December 2, 2013

NEW MEXICO ESD CORE GROUP MEETING

Wayne Robbie- Agency Report for the USDA Forest Service-Southwestern Region

I. Integrated Landscape Assessment Project (ILAP):

ILAP was a two year ARRA project that created about 50 jobs to work on watershed-level prioritization of land management actions based upon fuel conditions, wildlife and aquatic habitats, economic values and projected climate change across all lands in AZ, NM, OR, and WA. The project integrates data and tools, creating a decision support framework to help make the best use of available information.

Project deliverables includes ecological and economic assessments, region-wide map data of existing and potential vegetation, and state-and-transition models for major ecosystems of the Southwest. Deliverables and data can be downloaded from the ILAP web site:

http://oregonstate.edu/inr/ilap

Focus area: The ILAP team is still conducting landscaping assessment in the Southwest, including with the Sky Island Focus Landscape, a multi-agency working group to apply the models to southern Arizona specifically addressing vegetation dynamics, insects, treatment scenarios and wildfire in response to climate change (MC1). ILAP has considerable analytical and geoprocessing capability, and is looking for other opportunities to support economic, ecological, and climate change assessments elsewhere in the West.

II. RMAP-Regional Riparian Mapping Project:

RMAP was a two-year project to map all riparian corridors within 5th code HUC's that intersects NFS lands in the US Forest Service Southwestern Region. The goal of RMAP was to help facilitate the assessment, management, and research of riparian resources. Advances in GIS and remote sensing technologies have enabled more efficient, accurate, and precise map capabilities. The mapping process built upon existing TES/TEUI riparian classification and mapping, valley bottom modeling, and photo interpretation to develop a 1:12,000 scale map, with 24 map units and four subclasses. An independent accuracy assessment was completed to determine the thematic and spatial quality of RMAP. The map data are available on the internet:

http://www.fs.usda.gov/main/r3/landmanagement/gis

III. Rangeland Monitoring Workshops

a. Three rangeland monitoring workshop were held in Arizona. The AZ TEUI team presented the concepts and data to support ESD classification of the site and demonstrated the use of the state-and-transition models. http://www.aznrcd.org/book.htm

IV. Terrestrial Ecological Unit Inventory (TEUI) Program

a. Release of the Valles Caldera National Preserve TEUI/Soil Survey to the science staff (June 2013). A cross-walk was built between NRCS ESD vegetation communities, Muldavin's existing vegetation classification map, and the TEUI plant associations and subseries. A total of 39 ecological types for 59 ecological units are being reported.

b. Continue TEUI activities on the Gila NF. Acres mapped: 269,000: approximately 200,000 acres are remaining to be mapped; primarily in the wilderness areas. Total area of the Gila NF is 2.7 million acres; 161 ecological units. Final field review and field correlation fall of 2014.

c. Project planning for TEUI project initiation on the Lincoln NF, with a focus on the Guadalupe Mts. will be completed 2014.

d. Updated Ecological Site Description (form attached) procedures to include structural metric for dead and standing biomass, including decay classes; new fine and coarse woody material sampling process, added hydrologic soil group and Ksat classes.

e. Reviewed a paper by Scott Abella (NPS-Fort Collins); *Soil development in vegetation patches of Pinus ponderosa forests: Interface with restoration thinning and carbon storage.* Forest Ecology and Management (in press).

f. Completed a baseline carbon assessment of the Cibola NF which included carbon stock values for above and below ground (SOC) components.

g. Two projects used ecological site description data for determining critical habitat (Jemez salamander) and support the development of a recovery plan (Thick-biller parrot).

V. Regional Climate Change Vulnerability Project (CCVA):

Land managers need to assess ongoing and potential effects of climate change, and coordinate a response for ecosystems, species, and human communities. The CCVA project utilized and complements TEUI products, and work by RMRS, TNC, ILAP, and others, with the development of an ecosystem-based assessment of vulnerability, based on climate predictions and the climate envelop analysis. CCVA resulted in an all-lands assessment of upland ecosystems in

Arizona and New Mexico, of sufficient resolution to support land managers. CCVA products are not posted on the internet, but are available by request, along with an executive summary.

