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# Aggregate Stability

#### Jason Nemecek, Cathy Seybold, John Hammerly, Anna Courtney, Jeff Glanville, Andrew Brown, and Barry Fisher

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# Introduction

The Aggregate Stability Interpretation provides a ranking based on inherent soil properties. It predicts of the potential suitability of soils and map units. Onsite investigation is needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0 to 100. The larger the value, the greater the potential suitability. The soil may have additional limitations.

Cropping systems, tillage, and management scenarios vary by location and over time, reflecting choices made by farmers. These factors partially mask inherent soil quality. Except for extreme circumstances, inherent soil quality or inherent soil productivity varies little by location over time for a specific soil (map unit component) identified by NRCS soil surveys. The interpretation reflects a relative comparison of the top 6 inches of soils for aggregate stability. It does not forecast actual aggregate stability because actual values are based on weather conditions, soil health, tillage, management conditions, and other factors.

## Scope

* Surface and near-surface horizons
* Conventional tillage
* Focus on macroaggregates (>250 micron)

## Definition of What is Estimated

Aggregate stability is defined as the stability of macroaggregates (1--2 mm in size) against flowing water and is expressed as percent stable aggregates of the less-than-2-mm fraction. It is estimated from the organic matter content, total clay, and sodium adsorption ratio. Aggregate stability values are provided for horizons within the upper 6 inches but not for sandy and organic surface layers.

## Significance

Soil aggregate stability affects soil health and crop production. It is important for stabilizing soil structure, increasing water infiltration, and reducing erosion.

Soil aggregates are the smallest unit of soil structure. They are composed of decaying particulate organic matter, clay particles, microbial products, and fine roots. Aggregates are generally divided into macroaggregates (greater than 250 μm) and microaggregates (less than 250 μm). The size, strength, and stability of aggregates depend upon the stabilizing agents involved. They can be classified as temporary, transient, or persistent. Improved aggregate stability leads to increased water infiltration and storage in the profile, increased aeration, reduced erosion, and soil structure that is more resistant to crusting and compaction. Increases in soil organic carbon improve aggregation and aggregate stability, which protect carbon compounds enmeshed in the aggregates from decomposition, leading to carbon sequestration.

## Factors Affecting Soil Aggregation and Aggregate Stability

### Inherent Factors

Microaggregation is generally considered to be an inherent property of the soil. Persistent binding agents include highly decomposed, high-molecular-weight organic materials (e.g., humic compounds), polymers, and polyvalent cations (e.g., calcium, aluminum, iron) that have a heterogeneous, non-specific structure. These agents are associated with microaggregation and soil organic carbon (SOC) sequestration. These persistent compounds are found in the interior of aggregates, forming organo-mineral complexes via the polyvalent cations. These agents are long-lasting, and the degree of aggregation formed by them is considered part of the inherent soil properties. Generally, management does not impact soil microaggregation. Soils that have a naturally high content of clay and polyvalent cations are likely to form more microaggregates than those soils with a lower content.

### Dynamic Factors

Transient binding agents consist mainly of complex carbohydrates, or polysaccharides, and organic mucilages. As plant residues and compounds extruded by plant roots decompose, bacteria release mucilages that are complex carbon-rich carbohydrates. These carbohydrates serve as binding agents, or “glues,” to which clay particles can be adsorbed and bound together. The polysaccharides are non-humic compounds of high molecular weight and comprise about 20 to 25 percent of the soil humus. They are critical for binding microaggregates together, via polymer and polyvalent cation bridges, to form larger macroaggregates. Although binding with clay particles provides some protection against decomposition, these binding agents generally decompose within a few weeks and need to be continually renewed through actively growing plants, decaying residues, or organic amendments.

Temporary binding agents consist of plant roots, especially fine roots and root hairs, fungal hyphae, and bacterial and algal cells. These agents develop along with plant roots, forming a network that entangles mineral particles, through adsorption, to form macroaggregates. As roots cease to grow, the amount of these temporary agents is reduced. Planting cover crops or perennial plants maintains living roots longer in the soil, thus maintaining and strengthening the aggregates. Tillage reduces the number of roots and the amount of microbial biomass, especially in the surface horizon, thereby potentially weakening the aggregates.

### Consequences of Weak Aggregates

The first step in erosion is the breakdown of surface aggregates. Aggregates at the soil surface are weakened if the binding agents degrade at rates exceeding replenishment rates. These aggregates can be broken apart by outside forces. Among the most important of these forces are raindrops, wind, variations in sunlight and temperature, and tillage. Changes in soil chemistry, such as increased sodicity of the soil, can also contribute to aggregate breakdown. As aggregates are broken down, the component particles clog the surface pores, leading to surface sealing and crusting. This process results in decreased water infiltration and increased ponding, runoff, erosion, and sediment transport, both on- and off-site. The extent of the process can be minimized by strengthening aggregates.

Additionally, reducing the size and strength of the aggregates throughout the profile weakens soil structure. The weakened structure is more easily compacted by field operations, especially if the soil is too wet. Poor structure can lead to ponding after rainstorms. Ponding can result in increased evaporation and thereby less water—that might otherwise have been available for crop growth—in the profile.

Aggregation and aggregate strength can be maintained or increased through the implementation of soil health management systems. These systems may include reduced tillage operations (or preferably no tillage operations) and the incorporation of cover crops or a cash crop (such as winter wheat) into the rotation. Growing crops and cover crops that have varied rooting structures improves soil structure, as does maintaining living roots in the soil as long as possible. Studies have shown that plants push into the rhizosphere, via the root system, about 20% of the carbon dioxide that is fixed through photosynthesis. Those carbon compounds can support the soil microbial population, which is critical to soil structure, water infiltration, and nutrient cycling. Any management system that leads to increased soil organic carbon is likely to improve aggregate stability.

### Measuring Aggregate Stability

Aggregate stability is determined by a wet sieving technique preceded by vacuum saturation of the 1--2 mm size aggregates as described in USDA-ARS (1966). Stable aggregates are corrected for sand greater than 0.25 mm as follows:

Aggregate stability(%)=\[((wt. of stable aggregates and sand) - (wt. of sand))/((wt. of sample) - (wt. of sand))\]

### Criteria Table

| **Property** | **Strong stability** | **Moderate stability** | **Moderate stability** | **Reason** |
| --- | --- | --- | --- | --- |
| % clay | > 36 | 21--35 | 0--20 | Lower clay content results in lower aggregate stability. |
| % OM | > 5 | 1--5 | 0--1 | Lower organic matter content results in lower aggregate stability. |
| Suborder / SMR Depth to Water |  |  | Aqu- / aquic within 50cm | Shallow depth to water table during growing season results in higher moisture status. Soil aggregates are less stable at higher moisture content. |
| Fe2O3 (Fed mass %) | > 2 | 0.5--2 | < 0.5 | Low content of free iron oxide (esp. with low % OM) results in lower aggregate stability. |
| ESP % | 0--4 | 4--10 | > 10 | High exchangeable sodium percentage results in dispersion of clay and low aggregate stability. |
| EC (dS/m) | Any (with ESP < 4%) | < 4 (with ESP > 4%) | < 4 (with ESP > 10%) | Low EC (with high ESP) results in dispersion of clay and low aggregate stability. |

## Soil Script Breakdown

### Create AoI Table

CREATE TABLE #AoiTable

( aoiid INT IDENTITY (1,1),

landunit CHAR(20),

aoigeom GEOMETRY);

* Create AOI table with polygon geometry. Coordinate system must be WGS1984 (EPSG 4326).

SELECT @aoiGeom = GEOMETRY::STGeomFromText('MULTIPOLYGON (((-102.12335160658608 45.959173206572416, -102.13402890980223 45.959218442561564, -102.13386921506947 45.944643788188387, -102.12327175652177 45.944703605814198, -102.12335160658608 45.959173206572416)))', 4326);

SELECT @aoiGeomFixed = @aoiGeom.MakeValid().STUnion(@aoiGeom.STStartPoint());

INSERT INTO #AoiTable ( landunit, aoigeom )

VALUES ('T9981 Fld3', @aoiGeomFixed);

SELECT @aoiGeom = GEOMETRY::STGeomFromText('MULTIPOLYGON (((-102.1130336443976 45.959162795100383, -102.12335160658608 45.959173206572416, -102.12327175652177 45.944703605814198, -102.1128892282776 45.944710506326032, -102.1130336443976 45.959162795100383)))', 4326);

SELECT @aoiGeomFixed = @aoiGeom.MakeValid().STUnion(@aoiGeom.STStartPoint());

INSERT INTO #AoiTable ( landunit, aoigeom )

VALUES ('T9981 Fld4', @aoiGeomFixed);

#### Creates summary acres for each landunit

CREATE TABLE #AoiAcres

( aoiid INT,

landunit CHAR(20),

landunit\_acres FLOAT

);

INSERT INTO #AoiAcres (aoiid, landunit, landunit\_acres )

SELECT aoiid, landunit,

SUM( ROUND( ( ( GEOGRAPHY::STGeomFromWKB(aoigeom.STAsBinary(), 4326 ).STArea() ) / 4046.8564224 ), 3 ) ) AS landunit\_acres

FROM #AoiTable

GROUP BY aoiid, landunit;

| **aoiid** | **landunit** | **landunit\_acres** |
| --- | --- | --- |
| 1 | T9981 Fld3 | 328.952 |
| 2 | T9981 Fld4 | 318.722 |

#### Populate intersected soil polygon table with geometry

-- Create intersected soil polygon table with geometry

CREATE TABLE #AoiSoils

( polyid INT IDENTITY (1,1),

aoiid INT,

landunit CHAR(20),

mukey INT,

soilgeom GEOMETRY

);

INSERT INTO #AoiSoils (aoiid, landunit, mukey, soilgeom)

SELECT A.aoiid, A.landunit, M.mukey, M.mupolygongeo.STIntersection(A.aoigeom ) AS soilgeom

FROM mupolygon M, #AoiTable A

WHERE mupolygongeo.STIntersects(A.aoigeom) = 1;

#### Populate soil geometry with landunit attribute

-- Soil geometry with landunits

CREATE TABLE #AoiSoils2

( aoiid INT,

polyid INT,

landunit CHAR(20),

mukey INT,

poly\_acres FLOAT,

soilgeog GEOGRAPHY

);

