

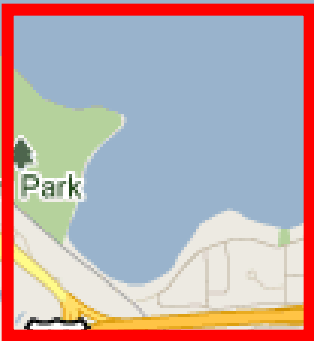
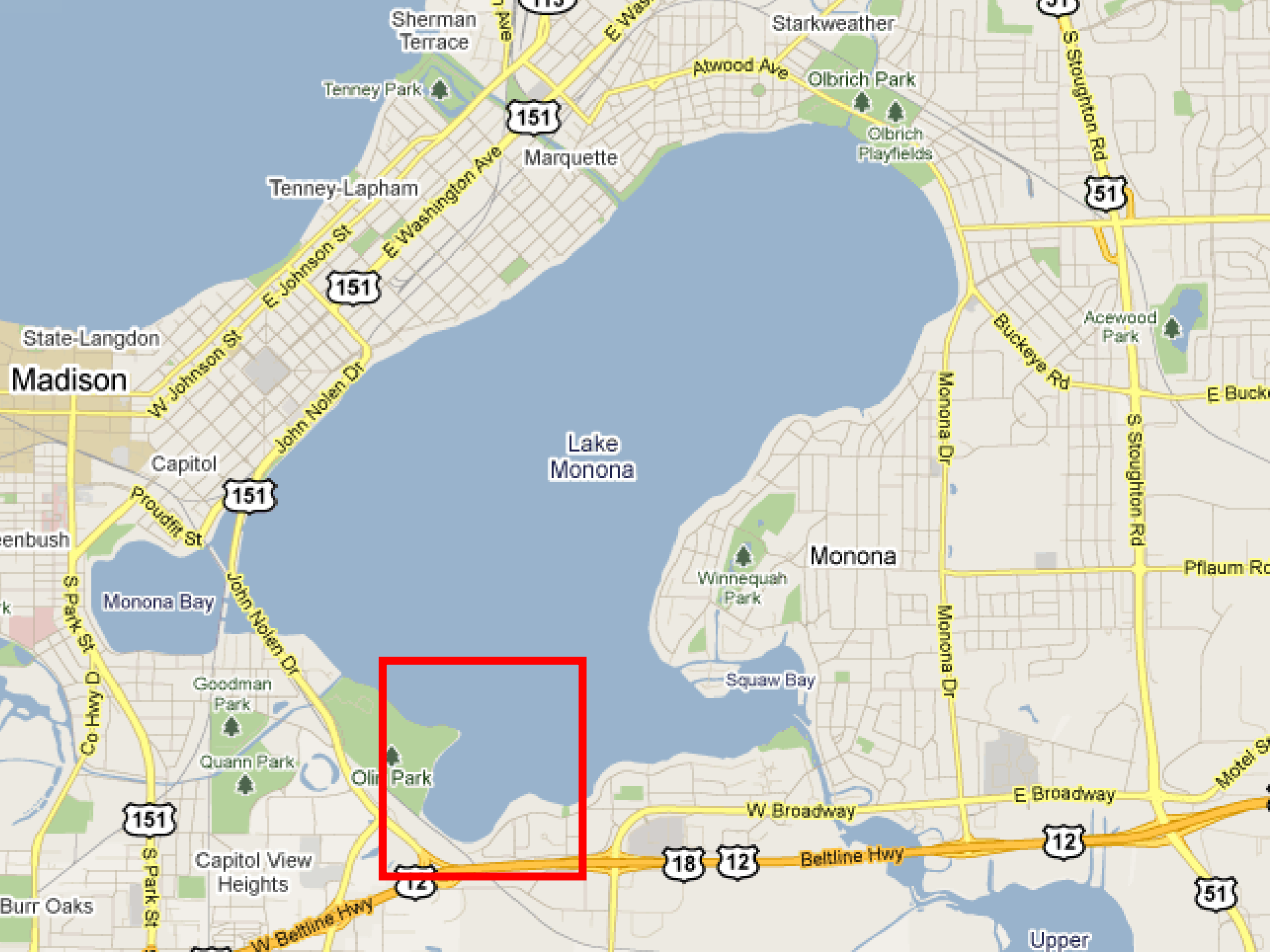
Contrasting effects of early-season harvesting and chemical treatment in Lake Monona (Madison, WI)