George Chavez – Attending as institutional knowledge for the history of ESD efforts in NM. George served as NRCS state rangeland conservationist during formation ESD core group for NM. He reported on the 12 year history of the group and it genesis and development. Geroge reported this will be his last ESD meeting in this capacity. As he is retiring soon.

Richard Strait spoke on the success of the climate station project for NRCS and that 4 of the 24 stations purchased have been installed and are collecting information. The remained are to be deployed whenever staff and budget is available for installation. Richard also reported that the Soil Survey Offices (SSO) in New Mexico have all been transferred to Phoenix NRCS control. Closer coordination will be needed to assure NM ESD needs are met.

Ken Leiting – Represented NM Association of Conservation Districts (NMACD). He mentioned that he and his staff of Technical Service Providers (TSP) are users of ESD technology and they are also available to do ESD development and maintenance work.

Eldon Ayers – Reported in the state mapping project he is working on in behalf of Jornada and other partners. Latest effort is at the Thorp ranch near Newkirk, NM. Has abundant utility to help inform management of rangelands.

Kirstin Romig – Amplified Eldons report as she is collaborating with Eldon in the state mapping effort.

Mathew Ballmer – Santa Fe Soil Survey Announcements,

1) Last year's major initiatives have all been tabled.

a. The initial soil survey work and ESD development in Pecos. This was a potential joint project with ARS, NPS and the Alamosa, CO SSO. 22,000acres.

b. The update of the MLRA 49 in NM, north of Pecos. Really this project was still in the assessment and planning phase. However, the general work area had been identified and the blatant absence of any 49 ESDs was a good justification for moving fwd. This is another possible joint project with the Alamosa, CO SSO. 400,000+/-acres.

2)

a. The Upper Rio-G field tour in 2012 identified much work to address before formal update projects are proposed. We continued to collect soil temperature data. There are currently 17 soil temperature sites in the URGRV.

b. Contact to field offices was made to begin establishing a feedback loop for issues with ESD and soils resources inventories and soil surveys. Created the soil survey assessment worksheet.

3) For 2014 we will focus on

a. The assessment and evaluation of MLRA 70A. This will include paring it down to LRUs, building a Tech Team and identifying priority areas for soil and ESD update projects.

b. The assessment and evaluation of the ABQ urban area. This will include defining the scope of an urban ESD project sought by Rick Strait, building a Tech Team and identifying any priority areas for soil and ESD update projects. (Joel Brown requested that Rick Strait help him with the NEON site and an urban interface)

c. In response to Eldon's request for soil profile descriptions in ESDs I suggested that they could be hyperlinked to the graphics application available through Web Soil Survey or the OSD site.

Scott Woodall – Santa Fe ESD development news; The Carlsbad ESDs are being completed and approved. He is starting an assessment of MLRA 70A. The assessment will include: defining LRUs; putting together a technical team; prioritizing LRUs; and eventually creating soil and ESD update projects.

Luis Garcia – Las Cruces SSO reported he is new to the ESD development position and is an experienced user of ESD thru several years of conducting NRI for NM-NRCS. Is looking forward to accelerating ESD work in his area.

