From:	GROOM Jeremy
To:	Henning, Alan; jeffrey.lockwood@noaa.gov; SEEDS Joshua; Kubo, Teresa; Leinenbach, Peter
Subject:	possible RipStream presentation for today
Date:	Monday, May 05, 2014 8:10:49 AM
Attachments:	NOAA_EPA_DEQ_5May2014.pptx

Greetings,

Attached is a presentation we may use some or all of today.

See you soon,

Jeremy

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RipStream methods update to EPA, NOAA and DEQ

5 May, 2014

Developments

- Where we were in January
  - Deadlines
  - Communication
  - Developments
    - Methods
    - Ancillary review
      - Mark Teply – Cramer Scientific
      - Weyerhaeuser statisticians

To-do list

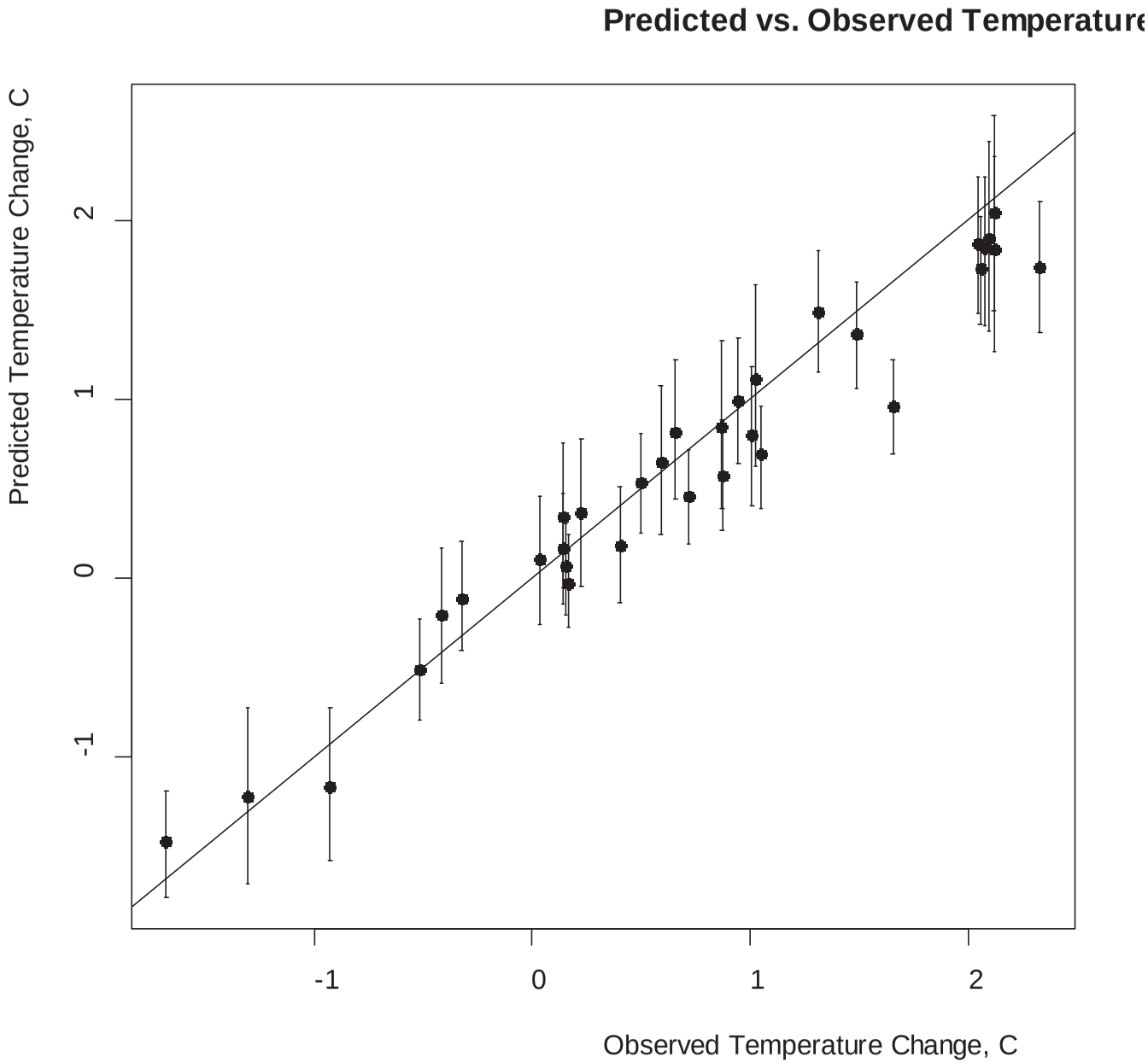
1) Model leave-one-out cross-validation – **1.8.3**, **Figure 14**
2) Priors tested in main model – **1.8.1**
3) 40 day vs. 7DMM – **Appendix 1**
4) How did harvests compare?? – **2.2.4**
5) Specific prescriptions – *Awaiting finalization of methods*
6) Write up methods – **First draft complete**

