

Field Inventory - Resource Concerns

identified resource concerns & assessment tool(s) used

Client: Sam Smith

Tract: T-1234

Location: SW1/4, sec 32, T80 R78,
Lucas Co.

Date: 11/15/2015

Cropland Land Use

Soil Erosion	sheet & rill, wind, ephemeral, compaction, organic depletion. <i>Note past crop, existing crop, residue levels, residue harvesting, presense of cover crops, tillage, cuts, condition of existing waterways, signs of sedimentation, sub soil exposure, row pattern, anhydrous tracks, row cleaner use, penotrometer readings, etc.</i>
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Cropland was prevented planting and seeded to cover crops at the end of August. Good stand of oats and radishes. Large flat ridge that break over and that is where there are visible rills. Some areas (822D2 & 222D2) areas have little to no topsoil in place. Terraces on farm showing erosion below and above them. Some will need cleaned our in a few years. Lots of ephemeral erosion. Some waterways with eroded cuts along side of them that will need to be reshaped and seeded. Refer to map. There was some compaction noted with penetrometer at 4-5" . I think with the cover crop in place and freeze and thaw might leave him in pretty good place. **Note: need to discuss managment alterantives to reduce erosion, shaping waterways, and seeding down some areas where the erosion is the worst. CRP or hay on those areas. Also discuss extra cereal rye in small ephmerals and not spraying out until post herbicide application.**

Water Quality	excess nutrients, offsite pesticide movement, excessive sediment in surface waters. <i>Note surface intakes, filter strips or need, potential for offsite sediment movement, nutrient loading.</i>
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Cropland is within 15 - 20' in places along farm pond in the middle of tract and the farm pond along the south road. Over (20) intakes associated with the graded terrases on the farm.

Associated Ag Land

Classic Gully & Stream Assessment	Presence of classic gullies, are they growing or stableizing (V bottom, both sides raw, no meander, nick point), location. Presence of streams, SVAP bank condition score, overall description, filterstrip widthbank erosion, channelized.
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No active gullies noted on tract. Some classic gullies present but have stableized and have good vegetation.

Wildlife Habitat	What type, amount, etc. is present on the tract. Describe vegetation, winter cover, nesting habitat, food source. Note opportunities.
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some brome, reed canary, fescue with some tree growth along the ponds. Few areas cropped right up to the ponds. Note: need to discuss installing a filter strip with that would give us a minimum of 60' along the ponds. Also discuss putting in the steepest areas of the farm into a CRP program, laying out so the cropland would be easy to farm.

Other

Will need a complete conservation system to solve the erosion problems on farm. Need to minimize soil distruption. Discuss planter attachments, N application, successfully no-tilling with cover crops, CRP, hay.

Conservation Planner:	Kevin Kuhn
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Interview with Operator

Operator: Sam Smith	Farm No. 1000	Tract No. 1234	Date: 11/15/2015
Owner:	same		
Overall Farming Operation (total acres, crop rotations, acres of each crop, CRP, livestock, all operators, etc.)			
320 acre tract, 271.4 acres cropland. CB rotation. Primarily no-till. With excessive rains seeing rill erosion. Started renting this farm in 2010. Born and raised in Marshall County until 17 and then Dad moved to this area.			
Landowner &/or Operator Objective			
Biggest concern is concentrated flow erosion, especially where it comes off the flats. Also struggles on how much can we spend on the crop, have to be careful. Operator objective: making a profit and controlling erosion from the heavy rains.			
Tillage/ Cropping System (typical system from harvest to harvest, ever deep rip, etc.)			
Tills when needed to dry out ground to plant and to smooth out eroded areas. Get into spring when ground isn't drying out and need to till it. Government has rules, try to take care of ground. Prefers No-till but some years not fit. 2015 tough spring water didn't infiltrate. He struggles with corn into beans stubble, has better corn stands where he tills. Had farms that were 10 years of NT then heavy rains started and had to repair.			
Equipment Notes (planter setup (coulters, row cleaners, starter), tillage equipment owned i.e. vertical tillage tool, deep ripper, etc.)			
Had a Kinzee for a planter with splitter units. NT coulters for beans and row cleaners with keetan seed firmers for corn. Had a spader closing wheel and a rubber tire closing wheel. Now has a new Case IH planters, no coulters or row cleaners. Has offset disk openers with concave disks for closing wheels. Owns vertical tillage tool, Sulford.			
Nutrient Program (P&K program, soil test program, manure used (kind, rate, when, acres, etc.), Nitrogen program (principal, w/ pre, starter, side dress, anhydrous bar used), Liming program - how often, do they incorporate			
<p>Nitrogen: uses 150lbs anhydrous or 130-140lbs N (32%) when side dressing. Uses Blue Jet for side dressing, has large coulters. Considering using low disturbance anhydrous bar. Sees erosion in anhydrous tracks. Less invasive than anhydrous. South Central Coop has a Synergy Bar. In 2014 spring applied anhydrous and used coated urea to add 40-50lbs N. Thinking about using 90-100lbs N anhydrous and then side dressing 30-50lbs liquid N. May use liquid starter for corn.</p> <p style="text-align: right;">P and K: Where he zone samples he uses VRT on those areas. Coop has one product machine. He applies MAP or DAP on B → C and K on C → B.</p> <p>Lime: Has limed a lot in the last 10 -12 years. some areas as low as 5.4 pH.</p>			

Pesticide Program (weed resistant issues, herbicide program, insecticide use, over all week control issues)

didn't discuss.

Hay Production (acres, species, how its seeded, nurse crop, following crop, N credits)

Has some hay production. Made comment that after hay can't hardly do anything wrong. Usually 30 acres of land in hay.

Erosion Issues (sheet, rill, ephemeral, gully)

Excessive rains seeing rill erosion. 2015 ground wouldn't dry out. Too wet to use vertical tillage tool to dry out. Likes No-till but some years not a fit. Last 6 - 7 years have had heavy rains, 3" - 4" at a time. Terraces keep soil on the farm and then can push back out. Heavy rains fill basins full. Flat ridges (2%) are the hardest areas to control. Eroded land doesn't heal itself. Tills small areas but tilled soil erodes.

Cover Crop Experiences (species, rate, how, termination, etc.)

This tract was prevented planting in 2015. Corn stalk ground never dried out. Used 2 bu oats and 4lbs radishes. He disked this farm and then seeded cover crop with fertilizer and then incorporated with Sulford. Discussed using air seeder for seeding cover crop. He stated neighbor got great stands using it for seeding cover crops. 2015 was his first year using cover crops on 80 acres. He plans to no-till into it in the spring of 2016. Struggles with economics of cover crops.

Wildlife Habitat

Hasn't utilized the CRP program on any farms. He and his son deer and turkey hunt mostly on other farms. He hasn't bird hunted for years.

Conservation Planner: Kevin Kuhn