CNH Lakes Monthly Video Conference

Meeting Minutes, 4/6/2018

1. Welcome and items from the team
2. May workshop tasks
   1. Interactive presentations for LSPA *et al.* during May workshop
      1. To be given on Thursday morning (roughly 3 hours allotted)
      2. Target audience: science-literate individuals (but not scientists)
         1. LSPA staff, members of Board and community, town decision-makers in 6 towns surrounding Sunapee, representative(s) from local land trust, Dept. Env. Services representative (State), and watershed group (comprehensive planning). This group will also be invited to poster session and boat tour.
      3. Ideas for content/structure:
         1. Start with high-level overview to tell the story, why we want to do this research, why these 3 catchments are interesting, how do each of the components feed into the larger story, connections of interest to the community (Kelly)
         2. Discussion between team and LSPA: Explore what interests them based on the conceptual model before diving into visualizations
         3. High-level results presentations
            1. Nicole – internal vs. external loadings
            2. Kelly/Armen – ag management and N leaching
            3. GLM team – field questions as a group (10-15 slides they could go to that might be answers about where they could go with the group); be adaptive, listen, try to respond to wherever the conversation goes; CC – something to have ready might be about spatial nature of land-use change around the watershed and P loading (around Sunapee)
            4. Model sensitivity might be a good thing for this group. What’s coming in terms of climate variability? What kinds of data are important for these models?
            5. Chris – IPCC results to demonstrate how climate change may interact with land-use change (or at least show differences in climate); what if you increase precip by X amount, or land-use change that alters water balance?
            6. Joe/Pat – qualitatively describe the setting of Sunapee relative to other lakes (put Sunapee in context within LAGOS funneling down to HUC-4 level); how is it typical or unusual? There’s another lake in the watershed – where does it fit in the classification Joe has come up with?
            7. What are the big issues in Sunapee watershed? Invasive species; sensitivity of watershed to sediment loading, pollution; cyanobacterial blooms; lake level issues; where are the biggest water inputs, P loading, sensitive areas for high rainfall events
            8. Civic engagement – track their activities/words used/etc. over time; just diving into that piece right now; provide description of what they’re doing
            9. Hedonic – Weizhe describes what model is about. Where are the problems? Do they have input to help us understand what needs to be done?
         4. \*\* Action item for Kelly, Reilly: Talk with Kathie about the agenda for this piece
      4. PIHM meta-model to link SDP-Cycles-PIHM-GLM; model land-use change in PIHM (spatial and temporal), could potentially do for one of the lakes; simpler than setting up a PIHM model; go over this in May, how can we do land-use change scenarios (related to population)?
         1. GLM – do daily to monthly changes matter? Quarterly or seasonal dynamics might matter?
3. Paper updates
   1. Framework paper – accepted and forthcoming in Ecosphere
   2. Lit review paper – comments due next Friday; Google doc under active revision right now (living document)
   3. LakeLine article – editor feedback; figure in LakeLine article needs to have copyright permission (need to attribute, check with editor)
   4. PIHM-GLM – calibration ongoing (moved to new model version, but a few missing pieces, need to update source code to fix a few bugs); will have something by the May meeting
   5. GLM-hedonic paper – updated hedonic model; finished estimation; working on writing of manuscript; will send out this month (paper accepted to AAEA meeting)
   6. SDP-Cycles – working on BMPs; pre-authorship memo
   7. Lake association paper – pre-authorship memo; expect to have something to share at the May meeting in presentation form
   8. Additional papers?
      1. Aviah Stillman’s P model is in the works (Paul will finish it up); will send authorship memo
4. Updates from modeling teams
   1. PIHM updates – pushing with Lele on getting results for Sunapee; difficult transfer in versions of code between Yu Zhang (beta version) and Lele’s; early calibration results in short order
   2. SDP – list of BMPs; sent baseline results to Armen
   3. GLM – waiting for new version of software (can do them more efficiently with new version); CLA has a suite of scenarios they’re interested in (manure digesters); for CNHS coupling using version of GLM that Nicole has been using for Sunapee, multiple versions being used now, using older version for GLM-hedonic coupling
   4. Hedonic – mainly working on paper; identifying EMVs, hard to see patterns right now; strong results for Mendota but not Sunapee – what is the story here? Can you capture the variability across the two watersheds?
   5. Civic engagement – paper development; code/protocol for content analysis; Leah working on financials; honing in on indicators they’ll start with
   6. Scaling up/extrapolation – push between now and the workshop
   7. Broader impacts – no updates at present; can we think about linkages between fertilizer use in ag and lawns
5. Ecosphere paper coming out – communicate with Tom Baerwald and Richard Yuretich