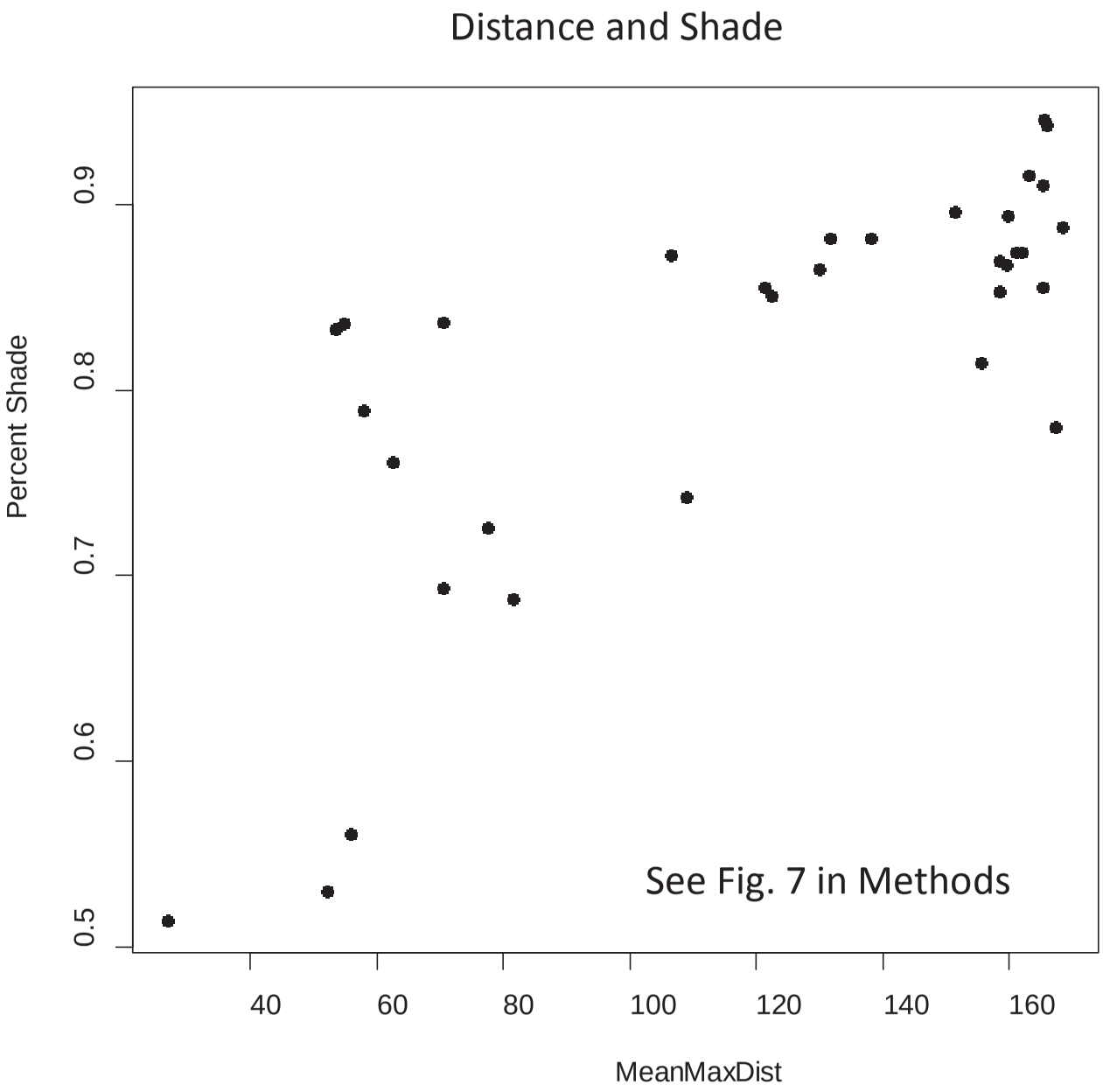
Other changes

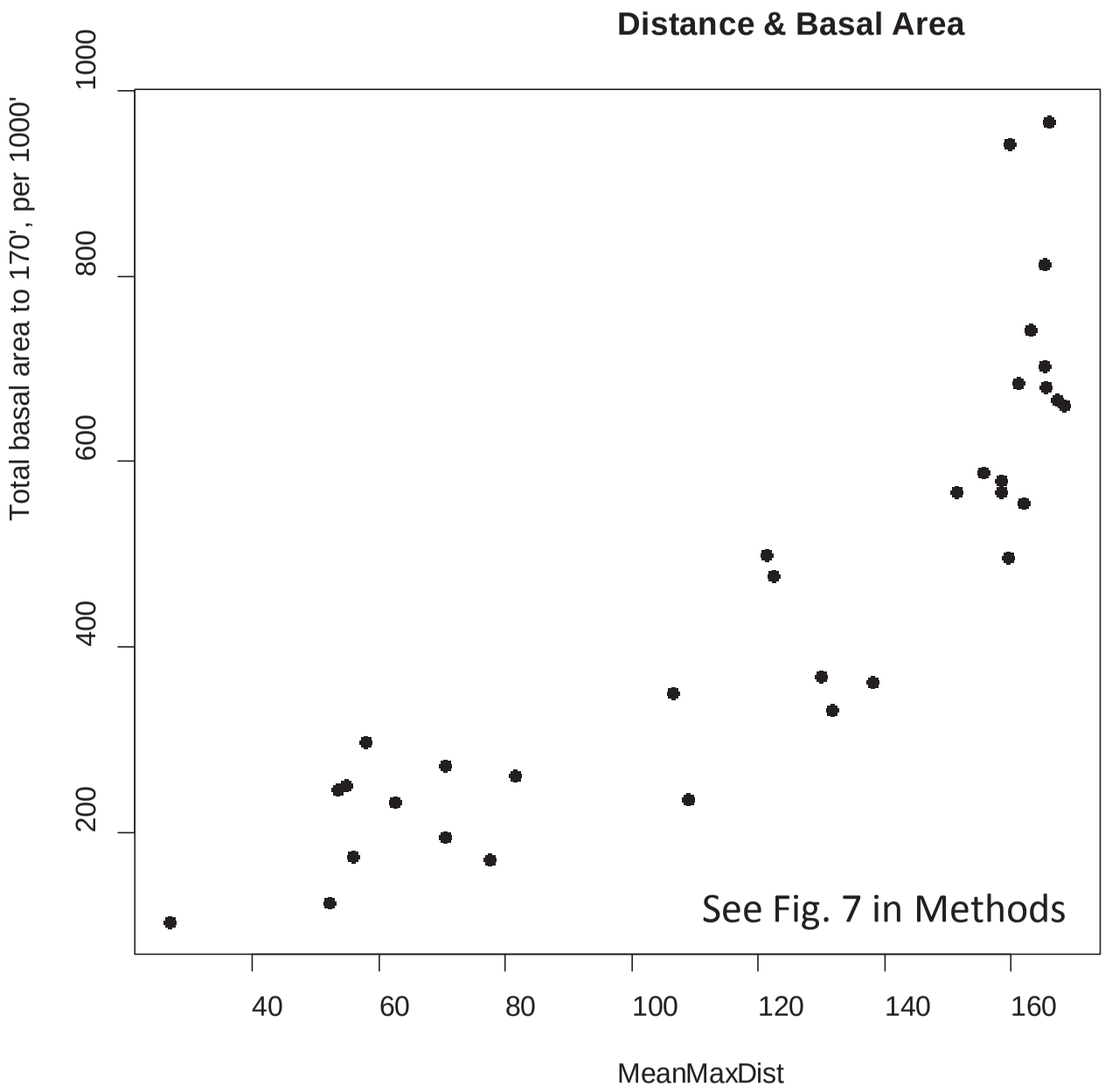
- FPA harvest reviewed, some changes
- FMP harvest review in progress
- Literature review in progress
- Timeframe less rushed

