**Practitioner’s Discussion**

**6/4/19**

Attendees:

1. Jess Philippe – R12 St. Johnsbury, VT
2. Suzann Kienast-Brown – R4 Bozeman, MT
3. Tom D’Avello – GRU, Morgantown, WV
4. Stephen Roecker
5. Phil Roberts
6. Rebecca Fox
7. Adolfo Diaz
8. Anthony C
9. Bernie Skipper
10. Carl
11. Chad
12. Chris Gebauer
13. George Otto
14. Jay Skovlin
15. Jocelyn Wardrup
16. Jonathan Diaz
17. Kurt
18. Matt Bromley
19. Alex Stum
20. Talyor C
21. Wade Bott
22. Wendy Pierce
23. Jennifer Wood
24. Tim Riebe
25. Jacky
26. Tyson Morley

* Sampling discussion
  + Tom – Salmon-Challis NF
    - cLHS design for field sampling
    - cost layer – binary classification – 0 and 10,000
    - 1/4 mile buffer from trails
    - 1/3 mile buffer from roads
    - cLHS point in high cost areas – similarity index in cLHS package is good but only for points that they can actually access
    - clustering based on covariate values extracted at high cost points to then use in SIE to create fuzzy membership layers to identify similar areas that are accessible
    - touch base with Colby/Dylan to potentially improve cLHS package
    - number of clusters could have been adjusted if more time available – 1hr each to create fuzzy memberships in SIE
    - data management issues with similarity index as separate layer for each point
    - Tom will write up job aid and share scripts
    - Suzann shared Carla’s observations/considerations in implementing sampling design in the field
    - Discussion
      * overall, use primary cLHS point as primary sampling location and cluster around to capture landform position variability; such as a traverse
      * if covariates are chosen carefully to represent soil forming factors, then cLHS points should represent variability in soil-landscape relationships and when coupled with cluster/traverse sampling and provide adequate information to develop map unit concepts and map unit descriptions
  + Jess – sampling design evolution in Essex and WMNF
    - Essex Stratified grid sampling: extremely time & labor intensive for little return (highly variable area and points did not capture the variability)
    - Essex Random Catena/stratified random sampling: combined targeted & random approaches and better captured the catena variability targeted in the model, but didn’t necessarily meet statistical rigor of randomness
    - Essex -With SSURGO as an end goal, some traditional transects (makes traditional project leaders feel better and did yield some good data)
    - WMNF – stratified random based on parent material and some target components. Rushed process with resource limitations that impacted the usefulness for training data.
    - WMNF moving forward – cLHS for each parent material model
    - Discussion
      * sampling design and the stage at which it happens can really affect things like map unit composition (example of a transect designed to document raster map unit that “goes away” when raster is processed for ssurgo)
      * Unlikely to be perfect so documentation is key
  + Alex
    - transects served as unbiased approach to sampling landscapes in past
    - cLHS looks at cumulative distribution to sample feature space
      * you can use to represent map unit concept
      * add hoc sampling will risk this
    - many models are sensitive to sample size and purposive sampling risks oversampling a single class and affecting modeling

**Initial Sub-Team Meeting**

**4/2/19**

Attendees:

1. Jess Philippe – R12 St. Johnsbury, VT
2. Suzann Kienast-Brown – R4 Bozeman, MT
3. Jay Skovlin
4. Aaron Wells
5. Bernie Skipper
6. David Rand
7. Frodo
8. Jocelyn Wardrup
9. Matt
10. Matt Dorman
11. Nicholas Kozlowski
12. Tom D’Avello
13. Portland
14. Betsy Schug
15. Stephanie Shoemaker
16. Jacky
17. Kelley Paup-Lefferts
18. Sam Streeter
19. Nick Kozlowski
20. Pat O’Connell
21. Chad
22. Jennifer Wood
23. Kristi Mingus
24. Tim Riebe
25. Brian
26. Ben

* Project design overview – Jess
  + Discussion on nationwide covariate stack to support projects – hopeful for wide use and access via Fort Worth in CY19
* Bob Marshall project overview – Jay Skovlin
  + Use existing information – USFS, NRCS
  + Soil forming factors
  + Stratify landscape based on landform/parent material groups
    - Will ask Sonora SSO to share script on DSM FT Github
  + Use strata in sampling design – cLHS
    - Gives different scale of information than geomorphons
    - Geomorphons may still be useful – more component level information

**Initial Sub-Team Meeting**

**2/5/19**

Attendees:

1. Jess Philippe – R12 St. Johnsbury, VT
2. Suzann Kienast-Brown – R4 Bozeman, MT
3. Alex Stum – R9 Temple, TX; awareness for initial; loves dsm
4. Beth Rowley – Missoula, MT; bob marshall wilderness; glacier np; updates
5. Betsy Schug – Fergus Falls, MN; update and initial with dsm; learn new things; lessons learned
6. Brian Gardner – Moscow, ID; curiosity; notcom forested areas
7. Chris Fabian – Fort Collins, CO; USFS orphans; update projects
8. Kari Sever – Fort Collins, CO; current correlation
9. Chris Gebauer – Klamath Falls, OR; large traditional initial/update; notcom w/dsm
10. Chris Savastio – Mindon, NV; notcom w/dsm
11. Danny Wood – Powell, WY; notcom w/dsm
12. Dave White – Las Cruces, NM; mostly update w/dsm
13. David Rand – Salem, OR; initial for NF, lots mapped, leverage existing knowledge w/dsm
14. Jacqueline Vega – Kealakekua, HI; initial; improve knowledge
15. Jocelyn Wardrup – grad student DE; expanding knowledge
16. Joe Brennan – R10 St. Paul, MN; mostly update, some initial; fed lands liaison
17. Josh Paul – Fairbanks, AK; LOTS of notcom
18. Megan Krueger – Vale, OR; BLM initial survey; using ArcSIE
19. Mike Regan – R1 Portland, OR; awareness
20. Phil Goodin – Powell, WY; notcom w/dsm
21. Russ Almarez – R2 Davis, CA; initial mapping focus team
22. Sam Streeter – Alamosa, CO; update w/dsm; learning for initial
23. Shauna Bernal-Fields – Ontario, OR; some dsm training; use it more
24. Sue Aszman – Arcata, CA; initial NF, BLM
25. Tim Riebe – R13 AK; LOTS of notcom
26. Andy Oxford – Pierre, SD; assisting AK with Kodiak project
27. Bernie Skipper – DU; extracting linework from photography – digital
28. Bob Kukachka – ID; retiree; NF work; awareness
29. Whityn Owen – OR State GIS; awareness

* DSM Focus Team overview – Suzann
* Getting started with DSM – Jess
  + Visit the DSM focus team website – it’s all there!
    - Training curriculum
    - Available resources
  + Essex county project
  + White Mountain project
* Q/A
  + Properties
    - NASIS data? Yes, but w/QC. Project will start with KSSL, RCA data
    - Official data? Differing opinions – moving toward NRCS providing multiple data options – more discussion to come on this topic
      * Feel free to communicate with Suzann or leadership if you have opinions, concerns, etc to share
  + Time savings with DSM?
    - Depends really. Every project is different in scope.
    - Efficiencies are created in targeted field sampling, consistency, and ability to extrapolate across project area from smaller sampling area, if soil-landscape relationships are the same.
    - Initial investment and learning curve, especially for the first project. Like everything, efficiencies will develop over time.
    - More flexible product (raster-based) for users in the end may be one of the biggest gains for employing DSM.