**Practitioner Sub-Team meeting**

**5/18/23**

Participants:

* + Joe Brennen –
  + Chad Ferguson – absent
  + Suzann Kienast-Brown
  + Jessica Philippe
  + Stephen Roecker –
  + Tiffany Allen –
  + Alex Stum –
  + Dave White –
  + Jim Thompson –
* Mentor projects
  + Mark Twain – recent meeting with USFS, local and regional staff; lots of data, need to get it all in NASIS. New cLHS work happening.
  + Mentor progress reports have come in
    - 12-GRR – making progress, have been slowed down by staff turnover. Initial sampling plan was probably flawed so they’ve recently collected additional data.
    - Idaho
      1. Brian is working towards a raster product, Suzann will encourage continued engagement with mentors even though mentoringtimeline has technically ended.
      2. Carla is working on the global model, e.g. global legend for filling in wilderness areas. Discussion on avoiding boundary issues between areas, local model strengths vs value of continuity of global model.
         1. Try to mask or constrain certain classes to appropriate areas?
         2. Weight results based on sampling densities in the various aoi’s, with feathering along the borders?
         3. Utilize training data from adjacent local models?
         4. Model generalized soil units within which different models perform appropriately?
         5. Model averaging has been considered but with such different model approaches it doesn’t seem like it would work – neither office has one model that has all the classes in it for each area
         6. Look at individual class probability for global model
* Spatial Analysis Workshop – how can we keep DSM link in that course without using too many DSM Training crew resources.
  + Some promising folks from BSS - Tiffany
  + Kyle Thomson in Bismarck?
  + Beyhan Amichev?
  + Joel Gebhard? Lucas Scott? Mike Sousa? Leah Carter?
  + Regional GIS Specialists?
    - Should RGIS positions be required to be on either DSS or SAW cadres by default?
* Fernow is booting up – Joel will be leading since Ann is going to HI

**4/20/23**

Participants:

* + Joe Brennen –
  + Chad Ferguson – absent
  + Suzann Kienast-Brown
  + Jessica Philippe
  + Stephen Roecker –
  + Tiffany Allen – absent
  + Alex Stum –
  + Dave White –
  + Jim Thompson – absent
* Mentor projects
  + Mentor progress reports due
  + Mark Twain: in the field, moving forward
  + Idaho: Global model is finished, sampling plan using Shannon entropy as cost layer (to sample areas where uncertainty is high), USFS is doing cLHS. Moving on to Southern portion that’s not connected to global model.
    - Landform model not good enough in South – question is how to make it (and other models) better. Tree-based models don’t extrapolate well. Are soil-landscape relationships too different? Is feature space not represented well enough?
  + 12-GRR – still need to enter pedons
  + LCB – waiting on VT GIS for cohesive elevation dataset
* ES standards update – committee has met once, gone over standards process. Will decide to either add a section to 648 or add a new part to NSSH. Team is Shawn Salley, Stephanie Shoemaker, Nathan Roe, Suzann and Tiffany
* Part 648 is with the editors
* Archiving RSS data and models
  + Needs to be incorporated into standards for next update
  + How much do we archive? Just what’s necessary to recreate product or everything, covariates included?
  + Where do we archive? Box seems best for now.
  + Can we provide a common format for things like naming conventions, covariate decisions, etc.? Correlation documentation does most of that.

**3/21/23**

Participants:

* + Joe Brennen –
  + Chad Ferguson – absent
  + Suzann Kienast-Brown
  + Jessica Philippe –
  + Stephen Roecker –
  + Tiffany Allen –
  + Alex Stum – absent
  + Dave White –
  + Jim Thompson –
* Mentor projects
  + Mark Twain: working on sampling scheme
  + Idaho: trying to use uncertainty (shannon’s entropy) to guide sampling; GTAC will be generating cLHS points using uncertainty to generate cost raster
  + 12-GRR – need to enter pedons
* Koya
  + Covered everything from basic soils knowledge to DSM project planning and workflows, including sampling and data reduction and developing covariates. Found a satellite dataset for 12m elevation -
* Pedometrics is scheduled for February 2024 in Las Cruces
* ES sub-team has identified that ES spatial products need to be QA’d and standards need to be developed. Do ES standards belong in part 648? Suzann, Joe, Tiffany will help with standards process (others welcome)
* Part 648 – has been reorganized and relevant comments addressed; some remaining minor questions were discussed.
  + Section on scale will be finalized and put into part B (Stephen and Dave)
  + Tiffany and Jess will do final read-through

