State Technical Committee Minutes
Richmond, Virginia
May 24, 2011

Wade Biddix, NRCS ASTC-Programs, welcomed the group and opened the meeting at 10:05 a.m. He then had each person introduce themselves.

Attendance: Wade Biddix *(NRCS)*, Peter Thomas *(CoalTec Energy)*, Libby Norris *(CBF)*, Emily Horsley *(FSA)*, Keith Boyd *(NRCS)*, Patricia Stansbury *(VABF)*, Mark Dubin *(UMD/MAWP/CBPO)*, Barry Harris *(NRCS)*, Chad Wentz *(NRCS)*, John H. Parker (*VA Pork)*, Diane Dunaway *(NRCS)*, Karen Hudson *(VIMS)*, Jeremy Stone *(NRCS)*, Ron Wood *(NRCS)*, Jim Wesson *(VMRC)*, Dean Cumbria *(VDOF)*, Dale Gardner *(WSI)*, Gary Moore *(VA DCR)*, Sally Norton *(Community Public Health)*, David Phemister *(TNC)*, Maribeth Pettigrew *(NRCS Recorder).*

Wade Biddix – (NRCS) Opening Comments: A budget has finally been approved; we are already heavily into FY11 but looking at next fiscal year; it will be here shortly. We received more money for programs than we have in recent years. Next year is an election year, and that brings the question as to whether a new Farm Bill will be approved. Wade stated that he believes we will start FY-12 with the current Farm Bill, so he does not want to make many changes to the current program offerings. A new Farm Bill in 2012 is a possibility so changes could be coming for FY-13 and beyond. This will be discussed as we go through the agenda today.

Emily Horsley – FSA re: CREP – Handout – She went over the different programs as seen on her handout; then said that FSA has seen a good jump in activity following their CREP rallies in February. There have been several new sign-ups in several of the fund categories. Tomorrow FSA has a field meeting in New Kent focusing on long leaf pine, and they are looking forward to that. They have been meeting to come up with marketing strategies and have been signing agreements with some other agencies. They have discussed this in their local working group (LWG) meetings but need to make more of an effort to contact producers who wouldn't be enrolling anyway. They are hoping to work towards WHIP implementation goals – not just in Chesapeake Bay but across the whole state. Specifically, they have been encouraging tree and grass buffers and focusing on implementation of all the practices CREP offers, and have especially been trying to increase sign-up numbers.

Wade mentioned that we just sent out LWG worksheets too; hopefully there can be coordination with the agencies at the local level on proposed changes for FY-12. Dale Gardner asked how much less expensive it is to do grass vs. trees for buffers. Emily explained some of the specifics that are necessary in trying to get canopy closure. It is more expensive, but we do see more conservation buffers. Gary Moore said that it's three or four hundred dollars per acre more expensive than establishing grass buffers. The rental rate is not different.

Gary Moore – FSA - AG BMP cost-share program statewide. SL-6 practice extension is providing for extended water pipe troughs etc. throughout the state, not just in the Chesapeake Bay (CB) Watershed area. There are limits, but this is a positive move and will help bring people in to participate who have been hesitant previously. Dale Gardner asked about bringing power to sites being cost prohibitive. Gary said there are options with solar powered systems etc. and that people should be looking at other options. People like to put in wells and pumps, but that can be cost prohibitive and is not a good answer to the problem.

Libby Norris commented that technical assistance is where the need really is. She asked if the State BMP Manual is out yet. Response: It will be out; the training is coming up in June. She also asked if there are any major changes. Gary said he was going to mention it during agency updates later, but would do it now. He passed around a handout that shows changes that were approved and signed by David Johnson back in March. It will be implemented July 1st. Examples of kinds of changes are: the name of one of the continuous programs has been changed; one practice that was a base practice has been elevated to priority (see handout); *a big item* - SL6 will allow cost-share on dry wells and the risk will be taken away from the participant; a geo-technical

survey can be brought in up-front in an area that is questionable in terms of water availability; nutrient management program record-keeping will not be funded in state cost-share (that may affect what NRCS wants to do with EQIP) . One last item that is a surprise: There will be a $10 per acre bonus payment that is a bio-fuels benefit. One other small item that is not listed is continuous no-till clarification. While the practice is in life span, there will be no tillage. Some districts were allowing this, but now there will be no allowance of tillage at all.

Libby asked whether the new state tax credit would be in the new manual. Yes it will be – it allows refunds to come directly from the Department of Taxation and may bring in participants who were hesitant previously.

Wade Biddix – (NRCS) – Save the Date – A National Historical Marker will be dedicated for Hugh Hammond Bennett on July 15, 2011, in Louisa County (Handout). This will also commemorate the completion of soil mapping in VA. Directions are provided on the front table for anyone interested.