Greg Cates – Reported that the las Cruces SSO is -Las Cruces Soil Survey office supervision changed from New Mexico State Soil Scientist to Region 8 Director out of Phoenix, Arizona -Currently in the second round of edits for White Sands Missile Range Manuscript and completed first round of edits for White Sands National Monument

FY13

-Completed Lava Flow Updates, correlation pending

-Armendaris Lava Flow

-Carrizozo Lava Flow

-Broken Back Crater

-Held MLRA 42 Team Meeting

-Potential FY15-16 Project: Jornada Experimental Range -Helped sample and install 4 climate stations with NM State Soil Scientist

FY14 - -SDJR Projects: Most were rejected, remainder nearly complete -Portrillo Mountains, Aden and Afton Lava Flows Updates -Update Akela ESD and sample -Potentially propose 3 new Malpais ESDs currently being worked on by the ARS -Meeting with Region 8, Las Cruces, Santa Fe, and Marfa Soil Survey Offices to agree on current LRUs in MLRA 42 -Finish southern portion of Holloman AFB -Install more climate stations

Noe Gonzales serves as a BLM ecologist working on ESD development that suppliments NRCS efforts; He reported the following accomplishments and plans;

1) Completed 3 revision of ESDs with S&T models attached for Hidalgo Cty., MLRA 41.1 (Animas Valley). ESDs are Gravelly Slopes, Hills, Loamy Bottom.

2) Requested status of Rocky Hills ESD from year 2010, located in McGregor Range; It is not loaded in ESIS for MLRA 70D, identified as Alligator Juniper-Oneseed juniper site. Never received approval letter. Site is located between MLRA 39.2 and MLRA 70C. The info was used in correlation and development of NRCS ESDs on Guadalupe Park.

3) Status of two Pine-type ESDs from Lincoln county that were compleetd and submitted in 2010. One was called F039XLincoln1 (Mtn. Foot slopes- Warm phase, PIPO-PIED) and the other was F039XLincoln2 (Mtn. Foot slopes- Cool phase, PIPO-QUGA). Never received approval letter for both of them and neither are loaded in ESIS.

4) A third ESD from 2010 is still in draft form to be completed FY2014 pending field work to possibly add soils from Otero Cty. to Lincoln Cty. soils into same ESD for a Mixed Conifer site; tentatively ESD named F039XBLinc-OtNM, Mountain and Steep Slopes (PSME-PIPO).

5) ESD target for FY2014 is to complete 4 ESDs in the Timberon area, 1-J/P, 1P/J, and 2 PIPO ESDs.

Nick Ashcroft – Serves on the Range Improvement Task Force (RITF) at NMSU. RITF has several concerns over the use of ESD by some agency field staff that apparently need more training. To summarize these inexperienced users are treating ESD concepts as prescriptive of management actions. All present believe ESD are tools for informing management decisions. Not decision documents in and of themselves. A clear interagency users training need is present.

Bebo Lee – NM Livestock Growers Federal Land Committee – Seconded Nicks' concerns. Emphasized the need to address this ASAP.

Bobby Jones - NM Livestock Growers Federal Land Committee – Seconded Nicks' concerns. Emphasized the need to address this ASAP.

Les Owen – NM Department of Agriculture- Seconded Nicks' concerns. Emphasized the need to address this ASAP.

Jim Norwick – NM State Land Office – Indicated ESD are a valuable management tool for SLO use in management planning. The better quality of what is available the better it will meet their needs.

Matt Levi – Jornada ARS postdoc is working on papers and studies that will help inform the interpretations sections of ESD. Is looking forward to working with the group in this effort.

Leticia Lister – BLM Las Cruces Office range Program Manager – Reported that ESD continues to be an indispensable management tool. They often wish the entire Office area of jurisdiction was state mapped. A cooperator in The Malpais border lands state mapping project.

Joel Brown – National ESD leader for NRCS at Jornada. – Reported on NRCS national reorganization for the ESD development effort.

Brandon Bestelmeyer – Reviewed the material and projects presented on Jornada ESD webpage (http://jornada.nmsu.edu/esd) and requested feedback about content and presentation. Reported on continued ESD technology development work and scientific papers from Jornada.

John Tunberg – State Range Conservationist for NRCS in NM reported this will be his last ESD meeting in this capacity. John is retiring soon. The group will be under the purview of Richard Strait as State Soil Scientist in the new organizational structure for NRCS in NM.