**2/16/23**

Participants:

* + Joe Brennen –
  + Chad Ferguson – absent
  + Suzann Kienast-Brown
  + Jessica Philippe –
  + Stephen Roecker –
  + Tiffany Allen –
  + Alex Stum –
  + Dave White – absent
  + Jim Thompson –
* Mentor projects
  + List updated
* Practitioner’s Call
  + Stephen will do March, SOLUS for April, Sarah in May
* Some R packages are going away and scripts in Intro DSM need to be updated. Reminder for people to audit Stats class to stay up to date on new tools.
* Part 648
  + Change raster levels to alpha instead of numeric
  + Add scale to table

**12/15/22**

Participants:

* + Joe Brennen –
  + Chad Ferguson –
  + Suzann Kienast-Brown -
  + Jessica Philippe –
  + Stephen Roecker –
  + Tiffany Allen –
  + Alex Stum – absent
  + Dave White –
  + Jim Thompson –
* Mentor projects
  + Brian Gardner working with some vectors
  + NACD – Dan Polito is working on draft legend; still in planning stages
  + Idaho – broader regional model progress: progress on a combined legend; Carla working on lithology, climate models so they’re available for whole area
* Part 648
  + Comments are in – deciding which comments should be implemented within standards at this point (or at all). Big picture themes vs really specific comments.
    - Will document responses regardless of if edits are made

**11/17/22**

Participants:

* + Joe Brennen –
  + Chad Ferguson –
  + Suzann Kienast-Brown
  + Jessica Philippe –
  + Stephen Roecker –
  + Tiffany Allen – absent
  + Alex Stum –
  + Dave White – absent
  + Jim Thompson –
* Mentor projects
  + NACD project
    - Scope of the project is(was) very small; SRSS is skeptical of DSM. Need better project plan to support larger extent, DSM-specific sampling etc. Perhaps Joe can participate and share experience.
    - Next step: inventory of soils that occur in expanded project area
  + Grand Rapids – Stephen will follow up
  + MTNF – John Hammerly will be doing DSM work; extent is being refined
* Practitioner’s Call
  + Mentor projects are expected to participate
  + France presentations, other presentations that our group has done
  + Dylan – suggests Peter Engelstadt from USGS – invasive species distribution modeling
  + Alex – Little Washita – March
  + January and March may need to be moved, February is France meeting
* Part 648 – comments are due by Nov. 30th
* Training
  + December session of Intro DSM is cancelled
  + Meredith has requested a super basic Intro to DSM webinar type training
* Data Delivery – raster soil survey tabular data via soil data access?

**10/22/22**

Participants:

* + Joe Brennen –
  + Chad Ferguson – absent
  + Suzann Kienast-Brown
  + Jessica Philippe –
  + Stephen Roecker –
  + Tiffany Allen – absent
  + Alex Stum –
  + Dave White –
  + Jim Thompson – absent
* Mentor projects
  + NACD project
    - Scope – size of area, how representative
  + Champlain Basin – Lucy and Paul will be working on it; Jess will mentor
  + Grand Rapids – wrapping up from field season
  + MTNF – looking for DSM help
* Part 648 – moving forward
* Quarterly meeting – beginning of Nov
* Training schedule – ideas for mentors
  + Carla (intro to DSM)
  + Brianna Wagner (ND) – other people working on her projects? (intro to DSM)
  + Greg Schmidt ?
  + Tyson Hart
  + Dennon ? field notes webinar
  + Paul Gadeki
  + Sharon Parrone
  + Martin Figueroa (intro to DSM)
  + Beyhan Amichev

**9/28/22**

Participants:

* + Joe Brennen –
  + Chad Ferguson – absent
  + Suzann Kienast-Brown
  + Jessica Philippe – absent
  + Stephen Roecker –
  + Betsy Schug – absent
  + Tiffany Allen – absent
  + Alex Stum –
  + Dave White –
  + Jim Thompson – absent
* ID field week
* Mentoring projects – Stephen and Suzann will help with NACD project and reach out to office for a meeting to answer some general questions
* Training
  + Reviewed schedule
  + Koya university training
* Part 648
* RSS checklists – next time

**3/15/22**

Participants:

1. Joe Brennen –
2. Chad Ferguson – absent
3. Suzann Kienast-Brown
4. Jessica Philippe – absent
5. Chance Robinson – absent
6. Stephen Roecker – absent
7. Betsy Schug – absent
8. Tiffany Allen –
9. Alex Stum –
10. Dave White –
11. Jim Thompson – absent

* Mentoring projects
* Training
  + Terrain workshop
  + GEE
  + Intro to DSM – mentors (6 or more needed)
* RSS as part of FY22 refresh – checklist for RSS certification at Regional Office
  + Tiffany will share document to edit
  + Checklists
    - QC checklist (SSS, SSO, cooperator)
    - QA spatial checklist (GIS)
    - QA tabular checklist (SDQS)
  + Need tools for exporting – set up a meeting - Suz
    - Chad, Adolfo, Kyle
    - Joe, Tiffany, Jess, Alex
    - Export NASIS data to data warehouse
* Part 648 updates
  + Accuracy metrics
  + Uncertainty layers

**2/15/22**

Participants:

1. Joe Brennen –
2. Chad Ferguson –
3. Suzann Kienast-Brown
4. Jessica Philippe –
5. Chance Robinson – absent
6. Stephen Roecker –
7. Betsy Schug – absent
8. Tiffany Allen –
9. Alex Stum –
10. Dave White – absent
11. Jim Thompson – absent

* Mentoring projects
* Part 648 updates – need to figure out file permissions for the FT (Suz)
* Raster Soil Survey Project in NASIS
  + Will incorporate standard naming convention into upcoming edits of Part 648
  + Higher level NASIS changes will wait – check in with Kyle near the end of the FY

**1/18/22**

Participants:

1. Joe Brennen –
2. Chad Ferguson –
3. Suzann Kienast-Brown
4. Jessica Philippe –
5. Chance Robinson – absent
6. Stephen Roecker –
7. Betsy Schug –
8. Tiffany Allen – absent
9. Alex Stum –
10. Dave White –
11. Jim Thompson – absent

* Mentoring projects
* Validation – how to design independent validation – number of points required?
  + Add more info into RSS levels regarding independent validation
* Part 648
  + Updates
    - Projection
    - Snapping grid
    - RSS levels
    - RaSS to RSS
    - Metadata example review – maybe need standard language w/reference to the DSM webpage
      * Stephen/Chad can help
    - DSS project type – is this added to MLRA project type or is it unique?
    - Naming convention – make consistent with gSSURGO
      * All states and territories currently have RSS legends with 2-digit state code, no 000
      * Add year to gdb name
      * Discuss naming convention with Adolfo
        + Add state abbreviation to feature classes in gdb for gSSURGO (and in RSS)
  + Small group to start edits – Suz/Jess
  + Put a document in Teams for editing and with the list of updates

**11/17/21**

Participants:

1. Joe Brennen –
2. Chad Ferguson –
3. Suzann Kienast-Brown
4. Jessica Philippe – absent
5. Chance Robinson – absent
6. Stephen Roecker –
7. Betsy Schug –
8. Tiffany Allen –
9. Alex Stum – absent
10. Dave White –
11. Jim Thompson – absent