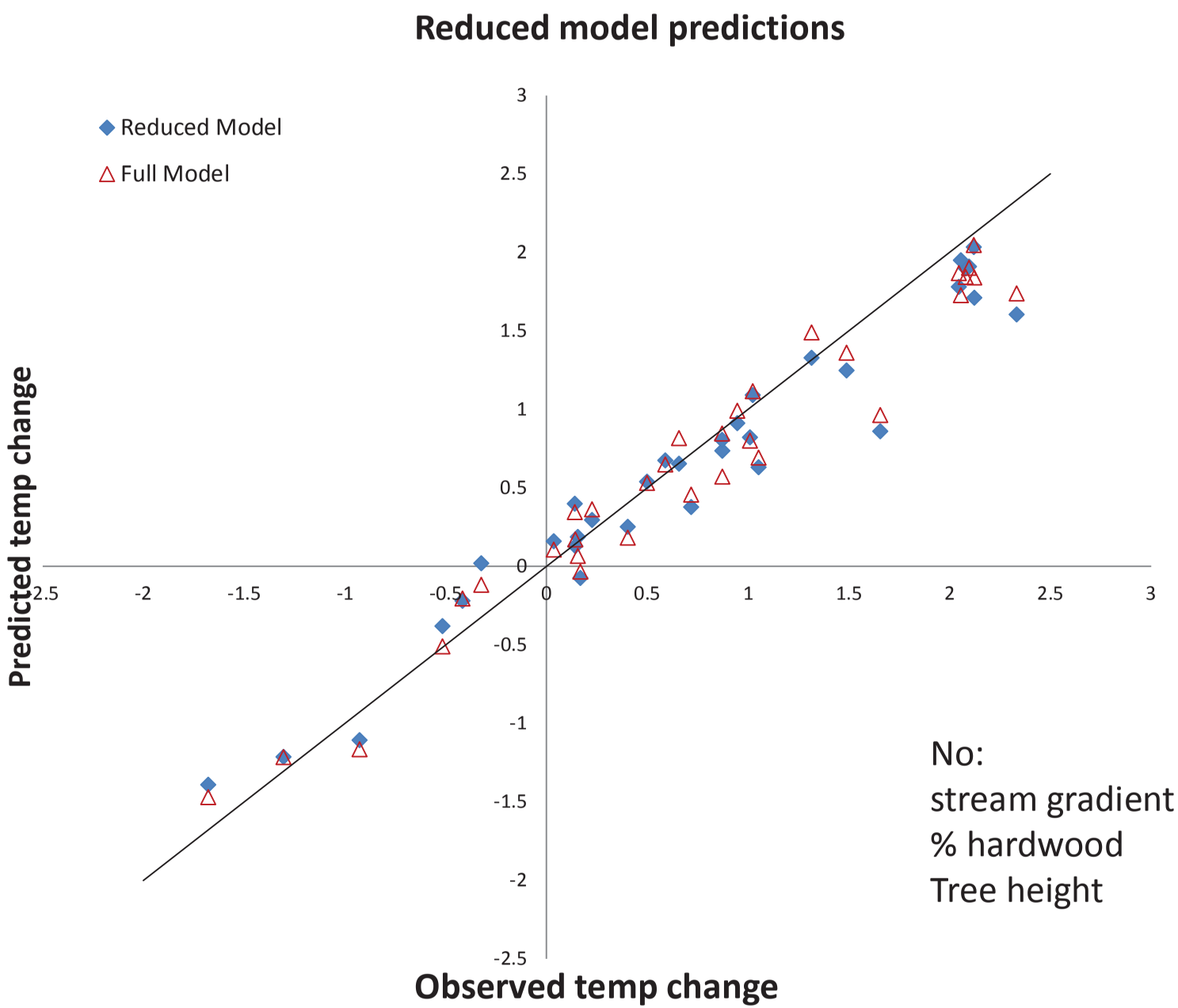
Focus items

- Multiple models
- Shade curvature
- State vs. private
- Total distances
- Literature review


Predicted vs. Observed Temperature
Predicted Temperature Change, C
Observed Temperature Change, C
-1
0
1
2
-1
0
1
2


Distance and Shade
Percent Shade
0.5
0.6
0.7
0.8
0.9
40
60
80
100
120
140
160
MeanMaxDist
See Fig. 7 in Methods


Distance & Basal Area
Total basal area to 170', per 1000'
1000
800
600
400
200
40
60
80
100
120
140
160
MeanMaxDist
See Fig. 7 in Methods


Reduced model predictions
Reduced Model
Full Model
Predicted temp change
Observed temp change
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
3
No:
stream gradient
% hardwood
Tree height

Bayesian Assumption checks

- Model converged
  - **Yes (?)**
- Priors appropriate (means, distribution, precision)
  - **Uninformed means, relaxed precision, checked distributions**
- Model not overfit
  - **Leave-one-out cross-validation**

