**CNH Team Teleconference**

**March 17, 2017**

In attendance: Kelly, Chris, Joe, Julia, Jen, Mike, Nicole, Kevin, Weizhe, Paul, Hilary

Land allocation update

* Update: see slides
* Questions
	+ How do we get from SDP output to lake?
	+ Outputs are counterintuitive (cfc vs. cfs)
	+ N carryover from year to year? Are there cases where this might matter?

GLM update

* Update
	+ N is an interesting part of the story even if it doesn’t have the same effect as P
	+ Milestones
		- Coupling of PIHM-GLM in last week (13 years), outputs from PIHM/inputs to GLM
	+ Data
		- Ice duration matters – affects development of anoxia, nutrient cycling and water clarity issues
		- Phosphorus speciation (3m depth) – don’t know if it’s right
		- Nitrogen speciation (3m depth)
		- Secchi depth – too much phytoplankton, biomass artificially reducing clarity
	+ Calibrated model by May
	+ Next steps
		- Lack observational data on accurate nutrient loads coming into lake,
		- Challenge is to pair simulated discharge with observational data and hindcast
		- Calibrate water quality and extend to 30+ years
		- Qualitative work to calibrate
	+ Inputs/outputs
		- PIHM covers hydrology, scenarios for coupled models (modify nutrient concentrations in inflow)
		- Outputs include any water quality metric people might care about
* Questions
	+ Speciation – how P (&N) divided up into different forms
	+ Crash in 2012/2013? Might be a data formatting issue

PIHM update

* Update
	+ Weir boundary condition is complicated – don’t have detailed operating rules
	+ Inflows (slide 25) – overpredicting inflows later in the time series (perhaps the ice conditions?)
	+ Outflow (slide 26) – overpredicting later in the series, especially during the later part of the year
		- Summer 2008 is the worst, likely due to flooding, operate weir differently then and don’t have the rules
		- November calibration also off for several years
			* Ice-on conditions may be problematic (maybe not, usually occurs later in the year)
			* Most likely failure to capture gate operations
		- Reanalysis has a rain bias, still working on this
* Questions
	+ Two methods
		- Coupling Cycles to PIHM
		- Take balance equations out of Cycles (is PIHM output already reflected in the spreadsheet outputs Charlie sent to Kelly? Set up meeting in the next few weeks.)

Hedonic update

* Update
	+ Building data, will use estimates from literature to summarize impacts of changes in WQ in the short run
	+ Econometric model
		- WQ variables of interest: e.g., secchi, DO saturation (0-2m depth); will be exploring to see which variables matter (provide the best model fit); work with correlation between WQ variables; looking at different functional forms (log-linear for now in clarity)
		- Observational data first; simulated WQ data later
		- Output: capitalized value of change in WQ, not time-specific (a single number for 2003-2015 interval)
* Questions
	+ Supplementary data in 2 weeks; cleaning will be fast

Paper updates

* Framework paper – another round of revisions on coupling discussion
* Grad review results to report out in May
	+ Highlighted rows in table with papers that are likely most relevant to our coupling (4-5 great examples)