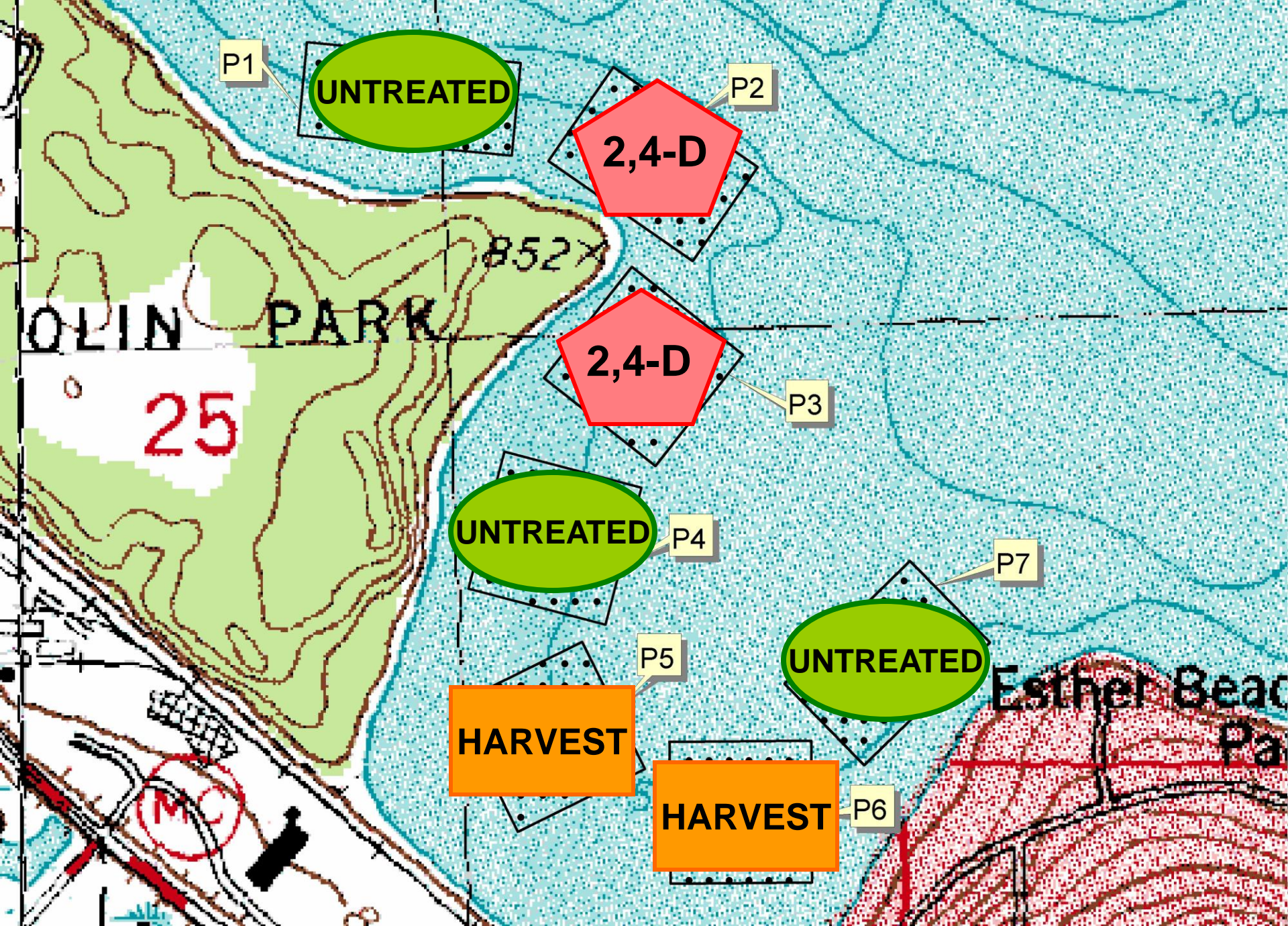
March 30, 2011



Early-Season Control Strategies

- 2,4-D treatment
 - Semi-selective
 - Dicots: EWM, Coontail, Water stargrass
- Deep harvesting
 - Non-selective
- Can treating early increase selectivity?