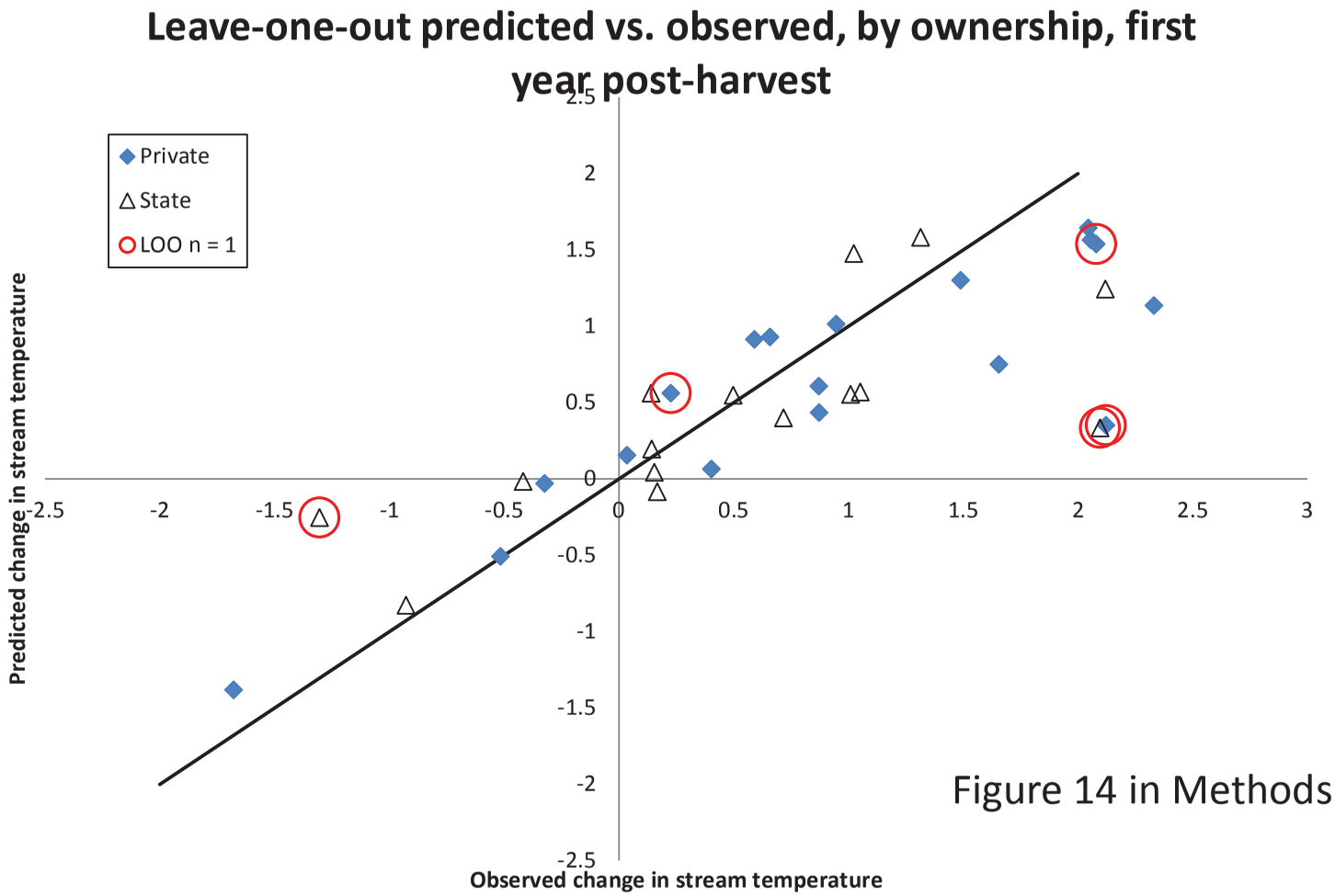
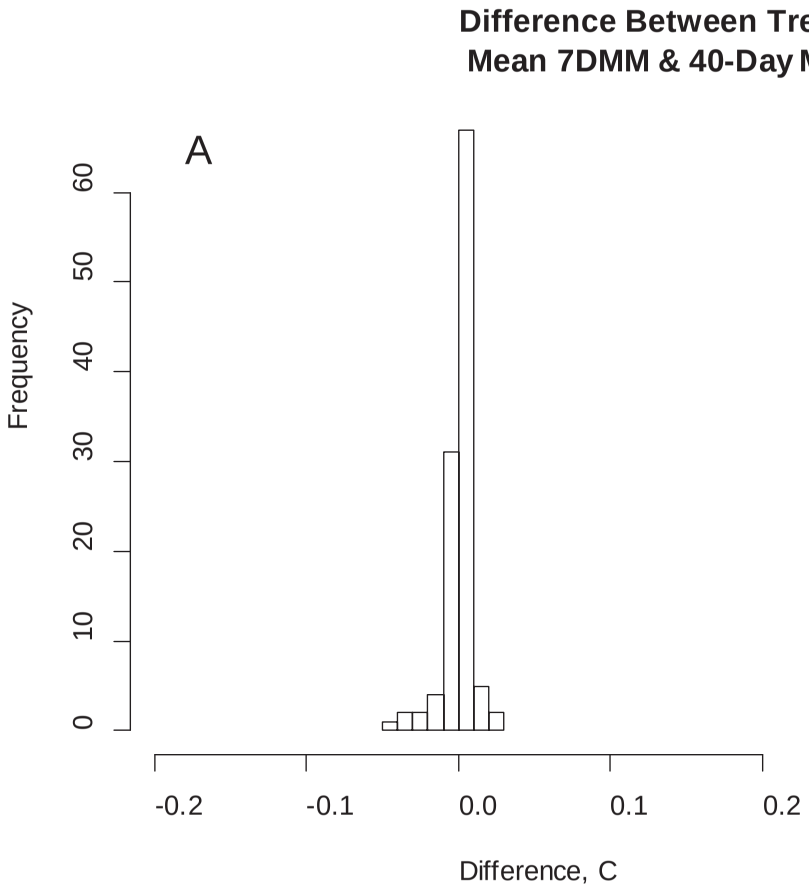