-- Populate Soil geometry with landunit attribute

INSERT INTO #AoiSoils2

SELECT aoiid, polyid, landunit, mukey, ROUND((( GEOGRAPHY::STGeomFromWKB(soilgeom.STAsBinary(), 4326 ).STArea() ) / 4046.8564224 ), 3 ) AS poly\_acres, GEOGRAPHY::STGeomFromWKB(soilgeom.STAsBinary(), 4326 ) AS soilgeog

FROM #AoiSoils;

### Start of Estimating Aggregate Stability

CREATE TABLE #agg1

( aoiid INT ,

landunit CHAR(20),

mukey INT,

mapunit\_acres FLOAT,

cokey INT,

compname CHAR(60),

comppct\_r INT,

majcompflag CHAR(3),

localphase CHAR(60),

hzname CHAR(20),

hzdept\_r INT,

hzdepb\_r INT,

claytotall FLOAT,

claytotalr FLOAT,

claytotalh FLOAT,

oml FLOAT ,

omr FLOAT ,

omh FLOAT,

sar\_l FLOAT,

sar\_r FLOAT,

sar\_h FLOAT,

cec7\_l FLOAT,

cec7\_r FLOAT,

cec7\_h FLOAT,

ec\_l FLOAT,

ec\_r FLOAT,

ec\_h FLOAT,

esp\_l FLOAT,

esp\_r FLOAT,

esp\_h FLOAT,

tcl CHAR(40),

mu\_pct\_sum INT,

major\_mu\_pct\_sum INT,

)

;

INSERT INTO #agg1

SELECT DISTINCT

MA44.aoiid ,

MA44.landunit,

MA44.mukey,

MA44.mapunit\_acres,

MA44.cokey,

MA44.compname,

MA44.comppct\_r,

MA44.majcompflag,

localphase,

hzname,

hzdept\_r,

hzdepb\_r,

CASE WHEN claytotal\_l > 92 then 92 WHEN claytotal\_l < 8 THEN 8 ELSE claytotal\_l END AS claytotall,

CASE WHEN claytotal\_r > 92 then 92 ELSE claytotal\_r END AS claytotalr,

CASE WHEN claytotal\_h > 92 then 92 ELSE claytotal\_h END AS claytotalh,

FORMAT ( CASE WHEN om\_l <0.01 THEN 0.05 WHEN om\_l > 17 then 17 ELSE om\_l END , '#,###,##0.00') AS oml ,

FORMAT (CASE WHEN om\_r <0.01 THEN 0.05 WHEN om\_r > 17 then 17 ELSE om\_r END , '#,###,##0.00') AS omr ,

FORMAT (CASE WHEN om\_h <0.01 THEN 0.05 WHEN om\_h > 17 then 17 ELSE om\_h END , '#,###,##0.00') AS omh ,

sar\_l,

sar\_r,

sar\_h,

cec7\_l,

cec7\_r,

cec7\_h,

ec\_l,

ec\_r,

ec\_h,

FORMAT (CAST ((100\*(-0.0126+0.01475\*sar\_l))/(1+(-0.0126+0.01475\*sar\_l)) as float) , '#,###,##0.00') as esp\_l,

FORMAT (CAST ((100\*(-0.0126+0.01475\*sar\_r))/(1+(-0.0126+0.01475\*sar\_r)) as float) , '#,###,##0.00') as esp\_r,

FORMAT (CAST ((100\*(-0.0126+0.01475\*sar\_h))/(1+(-0.0126+0.01475\*sar\_h)) as float) , '#,###,##0.00') as esp\_h,

(SELECT TOP 1 texcl FROM chtexturegrp AS chtg INNER JOIN chtexture AS cht ON chtg.chtgkey=cht.chtgkey AND chtg.rvindicator = 'yes' AND chtg.chkey=cha.chkey) AS tcl,

major\_mu\_pct\_sum, mu\_pct\_sum

FROM (#M4 AS MA44 INNER JOIN (component AS coa INNER JOIN chorizon AS cha ON cha.cokey=coa.cokey AND cha.hzdept\_r < 15 ) ON MA44.cokey=coa.cokey AND MA44.majcompflag = 'Yes' );

* Calculates ESP from SAR.
* Adjusts OM and clay to stay within property ranges of the prediction equation.

aoiid|landunit|mukey|mapunit\_acres|cokey|compname|comppct\_r|majcompflag|localphase|hzname|hzdept\_r|hzdepb\_r|claytotall|claytotalr|claytotalh|oml|omr|omh|sar\_l|sar\_r|sar\_h|cec7\_l|cec7\_r|cec7\_h|ec\_l|ec\_r|ec\_h|esp\_l|esp\_r|esp\_h|tcl|mu\_pct\_sum|major\_mu\_pct\_sum 1|T9981Fld3|354627|0.426|16464494|Daglum|25|Yes|NULL|H1|0|18|18|22|26|2|3|4|0|3|5|10|15|20|0|0|0|-1.28|3.07|5.76|Loam|90|100 1|T9981Fld3|354627|0.426|16464495|Farnuf|65|Yes|NULL|H1|0|20|20|23.5|27|2|3|4|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|90|100 1|T9981Fld3|354648|0.287|16464607|Amor|25|Yes|NULL|H1|0|20|15|20|25|3|4.5|6|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H1|0|13|10|18.5|27|3|4|5|0|1|1|20|25|30|0|0|0|-1.28|0.21|0.21|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H2|13|48|18|28|35|1|2|3|0|3|5|15|22.5|30|0|0|0|-1.28|3.07|5.76|Clayloam|85|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Ap|0|13|18|22|27|2|3|4|0|0|0|15|19|23|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Bw1|13|23|18|22|30|1|2|3|0|0|0|15|19|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Ap|0|13|14|19|27|1|2|3|0|0|0|12|15|19|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Bk|13|38|15|22|35|0.5|0.8|1|0|0|0|8|15|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 1|T9981Fld3|2525732|1.35|16663796|Ekalaka|55|Yes|NULL|Ap|0|15|10|14|18|1|1.5|2|0|1|2|8|13|18|0|1|2|-1.28|0.21|1.66|Finesandyloam|72|100 1|T9981Fld3|2525732|1.35|16663797|Yegen|17|Yes|NULL|Ap|0|15|10|15|20|2|3|4|0|0|0|10|17|24|0|0|0|-1.28|-1.28|-1.28|Finesandyloam|72|100 1|T9981Fld3|2525733|0.129|16663951|Vebar|50|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|15|20|0|0.400000006|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525733|0.129|16663952|Cohagen|25|Yes|NULL|Ap|0|15|10|14|18|0.5|1|2|0|0|0|9|12|15|0|1|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525739|28.479|16663915|Parshall|20|Yes|NULL|Ap|0|15|10|14|18|2|3.5|4|0|0|0|9|13|16|0|0.200000003|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525739|28.479|16663917|Vebar|58|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|12|16|0|0.400000006|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525745|4.983|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 1|T9981Fld3|2525746|16.106|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 1|T9981Fld3|2525764|17.691|16663611|Regan|55|Yes|saline,occasionallyflooded|Az|0|23|18|25|27|2|4|6|0|0|0|15|23|29|5|8|16|-1.28|-1.28|-1.28|Siltloam|55|100 1|T9981Fld3|2525769|181.356|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.100000001|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525769|181.356|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.100000001|1|2|-1.28|-1.28|0.21|Clayloam|88|100 1|T9981Fld3|2755648|2.449|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2755648|2.449|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100 1|T9981Fld3|2755654|4.599|16663846|Reeder|60|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|2755654|4.599|16663847|Amor|25|Yes|NULL|Ap|0|20|15|20|25|2|3|4|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 2|T9981Fld4|2525724|0.458|16664017|Savage|30|Yes|NULL|Ap|0|15|27|32|38|2|3|4|0|0.200000003|1|20|28|38|0|1|2|-1.28|-0.97|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664018|Daglum|20|Yes|NULL|Ap|0|15|27|32|40|2|3|4|0|0|1|20|28|40|0|1|2|-1.28|-1.28|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664022|Belfield|35|Yes|NULL|Ap|0|15|18|25|27|2|3|4|0|0.200000003|1|14|24|30|0|1|2|-1.28|-0.97|0.21|Siltloam|85|100 2|T9981Fld4|2525730|31.514|16663991|Regent|68|Yes|NULL|Ap|0|18|27|34|40|2|3|4|0|0|0|21|27|32|0|0.5|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525730|31.514|16663992|Savage|17|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|0|21|26|32|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525745|62.205|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 2|T9981Fld4|2525746|63.55|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 2|T9981Fld4|2525769|103.909|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.100000001|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525769|103.909|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.100000001|1|2|-1.28|-1.28|0.21|Clayloam|88|100 2|T9981Fld4|2755639|0.443|16663554|Savage|62|Yes|NULL|Ap|0|18|27|33|40|1|2|3|0|0|0|18|27|38|0|0|0|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|A|13|25|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|Ap|0|13|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|A|0|13|8|7|10|0.5|1.5|2.25|0|0|0|3|8|12|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|AC|13|25|8|5|10|0.25|1|1.5|0|0|0|1|6|10|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663958|Vebar|40|Yes|NULL|A|0|15|10|14|18|1.5|2|3|0|0|0|9|15|20|0|0.400000006|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755643|9.641|16663959|Tally|18|Yes|NULL|A|0|15|10|14|18|1.5|2.5|3.5|0|0|0|9|13|16|0|0.100000001|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755648|11.382|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2755648|11.382|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100

### Agg2 Table

CREATE TABLE #agg2

( aoiid INT ,

landunit CHAR(20),

mukey INT,

mapunit\_acres FLOAT,

cokey INT,

compname CHAR(60),

comppct\_r INT,

majcompflag CHAR(3),

localphase CHAR(60),

hzname CHAR(20),

hzdept\_r INT,

hzdepb\_r INT,

claytotall FLOAT,

claytotalr FLOAT,

claytotalh FLOAT,

oml FLOAT,

omr FLOAT,

omh FLOAT,

sar\_l FLOAT,

sar\_r FLOAT,

sar\_h FLOAT,

cec7\_l FLOAT,

cec7\_r FLOAT,

cec7\_h FLOAT,

ec\_l FLOAT,

ec\_r FLOAT,

ec\_h FLOAT,

esp\_l FLOAT,

esp\_r FLOAT,

esp\_h FLOAT,

tcl CHAR(40),

sandy INT, major\_mu\_pct\_sum INT,

mu\_pct\_sum INT);