Assessing Plant Response

- 8 Surveys : June & August, 2007-2010
- ~40 points per plot
- **Plant presence/absence**
 - Make linear predictions, assess significance of response to treatment

Harvesting

- 2008
 - high water levels prevented harvesting until later in the season (July)
- 2009 (early June) and 2010 (25 May)
 - timing was based on start of EWM growth







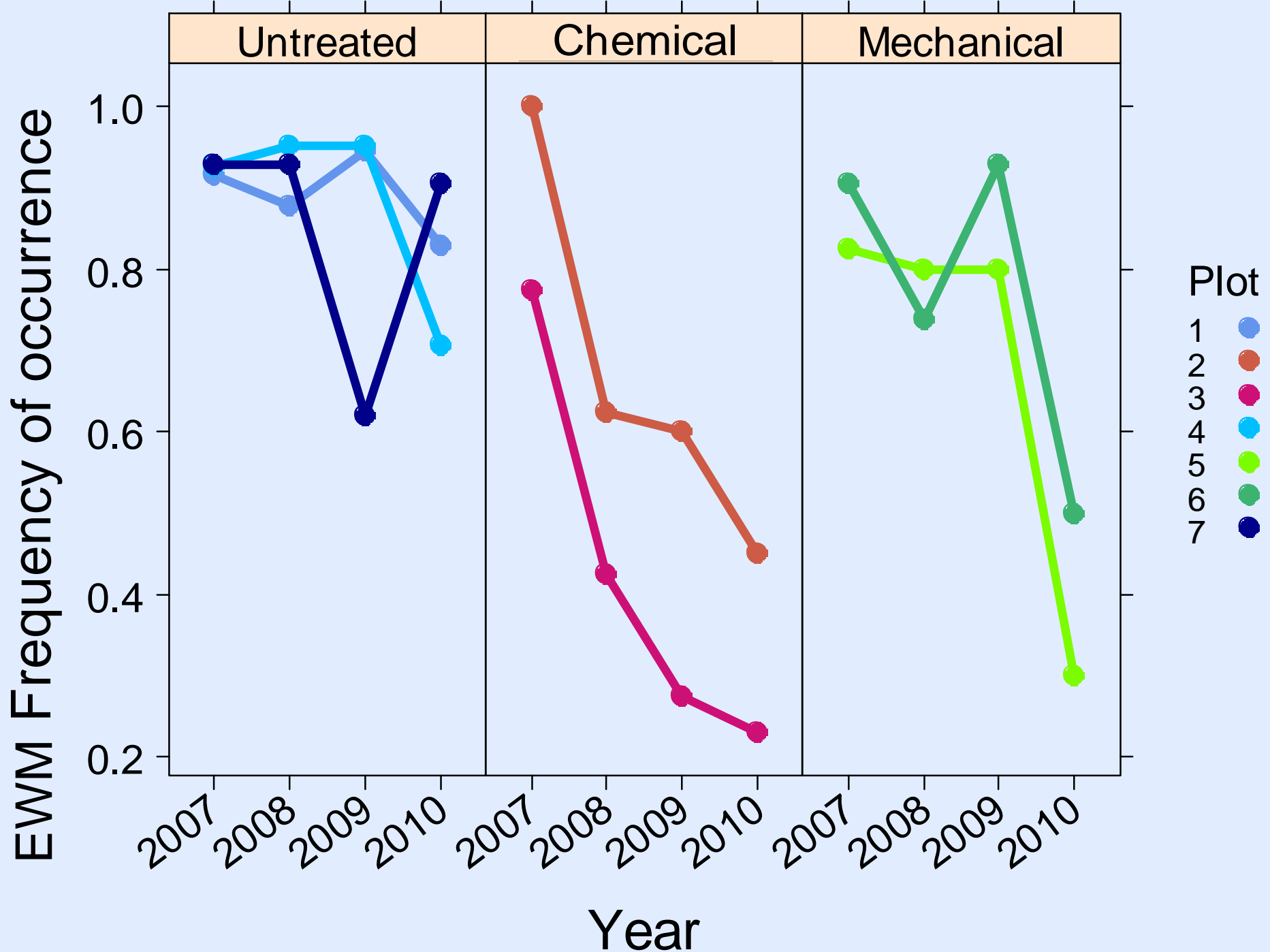


WATERTOWN
Park & Rec.
2003

FREE 40

Results

- Decrease in EWM Frequency observed over four years with chemical treatment or harvesting