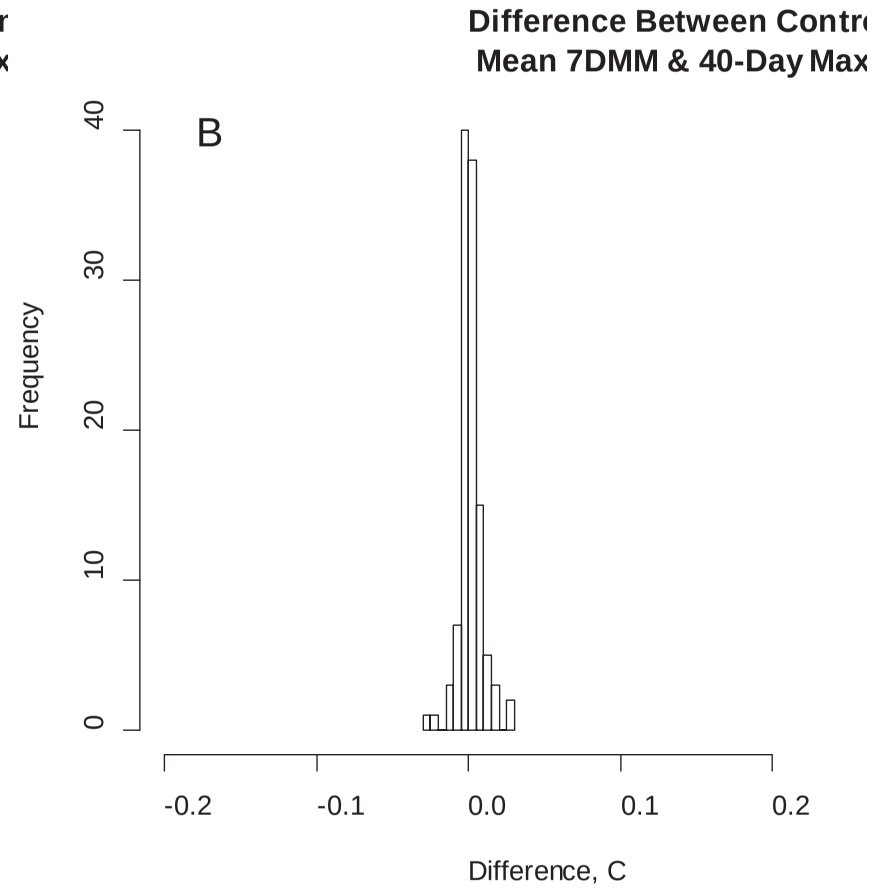