INSERT INTO #agg2

SELECT DISTINCT

aoiid ,

landunit,

mukey,

mapunit\_acres,

cokey,

compname,

comppct\_r,

majcompflag,

localphase,

hzname,

hzdept\_r,

hzdepb\_r,

claytotall,

claytotalr,

claytotalh,

oml ,

omr ,

omh ,

sar\_l,

sar\_r,

sar\_h,

cec7\_l,

cec7\_r,

cec7\_h,

ec\_l,

ec\_r,

ec\_h,

CASE WHEN cec7\_l < 50 + 0 and (cec7\_l) IS NOT NULL and (sar\_l) IS NOT NULL and sar\_l !=0 and sar\_l < 40 + 0 and ec\_l < 20 + 0 then esp\_l

WHEN sar\_l !=0 and (sar\_l) IS NOT NULL then 1.5\*sar\_l/(1 + 0.015\*sar\_l)

WHEN sar\_l < 0.01 then 0 else null END AS esp\_l,

CASE WHEN cec7\_r < 50 + 0 and (cec7\_r) IS NOT NULL and (sar\_r) IS NOT NULL and sar\_r !=0 and sar\_r < 40 + 0 and ec\_r < 20 + 0 then esp\_r

WHEN sar\_r !=0 and (sar\_r) IS NOT NULL then 1.5\*sar\_r/(1 + 0.015\*sar\_r)

WHEN sar\_r < 0.01 then 0 else null END AS esp\_r,

CASE WHEN cec7\_h < 50 + 0 and (cec7\_h) IS NOT NULL and (sar\_h) IS NOT NULL and sar\_h !=0 and sar\_h < 40 + 0 and ec\_h < 20 + 0 then esp\_h

WHEN sar\_h !=0 and (sar\_h) IS NOT NULL then 1.5\*sar\_h/(1 + 0.015\*sar\_h)

WHEN sar\_h < 0.01 then 0 else null END AS esp\_h,

tcl,

CASE WHEN tcl ='Loamy coarse sand' THEN 1

WHEN tcl = 'Loamy fine sand' THEN 1

WHEN tcl = 'Loamy sand' THEN 1

WHEN tcl = 'Sand' THEN 1

WHEN tcl = 'Coarse sand' THEN 1

WHEN tcl = 'Fine sand' THEN 1 ELSE 0 END AS sandy, major\_mu\_pct\_sum, mu\_pct\_sum

FROM #agg1;

* Determine if the texture is sandy.
* Adjusts OM and clay to stay within property ranges of the prediction equation.

aoiid|landunit|mukey|mapunit\_acres|cokey|compname|comppct\_r|majcompflag|localphase|hzname|hzdept\_r|hzdepb\_r|claytotall|claytotalr|claytotalh|oml|omr|omh|sar\_l|sar\_r|sar\_h|cec7\_l|cec7\_r|cec7\_h|ec\_l|ec\_r|ec\_h|esp\_l|esp\_r|esp\_h|tcl|major\_mu\_pct\_sum|mu\_pct\_sum 1|T9981Fld3|354627|0.426|16464494|Daglum|25|Yes|NULL|H1|0|18|18|22|26|2|3|4|0|3|5|10|15|20|0|0|0|-1.28|3.07|5.76|Loam|90|100 1|T9981Fld3|354627|0.426|16464495|Farnuf|65|Yes|NULL|H1|0|20|20|23.5|27|2|3|4|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|90|100 1|T9981Fld3|354648|0.287|16464607|Amor|25|Yes|NULL|H1|0|20|15|20|25|3|4.5|6|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H1|0|13|10|18.5|27|3|4|5|0|1|1|20|25|30|0|0|0|-1.28|0.21|0.21|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H2|13|48|18|28|35|1|2|3|0|3|5|15|22.5|30|0|0|0|-1.28|3.07|5.76|Clayloam|85|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Ap|0|13|18|22|27|2|3|4|0|0|0|15|19|23|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Bw1|13|23|18|22|30|1|2|3|0|0|0|15|19|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Ap|0|13|14|19|27|1|2|3|0|0|0|12|15|19|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Bk|13|38|15|22|35|0.5|0.8|1|0|0|0|8|15|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 1|T9981Fld3|2525732|1.35|16663796|Ekalaka|55|Yes|NULL|Ap|0|15|10|14|18|1|1.5|2|0|1|2|8|13|18|0|1|2|-1.28|0.21|1.66|Finesandyloam|72|100 1|T9981Fld3|2525732|1.35|16663797|Yegen|17|Yes|NULL|Ap|0|15|10|15|20|2|3|4|0|0|0|10|17|24|0|0|0|-1.28|-1.28|-1.28|Finesandyloam|72|100 1|T9981Fld3|2525733|0.129|16663951|Vebar|50|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525733|0.129|16663952|Cohagen|25|Yes|NULL|Ap|0|15|10|14|18|0.5|1|2|0|0|0|9|12|15|0|1|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525739|28.479|16663915|Parshall|20|Yes|NULL|Ap|0|15|10|14|18|2|3.5|4|0|0|0|9|13|16|0|0.2|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525739|28.479|16663917|Vebar|58|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|12|16|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525745|4.983|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 1|T9981Fld3|2525746|16.106|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 1|T9981Fld3|2525764|17.691|16663611|Regan|55|Yes|saline,occasionallyflooded|Az|0|23|18|25|27|2|4|6|0|0|0|15|23|29|5|8|16|-1.28|-1.28|-1.28|Siltloam|55|100 1|T9981Fld3|2525769|181.356|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525769|181.356|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 1|T9981Fld3|2755648|2.449|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2755648|2.449|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100 1|T9981Fld3|2755654|4.599|16663846|Reeder|60|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|2755654|4.599|16663847|Amor|25|Yes|NULL|Ap|0|20|15|20|25|2|3|4|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 2|T9981Fld4|2525724|0.458|16664017|Savage|30|Yes|NULL|Ap|0|15|27|32|38|2|3|4|0|0.2|1|20|28|38|0|1|2|-1.28|-0.97|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664018|Daglum|20|Yes|NULL|Ap|0|15|27|32|40|2|3|4|0|0|1|20|28|40|0|1|2|-1.28|-1.28|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664022|Belfield|35|Yes|NULL|Ap|0|15|18|25|27|2|3|4|0|0.2|1|14|24|30|0|1|2|-1.28|-0.97|0.21|Siltloam|85|100 2|T9981Fld4|2525730|31.514|16663991|Regent|68|Yes|NULL|Ap|0|18|27|34|40|2|3|4|0|0|0|21|27|32|0|0.5|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525730|31.514|16663992|Savage|17|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|0|21|26|32|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525745|62.205|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 2|T9981Fld4|2525746|63.55|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 2|T9981Fld4|2525769|103.909|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525769|103.909|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 2|T9981Fld4|2755639|0.443|16663554|Savage|62|Yes|NULL|Ap|0|18|27|33|40|1|2|3|0|0|0|18|27|38|0|0|0|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|A|13|25|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|Ap|0|13|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|A|0|13|8|7|10|0.5|1.5|2.25|0|0|0|3|8|12|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|AC|13|25|8|5|10|0.25|1|1.5|0|0|0|1|6|10|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663958|Vebar|40|Yes|NULL|A|0|15|10|14|18|1.5|2|3|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755643|9.641|16663959|Tally|18|Yes|NULL|A|0|15|10|14|18|1.5|2.5|3.5|0|0|0|9|13|16|0|0.1|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755648|11.382|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2755648|11.382|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100

### Agg3 Table

CREATE TABLE #agg3

( aoiid INT ,

landunit CHAR(20),

mukey INT,

mapunit\_acres FLOAT,

cokey INT,

compname CHAR(60),

comppct\_r INT,

majcompflag CHAR(3),

localphase CHAR(60),

hzname CHAR(20),

hzdept\_r INT,

hzdepb\_r INT,

claytotall FLOAT,

claytotalr FLOAT,

claytotalh FLOAT,

oml FLOAT,

omr FLOAT,

omh FLOAT,

sandy INT,

AgStab\_l FLOAT,

AgStab\_r FLOAT,

AgStab\_h FLOAT,

tcl CHAR(40), major\_mu\_pct\_sum INT, mu\_pct\_sum INT)

INSERT INTO #agg3

SELECT DISTINCT

aoiid ,

landunit,

mukey,

mapunit\_acres,

cokey,

compname,

comppct\_r,

majcompflag,

localphase,

hzname,

hzdept\_r,

hzdepb\_r,

claytotall,

claytotalr,

claytotalh,

oml,

omr,

omh,

sandy,

FORMAT (49.7+13.7\*LOG(oml) + 0.61\*claytotall-0.0045\*POWER(claytotall,2) - 0.28\*esp\_h-0.06\*POWER(esp\_h,2), '#,###,##0.00') AS AgStab\_l,

FORMAT (49.7+13.7\*LOG(omr) + 0.61\*claytotalr-0.0045\*POWER(claytotalr,2) - 0.28\*esp\_r-0.06\*POWER(esp\_r,2), '#,###,##0.00') AS AgStab\_r,

FORMAT (49.7+13.7\*LOG(omh) + 0.61\*claytotalh-0.0045\*POWER(claytotalh,2) - 0.28\*esp\_l-0.06\*POWER(esp\_l,2), '#,###,##0.00') AS AgStab\_h,

tcl, major\_mu\_pct\_sum , mu\_pct\_sum

FROM #agg2;