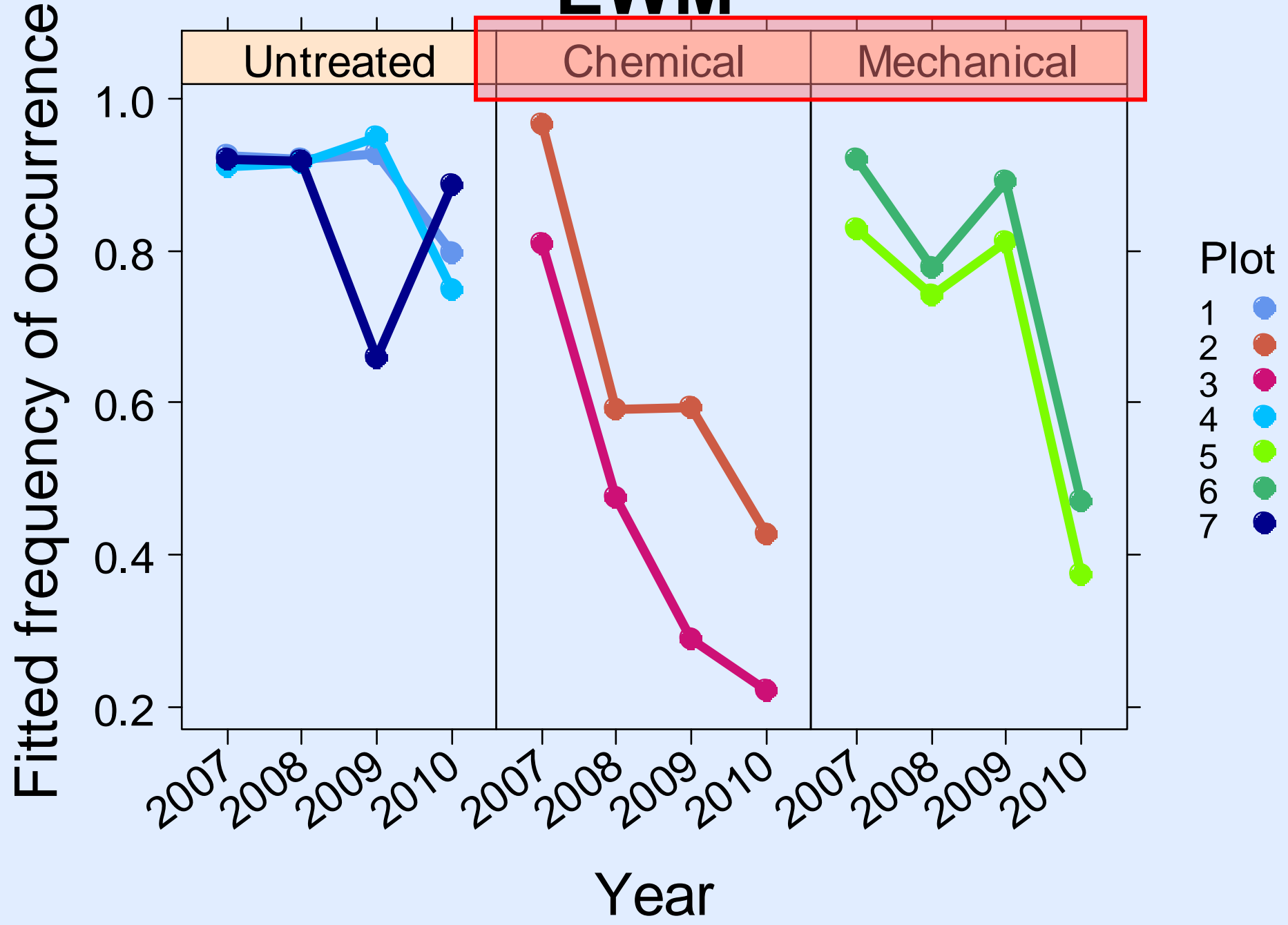


Results

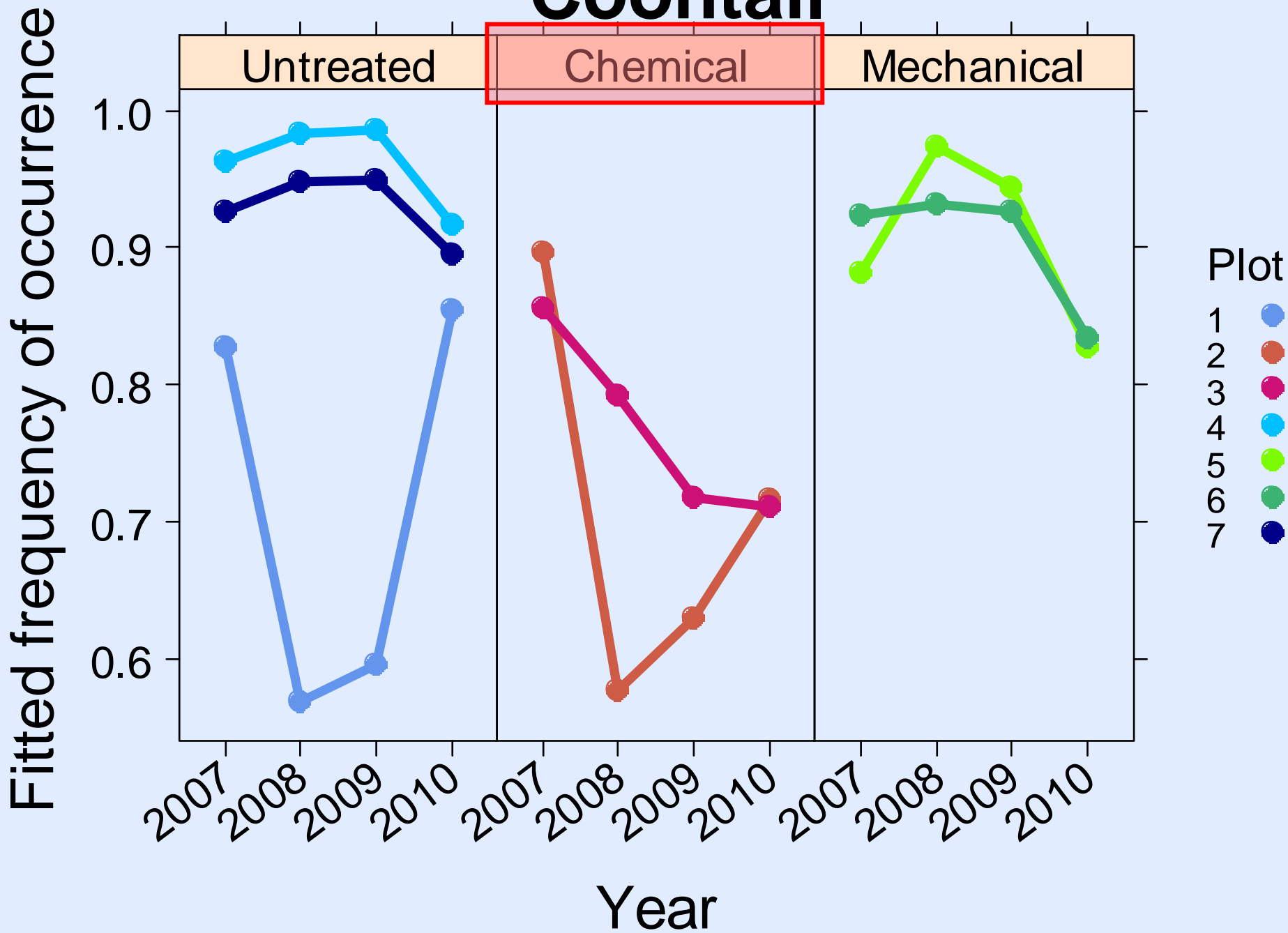
- Decrease in EWM frequency after four years with chemical treatment or harvesting
- Considerable variation
 - Among plots
 - Among years

Are there statistically significant differences among treatment groups?