SIGN IN SHEET — 12/1/2013

John Tunberg - NRCS - Albuquerque.
WAYNE ROBBIE NSD-Forest Servic - ABQ
George Chavez — NRCS — ABQ
Rick Strait - NRCS - ABQ
Ken Leting - NMACD - Rio Rancho
ELDON ARMIJO — NMSU - LAS CRUCES
Kirsten Romig — ARS — Las Cruces
Matthew Ballmer NRCS Santa Fe
Scott Woodall NRCS - Santa Fe
Luis B Garcia NRCS - Las Cruces
Greg Cates - NRCS - Las Cruces
Noe Gonzalez - BLM → Las Cruces
Nick Ashcroft - CES - Las Cruces
Bebee Lee NMFLC
Bobby Jones NMFLC - Otero Rancher
Les Owen - NM Dept. of Agriculture
Jim Norwick - NM State Land Ofc. - Santa Fe
Matt Levi - ARS - Las Cruces
Leticia Hister - BLM - Las Cruces
Joel Brown - NRCS - LC
Brandon Bestelmeyer - USDA ARS Jornada

ESD Core Group Work Items for 2014 and beyond			Percent		
Item	Due Date	Person or Entity Responsible	Completed	NOTES	
Full Implementation of Quality Assurance and Quality Control process for proposed correlation of ESD for Cibolla County and at all other locations where ESD work is underway in NM.	10/1/2013	Richard Strait and John Tunberg - NRCS; US Forest Service, Steve Strenger (Cibola NF)	5	First QA and QC review scheduled for march 2013	
Completed Riparian ESD scoping tour of San Juan County including the Animas, La Plata and San Juan River systems in collaboration with the NRCS west region riparian ESD team. 4 potential new Riparian ESD identified. These are planned to be sampled for and drafts completed as part of a general remapping of the soils associated with those river systems in the near future. (See Riparian team trip Report for details.)	10/1/2013	Richard Strait and John Tunberg - NRCS	10	4 potential new Riparian ESD identified	
Collaborate with Resource Inventory and Assessment (RIA) staff on establishing Rangeland Climate Stations on Modal Ecological sites on each MLRA in NM.	10/1/2013	Richard Strait and John Tunberg - NRCS; Wayne Robbie, USFS	10	3 to 4 sites identified. Most of the equipment for 2013 is in hand or on order; USFS long-term soil climate data exists for the Lincoln, Gila, Cibola NF's. Review USFS long-term soil climate monitoring data. W.Robbie	
Participated with CO, NRCS at a MLRA 51 field tour. Accomplishment was the development of a project proposal to explore designation of a new LRU tentatively called Northern Rio Grande Rift and Volcanics. It would range from south of Taos, NM and proceed south to just North of Albuquerque.	10/1/2013	Richard Strait and John Tunberg - NRCS; W.Robbie, USFS	10	project proposal to explore designation of a new LRU; ECOMAP section and subsection data for NM has identified s a similar ecological unit.	
ESD keys developed and published for MLRA35. This is in reply to a request from the Range CEAP effort that is in its second phase.	2/1/2013	John Tunberg, Scott Woodall, Louis Garcia, Pete LeFevre - NRCS; W.robbie & Steve Strenger, USFS	35	MLRA 38 and 39, Part of 42 and part of 70 and 77 are published.; work with USFS to incorprate ecological site/type data from Kiowa National Grasslands.	
Complete publishing process for 3 Woodland ESD authored by Noe Gonzaes in 2011 near Chupadera Mesa	5/1/2013	John Tunberg -NRCS and Noe Gonzales - BLM; W.Robbie, USFS	50	Draft ESD are in hand ready for editing F039XB103NM Mesa Hills/Slopes 12-19 ; F039XB107NM Shallow Hills 13-16 inches (Approved); F039XA007NM Montane slopes 12-18" (Approved) USFS will review ESD's that overlap into NFS lands.	
Complete sampling for and then publish Riparian ESD for San Francisco River riparian. Initial sampling completed in 2011.	9/1/2013	John Tunberg and Luis Garcia - NRCS; Steve Strenger, USFS and Mike Natharius, Gila NF	20	Trip reports are in hand as are inventory data;Coordinate with USFS on coefficients for San Franciso River within Gila NF.	
Publish updated Chupadera mesa sand sheet ESD as authored by Pat Shaver	9/1/2013	John Tunberg and Luis Gracia - NRCS	50	ESD is an example in the draft ESD handbook	
Complete publishing process for 3 MLRA41 Rangeland ESD authored by Noe Gonzales	5/1/2013	John Tunberg -NRCS and Noe Gonzales - BLM	50	Draft ESD are in hand ready for editing; R041XA006NM - Loamy Bottom; R041XA004NM - Gravelly slopes; R041XA005NM - Hills.	
Carlsbad Caverns NP ESD review and approval	1/1/2014	Scott Woodall and John Tunberg	80	Draft ESD are in hand ready for editing. Edits almost complete on 9 ESD.	
Develop S and T models for ESD in MLRA70A (Use 70B models as examples)	1/1/2015	Scott Woodall and John Tunberg			
Develop S and T models for ESD in MLRA70C (Use 70B models as examples)	1/1/2015	Scott Woodall and John Tunberg			
Update Soil Survey and ESD for BLM at Rio Grande Del Norte National Monument and for all of MLRA51 in NM and CO.	1/1/2015	Scott Woodall and John Tunberg	10		
Develop ESD for MLRA49 in Collaboration with Colorado NRCS.	1/1/2015	Scott Woodall and John Tunberg			
Develop ESD for NPS at Pecos historic park and Sate mapping by Jornada partners	1/1/2015	Scott Woodall and John Tunberg	10		