* Mentoring projects
  + Progress reports in Jan
* Part 648
  + Updates
    - Projection
    - Snapping grid
    - RSS levels
    - RaSS to RSS
    - Metadata example review – maybe need standard language w/reference to the DSM webpage
    - DSS project type – is this added to MLRA project type or is it unique?
    - Naming convention – make consistent with gSSURGO (check with Kyle on gNATSGO)
      * All states and territories currently have RSS legends with 2-digit state code, no 000
      * Add year to gdb name
  + Small group to start edits – Suz/Jess
* Correlation of SSURGO and RSS map units
  + Should they be the same or not?
    - No consensus yet
    - Needs to be consistent and user friendly
  + Map unit type in map unit table
  + MLRA map unit is current option; should we have a new Raster map unit type?
  + Standards would be updated
  + Discussion for another meeting
* Dec practitioner call
  + Joe will check with Bradley Miller at IA state

**10/27/21**

Participants:

1. Joe Brennen –
2. Chad Ferguson –
3. Suzann Kienast-Brown
4. Jessica Philippe –
5. Chance Robinson – absent
6. Stephen Roecker –
7. Betsy Schug –
8. Tiffany Allen –
9. Alex Stum –
10. Dave White –
11. Jim Thompson – absent

* Maine field work
  + Provide Colby’s ppt – Suz
* Project updates
  + Most are done with field work and in office entering pedon data
* Soils2026 projects
  + Summary of project classes and potential for DSM mentors
  + Project details deadline in Nov
* Springfield SSO mentor request (Tiffany and Suz)
  + Need to define
    - Project extent
    - Roles
    - Project objectives
  + Start with a limited scope of a specific catena, parent material, etc. to develop process then apply to other areas
  + Compartmentalize mentoring
  + Involve GTAC? – Suz reach out to Rob – done
  + Set up initial meeting (SSO) after Statement of Commitment is complete
* RSS
  + Update on RSS coordinator
  + RSS and ASR – timing and requirements
  + RSS map units/tabular data vs SSURGO map units/tabular data
    - Conversations w/Kyle
    - Guidance on population based on project needs
  + Getting RSS pushed to SDA – needs discussion
  + Chad will look at options to automate building of RSS gdb
  + Joe is working on checklist
* Update of current RSS datasets & anticipated new datasets (follow-up re: email from Kyle)
  + Ask Kyle to send an email with specific instructions
    - TN
    - NC
    - Jan 1 – ND, SD, MN, WI
    - Tabular refresh for MN, ND
    - Tabular refresh for VT
* Google update

**9/21/21**

Participants:

1. Joe Brennen –
2. Chad Ferguson –
3. Suzann Kienast-Brown
4. Jessica Philippe – absent
5. Chance Robinson – absent
6. Stephen Roecker –
7. Betsy Schug – absent
8. Tiffany Smith – absent
9. Alex Stum –
10. Dave White
11. Jim Thompson

* Project updates
* ArcSIE on software center
* RSS – certification and publication process
  + Currently
    - VT, ND, MN
  + Checklist – Joe will put something together for all to review
    - Add validation checks
  + Annual refresh – what is the timing?
    - Same as SSURGO refresh if desire to incorporate into new FY gNATSGO
  + Coordinator – Suz will discuss with Drew
* DSS products
  + RSS will be handled as outlined in Part 648 for now
  + Add to NSSH as a project type
  + Check on NASIS sub-type options – is DSS an option?
  + Does RSS trump gSSURGO in gNATSGO?
    - For now, yes but conservation activities are based on SSURGO
    - Follow up on SDA and RSS/gNATSGO
* Soils 2026
  + GEE scripts for covariate development
    - Sentinel and/or Landsat derivatives
    - Handful of terrain derivatives
    - Accompanying Python script to mosaic/snap/reproject
      * Alex has a script to build from – will share
  + R or Python scripts for additional terrain derivatives – people will share
  + Modeling areas with sparse access/data
    - STATSGO disaggregation

**7/20/21**

Participants:

1. Joe Brennen –
2. Chad Ferguson – absent
3. Suzann Kienast-Brown
4. Jessica Philippe
5. Chance Robinson – absent
6. Stephen Roecker –
7. Betsy Schug – absent
8. Tiffany Smith –
9. Alex Stum –
10. Dave White

