Out**: 22.4°C, Sunny, 0% cloud cover.	0
06/03/06	0900-1400	M. Torocco T. Bickhart M. McGraw W. Callaghan	5.0 5.0 5.0 5.0	20.0	**In**: 19.5°C, Cloudy, 90% cloud cover. **Out**: 21.6°C, Cloudy, 75% cloud cover.	0
06/08/06	0900-1400	M. Torocco T. Bickhart M. McGraw M. Myers W. Callaghan	5.0 5.0 5.0 5.0 5.0	25.0	**In**: 21.5°C, Cloudy, 100% cloud cover. **Out**: 22.4°C, Partly cloudy, 70% cloud cover.	0

Phase II Survey of Wetland J: The Phase II bog turtle surveys of Wetland J were conducted on April 20, 27, May 2, and 6, 2006 by HA. A total of 115.0 person-hours of search effort were expended for the 6.45 ac wetland before a bog turtle was discovered by Michael Torocco of HA at 12:30 pm on May 6, 2006. The precise location of the turtle observation was 40°26'14.9"N and 75°30'48.0"W (**Figure 23**). The turtle was observed partially submerged in shallow muck near the spring source.

The adult female bog turtle weighed 132 g and measured 90.3 mm carapace length, 66.5 mm carapace width, 77.6 mm plastron length, 46.9 mm plastron width, and 39.4 mm shell height (**Figures 24-28**). The age of the turtle is estimated at 10+ years as the shell is partially worn smooth. The turtle had tooth marks on the marginal and anal scutes, but otherwise appeared in good health. The first left and right marginal scutes were notched (L1, R1) for future identification. A summary of the Phase II site visits is presented in **Table 5**.

Table 5. Phase II Bog Turtle Survey Summary for Wetland J.

Date	Time	Surveyors	Search Effort	Total Hours of Search Effort	Weather	No. Bog Turtles Found
04/20/06	0930-1230 and 1330-1730	M. Torocco T. Bickhart M. McGraw M. Myers	7.0 7.0 7.0 7.0	28.0	**In**: 18.0°C, Sunny, 0% cloud cover. **Out**: 24.9°C, Sunny, 0% cloud cover.	0
04/27/06	0900-1200 and 1300-1700	M. Torocco T. Bickhart M. McGraw M. Myers	7.0 7.0 7.0 7.0	28.0	**In**: 14.1°C, Sunny, 0% cloud cover. **Out**: 24.7°C, Cloudy, 70% cloud cover.	0
05/02/06	0800-1230 and 1330-1730	M. Torocco T. Bickhart M. McGraw M. Myers	8.5 8.5 8.5 8.5	34.0	**In**: 15.7°C, Sunny, 0% cloud cover. **Out**: 23.6°C, Sunny, 10% cloud cover.	0
05/06/06	0900-1400	M. Torocco T. Bickhart M. McGraw M. Myers W. Callaghan	5.0 5.0 5.0 5.0 5.0	25.0	**In**: 18.4°C, Cloudy, 60% cloud cover. **Out**: 20.4°C, Cloudy, 50% cloud cover.	1