Completed Riparian ESD scoping tour of Rio Grande River System in NM in collaboration with the NRCS west region riparian ESD team. 4 potential new Riparian ESD identified. These are planned to be sampled for and drafts completed as part of a general remapping of the soils associated with those river systems in the near future.	10/1/2015	Richard Strait and John Tunberg - NRCS	10	4 potential new Riparian ESD identified	
General ESD Education workshops focusing on interpretations for Agency folks and general users. Need to form a focus group to develop training. Assemble training group and Logistics.	1/1/2015	John Tunberg and Brandon Bestelmeyer and Phil Smith			
Assess the following ESD; Here are the 70D and 70C sites that Michael Margot re-wrote: R070CY115NM Breaks R070CY109NM Loamy R070DY156NM Gravelly R070DY151NM Limestone Hills R070CY152NM Shallow He had also included a number of New Mexico 42 sites as well, which I think is a good possibility he re-wrote: R042XB011NM Deep Sand R042XB007NM Gyp Outcrop R042XB006NM Gyp Upland R042XB012NM Sandy R042XB003NM Vegetated Gypsum Dune R042XC007NM Loamy Determine is central concepts of the sites have been altered. If so determine a course of remedy.	5/1/2014	Scott Woodall and John Tunberg	0		
Complete development of and post to ESIS data for R042XJ001NM and R042XJ002NM and R042XK001NM as proposed by David Trujillo in 2008.	5/1/2014	Las Cuces Soil Survey	0		

USDA Forest Service

ECOLOGICAL SITE DESCRIPTION

R3-FS-2500-6 (June 2013)