* Project updates
* Part 648 – meeting on Wed 7/21
* GTAC support for projects in general and specifically soils2026 projects

**6/16/21**

Participants:

1. Joe Brennen –
2. Chad Ferguson
3. Suzann Kienast-Brown
4. Jessica Philippe
5. Chance Robinson
6. Stephen Roecker –
7. Betsy Schug –
8. Tiffany Smith –
9. Alex Stum –
10. Dave White

* Part 648
  + Projection/snapping grid – use 10m/30m MU key grid
    - Will bring up on SBS meeting to ensure consistency with gSSURGO/gNATSGO
    - Provide links
      * Part 648
      * AGOL
      * Job aids
      * gSSURGO/gNATSGO webpage
* RSS Levels
  + **This group approved the Levels document**
  + Chad will figure out what we need to do to update Part 648 ASAP
* GTAC
  + Project support initiative
  + Meet with Rob Vaughan to discuss possibility
* Google
  + One step closer to contract
* Training material QA/QC
  + Suz will send out link

**5/18/21**

Participants:

1. Joe Brennen –
2. Chad Ferguson
3. Suzann Kienast-Brown
4. Jessica Philippe
5. Chance Robinson
6. Stephen Roecker –
7. Betsy Schug –
8. Tiffany Smith –
9. Alex Stum – absent
10. Dave White

* Projection 6350 is universally read by software packages
* Raster Soil Survey levels (Dave, Joe)
* Soils2026 update and connection to RSS levels (Tiffany, Joe)

Action items

1. Chad will look into updating NSSH Part 648
   1. Standard projection
   2. Snapping grid
   3. RSS levels
2. RSS levels doc – everyone review and provide comments in Teams document before next meeting

Back burner

1. NASIS Milestones
   1. Detailed descriptions need to be updated based on new sequence (Joe/Chance)
   2. Assign lead for each milestone job aid (Dave)
2. Map unit kind (Dave/Joe)

**4/20/21**

Participants:

1. Joe Brennen – absent
2. Chad Ferguson
3. Suzann Kienast-Brown
4. Jessica Philippe
5. Chance Robinson
6. Stephen Roecker – absent
7. Betsy Schug –
8. Tiffany Smith – absent
9. Alex Stum – absent
10. Dave White

* WSS description of how soil surveys are made – include raster soil surveys
  + Refer to RSS page and WI soil page
* Standards
  + 6350 projection update
  + Snapping grid – instead of NLCD
    - gSSURGO (10m product), gNATSGO (30m product) in standards
    - gSSURGO binary grid for snapping – Chad will create
  + Chad will look at updating Part 648
* xTerrain tools
  + Jon Bathgate may be maintaining toolset
  + Chad will investigate
* Map unit kind/RSS levels
  + Map unit definitions
  + Uncertainty measures
  + Dave/Joe will circulate for feedback soon
  + This will become part of the policy completion of soils2026 will rely on
* Correlation guidance/legend creation and management for RSS is needed – we will put this on the priority list
  + Raster Soil Survey area type exists in NASIS
  + Legends are managed by state as indicated in Part 648
  + So maybe a lot of it is already there?

Action items

1. Chad will look into updating NSSH Part 648
   1. Standard projection
   2. Snapping grid
   3. RSS levels
2. NASIS Milestones
   1. Detailed descriptions need to be updated based on new sequence (Joe/Chance)
   2. Assign lead for each milestone job aid (Dave)
3. Finalize draft of map unit kind description/RSS levels (Joe/Dave)
4. Follow up with Wayne re: WSS (Suz)

**3/16/21**

Participants:

1. Joe Brennen
2. Chad Ferguson
3. Suzann Kienast-Brown
4. Jessica Philippe
5. Chance Robinson
6. Stephen Roecker – absent
7. Betsy Schug
8. Tiffany Smith
9. Alex Stum - absent
10. Dave White