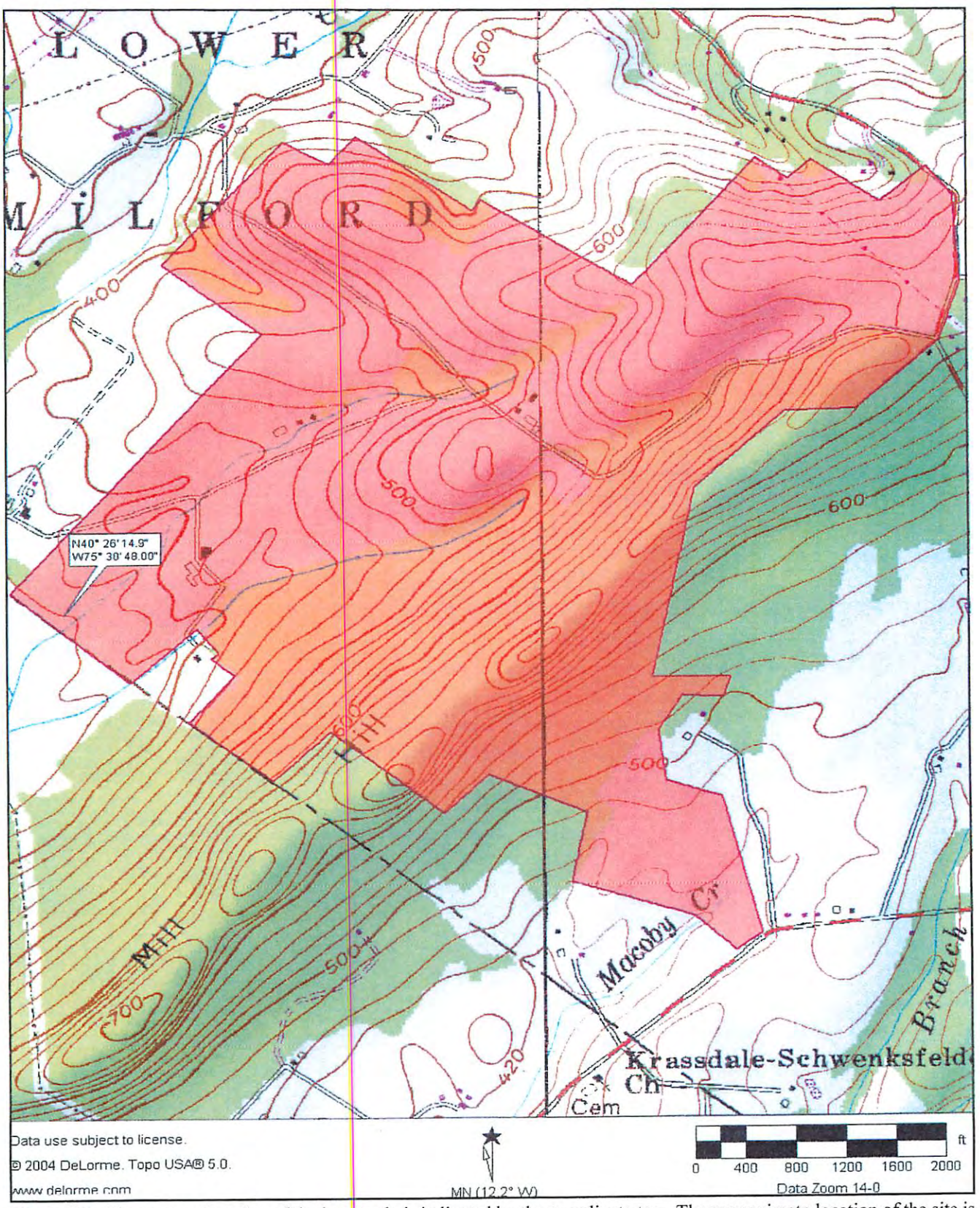

Figure 23. The capture location of the bog turtle is indicated by the coordinate tag. The approximate location of the site is indicated by the red shading.

Figure 24. Adult female bog turtle found on May 6, 2006 by Herpetological Associates, Inc. at the Geryville Materials Site.

igure 25. Close-up of carapace.

Figure 26. Close-up of plastron.