aoiid|landunit|mukey|mapunit\_acres|cokey|compname|comppct\_r|majcompflag|localphase|hzname|hzdept\_r|hzdepb\_r|claytotall|claytotalr|claytotalh|oml|omr|omh|sar\_l|sar\_r|sar\_h|cec7\_l|cec7\_r|cec7\_h|ec\_l|ec\_r|ec\_h|esp\_l|esp\_r|esp\_h|tcl|major\_mu\_pct\_sum|mu\_pct\_sum 1|T9981Fld3|354627|0.426|16464494|Daglum|25|Yes|NULL|H1|0|18|18|22|26|2|3|4|0|3|5|10|15|20|0|0|0|-1.28|3.07|5.76|Loam|90|100 1|T9981Fld3|354627|0.426|16464495|Farnuf|65|Yes|NULL|H1|0|20|20|23.5|27|2|3|4|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|90|100 1|T9981Fld3|354648|0.287|16464607|Amor|25|Yes|NULL|H1|0|20|15|20|25|3|4.5|6|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H1|0|13|10|18.5|27|3|4|5|0|1|1|20|25|30|0|0|0|-1.28|0.21|0.21|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H2|13|48|18|28|35|1|2|3|0|3|5|15|22.5|30|0|0|0|-1.28|3.07|5.76|Clayloam|85|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Ap|0|13|18|22|27|2|3|4|0|0|0|15|19|23|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Bw1|13|23|18|22|30|1|2|3|0|0|0|15|19|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Ap|0|13|14|19|27|1|2|3|0|0|0|12|15|19|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Bk|13|38|15|22|35|0.5|0.8|1|0|0|0|8|15|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 1|T9981Fld3|2525732|1.35|16663796|Ekalaka|55|Yes|NULL|Ap|0|15|10|14|18|1|1.5|2|0|1|2|8|13|18|0|1|2|-1.28|0.21|1.66|Finesandyloam|72|100 1|T9981Fld3|2525732|1.35|16663797|Yegen|17|Yes|NULL|Ap|0|15|10|15|20|2|3|4|0|0|0|10|17|24|0|0|0|-1.28|-1.28|-1.28|Finesandyloam|72|100 1|T9981Fld3|2525733|0.129|16663951|Vebar|50|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525733|0.129|16663952|Cohagen|25|Yes|NULL|Ap|0|15|10|14|18|0.5|1|2|0|0|0|9|12|15|0|1|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525739|28.479|16663915|Parshall|20|Yes|NULL|Ap|0|15|10|14|18|2|3.5|4|0|0|0|9|13|16|0|0.2|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525739|28.479|16663917|Vebar|58|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|12|16|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525745|4.983|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 1|T9981Fld3|2525746|16.106|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 1|T9981Fld3|2525764|17.691|16663611|Regan|55|Yes|saline,occasionallyflooded|Az|0|23|18|25|27|2|4|6|0|0|0|15|23|29|5|8|16|-1.28|-1.28|-1.28|Siltloam|55|100 1|T9981Fld3|2525769|181.356|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525769|181.356|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 1|T9981Fld3|2755648|2.449|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2755648|2.449|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100 1|T9981Fld3|2755654|4.599|16663846|Reeder|60|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|2755654|4.599|16663847|Amor|25|Yes|NULL|Ap|0|20|15|20|25|2|3|4|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 2|T9981Fld4|2525724|0.458|16664017|Savage|30|Yes|NULL|Ap|0|15|27|32|38|2|3|4|0|0.2|1|20|28|38|0|1|2|-1.28|-0.97|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664018|Daglum|20|Yes|NULL|Ap|0|15|27|32|40|2|3|4|0|0|1|20|28|40|0|1|2|-1.28|-1.28|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664022|Belfield|35|Yes|NULL|Ap|0|15|18|25|27|2|3|4|0|0.2|1|14|24|30|0|1|2|-1.28|-0.97|0.21|Siltloam|85|100 2|T9981Fld4|2525730|31.514|16663991|Regent|68|Yes|NULL|Ap|0|18|27|34|40|2|3|4|0|0|0|21|27|32|0|0.5|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525730|31.514|16663992|Savage|17|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|0|21|26|32|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525745|62.205|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 2|T9981Fld4|2525746|63.55|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 2|T9981Fld4|2525769|103.909|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525769|103.909|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 2|T9981Fld4|2755639|0.443|16663554|Savage|62|Yes|NULL|Ap|0|18|27|33|40|1|2|3|0|0|0|18|27|38|0|0|0|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|A|13|25|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|Ap|0|13|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|A|0|13|8|7|10|0.5|1.5|2.25|0|0|0|3|8|12|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|AC|13|25|8|5|10|0.25|1|1.5|0|0|0|1|6|10|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663958|Vebar|40|Yes|NULL|A|0|15|10|14|18|1.5|2|3|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755643|9.641|16663959|Tally|18|Yes|NULL|A|0|15|10|14|18|1.5|2.5|3.5|0|0|0|9|13|16|0|0.1|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755648|11.382|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2755648|11.382|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100

### Agg4 Table

CREATE TABLE #agg4

( aoiid INT ,

landunit CHAR(20),

landunit\_acres FLOAT,

mukey INT,

mapunit\_acres FLOAT,

cokey INT,

compname CHAR(60),

comppct\_r INT,

majcompflag CHAR(3),

localphase CHAR(60),

hzname CHAR(20),

hzdept\_r INT,

hzdepb\_r INT,

AgStab\_l FLOAT,

AgStab\_r FLOAT,

AgStab\_h FLOAT,

tcl CHAR(40),

major\_mu\_pct\_sum INT, mu\_pct\_sum INT,

adj\_comp\_pct FLOAT,

thickness INT,

AGG\_InRangeTop\_0\_15 INT,

AGG\_InRangeBot\_0\_15 INT

)

;

INSERT INTO #agg4

SELECT DISTINCT ag.aoiid ,

ag.landunit,

landunit\_acres,

mukey,

mapunit\_acres,

cokey,

compname,

comppct\_r,

majcompflag,

localphase,

hzname,

hzdept\_r,

hzdepb\_r,

CASE WHEN AgStab\_l > 100 THEN 100 WHEN claytotall >= 0 and claytotall < 5 THEN null WHEN sandy=1 THEN null WHEN oml > 20 THEN null ELSE AgStab\_l END AS AgStab\_l,

CASE WHEN AgStab\_r > 100 THEN 100 WHEN claytotalr >= 0 and claytotalr < 5 THEN null WHEN sandy=1 THEN null WHEN omr > 20 THEN null ELSE AgStab\_r END AS AgStab\_r,

CASE WHEN AgStab\_h > 100 THEN 100 WHEN claytotalh >= 0 and claytotalh < 5 THEN null WHEN sandy=1 THEN null WHEN omh > 20 THEN null ELSE AgStab\_h END AS AgStab\_h,

tcl, major\_mu\_pct\_sum, mu\_pct\_sum, (1.0 \* comppct\_r / major\_mu\_pct\_sum) AS adj\_comp\_pct, CASE WHEN hzdepb\_r IS NULL THEN 0

WHEN hzdept\_r IS NULL THEN 0 ELSE hzdepb\_r-hzdept\_r END AS thickness,

CASE WHEN hzdept\_r < 15 then hzdept\_r ELSE 0 END AS AGG\_InRangeTop\_0\_15,

CASE WHEN hzdepb\_r <= 15 THEN hzdepb\_r WHEN hzdepb\_r > 15 and hzdept\_r < 15 THEN 15 ELSE 0 END AS AGG\_InRangeBot\_0\_15

FROM #AoiAcres

LEFT OUTER JOIN #agg3 AS ag ON ag.aoiid=#AoiAcres.aoiid WHERE majcompflag = 'yes' GROUP BY ag.aoiid ,

ag.landunit,

landunit\_acres,

mukey,

mapunit\_acres,

cokey,

compname,

comppct\_r,

majcompflag,

localphase,

hzname,

hzdept\_r,

hzdepb\_r, AgStab\_l , AgStab\_h, AgStab\_r, claytotall, claytotalr, claytotalh, sandy,comppct\_r , major\_mu\_pct\_sum ,mu\_pct\_sum , oml, omr, omh, tcl;

aoiid|landunit|mukey|mapunit\_acres|cokey|compname|comppct\_r|majcompflag|localphase|hzname|hzdept\_r|hzdepb\_r|claytotall|claytotalr|claytotalh|oml|omr|omh|sar\_l|sar\_r|sar\_h|cec7\_l|cec7\_r|cec7\_h|ec\_l|ec\_r|ec\_h|esp\_l|esp\_r|esp\_h|tcl|major\_mu\_pct\_sum|mu\_pct\_sum 1|T9981Fld3|354627|0.426|16464494|Daglum|25|Yes|NULL|H1|0|18|18|22|26|2|3|4|0|3|5|10|15|20|0|0|0|-1.28|3.07|5.76|Loam|90|100 1|T9981Fld3|354627|0.426|16464495|Farnuf|65|Yes|NULL|H1|0|20|20|23.5|27|2|3|4|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|90|100 1|T9981Fld3|354648|0.287|16464607|Amor|25|Yes|NULL|H1|0|20|15|20|25|3|4.5|6|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H1|0|13|10|18.5|27|3|4|5|0|1|1|20|25|30|0|0|0|-1.28|0.21|0.21|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H2|13|48|18|28|35|1|2|3|0|3|5|15|22.5|30|0|0|0|-1.28|3.07|5.76|Clayloam|85|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Ap|0|13|18|22|27|2|3|4|0|0|0|15|19|23|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Bw1|13|23|18|22|30|1|2|3|0|0|0|15|19|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Ap|0|13|14|19|27|1|2|3|0|0|0|12|15|19|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Bk|13|38|15|22|35|0.5|0.8|1|0|0|0|8|15|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 1|T9981Fld3|2525732|1.35|16663796|Ekalaka|55|Yes|NULL|Ap|0|15|10|14|18|1|1.5|2|0|1|2|8|13|18|0|1|2|-1.28|0.21|1.66|Finesandyloam|72|100 1|T9981Fld3|2525732|1.35|16663797|Yegen|17|Yes|NULL|Ap|0|15|10|15|20|2|3|4|0|0|0|10|17|24|0|0|0|-1.28|-1.28|-1.28|Finesandyloam|72|100 1|T9981Fld3|2525733|0.129|16663951|Vebar|50|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525733|0.129|16663952|Cohagen|25|Yes|NULL|Ap|0|15|10|14|18|0.5|1|2|0|0|0|9|12|15|0|1|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525739|28.479|16663915|Parshall|20|Yes|NULL|Ap|0|15|10|14|18|2|3.5|4|0|0|0|9|13|16|0|0.2|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525739|28.479|16663917|Vebar|58|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|12|16|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525745|4.983|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 1|T9981Fld3|2525746|16.106|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 1|T9981Fld3|2525764|17.691|16663611|Regan|55|Yes|saline,occasionallyflooded|Az|0|23|18|25|27|2|4|6|0|0|0|15|23|29|5|8|16|-1.28|-1.28|-1.28|Siltloam|55|100 1|T9981Fld3|2525769|181.356|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525769|181.356|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 1|T9981Fld3|2755648|2.449|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2755648|2.449|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100 1|T9981Fld3|2755654|4.599|16663846|Reeder|60|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|2755654|4.599|16663847|Amor|25|Yes|NULL|Ap|0|20|15|20|25|2|3|4|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 2|T9981Fld4|2525724|0.458|16664017|Savage|30|Yes|NULL|Ap|0|15|27|32|38|2|3|4|0|0.2|1|20|28|38|0|1|2|-1.28|-0.97|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664018|Daglum|20|Yes|NULL|Ap|0|15|27|32|40|2|3|4|0|0|1|20|28|40|0|1|2|-1.28|-1.28|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664022|Belfield|35|Yes|NULL|Ap|0|15|18|25|27|2|3|4|0|0.2|1|14|24|30|0|1|2|-1.28|-0.97|0.21|Siltloam|85|100 2|T9981Fld4|2525730|31.514|16663991|Regent|68|Yes|NULL|Ap|0|18|27|34|40|2|3|4|0|0|0|21|27|32|0|0.5|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525730|31.514|16663992|Savage|17|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|0|21|26|32|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525745|62.205|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 2|T9981Fld4|2525746|63.55|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 2|T9981Fld4|2525769|103.909|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525769|103.909|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 2|T9981Fld4|2755639|0.443|16663554|Savage|62|Yes|NULL|Ap|0|18|27|33|40|1|2|3|0|0|0|18|27|38|0|0|0|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|A|13|25|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|Ap|0|13|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|A|0|13|8|7|10|0.5|1.5|2.25|0|0|0|3|8|12|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|AC|13|25|8|5|10|0.25|1|1.5|0|0|0|1|6|10|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663958|Vebar|40|Yes|NULL|A|0|15|10|14|18|1.5|2|3|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755643|9.641|16663959|Tally|18|Yes|NULL|A|0|15|10|14|18|1.5|2.5|3.5|0|0|0|9|13|16|0|0.1|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755648|11.382|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2755648|11.382|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100

