

Engineering Updates Cost Share Training- PY19

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What's new (or maybe just a facelift)?

- Staffing
- DCR Engineering Job Approval Authority (EJAA)
- Animal Waste
- Training

Staffing

- Will bring new PE on board summer 2018
- Districts will have assigned engineer for EJAA/engineering assistance
- Raleigh Coleman will continue to provide technical assistance throughout the State as needed
- More staff, more training!

Districts assigned to new engineer

- Daniel Boone
- Clinch Valley
- Scott County
- Lonesome Pine
- Big Sandy
- Skyline
- Holston River
- New River
- Patrick
- Tazewell
- Big Walker
- Evergreen
- Headwaters
- Mountain Castles
- Mountain
- Natural Bridge
- Blue Ridge

DCR EJAA

- Status of Reviews
- I&E
- Design
- Construction

DCR EJAA-Status of Reviews

- All Districts that need reviews had their first by the end of 2017
- All competency reviews converted to EJAA January 1, 2018-sheets provided to District staff by January 10, 2018
- Scheduling reviews for 2018

2018 DCR EJAA Reviews

- Scheduling annual reviews, as well as reviews for new and/or increase in existing EJAA
 - Scheduling Districts that will be assigned to me now
 - District assigned to new engineer will be reviewed later this summer/fall
 - I'll be attending most of these with the new engineer as training

Review Schedules

- District staff who have held EJAA (either NRCS or DCR) for three or more years reviewed every three years
 - Dependent upon satisfactory review
 - Staff will be notified if a yearly review is required
 - Will be offered review for upgrade or new EJAA each year
- District staff who have held EJAA for less than three years reviewed yearly for three years (or three reviews)

DCR EJAA-I&E

INVENTORY AND EVALUATION (IE)-On site observations of an exploratory nature for planning and preparation of sound alternative solutions of sufficient intensity for the cooperator to make treatment decisions. May require assistance from higher levels for large or complex jobs. (See NEM 501 and 510).

DCR EJAA-I&E

- Not talking about full conservation planning...not my job
- Need to be able to identify the correct engineering practice to solve an existing water resource concern
 - Make sure it meets the VACS specification
 - Make sure it solves the water quality problem
 - Make sure it is the “least cost, technically feasible” option

DCR EJAA-I&E

- Examples of improper application:
 - Planning a reservoir for every watering system, regardless of the water budget
 - Planning a feeding area/HUA for a confined feeding operation
 - Planning a feeding area/HUA when simply moving the current feeding location would eliminate the water quality problem

DCR EJAA-I&E

- Examples of improper application:
 - Planning an animal waste storage structure when the producer has no storage need
 - Maybe the manure produced does not exceed what he can spread or sell immediately
 - Maybe the manure is currently stored in a manner that does not create a water quality problem
 - Stream Crossings:
 - Excess crossings, no consideration for consolidation
 - Locating the crossing at an unstable location, a bend in the stream, steep topography would result in extra long ramps to meet ramp slope requirements

DCR EJAA-I&E

- So what am I looking for during a review?
 - This can be hard to list as it is really the overall planning of the practice, but may include:
 - Documentation of the water resource concern
 - Documentation of existing conditions for the operation
 - Herd size and type of animal
 - Water demand

DCR EJAA-I&E

- Ask yourself these questions:
 - Is the practice planned to address a “need” or a “want”?
 - Does the application meet the VACS specification?
 - Is this the least cost, technically feasible way to address the water resource concern?

DCR EJAA-Design

DESIGN-Designing and checking all aspects of the supporting data, drawings, and specifications to ensure that the planned practice will meet the purpose for which it is installed. Also includes setting any specific inspection requirements. Approval signature is required. (See NEM 501 and 511).

DCR EJAA-Design

- All reviews follow the Design data listed for each NRCS conservation practice standard at:

<https://efotg.sc.egov.usda.gov/treemenuFS.aspx>

DCR EJAA-Construction

- All reviews follow the Check Data listed for each NRCS Conservation Practice Standard at:

<https://efotg.sc.egov.usda.gov/treemenuFS.aspx>

DCR EJAA-Construction

- Example Check Data (NRCS 516-Livestock Pipeline)
 1. As-built plans including dimensions, types, and quantities of materials installed, and variations from design. Include justification for variations.
 2. Adequacy of vegetation and/or ground cover.
 3. Complete as-built section of cover sheet.

Check Data/Construction Documentation

As-built plans including dimensions, types, and quantities of materials installed, and variations from design. Include justification for variations.

- This means red lined plans marked “as-built”
- Check off all components installed as designed
- Note any changes (Important! All changes should have prior approval!)
- Don’t forget to sign and date the as built box!

Check Data/Construction Documentation

- The file should also include:
 - Pictures, pictures, pictures!
 - Pipeline depth, ASTM #, diameter
 - Trough excavation
 - Anything that will be covered up
 - Material tickets
 - Concrete tickets
 - Stone tickets
 - Geotextile, etc.

This will help protect YOU down the road!

Animal Waste

- Using DCR
- Using a PE
- Written process coming soon!

Animal Waste-Using DCR

- Standard drawings available:
 - Poultry Litter Dry Stacking Facilities
 - Winter Feeding Facility w/ Attached Manure Storage
 - Manure Storage Facilities
- No changes can be made to the design

Animal Waste-Using DCR

- Need topographic survey showing cut/fill required
 - Note-this is one of the changes that will be incorporated into the written process document
- Soils Investigation
 - Due to retirement of key folks at NRCS, I am now doing these for structures with concrete floors

Animal Waste-Using a PE

- Need topographic survey showing cut/fill
 - Can be done by either the engineer or the District
- Need soils investigation statement for buildings with concrete floors
- Need a cover sheet
 - Must have a vicinity map
 - Will provide NRCS construction specifications to be included

Animal Waste-General

- Sizing and AWMS plan must be approved by Agricultural BMP Engineer
- All PE designs must have a functional review by the Agricultural BMP Engineer
- If using an existing building to meet required six month storage, building must be certified
- If there is an unusual situation, please call before proceeding with project!
- Must have I&E or have it reviewed by someone who does prior to project funding approval

Animal Waste-Written Process

- To help both the District and the PE's
- Working on draft, will have EWG review
- Try to be as consistent as possible with NRCS process
- Coming soon!

Training

- Working with Employee Association to plan a fall training
 - Important to provide this technical training without Graves this year
- Planning for 2018 regional trainings, taking suggestions now!



Questions???

This presentation will be made available at:

<http://www.dcr.virginia.gov/soil-and-water/district-engineering-services>

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