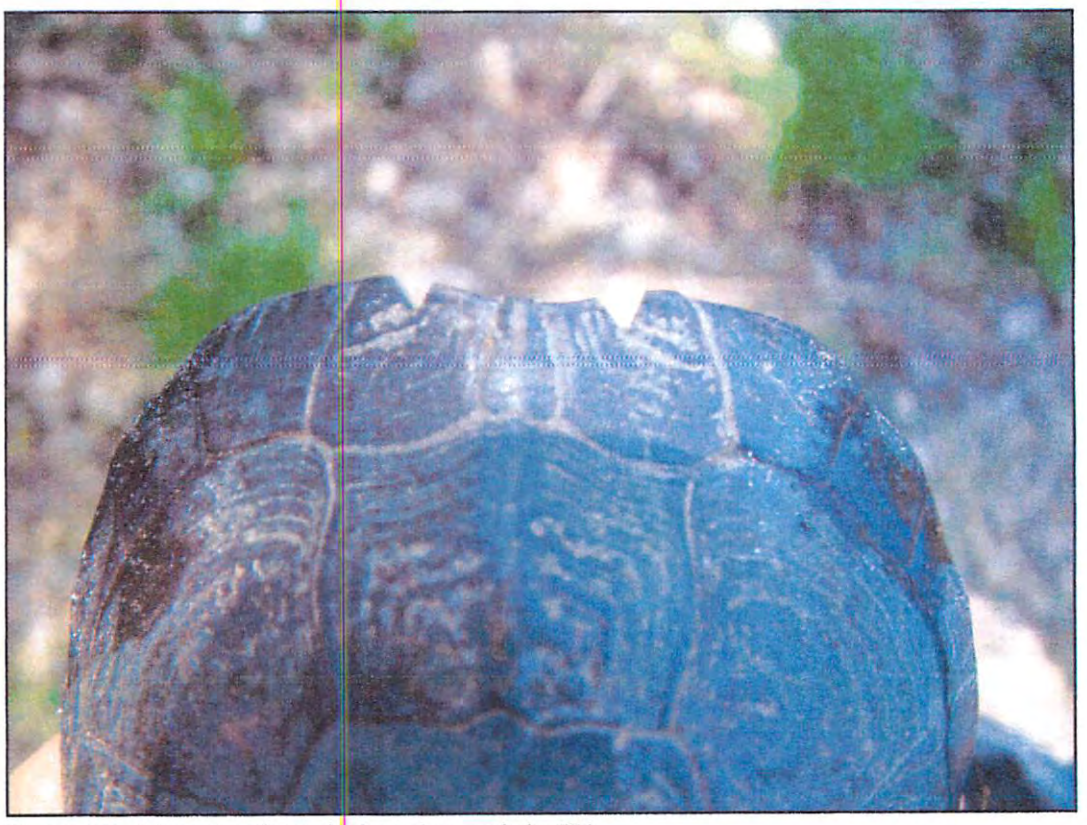

Figure 27. Close-up of marginal notches made by HA.

Figure 28. The bog turtle after her release. The turtle was found in a similar posture, but with only 25% of its shell exposed. This is a typical basking posture.

REDBELLY TURTLE SURVEY

All open water habitats and stream corridors within the 628 acre study area were investigated for redbelly turtle habitat by Herpetological Associated, Inc. on April 6, 2006. The wetlands which met the criteria of redbelly turtle habitat were further investigated for nesting habitat during the month of June 2006. A man-made pond within Wetland L was observed to contain potential redbelly turtle aquatic habitat. Because painted turtles were confirmed present during the habitat investigation and because of the close proximity of Hosensack Creek, a suitable movement corridor, further investigation for the presence of redbelly turtles was warranted. It is important to note that access to this pond for redbelly turtles is limited to overland travel, due to the small size of the tributary.

A total of 36.0 person-hours were spent conducting surveys for basking/swimming redbelly turtles and conducting nesting habitat surveys within the subject property (**Table 6**). The cultivated farm fields and mowed lawn surrounding the man-made pond were the focus of nesting habitat surveys. The topography and the forest edge delineated the available nesting habitat within the farm fields.