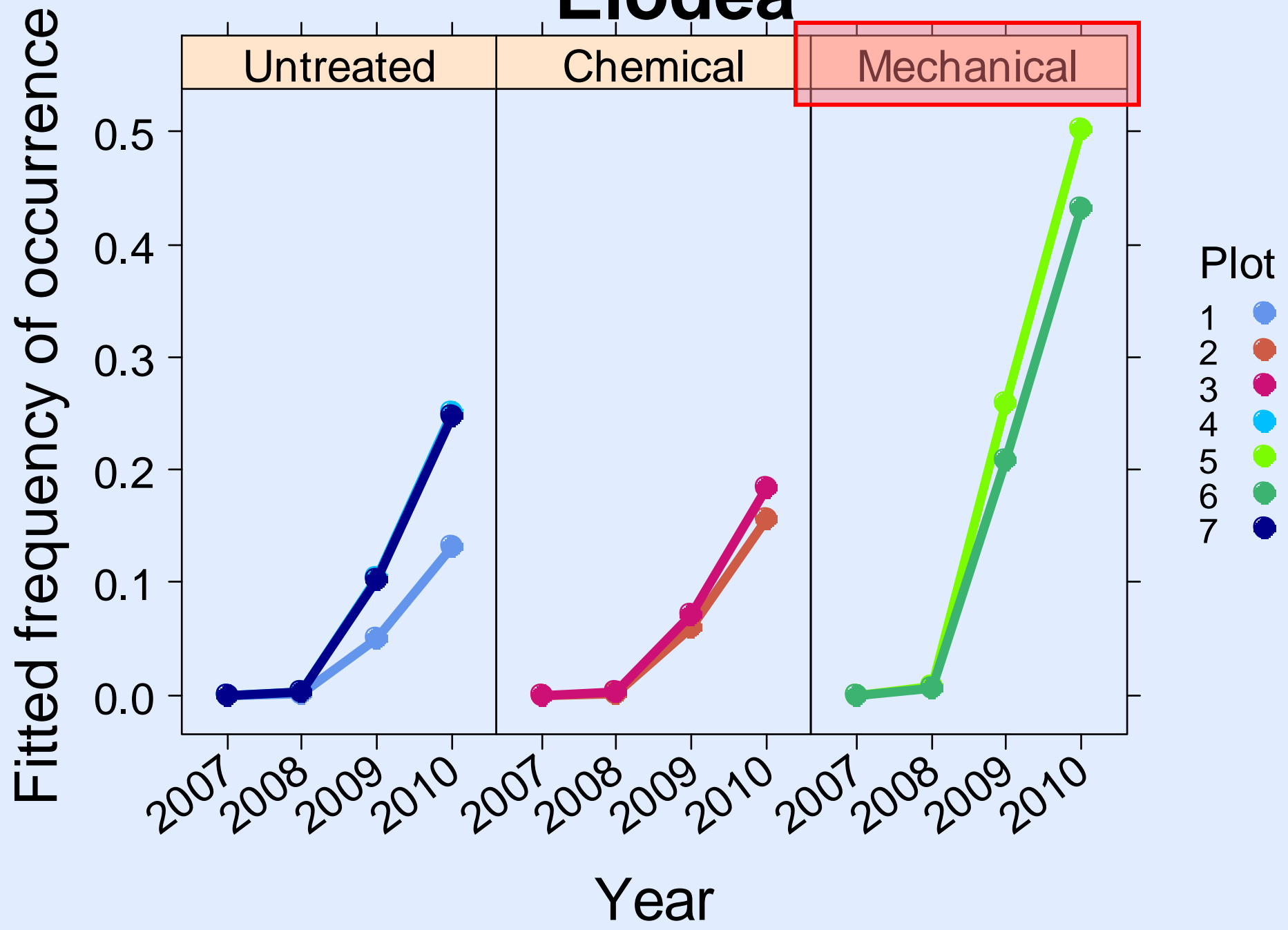
EWM



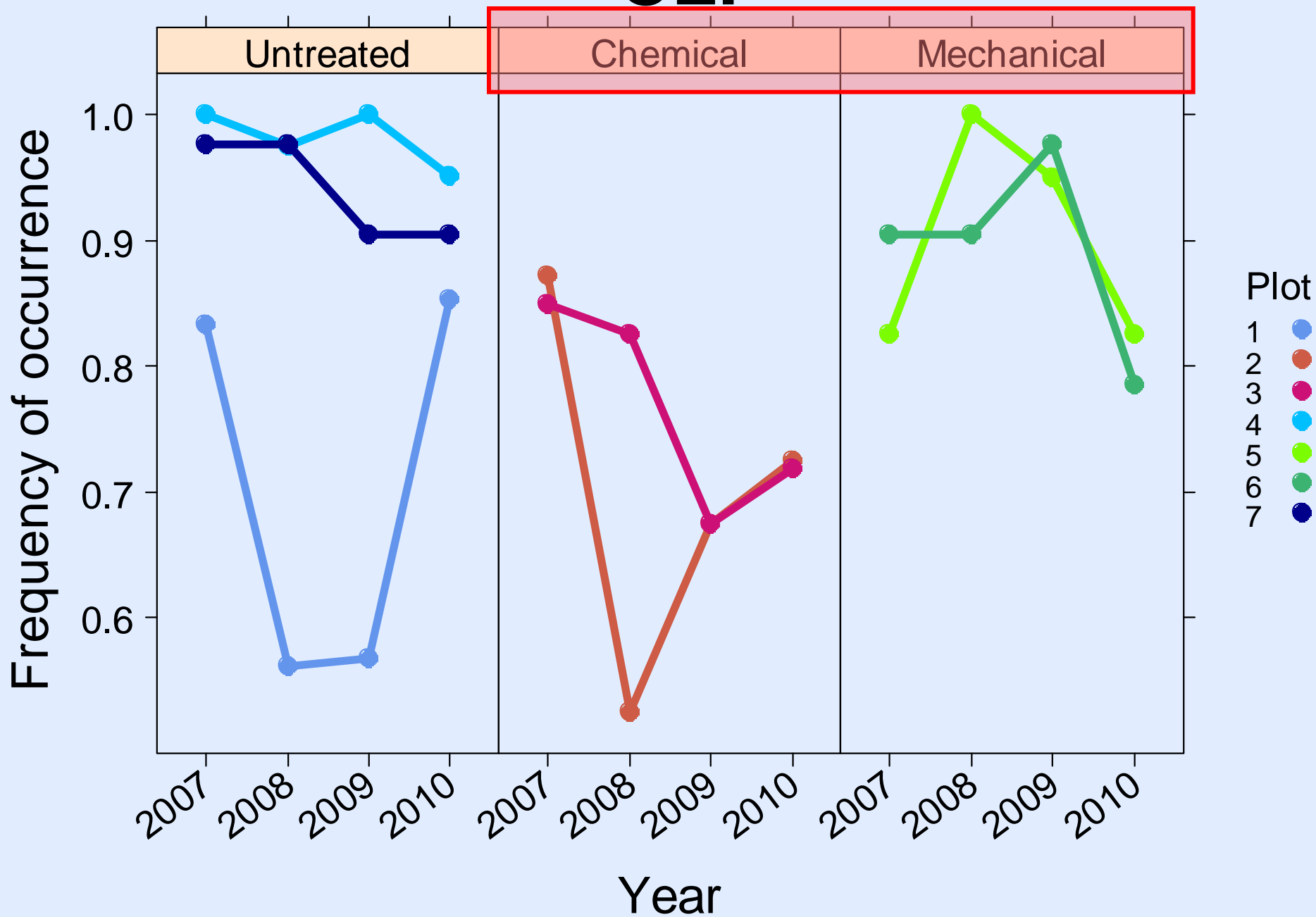
Coontail



Elodea



CLP



Other natives

- No significant effects, although most species were less than 10% frequent throughout the majority of the study

Interim Results

- EWM (decrease)
 - Mechanical harvesting
 - Chemical application
- Coontail (decrease)
 - Chemical application
- Elodea (increase)
 - Mechanical harvesting
- CLP
 - Increase: Mechanical harvesting
 - Decrease: Chemical application

Interim Results

- Results of harvesting are variable
 - Multiple years required to be comparable to chemical treatments
- Non-target effects of chemical treatment
- Interannual variation can be great
- Further research is required!

Going forward

- Monitor 2 years post treatment (2011, 2012) in chemically treated plots
- Harvest one additional year to confirm 2010 findings
- Monitor 2 years post treatment (2012, 2013) in harvested plots