

**Draft: Yellow Birch Lake, Vilas County, Herbicide Residual Summary, 2011
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A granular formulation of 2,4-D (Navigate) was applied to four sites on Yellow Birch Lake infested with Eurasian watermilfoil (Figure 1). The herbicide was applied on 31 May 2011 at application rates ranging from 2330 to 2450 ug/L ae (Table 1).

A herbicide residual sample location was located in each of the treated sites (Figure 2). Treatment site areas ranged from 0.62 to 2.36 acres. Water residual samples were collected by volunteers using an integrated water sampler to collect water from the entire water column. Samples were collected at 3, 24, 48, 72, 144, and 168 hours after treatment (HAT). Following completion of each sample interval, 2-3 drops of muriatic acid were added to all samples to fix the herbicide. Samples were then stored in a refrigerator until shipped to the ERDC laboratory for analysis.

Residual 2,4-D concentrations ranged from 27 to 76 ug/L ae at 3 HAT compared to a target concentration of 2330 to 2450 ug/L (Figure 3 and Figure 4). Concentrations were less than the irrigation restriction level of 100 ug/L ae at 3 HAT. The maximum mean concentration was 64 ug/L ae at 24 HAT which was less than the irrigation restriction level at 3 HAT (Figure 5).

**Table 1 Summary of Yellow Birch Lake, 2011
Herbicide Treatments Monitored for Herbicide Residuals**

	Area	Depth	Application Rate	Application Rate
Site	acres	feet	lbs/acre	ug/L ae
YBL A	0.62	6	200	2333
YBL B	2.36	5	175	2450
YBL C	2.04	5	175	2450
YBL D	0.80	6	200	2333

Figure 1. Yellow Birch Lake, 2011 herbicide treatment sites (Onterra LLC)