Nesting surveys revealed one snapping turtle actively nesting along the gravel driveway, adjacent to the man-made pond. Several destroyed painted turtle nests were also observed, both on the bank of the pond and in the adjacent farmland. Redbelly turtle nests were not confirmed. Visual surveys for adult and juvenile redbelly turtles in the pond were conducted concurrently with the nesting surveys. Eastern painted turtles and snapping turtles were commonly observed swimming and basking in the pond. Redbelly turtles, or evidence of their presence, were not observed.

Table 6. Redbelly Turtle Survey Summary of the Geryville Materials, Inc. Site.

Date	Time	Surveyors	Search Effort	Total Hours of Search Effort	Weather	No. Redbelly Nest Found
06/03/06	1430-1630	M. Torocco T. Bickhart M. McGraw W. Callaghan	2.0 2.0 2.0 2.0	8.0	**In**: 20.8 °C, Sunny, 0% cloud cover. **Out**: 21.6°C, Sunny, 0% cloud cover.	0
06/08/06	1430-1630	M. Torocco T. Bickhart M. McGraw M. Myers W. Callaghan	2.0 2.0 2.0 2.0 2.0	10.0	**In**: 22.7°C, Sunny, 0% cloud cover. **Out**: 23.3°C, Cloudy, 70% cloud cover.	0
06/16/06	0930-1130	M. Torocco T. Bickhart M. McGraw M. Myers W. Callaghan	2.0 2.0 2.0 2.0 2.0	10.0	**In**: 19.8°C, Sunny, 40% cloud cover. **Out**: 22.6°C, Sunny, 10% cloud cover.	0
06/20/06	1000-1200	M. Torocco T. Bickhart M. McGraw M. Myers	2.0 2.0 2.0 2.0	8.0	**In**: 20.3°C, Cloudy, 60% cloud cover. **Out**: 25.9°C, Cloudy, 50% cloud cover.	0

REPTILES AND AMPHIBIANS OBSERVED

Eight reptiles and eight amphibians were observed on the Geryville Material, Inc. study site (**Figures 29-31**). A list of these species is presented in **Table 7**. In addition to the state endangered and federally threatened bog turtle, three Pennsylvania species of special concern were also observed within the Wetland J area. One adult female spotted turtle and one dead adult female spotted turtle were found within Wetland J. Six box turtles were observed along the wetland corridor and hedge row leading to Wetland J. One adult female wood turtle and one dead adult female wood turtle were found along the Hosensack Creek.

Table 7. Reptiles and Amphibians Observed on the Geryville Materials Site.

Common Name	Scientific Name	PA Status[1]	Federal Status[2]
Reptiles			
Bog turtle	*Glyptemys muhlenbergii*	E	T
Wood turtle	*Glyptemys insculpta*	S	---
Spotted turtle	*Clemmys guttata*	S	---
E. box turtle	*Terrapene c. carolina*	S	---
N. water snake	*Nerodia s. sipedon*	A	---
E. garter snake	*Thamnophis s. sirtalis*	A	---
E. painted turtle	*Chrysemys p. picta*	A	---
Snapping turtle	*Chelydra serpentina*	A	---
Amphibians			
American toad	*Bufo americana*	A	---
Green frog	*Rana clamitans*	A	---
Wood Frog	*Rana sylvatica*	A	---
Bullfrog	*Rana catesbeiana*	A	---
Pickerel frog	*Rana palustris*	A	---
N. red salamander	*Pseudotriton r. ruber*	A	---
Redback salamander	*Plethodon cinereus*	A	---
N. two-lined salamander	*Eurycea bislineata*	A	---

[1]PA Status:
A= Abundant
C= Candidate Species
S= Species of special concern
T= Threatened Species
E= Endangered Species
X= Extirpated

[2]Federal Status:
T= Threatened
E= Endangered

Figure 29. An adult female wood turtle found along the banks of the Hosensack Creek adjacent to the study site.

Figure 30. An adult female spotted turtle found within the Wetland

Figure 31. One of many adult box turtle found within the vicinity of Wetland J.