### Agg5 Table

CREATE TABLE #agg5

( aoiid INT ,

landunit CHAR(20),

landunit\_acres FLOAT,

mukey INT,

mapunit\_acres FLOAT,

cokey INT,

compname CHAR(60),

comppct\_r INT,

majcompflag CHAR(3),

localphase CHAR(60),

hzname CHAR(20),

hzdept\_r INT,

hzdepb\_r INT,

AgStab\_l FLOAT,

AgStab\_r FLOAT,

AgStab\_h FLOAT,

tcl CHAR(40),

major\_mu\_pct\_sum INT,mu\_pct\_sum INT,

adj\_comp\_pct FLOAT,

thickness INT,

AGG\_InRangeTop\_0\_15 INT,

AGG\_InRangeBot\_0\_15 INT,

InRangeThickness INT,

InRangeSumThickness INT )

;

INSERT INTO #agg5

SELECT DISTINCT aoiid ,

landunit,

landunit\_acres,

mukey,

mapunit\_acres,

cokey,

compname,

comppct\_r,

majcompflag,

localphase,

hzname,

hzdept\_r,

hzdepb\_r,

AgStab\_l,

AgStab\_r,

AgStab\_h,

tcl,

major\_mu\_pct\_sum, mu\_pct\_sum,

adj\_comp\_pct,

thickness,

AGG\_InRangeTop\_0\_15,

AGG\_InRangeBot\_0\_15,

CASE WHEN AGG\_InRangeTop\_0\_15 IS NULL THEN 0

WHEN AGG\_InRangeBot\_0\_15 IS NULL THEN 0 ELSE AGG\_InRangeBot\_0\_15 - AGG\_InRangeTop\_0\_15 END AS InRangeThickness,

SUM (CASE WHEN AGG\_InRangeTop\_0\_15 IS NULL THEN 0

WHEN AGG\_InRangeBot\_0\_15 IS NULL THEN 0 ELSE AGG\_InRangeBot\_0\_15 - AGG\_InRangeTop\_0\_15 END) over(PARTITION BY cokey, aoiid) AS InRangeSumThickness

FROM #agg4

GROUP BY aoiid ,

landunit,

landunit\_acres,

mukey,

mapunit\_acres,

cokey,

compname,

comppct\_r,

majcompflag,

localphase,

hzname,

hzdept\_r,

hzdepb\_r,

AgStab\_l,

AgStab\_r,

AgStab\_h,

tcl, major\_mu\_pct\_sum,

mu\_pct\_sum,

adj\_comp\_pct,

thickness,

AGG\_InRangeTop\_0\_15,

AGG\_InRangeBot\_0\_15 ;

aoiid|landunit|mukey|mapunit\_acres|cokey|compname|comppct\_r|majcompflag|localphase|hzname|hzdept\_r|hzdepb\_r|claytotall|claytotalr|claytotalh|oml|omr|omh|sar\_l|sar\_r|sar\_h|cec7\_l|cec7\_r|cec7\_h|ec\_l|ec\_r|ec\_h|esp\_l|esp\_r|esp\_h|tcl|major\_mu\_pct\_sum|mu\_pct\_sum 1|T9981Fld3|354627|0.426|16464494|Daglum|25|Yes|NULL|H1|0|18|18|22|26|2|3|4|0|3|5|10|15|20|0|0|0|-1.28|3.07|5.76|Loam|90|100 1|T9981Fld3|354627|0.426|16464495|Farnuf|65|Yes|NULL|H1|0|20|20|23.5|27|2|3|4|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|90|100 1|T9981Fld3|354648|0.287|16464607|Amor|25|Yes|NULL|H1|0|20|15|20|25|3|4.5|6|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H1|0|13|10|18.5|27|3|4|5|0|1|1|20|25|30|0|0|0|-1.28|0.21|0.21|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H2|13|48|18|28|35|1|2|3|0|3|5|15|22.5|30|0|0|0|-1.28|3.07|5.76|Clayloam|85|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Ap|0|13|18|22|27|2|3|4|0|0|0|15|19|23|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Bw1|13|23|18|22|30|1|2|3|0|0|0|15|19|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Ap|0|13|14|19|27|1|2|3|0|0|0|12|15|19|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Bk|13|38|15|22|35|0.5|0.8|1|0|0|0|8|15|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 1|T9981Fld3|2525732|1.35|16663796|Ekalaka|55|Yes|NULL|Ap|0|15|10|14|18|1|1.5|2|0|1|2|8|13|18|0|1|2|-1.28|0.21|1.66|Finesandyloam|72|100 1|T9981Fld3|2525732|1.35|16663797|Yegen|17|Yes|NULL|Ap|0|15|10|15|20|2|3|4|0|0|0|10|17|24|0|0|0|-1.28|-1.28|-1.28|Finesandyloam|72|100 1|T9981Fld3|2525733|0.129|16663951|Vebar|50|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525733|0.129|16663952|Cohagen|25|Yes|NULL|Ap|0|15|10|14|18|0.5|1|2|0|0|0|9|12|15|0|1|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525739|28.479|16663915|Parshall|20|Yes|NULL|Ap|0|15|10|14|18|2|3.5|4|0|0|0|9|13|16|0|0.2|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525739|28.479|16663917|Vebar|58|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|12|16|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525745|4.983|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 1|T9981Fld3|2525746|16.106|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 1|T9981Fld3|2525764|17.691|16663611|Regan|55|Yes|saline,occasionallyflooded|Az|0|23|18|25|27|2|4|6|0|0|0|15|23|29|5|8|16|-1.28|-1.28|-1.28|Siltloam|55|100 1|T9981Fld3|2525769|181.356|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525769|181.356|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 1|T9981Fld3|2755648|2.449|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2755648|2.449|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100 1|T9981Fld3|2755654|4.599|16663846|Reeder|60|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|2755654|4.599|16663847|Amor|25|Yes|NULL|Ap|0|20|15|20|25|2|3|4|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 2|T9981Fld4|2525724|0.458|16664017|Savage|30|Yes|NULL|Ap|0|15|27|32|38|2|3|4|0|0.2|1|20|28|38|0|1|2|-1.28|-0.97|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664018|Daglum|20|Yes|NULL|Ap|0|15|27|32|40|2|3|4|0|0|1|20|28|40|0|1|2|-1.28|-1.28|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664022|Belfield|35|Yes|NULL|Ap|0|15|18|25|27|2|3|4|0|0.2|1|14|24|30|0|1|2|-1.28|-0.97|0.21|Siltloam|85|100 2|T9981Fld4|2525730|31.514|16663991|Regent|68|Yes|NULL|Ap|0|18|27|34|40|2|3|4|0|0|0|21|27|32|0|0.5|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525730|31.514|16663992|Savage|17|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|0|21|26|32|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525745|62.205|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 2|T9981Fld4|2525746|63.55|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 2|T9981Fld4|2525769|103.909|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525769|103.909|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 2|T9981Fld4|2755639|0.443|16663554|Savage|62|Yes|NULL|Ap|0|18|27|33|40|1|2|3|0|0|0|18|27|38|0|0|0|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|A|13|25|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|Ap|0|13|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|A|0|13|8|7|10|0.5|1.5|2.25|0|0|0|3|8|12|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|AC|13|25|8|5|10|0.25|1|1.5|0|0|0|1|6|10|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663958|Vebar|40|Yes|NULL|A|0|15|10|14|18|1.5|2|3|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755643|9.641|16663959|Tally|18|Yes|NULL|A|0|15|10|14|18|1.5|2.5|3.5|0|0|0|9|13|16|0|0.1|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755648|11.382|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2755648|11.382|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100

### Agg6 Table

CREATE TABLE #agg6

( aoiid INT,

landunit CHAR(20),

landunit\_acres FLOAT,

mukey INT,

mapunit\_acres FLOAT,

cokey INT,

compname CHAR(60),

localphase CHAR(60),

major\_mu\_pct\_sum INT,mu\_pct\_sum INT,

adj\_comp\_pct FLOAT ,

--AGG\_InRangeTop\_0\_15 INT,

--AGG\_InRangeBot\_0\_15 INT,

--InRangeThickness INT,

--InRangeSumThickness INT,

--AgStab\_l FLOAT,

--AgStab\_r FLOAT,

--AgStab\_h FLOAT,

comp\_weighted\_average\_l FLOAT,

comp\_weighted\_average\_r FLOAT,

comp\_weighted\_average\_h FLOAT

)

;

INSERT INTO #agg6

SELECT DISTINCT aoiid ,

landunit,

landunit\_acres,

mukey,

mapunit\_acres,

cokey,

compname,

localphase, major\_mu\_pct\_sum,

mu\_pct\_sum,

adj\_comp\_pct,

--AGG\_InRangeTop\_0\_15,

--AGG\_InRangeBot\_0\_15,

--InRangeThickness,

--InRangeSumThickness,

--AgStab\_l ,

--AgStab\_r ,

--AgStab\_h ,

SUM ((CAST (InRangeThickness AS FLOAT)/CAST (InRangeSumThickness AS FLOAT)) \* AgStab\_l) over(PARTITION BY ag5.cokey, aoiid) AS comp\_weighted\_average\_l,

