**CNH Team Teleconference, 2/3/2017**

**Meeting Minutes**

In attendance: Pat, Joe, Cayelan, Nicole, Jen, Kelly, Kak, Lars, Julia, Kevin, Weizhe, Armen, Mike S.

Add data collation at end of call (Cayelan)

Team updates

* SDP update (Kelly)
  + Using USDA CDL to describe crop rotations
  + Availability of remote sensing data will constrain field-scale calibration to 2008-2013; can calibrate based on aggregate statistics (county level)
* PIHM update (Cayelan)
  + Addressed weir operations on Lake Mendota
  + Calibrated 2010-2013
* GLM update (Cayelan, Nicole)
  + Mendota model (Cayelan)
    - Filling in data gaps on inflow (driver data)
    - Refining calibration now
  + Sunapee model (Nicole)
    - 2005-2010 running
  + Questions
    - Joe – is a preview of GLM output possible?
      * Cayelan – output variables in table on ODS
    - Kelly – calibration lessons from GLM for other modeling efforts?
      * Cayelan – workflow to standardize calibration methods (even beyond GLEON); finished UG teaching module on GLM (co-authored with Jen), working on another one now
* Hedonic update (Kevin)
  + Data cleaning ongoing, goal is to get initial (simplest) model up and running for Mendota
* Social science (Mike S.)
  + Recruiting student now, then will start collecting data
* Scaling up (Joe, Pat)
  + Assembling LAGOS dataset, nearly finalized
  + Identifying subset of larger dataset with similar lakes to scale up
    - Our lakes are large and deep relative to LAGOS, they’re outliers
    - May look at land use as a way to select “similar” lakes
  + Questions
    - Kathie – is residence time a parameter? Would that be better than size/depth?
      * Joe – no, but working on getting residence time data, hope to integrate the two
      * Pat – have catchment to lake size ratio, a coarse proxy for residence time; our lakes are more representative in terms of residence time than area/depth
      * Cayelan – is there a quick and dirty method to get residence time estimates?
        + Joe – yes, working on this
* Broader impacts (Kathie)
  + Planning session with LSPA
  + Education module mentioned by Cayelan could be a significant BI for the project as a whole
  + Nicole and Cayelan organizing Skype meeting with LSPA about GLM modeling effort
* Cycles update (Armen)
  + Working on P module, more complex than anticipated (not the model code, the P itself)
    - How does GLM treat P in the lake? Could use to help develop Cycles module
    - Has created a diagram on how the literature characterizes P, but doesn’t help determine how to do the modeling
    - Comments
      * Kathie – paper on biogeochemical cycling through the lens of different models; what do we know and not know (*Frontiers*?)
      * Cayelan – how P works in the world, but it’s instantiated into the model in a different way
  + SDP-Cycles linkage
    - Determine rotations based on observations from CDL and cluster analysis for last 6 years
      * Don’t have livestock component, need to think about this
  + By March, planning a workshop on Cycles (1-day) to demonstrate how to use the model

Graduate literature review

* Through abstract review
  + 31 papers of several hundred to use and review
  + Meeting next week to pull information from those papers
  + Draft of intro/methods has been circulated to graduate students, not yet other co-authors
  + Using ODS to update progress

Framework paper

* Timeline
  + Out to group on 2/10
  + Back to KC on 2/20 for final polishing
* Google Sheets sign-up for revisions to be sent out after call today

Data collation

* HydroTerre is not sufficient for running Cycles because it doesn’t have soil data by layer