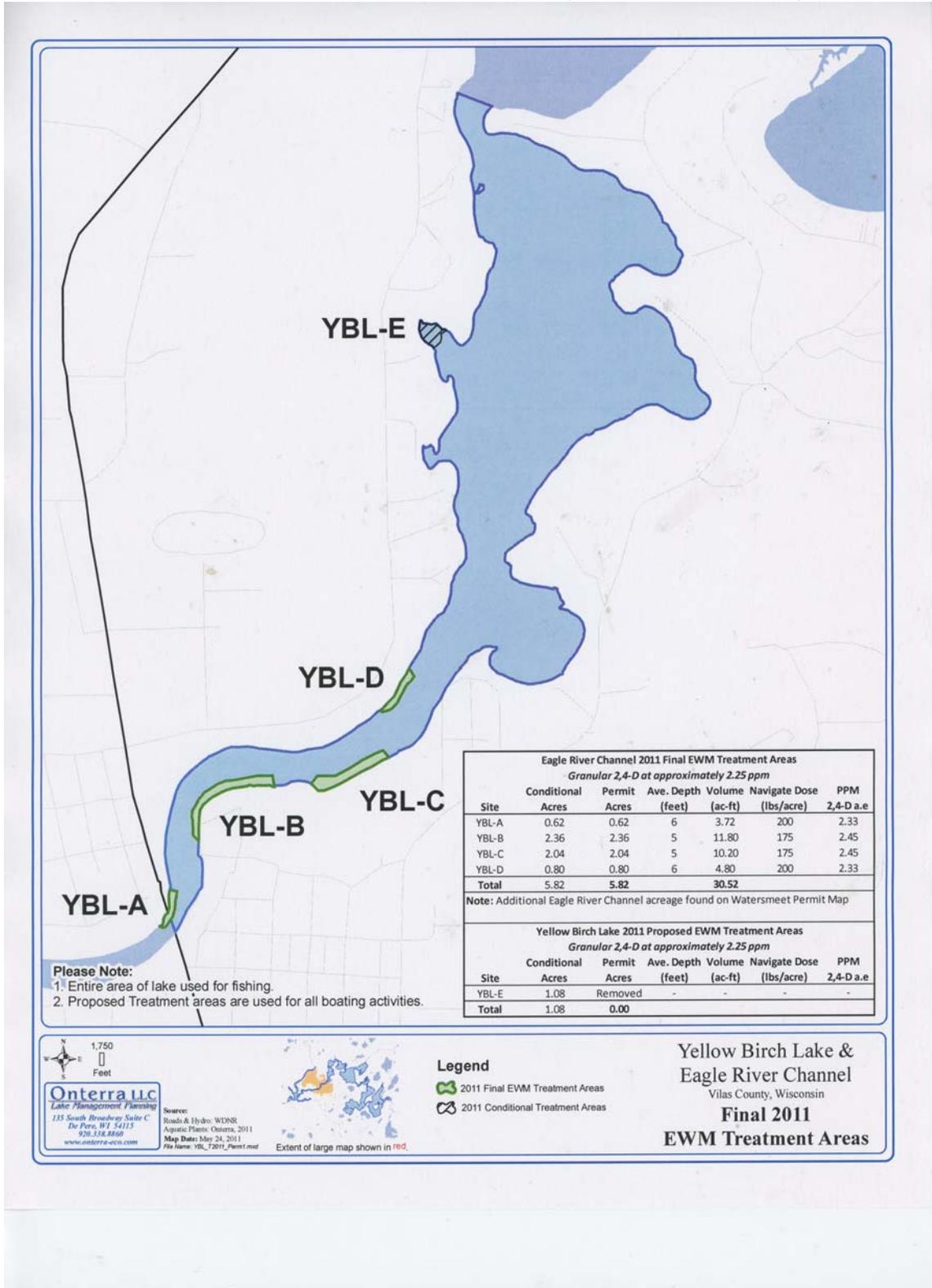


Figure 2. Yellow Birch Lake, 2011 herbicide residual sample locations

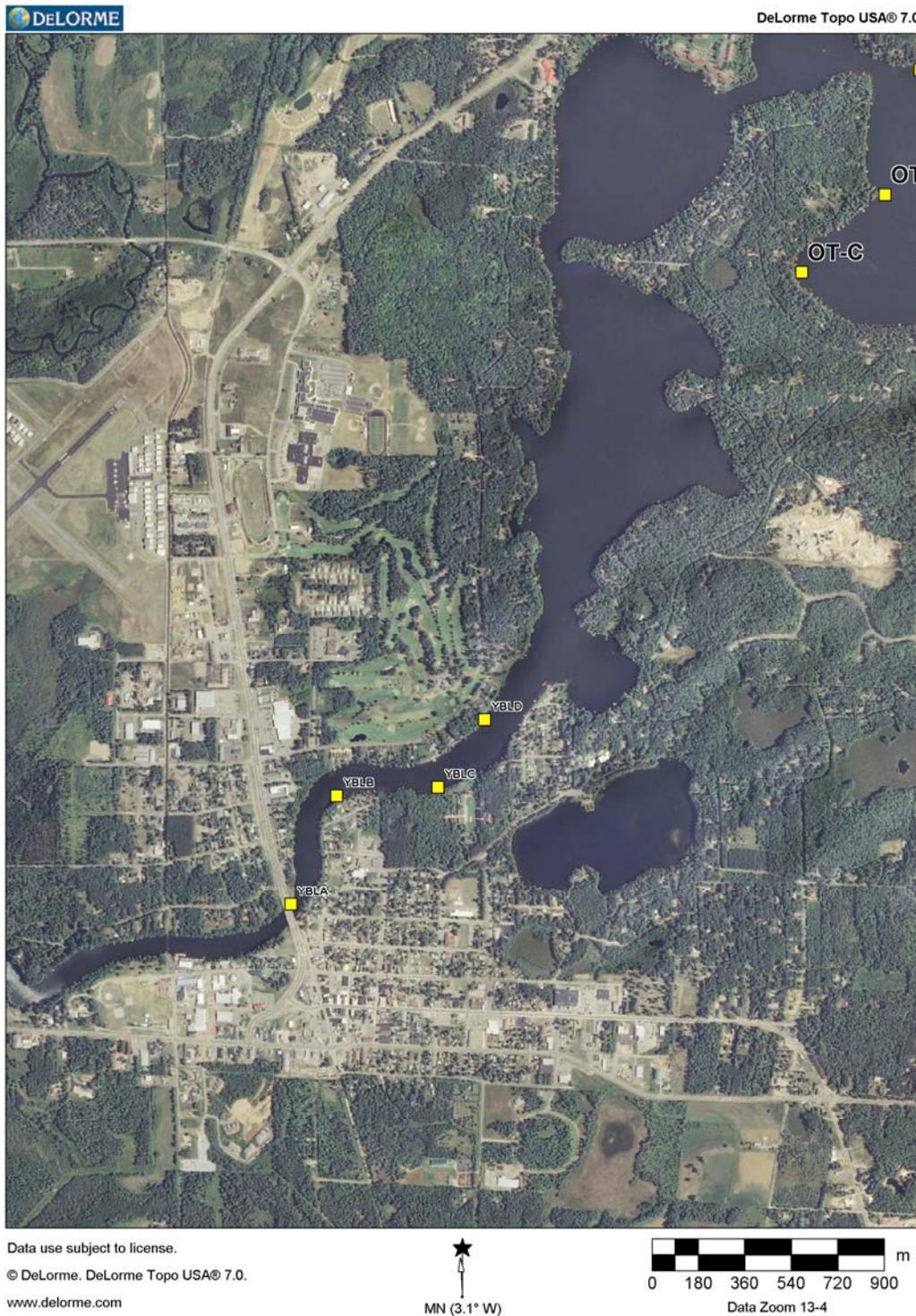


Figure 3.