Map Symbol:	**Representative for**	**Soil Taxon:**	
Component:	**Map Unit:** **Taxon:**		
By:	**Date:**	**Phase:**	
NRM-NRIS Data Entry - Date: By:		**Vegetation Taxon:**	
Plot - Shape:		**Climax Class:**	**MAP** (cm):
Dimension:		**Plant Association:**	
Flight/Photo/Stop:		**Stone Boulder Class:**	**Surface Morphometry** - Gradient (%):
GPS File Name:	**DC:** **AVG:**	**Erosion Kind:**	Aspect (deg.): Length (m):
UTM:		**Erosion Degree Class:**	Elevation (m): Complexity:
Township:	**Range:** **Section:**	**Drainage Class:**	Slope Shape - Horizontal:
State:		**Hydrologic Soil Group:**	Slope Shape - Vertical:
County:		**Formation:**	Slope Position: Position Modifier:
Forest:		**Parent Material** - Kind-Origin**:**	
District:		**Site Geomorphology** - GP:	LsT:
**********		Lf:	ELf: CLf:

Horizon/Layer			**USDA Texture**	**Rock Frag**	**Color**	**Struc**	**Surface Features**	**Consist**	**Pores**	**Roots**	**Reaction**	**Accessory Properties**
Symbol	Depth Thick cm	Bdy	Tex Mod Texture % Clay	Gr Cb St By % Vol	p/d p/m c/d r/m	Gr Si Ty	Ki Am Dis Loc	Dr Mo St Pl Ce CA	Qu Si Sh VC	Qu Si Lo	pH CaCO3 Effervesce	Mottles, RMF Stress Features Concen., K_{sat}

Diagnostic Surface Epipedon:	Thickness:	to	cm
Diagnostic Subsurface Horizon:	Thickness:	to	cm
	Thickness:	to	cm
Control Section: cm Av. Clay (%) Av. Rock Frag. (%)	Thickness:	to	cm

Soil Notes:

VEGETATION

Vegetation Cross Reference:

Trees		**Shrubs**						**Forbs**						**Graminoids**		
Species	%CC	Species	%CC	Ht	Species	%CC	Ht	Species	%CC	Ht	Species	%CC	Ht	Species	%CC	Ht
Totals		**********						**********						**********		***

Dist.	**Treat.**	**Snags**	
Agent	Type	Decay Class	Count
		1	
		2	
		3	
		4	
		5	

Notes:

Surface Components	Ocular
Graminoids (BA)	
Forb (BA)	
Shrub (BA)	
Tree (BA)	
Litter (> 1.25 cm)	
Gravel (0.2 – 0.5 cm)	
Gravel (0.5 – 2.0 cm)	
Gravel (2.0 - 7.5 cm)	
Cobble (7.5 - 25.0 cm)	
Stone (25.0 - 60.0 cm)	
Boulder (> 60.0 cm)	
Rock Outcrop	
Bare Soil	
Cryptogams	
Total	
Overstory Cover	

Microbiotic Organisms	Ocular
Mosses	
Lichens	
Liverworts	
Algae/Cyanobacteria	

Down Woody Material			
FWD	#	CWD ≥ 3"	
¼"-1"		Dia.	DC
1"-3"			
**********			

Woodland Species Size Class – DRC (#, Av. Ht., Total CC)

Species																						
≤ 0.9"																						***
1.0" - 2.9"																						***
3.0" - 4.9"																						***
5.0" - 8.9"																						***
9.0" - 11.9"																						***
12.0"- 17.9"																						***
18.0"- 23.9"																						***
> 24.0"																						***
Cords/Acre																						***

Forest Productivity – Site Index

Species										
Height										
Age										
SI										
Avg SI		**********			**********			**********		

CWD ≥ 3"		***Carnegiea gigantea*** **Height Class**			
Dia.	DC		#	HC	RS
		≤ .1m			
		.1 -1m			
		1-2m			
		2-4m			
		4-6m			
		≥ 6m			
		Total			

Forest Species Size Class – DBH (#, Av. Ht., Total CC)

Species																	
≤ 0.9"																	
1.0" – 4.9"																	
5.0" – 8.9"																	
9.0" – 11.9"																	
12.0" – 17.9"																	
18.0" – 23.9"																	
≥ 24.0"																	
Basal Area (ft^2/ac)																	