SUM((CAST (InRangeThickness AS FLOAT)/CAST (InRangeSumThickness AS FLOAT)) \* AgStab\_r) over(PARTITION BY ag5.cokey, aoiid) AS comp\_weighted\_average\_r,

SUM((CAST (InRangeThickness AS FLOAT)/CAST (InRangeSumThickness AS FLOAT)) \* AgStab\_h) over(PARTITION BY ag5.cokey, aoiid) comp\_weighted\_average\_h

FROM #agg5 AS ag5

WHERE InRangeSumThickness !=0

GROUP BY aoiid, landunit,

landunit\_acres,

mukey,

mapunit\_acres,

cokey,

compname,

localphase, major\_mu\_pct\_sum ,

mu\_pct\_sum,

adj\_comp\_pct,-- AgStab\_l ,

--AgStab\_r ,

--AgStab\_h ,

--AGG\_InRangeTop\_0\_15,

--AGG\_InRangeBot\_0\_15,

InRangeThickness,

InRangeSumThickness, AgStab\_l, AgStab\_r, AgStab\_h ;

aoiid|landunit|mukey|mapunit\_acres|cokey|compname|comppct\_r|majcompflag|localphase|hzname|hzdept\_r|hzdepb\_r|claytotall|claytotalr|claytotalh|oml|omr|omh|sar\_l|sar\_r|sar\_h|cec7\_l|cec7\_r|cec7\_h|ec\_l|ec\_r|ec\_h|esp\_l|esp\_r|esp\_h|tcl|major\_mu\_pct\_sum|mu\_pct\_sum 1|T9981Fld3|354627|0.426|16464494|Daglum|25|Yes|NULL|H1|0|18|18|22|26|2|3|4|0|3|5|10|15|20|0|0|0|-1.28|3.07|5.76|Loam|90|100 1|T9981Fld3|354627|0.426|16464495|Farnuf|65|Yes|NULL|H1|0|20|20|23.5|27|2|3|4|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|90|100 1|T9981Fld3|354648|0.287|16464607|Amor|25|Yes|NULL|H1|0|20|15|20|25|3|4.5|6|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H1|0|13|10|18.5|27|3|4|5|0|1|1|20|25|30|0|0|0|-1.28|0.21|0.21|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H2|13|48|18|28|35|1|2|3|0|3|5|15|22.5|30|0|0|0|-1.28|3.07|5.76|Clayloam|85|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Ap|0|13|18|22|27|2|3|4|0|0|0|15|19|23|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Bw1|13|23|18|22|30|1|2|3|0|0|0|15|19|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Ap|0|13|14|19|27|1|2|3|0|0|0|12|15|19|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Bk|13|38|15|22|35|0.5|0.8|1|0|0|0|8|15|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 1|T9981Fld3|2525732|1.35|16663796|Ekalaka|55|Yes|NULL|Ap|0|15|10|14|18|1|1.5|2|0|1|2|8|13|18|0|1|2|-1.28|0.21|1.66|Finesandyloam|72|100 1|T9981Fld3|2525732|1.35|16663797|Yegen|17|Yes|NULL|Ap|0|15|10|15|20|2|3|4|0|0|0|10|17|24|0|0|0|-1.28|-1.28|-1.28|Finesandyloam|72|100 1|T9981Fld3|2525733|0.129|16663951|Vebar|50|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525733|0.129|16663952|Cohagen|25|Yes|NULL|Ap|0|15|10|14|18|0.5|1|2|0|0|0|9|12|15|0|1|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525739|28.479|16663915|Parshall|20|Yes|NULL|Ap|0|15|10|14|18|2|3.5|4|0|0|0|9|13|16|0|0.2|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525739|28.479|16663917|Vebar|58|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|12|16|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525745|4.983|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 1|T9981Fld3|2525746|16.106|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 1|T9981Fld3|2525764|17.691|16663611|Regan|55|Yes|saline,occasionallyflooded|Az|0|23|18|25|27|2|4|6|0|0|0|15|23|29|5|8|16|-1.28|-1.28|-1.28|Siltloam|55|100 1|T9981Fld3|2525769|181.356|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525769|181.356|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 1|T9981Fld3|2755648|2.449|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2755648|2.449|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100 1|T9981Fld3|2755654|4.599|16663846|Reeder|60|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|2755654|4.599|16663847|Amor|25|Yes|NULL|Ap|0|20|15|20|25|2|3|4|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 2|T9981Fld4|2525724|0.458|16664017|Savage|30|Yes|NULL|Ap|0|15|27|32|38|2|3|4|0|0.2|1|20|28|38|0|1|2|-1.28|-0.97|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664018|Daglum|20|Yes|NULL|Ap|0|15|27|32|40|2|3|4|0|0|1|20|28|40|0|1|2|-1.28|-1.28|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664022|Belfield|35|Yes|NULL|Ap|0|15|18|25|27|2|3|4|0|0.2|1|14|24|30|0|1|2|-1.28|-0.97|0.21|Siltloam|85|100 2|T9981Fld4|2525730|31.514|16663991|Regent|68|Yes|NULL|Ap|0|18|27|34|40|2|3|4|0|0|0|21|27|32|0|0.5|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525730|31.514|16663992|Savage|17|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|0|21|26|32|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525745|62.205|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 2|T9981Fld4|2525746|63.55|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 2|T9981Fld4|2525769|103.909|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525769|103.909|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 2|T9981Fld4|2755639|0.443|16663554|Savage|62|Yes|NULL|Ap|0|18|27|33|40|1|2|3|0|0|0|18|27|38|0|0|0|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|A|13|25|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|Ap|0|13|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|A|0|13|8|7|10|0.5|1.5|2.25|0|0|0|3|8|12|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|AC|13|25|8|5|10|0.25|1|1.5|0|0|0|1|6|10|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663958|Vebar|40|Yes|NULL|A|0|15|10|14|18|1.5|2|3|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755643|9.641|16663959|Tally|18|Yes|NULL|A|0|15|10|14|18|1.5|2.5|3.5|0|0|0|9|13|16|0|0.1|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755648|11.382|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2755648|11.382|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100

### Map Unit Aggregation for Mapunit Table

CREATE TABLE #agg7

( aoiid INT,

landunit CHAR(20),

landunit\_acres FLOAT,

mukey INT,

mapunit\_acres FLOAT,

major\_mu\_pct\_sum INT,mu\_pct\_sum INT,

MU\_SUM\_AGG\_L FLOAT,

MU\_SUM\_AGG\_R FLOAT,

MU\_SUM\_AGG\_H FLOAT

--MU\_Weighted\_Average\_R FLOAT

)

;

-- Map Unit Aggregation

INSERT INTO #agg7

SELECT DISTINCT aoiid ,

landunit,

landunit\_acres,

mukey,

mapunit\_acres,

major\_mu\_pct\_sum, mu\_pct\_sum,

FORMAT ( SUM (adj\_comp\_pct \* comp\_weighted\_average\_l) over(PARTITION BY ag6.mukey, aoiid ) , '#,###,##0.00') AS MU\_SUM\_AGG\_L,

FORMAT (SUM (adj\_comp\_pct \* comp\_weighted\_average\_r) over(PARTITION BY ag6.mukey, aoiid ) , '#,###,##0.00') AS MU\_SUM\_AGG\_R,

FORMAT (SUM (adj\_comp\_pct \* comp\_weighted\_average\_h) over(PARTITION BY ag6.mukey, aoiid ) , '#,###,##0.00') ASMU\_SUM\_AGG\_H

--(mapunit\_acres/landunit\_acres)\*MU\_SUM\_AGG\_R AS MU\_Weighted\_Average\_R

FROM #agg6 AS ag6

GROUP BY aoiid ,

landunit,

landunit\_acres,

mukey,

mapunit\_acres,

major\_mu\_pct\_sum , mu\_pct\_sum,

adj\_comp\_pct,

comp\_weighted\_average\_l,

comp\_weighted\_average\_r,

comp\_weighted\_average\_h

;

aoiid|landunit|mukey|mapunit\_acres|cokey|compname|comppct\_r|majcompflag|localphase|hzname|hzdept\_r|hzdepb\_r|claytotall|claytotalr|claytotalh|oml|omr|omh|sar\_l|sar\_r|sar\_h|cec7\_l|cec7\_r|cec7\_h|ec\_l|ec\_r|ec\_h|esp\_l|esp\_r|esp\_h|tcl|major\_mu\_pct\_sum|mu\_pct\_sum 1|T9981Fld3|354627|0.426|16464494|Daglum|25|Yes|NULL|H1|0|18|18|22|26|2|3|4|0|3|5|10|15|20|0|0|0|-1.28|3.07|5.76|Loam|90|100 1|T9981Fld3|354627|0.426|16464495|Farnuf|65|Yes|NULL|H1|0|20|20|23.5|27|2|3|4|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|90|100 1|T9981Fld3|354648|0.287|16464607|Amor|25|Yes|NULL|H1|0|20|15|20|25|3|4.5|6|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H1|0|13|10|18.5|27|3|4|5|0|1|1|20|25|30|0|0|0|-1.28|0.21|0.21|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H2|13|48|18|28|35|1|2|3|0|3|5|15|22.5|30|0|0|0|-1.28|3.07|5.76|Clayloam|85|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Ap|0|13|18|22|27|2|3|4|0|0|0|15|19|23|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Bw1|13|23|18|22|30|1|2|3|0|0|0|15|19|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Ap|0|13|14|19|27|1|2|3|0|0|0|12|15|19|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Bk|13|38|15|22|35|0.5|0.8|1|0|0|0|8|15|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 1|T9981Fld3|2525732|1.35|16663796|Ekalaka|55|Yes|NULL|Ap|0|15|10|14|18|1|1.5|2|0|1|2|8|13|18|0|1|2|-1.28|0.21|1.66|Finesandyloam|72|100 1|T9981Fld3|2525732|1.35|16663797|Yegen|17|Yes|NULL|Ap|0|15|10|15|20|2|3|4|0|0|0|10|17|24|0|0|0|-1.28|-1.28|-1.28|Finesandyloam|72|100 1|T9981Fld3|2525733|0.129|16663951|Vebar|50|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525733|0.129|16663952|Cohagen|25|Yes|NULL|Ap|0|15|10|14|18|0.5|1|2|0|0|0|9|12|15|0|1|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525739|28.479|16663915|Parshall|20|Yes|NULL|Ap|0|15|10|14|18|2|3.5|4|0|0|0|9|13|16|0|0.2|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525739|28.479|16663917|Vebar|58|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|12|16|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525745|4.983|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 1|T9981Fld3|2525746|16.106|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 1|T9981Fld3|2525764|17.691|16663611|Regan|55|Yes|saline,occasionallyflooded|Az|0|23|18|25|27|2|4|6|0|0|0|15|23|29|5|8|16|-1.28|-1.28|-1.28|Siltloam|55|100 1|T9981Fld3|2525769|181.356|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525769|181.356|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 1|T9981Fld3|2755648|2.449|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2755648|2.449|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100 1|T9981Fld3|2755654|4.599|16663846|Reeder|60|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|2755654|4.599|16663847|Amor|25|Yes|NULL|Ap|0|20|15|20|25|2|3|4|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 2|T9981Fld4|2525724|0.458|16664017|Savage|30|Yes|NULL|Ap|0|15|27|32|38|2|3|4|0|0.2|1|20|28|38|0|1|2|-1.28|-0.97|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664018|Daglum|20|Yes|NULL|Ap|0|15|27|32|40|2|3|4|0|0|1|20|28|40|0|1|2|-1.28|-1.28|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664022|Belfield|35|Yes|NULL|Ap|0|15|18|25|27|2|3|4|0|0.2|1|14|24|30|0|1|2|-1.28|-0.97|0.21|Siltloam|85|100 2|T9981Fld4|2525730|31.514|16663991|Regent|68|Yes|NULL|Ap|0|18|27|34|40|2|3|4|0|0|0|21|27|32|0|0.5|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525730|31.514|16663992|Savage|17|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|0|21|26|32|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525745|62.205|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 2|T9981Fld4|2525746|63.55|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 2|T9981Fld4|2525769|103.909|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525769|103.909|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 2|T9981Fld4|2755639|0.443|16663554|Savage|62|Yes|NULL|Ap|0|18|27|33|40|1|2|3|0|0|0|18|27|38|0|0|0|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|A|13|25|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|Ap|0|13|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|A|0|13|8|7|10|0.5|1.5|2.25|0|0|0|3|8|12|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|AC|13|25|8|5|10|0.25|1|1.5|0|0|0|1|6|10|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663958|Vebar|40|Yes|NULL|A|0|15|10|14|18|1.5|2|3|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755643|9.641|16663959|Tally|18|Yes|NULL|A|0|15|10|14|18|1.5|2.5|3.5|0|0|0|9|13|16|0|0.1|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755648|11.382|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2755648|11.382|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100