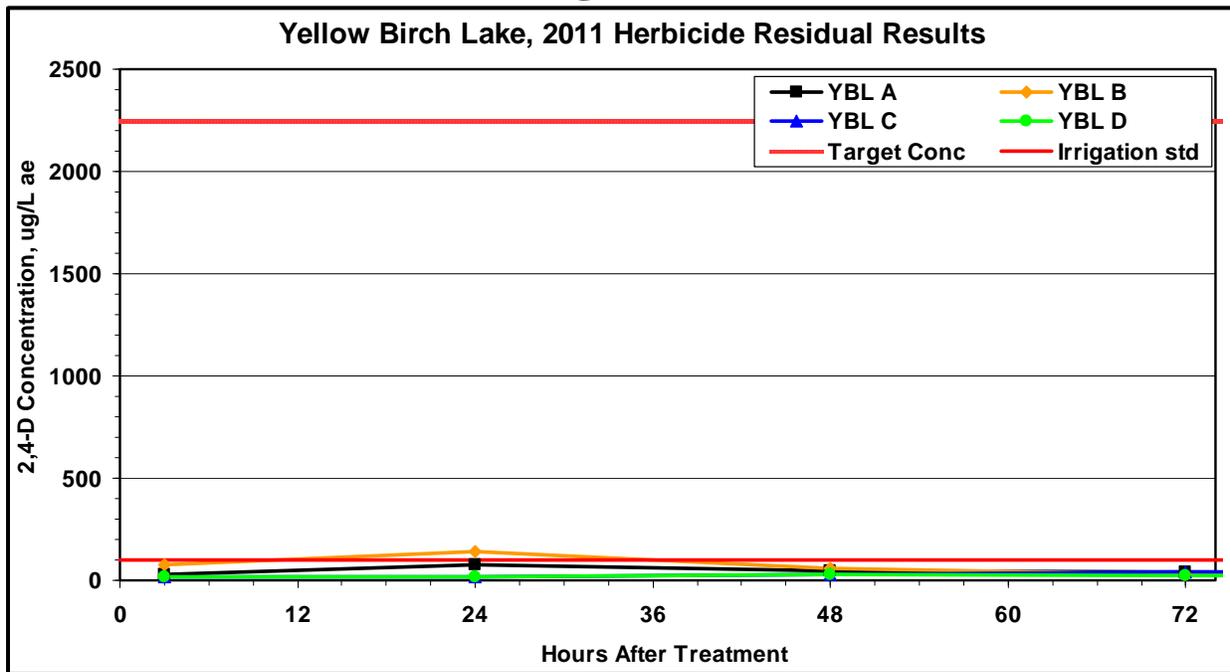


Figure 4.

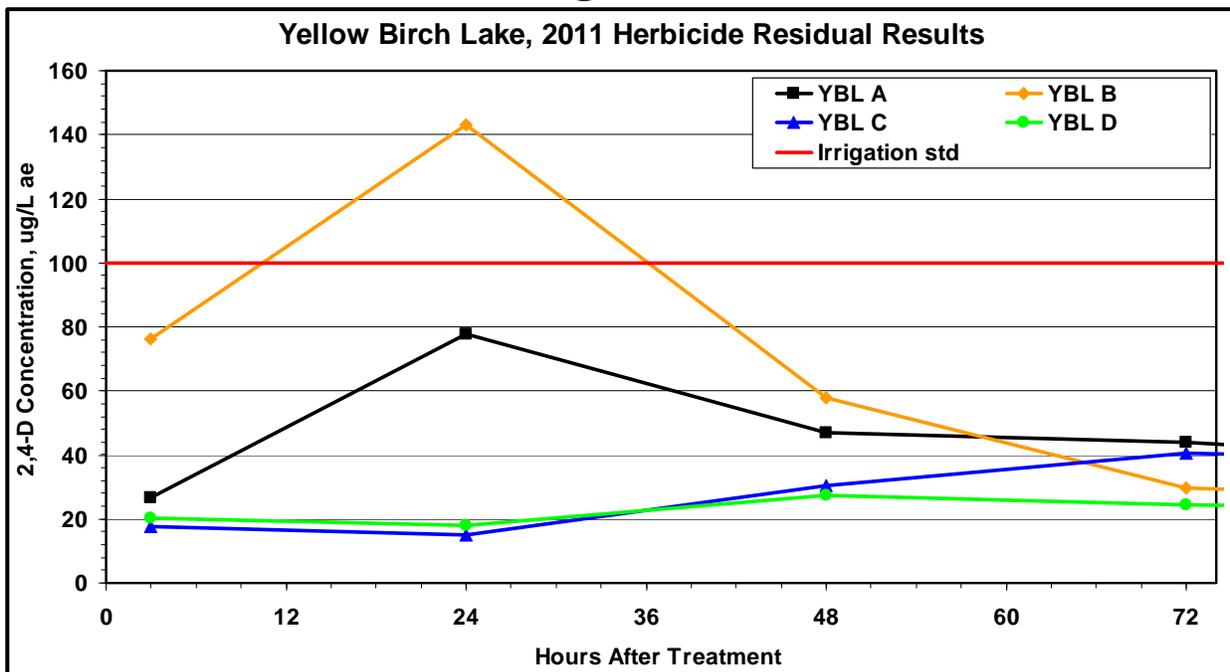


Figure 5