Figure 14 in Methods

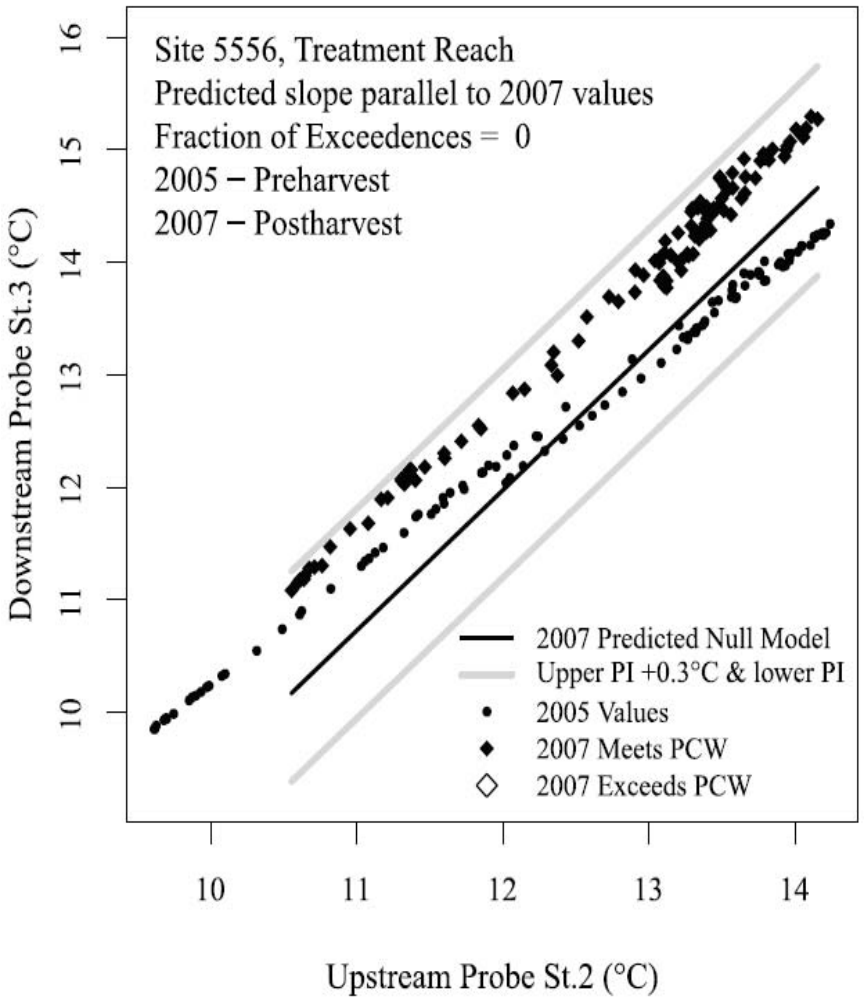
7DAYMAX vs. 40-day max

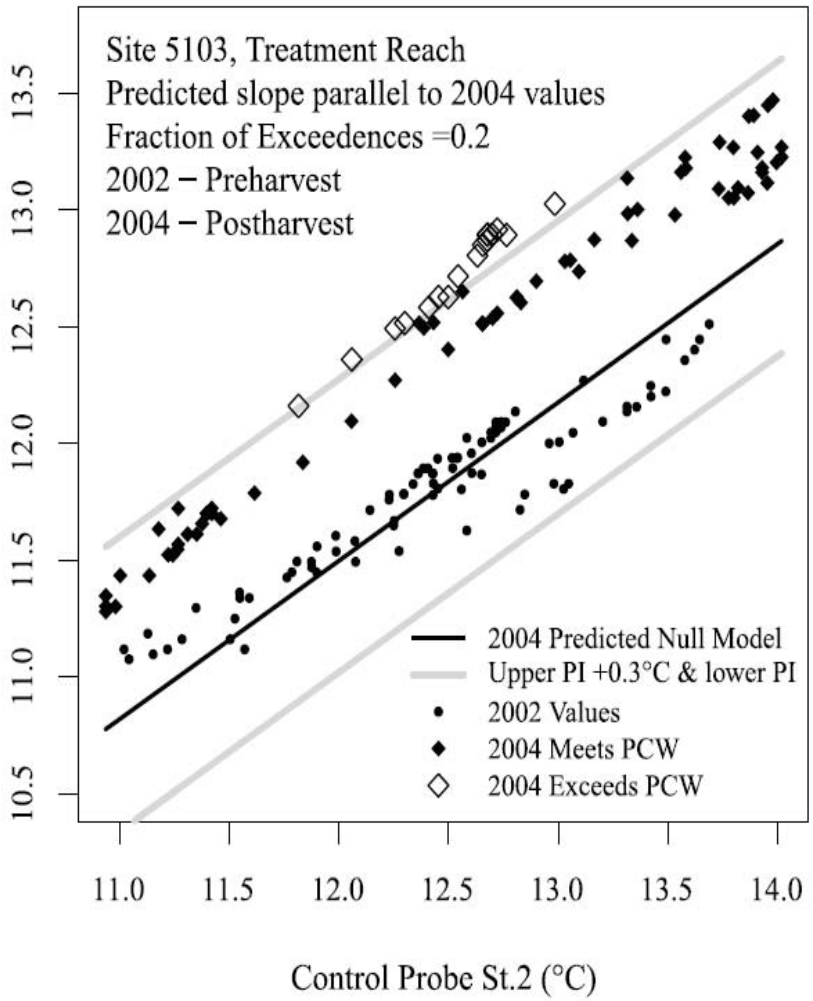




Appendix 1

7DAYMAX exceedance locations





Appendix 1

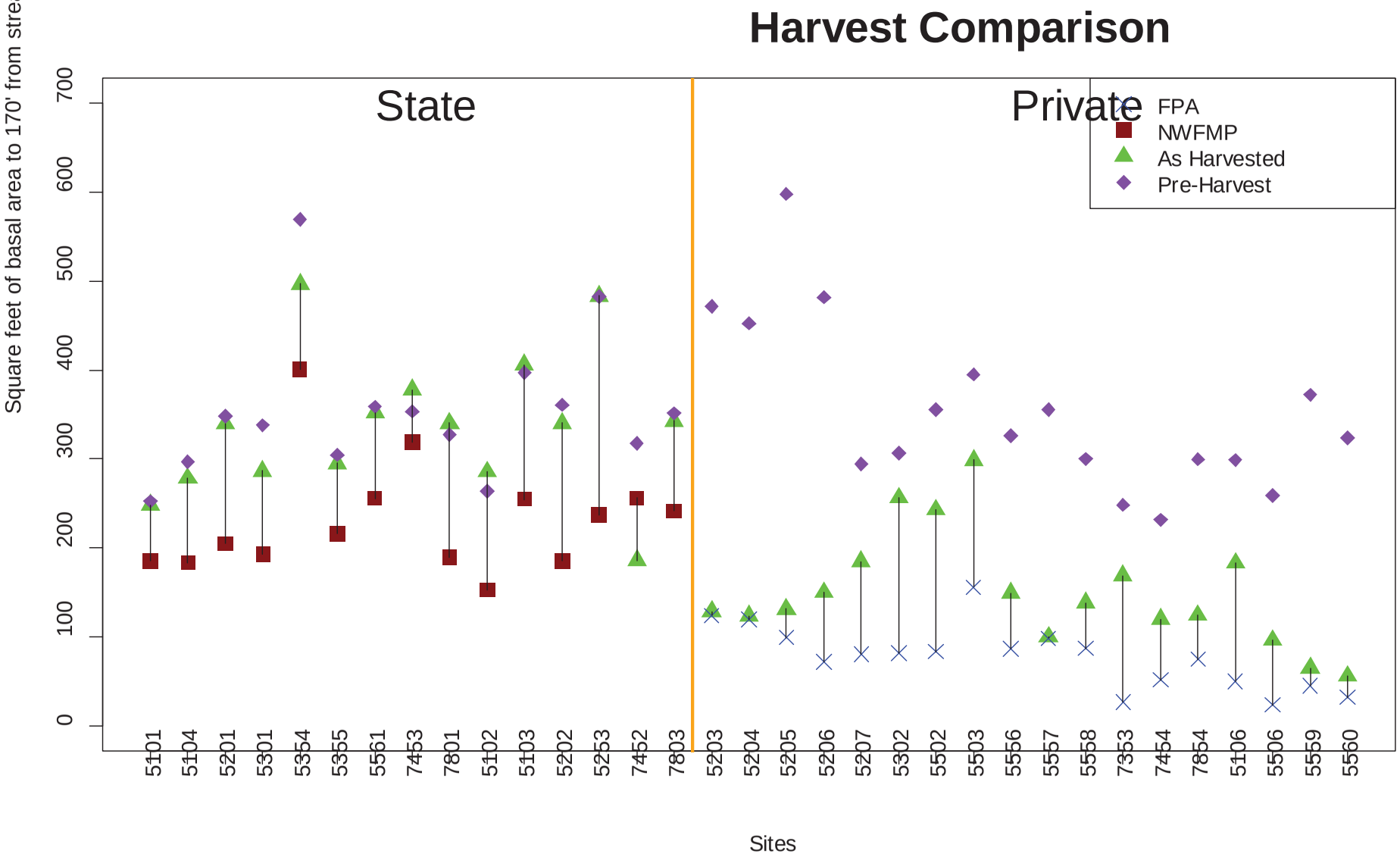


Figure 18, methods

Model Limitations

- Within 100’ of the stream, no information on tree distribution (assumes hard-edged clearcut)
- Sites not randomly selected; representative?
- Built around highly shaded streams (80% +). May not be applicable for less shaded streams.