### Agg7a Table

CREATE TABLE #agg7a

( aoiid INT,

landunit CHAR(20),

landunit\_acres FLOAT,

mapunit\_acres FLOAT,

MU\_SUM\_AGG\_L FLOAT,

MU\_SUM\_AGG\_R FLOAT,

MU\_SUM\_AGG\_H FLOAT

)

;

INSERT INTO #agg7a

SELECT DISTINCT

aoiid ,

landunit,

landunit\_acres,

mapunit\_acres,

CASE WHEN MU\_SUM\_AGG\_R = 0 THEN 0 ELSE MU\_SUM\_AGG\_L END AS MU\_SUM\_AGG\_L ,

MU\_SUM\_AGG\_R ,

CASE WHEN MU\_SUM\_AGG\_R = 0 THEN 0 ELSE MU\_SUM\_AGG\_H END AS MU\_SUM\_AGG\_H

FROM #agg7

GROUP BY aoiid, landunit, mapunit\_acres, landunit\_acres, MU\_SUM\_AGG\_L, MU\_SUM\_AGG\_R, MU\_SUM\_AGG\_H;

aoiid|landunit|mukey|mapunit\_acres|cokey|compname|comppct\_r|majcompflag|localphase|hzname|hzdept\_r|hzdepb\_r|claytotall|claytotalr|claytotalh|oml|omr|omh|sar\_l|sar\_r|sar\_h|cec7\_l|cec7\_r|cec7\_h|ec\_l|ec\_r|ec\_h|esp\_l|esp\_r|esp\_h|tcl|major\_mu\_pct\_sum|mu\_pct\_sum 1|T9981Fld3|354627|0.426|16464494|Daglum|25|Yes|NULL|H1|0|18|18|22|26|2|3|4|0|3|5|10|15|20|0|0|0|-1.28|3.07|5.76|Loam|90|100 1|T9981Fld3|354627|0.426|16464495|Farnuf|65|Yes|NULL|H1|0|20|20|23.5|27|2|3|4|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|90|100 1|T9981Fld3|354648|0.287|16464607|Amor|25|Yes|NULL|H1|0|20|15|20|25|3|4.5|6|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H1|0|13|10|18.5|27|3|4|5|0|1|1|20|25|30|0|0|0|-1.28|0.21|0.21|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H2|13|48|18|28|35|1|2|3|0|3|5|15|22.5|30|0|0|0|-1.28|3.07|5.76|Clayloam|85|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Ap|0|13|18|22|27|2|3|4|0|0|0|15|19|23|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Bw1|13|23|18|22|30|1|2|3|0|0|0|15|19|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Ap|0|13|14|19|27|1|2|3|0|0|0|12|15|19|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Bk|13|38|15|22|35|0.5|0.8|1|0|0|0|8|15|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 1|T9981Fld3|2525732|1.35|16663796|Ekalaka|55|Yes|NULL|Ap|0|15|10|14|18|1|1.5|2|0|1|2|8|13|18|0|1|2|-1.28|0.21|1.66|Finesandyloam|72|100 1|T9981Fld3|2525732|1.35|16663797|Yegen|17|Yes|NULL|Ap|0|15|10|15|20|2|3|4|0|0|0|10|17|24|0|0|0|-1.28|-1.28|-1.28|Finesandyloam|72|100 1|T9981Fld3|2525733|0.129|16663951|Vebar|50|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525733|0.129|16663952|Cohagen|25|Yes|NULL|Ap|0|15|10|14|18|0.5|1|2|0|0|0|9|12|15|0|1|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525739|28.479|16663915|Parshall|20|Yes|NULL|Ap|0|15|10|14|18|2|3.5|4|0|0|0|9|13|16|0|0.2|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525739|28.479|16663917|Vebar|58|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|12|16|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525745|4.983|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 1|T9981Fld3|2525746|16.106|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 1|T9981Fld3|2525764|17.691|16663611|Regan|55|Yes|saline,occasionallyflooded|Az|0|23|18|25|27|2|4|6|0|0|0|15|23|29|5|8|16|-1.28|-1.28|-1.28|Siltloam|55|100 1|T9981Fld3|2525769|181.356|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525769|181.356|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 1|T9981Fld3|2755648|2.449|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2755648|2.449|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100 1|T9981Fld3|2755654|4.599|16663846|Reeder|60|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|2755654|4.599|16663847|Amor|25|Yes|NULL|Ap|0|20|15|20|25|2|3|4|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 2|T9981Fld4|2525724|0.458|16664017|Savage|30|Yes|NULL|Ap|0|15|27|32|38|2|3|4|0|0.2|1|20|28|38|0|1|2|-1.28|-0.97|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664018|Daglum|20|Yes|NULL|Ap|0|15|27|32|40|2|3|4|0|0|1|20|28|40|0|1|2|-1.28|-1.28|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664022|Belfield|35|Yes|NULL|Ap|0|15|18|25|27|2|3|4|0|0.2|1|14|24|30|0|1|2|-1.28|-0.97|0.21|Siltloam|85|100 2|T9981Fld4|2525730|31.514|16663991|Regent|68|Yes|NULL|Ap|0|18|27|34|40|2|3|4|0|0|0|21|27|32|0|0.5|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525730|31.514|16663992|Savage|17|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|0|21|26|32|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525745|62.205|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 2|T9981Fld4|2525746|63.55|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 2|T9981Fld4|2525769|103.909|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525769|103.909|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 2|T9981Fld4|2755639|0.443|16663554|Savage|62|Yes|NULL|Ap|0|18|27|33|40|1|2|3|0|0|0|18|27|38|0|0|0|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|A|13|25|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|Ap|0|13|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|A|0|13|8|7|10|0.5|1.5|2.25|0|0|0|3|8|12|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|AC|13|25|8|5|10|0.25|1|1.5|0|0|0|1|6|10|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663958|Vebar|40|Yes|NULL|A|0|15|10|14|18|1.5|2|3|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755643|9.641|16663959|Tally|18|Yes|NULL|A|0|15|10|14|18|1.5|2.5|3.5|0|0|0|9|13|16|0|0.1|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755648|11.382|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2755648|11.382|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100

### Agg8 Table

CREATE TABLE #agg8

( aoiid INT,

landunit CHAR(20),

landunit\_acres FLOAT,

LU\_AGG\_Weighted\_Average\_L FLOAT,

LU\_AGG\_Weighted\_Average\_R FLOAT,

LU\_AGG\_Weighted\_Average\_H FLOAT

)

;

INSERT INTO #agg8

SELECT DISTINCT

aoiid ,

landunit,

landunit\_acres,

FORMAT (SUM ((mapunit\_acres/landunit\_acres)\*MU\_SUM\_AGG\_L) over(partition by aoiid) , '#,###,##0.00') AS LU\_AGG\_Weighted\_Average\_L,

FORMAT (SUM ((mapunit\_acres/landunit\_acres)\*MU\_SUM\_AGG\_R) over(partition by aoiid) , '#,###,##0.00') AS LU\_AGG\_Weighted\_Average\_R,

FORMAT (SUM ((mapunit\_acres/landunit\_acres)\*MU\_SUM\_AGG\_H) over(partition by aoiid) , '#,###,##0.00') AS LU\_AGG\_Weighted\_Average\_H