* NASIS project subtypes
* Standards
  + 6350 projection update
  + Snapping grid – instead of NLCD
    - gSSURGO (10m product), gNATSGO (30m product) in standards
  + Chad will look at updating Part 648 – Suz will follow up
* Raster Mastery
  + Used GovDelivery and html
  + Github repo with R code from issues
  + Workflow
    - Develop content
    - Provide to Suzann for english edit
    - Pass to Dave for publication on GovDelivery
* NASIS milestones
  + Region 9 NASIS site has template for new projects
  + Standard national templates for all project types
  + Milestones available in NASIS
  + Detailed descriptions need to be updated based on new sequence (Joe/Chance)
* Github job aids repo/sharepoint (Dave)
  + Scripts
  + Milestone writeups
  + Keep source material docs/ppt on DSM FT sharepoint
* Milestone job aids – assign leads for each (Dave)
  + Review from practitioner sub-team
* Map unit kind – Dave and Joe will finalize a draft and circulate for review
  + Verbiage of relating a pixel to a map unit kind (represented as levels)
  + Levels linked to soil mapping order
  + Goal to get raster map unit kind and standard uncertainty info into NSSH then SSM
    - Need a proposal
* Soil Correlation
  + Working with Shawn and instructor cadre to update materials
* Google Cloud Services update – contract in place as soon as budget allocation comes through

Action items

1. Chad will look into updating NSSH Part 648 – standard projection and grid snapping guidance (Suz will follow up)
2. NASIS Milestones
   1. Detailed descriptions need to be updated based on new sequence (Joe/Chance)
   2. Assign lead for each milestone job aid (Dave)
3. Finalize draft of map unit kind description (Joe/Dave)

**2/16/21**

Participants:

1. Joe Brennen
2. Chad Ferguson
3. Suzann Kienast-Brown - absent
4. Jessica Philippe
5. Chance Robinson
6. Stephen Roecker - absent
7. Betsy Schug
8. Tiffany Smith – absent
9. Alex Stum - absent
10. Dave White

* NASIS milestones
  + Region 9 NASIS site has template for new projects
  + Detailed descriptions need to be updated based on new sequence (Joe/Chance)
* Github job aids repo/sharepoint (Dave)
  + Scripts
  + Milestone writeups
  + Keep source material docs/ppt on DSM FT sharepoint
* Milestone job aids – assign leads for each (Dave)
  + Review from practitioner sub-team
* Map unit kind – Dave and Joe will finalize a draft and circulate for review
  + Verbiage of relating a pixel to a map unit kind (represented as levels)
  + Levels linked to soil mapping order
* Training delivery schedule for Soil Correlation
  + Proposal to TFT meeting (2/22/21) to update existing Correlation course with DSM/RSS principals in existing structure, plus a module (Joe and Suz)
* Goal to get raster map unit kind and standard uncertainty info into NSSH then SSM
  + Need a proposal
* Spreadsheet for practitioner call, raster mastery, weekly assignments (Jess and Suz) – Complete
* Google Earth Engine
  + Still need training
  + Interest in creating standardized scripts for SPSD
  + need script that works with Sentinel Data – ask GTAC (Chance/others)

**12/15/20**

Participants:

1. Joe Brennen
2. Chad Ferguson
3. Suzann Kienast-Brown
4. Jessica Philippe
5. Chance Robinson
6. Stephen Roecker
7. Betsy Schug
8. Tiffany Smith – absent
9. Alex Stum
10. Dave White

* NASIS milestones
  + Joe provide more detailed descriptions to sub-team
  + Suz send edits to Wayne
* Github job aids repo/sharepoint (Dave)
  + Scripts
  + Milestone writeups
  + Keep source material docs/ppt on DSM FT sharepoint
* Milestone job aids – assign leads for each (Dave)
  + Review from practitioner sub-team
* Map unit kind – Dave and Joe will finalize a draft and circulate for review
  + Verbiage of relating a pixel to a map unit kind (represented as levels)
  + Levels linked to soil mapping order
* Training delivery schedule for Soil Correlation (Suz will talk to Shawn after 12/17)
* Goal to get raster map unit kind and standard uncertainty info into NSSH then SSM
* Spreadsheet for practitioner call, raster mastery, weekly assignments (Jess and Suz)