FROM #agg7a

GROUP BY aoiid, landunit, mapunit\_acres, landunit\_acres, MU\_SUM\_AGG\_L, MU\_SUM\_AGG\_R, MU\_SUM\_AGG\_H;

aoiid|landunit|mukey|mapunit\_acres|cokey|compname|comppct\_r|majcompflag|localphase|hzname|hzdept\_r|hzdepb\_r|claytotall|claytotalr|claytotalh|oml|omr|omh|sar\_l|sar\_r|sar\_h|cec7\_l|cec7\_r|cec7\_h|ec\_l|ec\_r|ec\_h|esp\_l|esp\_r|esp\_h|tcl|major\_mu\_pct\_sum|mu\_pct\_sum 1|T9981Fld3|354627|0.426|16464494|Daglum|25|Yes|NULL|H1|0|18|18|22|26|2|3|4|0|3|5|10|15|20|0|0|0|-1.28|3.07|5.76|Loam|90|100 1|T9981Fld3|354627|0.426|16464495|Farnuf|65|Yes|NULL|H1|0|20|20|23.5|27|2|3|4|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|90|100 1|T9981Fld3|354648|0.287|16464607|Amor|25|Yes|NULL|H1|0|20|15|20|25|3|4.5|6|0|0|0|15|17.5|20|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H1|0|13|10|18.5|27|3|4|5|0|1|1|20|25|30|0|0|0|-1.28|0.21|0.21|Loam|85|100 1|T9981Fld3|354648|0.287|16464612|Reeder|60|Yes|NULL|H2|13|48|18|28|35|1|2|3|0|3|5|15|22.5|30|0|0|0|-1.28|3.07|5.76|Clayloam|85|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Ap|0|13|18|22|27|2|3|4|0|0|0|15|19|23|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663930|Amor|49|Yes|NULL|Bw1|13|23|18|22|30|1|2|3|0|0|0|15|19|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Ap|0|13|14|19|27|1|2|3|0|0|0|12|15|19|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2494708|1.729|16663931|Cabba|32|Yes|NULL|Bk|13|38|15|22|35|0.5|0.8|1|0|0|0|8|15|25|0|1|2|-1.28|-1.28|-1.28|Loam|81|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 1|T9981Fld3|2525720|56.699|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 1|T9981Fld3|2525720|56.699|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 1|T9981Fld3|2525732|1.35|16663796|Ekalaka|55|Yes|NULL|Ap|0|15|10|14|18|1|1.5|2|0|1|2|8|13|18|0|1|2|-1.28|0.21|1.66|Finesandyloam|72|100 1|T9981Fld3|2525732|1.35|16663797|Yegen|17|Yes|NULL|Ap|0|15|10|15|20|2|3|4|0|0|0|10|17|24|0|0|0|-1.28|-1.28|-1.28|Finesandyloam|72|100 1|T9981Fld3|2525733|0.129|16663951|Vebar|50|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525733|0.129|16663952|Cohagen|25|Yes|NULL|Ap|0|15|10|14|18|0.5|1|2|0|0|0|9|12|15|0|1|2|-1.28|-1.28|-1.28|Finesandyloam|75|100 1|T9981Fld3|2525739|28.479|16663915|Parshall|20|Yes|NULL|Ap|0|15|10|14|18|2|3.5|4|0|0|0|9|13|16|0|0.2|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525739|28.479|16663917|Vebar|58|Yes|NULL|Ap|0|15|10|14|18|1.5|2|2.5|0|0|0|9|12|16|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|78|100 1|T9981Fld3|2525745|4.983|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 1|T9981Fld3|2525746|16.106|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 1|T9981Fld3|2525754|12.638|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 1|T9981Fld3|2525764|17.691|16663611|Regan|55|Yes|saline,occasionallyflooded|Az|0|23|18|25|27|2|4|6|0|0|0|15|23|29|5|8|16|-1.28|-1.28|-1.28|Siltloam|55|100 1|T9981Fld3|2525769|181.356|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 1|T9981Fld3|2525769|181.356|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 1|T9981Fld3|2755648|2.449|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 1|T9981Fld3|2755648|2.449|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100 1|T9981Fld3|2755654|4.599|16663846|Reeder|60|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 1|T9981Fld3|2755654|4.599|16663847|Amor|25|Yes|NULL|Ap|0|20|15|20|25|2|3|4|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|85|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|A|0|7|18|23|27|4|5.5|7|0|0|1|18|27|36|0|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|Btn|12|46|30|38|50|1.5|2|3|5|10|15|21|30|44|0|1|2|5.76|11.89|17.26|Siltyclayloam|88|100 2|T9981Fld4|2525720|8.623|16663899|Daglum|33|Yes|NULL|E|7|12|18|20|27|2.5|3.5|4.5|0|1|2|15|21|31|0|0.5|1|-1.28|0.21|1.66|Siltloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|Btn|8|20|35|38|50|0.5|1.25|2|5|12|20|22|28|42|0|2|4|5.76|14.12|22.02|Clayloam|88|100 2|T9981Fld4|2525720|8.623|16663903|Rhoades|55|Yes|NULL|E|0|8|18|24|27|3|4|5|0|4|10|16|25|32|0|1|2|-1.28|4.43|11.89|Loam|88|100 2|T9981Fld4|2525724|0.458|16664017|Savage|30|Yes|NULL|Ap|0|15|27|32|38|2|3|4|0|0.2|1|20|28|38|0|1|2|-1.28|-0.97|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664018|Daglum|20|Yes|NULL|Ap|0|15|27|32|40|2|3|4|0|0|1|20|28|40|0|1|2|-1.28|-1.28|0.21|Clayloam|85|100 2|T9981Fld4|2525724|0.458|16664022|Belfield|35|Yes|NULL|Ap|0|15|18|25|27|2|3|4|0|0.2|1|14|24|30|0|1|2|-1.28|-0.97|0.21|Siltloam|85|100 2|T9981Fld4|2525730|31.514|16663991|Regent|68|Yes|NULL|Ap|0|18|27|34|40|2|3|4|0|0|0|21|27|32|0|0.5|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525730|31.514|16663992|Savage|17|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|0|21|26|32|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|85|100 2|T9981Fld4|2525745|62.205|16663921|Shambo|75|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0.5|1|14|22|32|0|0.5|2|-1.28|-0.53|0.21|Loam|75|100 2|T9981Fld4|2525746|63.55|16663927|Shambo|78|Yes|NULL|Ap|0|15|18|22|27|2|3.5|5|0|0|0|15|22|32|0|0.5|2|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|Btn|5|46|35|37|50|1|2|3|13|19|25|23|30|46|4|10|16|15.19|21.11|26.26|Clayloam|75|100 2|T9981Fld4|2525754|23.138|16663602|Harriet|75|Yes|occasionallyflooded|E|0|5|12|22|27|3|4.5|6|0|0|0|13|24|34|0|1|2|-1.28|-1.28|-1.28|Loam|75|100 2|T9981Fld4|2525769|103.909|16663985|Belfield|48|Yes|NULL|Ap|0|18|18|23|27|2|4|6|0|0|1|14|24|34|0.1|1|2|-1.28|-1.28|0.21|Siltloam|88|100 2|T9981Fld4|2525769|103.909|16663987|Daglum|40|Yes|NULL|Ap|0|18|27|32|40|2|3|4|0|0|1|20|28|40|0.1|1|2|-1.28|-1.28|0.21|Clayloam|88|100 2|T9981Fld4|2755639|0.443|16663554|Savage|62|Yes|NULL|Ap|0|18|27|33|40|1|2|3|0|0|0|18|27|38|0|0|0|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|A|13|25|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755639|0.443|16663555|Grail|18|Yes|NULL|Ap|0|13|27|31|35|4|5|6|0|0|0|24|32|40|0|1|2|-1.28|-1.28|-1.28|Siltyclayloam|80|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|A|0|13|8|7|10|0.5|1.5|2.25|0|0|0|3|8|12|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663957|Flasher|30|Yes|NULL|AC|13|25|8|5|10|0.25|1|1.5|0|0|0|1|6|10|0|1|2|-1.28|-1.28|-1.28|Loamyfinesand|88|100 2|T9981Fld4|2755643|9.641|16663958|Vebar|40|Yes|NULL|A|0|15|10|14|18|1.5|2|3|0|0|0|9|15|20|0|0.4|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755643|9.641|16663959|Tally|18|Yes|NULL|A|0|15|10|14|18|1.5|2.5|3.5|0|0|0|9|13|16|0|0.1|2|-1.28|-1.28|-1.28|Finesandyloam|88|100 2|T9981Fld4|2755648|11.382|16663766|Reeder|58|Yes|NULL|Ap|0|20|18|23|27|1|2|3|0|0|0|13|20|28|0|0|0|-1.28|-1.28|-1.28|Loam|78|100 2|T9981Fld4|2755648|11.382|16663767|Janesburg|20|Yes|NULL|Ap|0|20|18|22|27|2|3|4|0|0|1|15|21|30|0|0|1|-1.28|-1.28|0.21|Siltloam|78|100

# Final Landunit Rating

SELECT DISTINCT landunit, landunit\_acres,

CASE WHEN LU\_AGG\_Weighted\_Average\_R <25 THEN 'Low'

WHEN LU\_AGG\_Weighted\_Average\_R >=25 AND LU\_AGG\_Weighted\_Average\_R <50 THEN 'Moderate'

WHEN LU\_AGG\_Weighted\_Average\_R >=50 AND LU\_AGG\_Weighted\_Average\_R <75 THEN 'Moderately High'

WHEN LU\_AGG\_Weighted\_Average\_R >=75 THEN 'High'

WHEN LU\_AGG\_Weighted\_Average\_R IS NULL THEN 'Not Rated'

END AS rating\_class,

CASE WHEN LU\_AGG\_Weighted\_Average\_R <25 THEN CONCAT ('Aggregate Stability', ':', 1)

WHEN LU\_AGG\_Weighted\_Average\_R >=25 AND LU\_AGG\_Weighted\_Average\_R <50 THEN CONCAT ('Aggregate Stability', ':', 2)

WHEN LU\_AGG\_Weighted\_Average\_R >=50 AND LU\_AGG\_Weighted\_Average\_R <75 THEN CONCAT ('Aggregate Stability', ':', 3)

WHEN LU\_AGG\_Weighted\_Average\_R >=75 THEN CONCAT ('Aggregate Stability', ':', 4)

WHEN LU\_AGG\_Weighted\_Average\_R IS NULL THEN CONCAT ('Aggregate Stability', ':', 'Not Rated')

END AS rating\_key,

'Aggregate Stability' AS attributename,

LU\_AGG\_Weighted\_Average\_L AS [Aggregate\_Stability\_L],

LU\_AGG\_Weighted\_Average\_R AS [Aggregate\_Stability\_R],

LU\_AGG\_Weighted\_Average\_H AS [Aggregate\_Stability\_H]

FROM #agg8

landunit|landunit\_acres|rating\_class|rating\_key|attributename|Aggregate\_Stability\_L|Aggregate\_Stability\_R|Aggregate\_Stability\_H T9981 Fld3 |328.952|Moderately High|Aggregate Stability:3|Aggregate Stability|54.45|64.07|70.55 T9981 Fld4 |318.722|Moderately High|Aggregate Stability:3|Aggregate Stability|53.11|61.41|67.4

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