Wade Biddix – (NRCS) – CIG – Last year we funded two projects: one for slug management in no-till crops and one for cover crops. This year funding was increased from $150 thousand to $225 thousand and we were able to fund six projects. (see handout) $248 thousand was actually funded, so there was an increase because of the "worthiness" of these six projects.

Gary Moore asked "Who is leading the phosphorous excretion project?" Response: J.B. Daniel is the lead contact for NRCS and the responsible party is Dr. Mark McCann with VA Tech.

Status of funds: handouts – *EQIP* – $11 million in FY11; currently most of that is committed; a large percentage of what is left is for organic producers. We have not had enough applications to allocate organic funds, although there are a few in pre-approval stages. Sometimes producers cancel and we reallocate those funds. July1st is the deadline for obligation of all our funds; there will be a sweep at that point; any funds we don't have allocated may be taken back by NHQ and given to others. Last year we did not allocate all of our organic funds, but things have been better this year. We don't set the organic allocation; NHQ does.

CBWI – organized a little differently. The total is $14.3 million - $11.5 million is now allocated. (see handout) We do have a few funds left but are trying to get everything allocated before the deadline. We are getting very close and should meet obligation deadline without a problem. We only have $18,000 in the reserve account – that is really close in terms of how much is needed with this large of a budget. The biggest backlog in CB has to do with animals in confinement fund pool.

CSP – no handout. Sign-up was down this year. Less than 100 signed up. Usually there are about 200 applications. There has been some shake up on the national level; some negative publicity and that seems to have affected the sign-up numbers. It isn't just in Virginia; nationwide participation in this program is down. We will have a few more fully contracted before we are done, but the deadline for those allocations is May 27th.

Ron Wood – NRCS – *WHIP* – handout – 76% of obligations have now been completed – we will end the year with about 86% obligated. We have already obligated 100% of funds where we can move the monies around. There is a national earmark for some categories so these monies cannot be moved to other areas. We have requested additional funding if some becomes available from other states.

Organic is slow going. He threw out the question again, as he did last meeting, to the group, "How much organic food did you buy last week?" There is money out there for interested producers in this area. There is an increase in interest, but there are definitely still funds available. Patricia Stansbury asked how to get certain programs eligible for funds – Ron and Wade answered that it would have to be made eligible through the upcoming Farm Bill. We have to live by the statutes that are established. Mark wanted to ask re: organic certifying, whether agents are fully aware of offerings. Response: Ron said we work closely with VDACS and

thinks we've done a good job of beating the bushes, but we aren't sure what the hold-up is. The issue has to do with a lot of people who don't feel the need to be USDA certified organic in order to be successful. It is prohibitive in its requirements, Patricia Stansbury commented. She said that people have to do paperwork for certification and then more paperwork for application of funds. Ron clarified some of the laws – we cannot take money back. People who try it out before certification are not obligated to become certified with a penalty that they would otherwise have to pay money back. That's not how it works. The driving force of all our payments is that we have to be addressing resource concerns. Organic goals aren't always as obvious in what they are trying to meet. Energy savings on all kinds of things are built into it. If you are certified, it's very strict.

Easement Programs

Jeremy Stone – NRCS – *FRPP* – (handout) – Covered status last meeting. We have received 2 applications that only request 31% of our allocation; we are moving to obligate those funds next week. We are still looking for FRPP applications. Partners have informed us that there is a lack of matching funds. Moving into FY12 – two of our partners who offer matching funds received much larger funds from the Legislature, so we are expecting an increase in the next FY. No substantive changes in the programs – always looking to make things more transparent, etc. We welcome feedback re: comments, concerns, questions to help us make the process better. We are in the middle of making a state plan for FRPP. There are two questions at the bottom of the handout. Jeremy asked the group to please take the time to respond to those questions and give feedback via e-mail. He also asked the group to let us know if their organizations are interested in funds for next year and reiterated that we are looking for projects for the rest of this year - FY11.

Diane Dunaway – NRCS – *GRP and WRP* – (handout) – The top half of the handout shows WRP obligations. She is in the middle of doing title work now and expects agreements on all those by July 1st. We are able to fund 6 out of 11 applications we have received and are scheduled to close on 6 in FY11. It looks like we're going to be able to reach the goals that were set. There is an option to do a 30 year easement, but the applications we have this year are all permanent. Wade commented that he is very pleased that these are not isolated in certain counties, but are spread around the state, reflecting a manifested interest in WRP.

Ranking criteria is being used very strictly. If there are additional funds, we do have other requests for funds that aren't quite up to the current criteria, but we could use more monies if there is extra from other states.

GRP – referred to handout. We need more monies and headquarters says they will be able to give us more funding so we can do complete and not partial easements. We have funded 9 total and closed one last week. Sign up – the allocation is $664,000. The demand was for 6.3 million. There were approximately 30 applications, and we were able to fund only 2 in FY11. We have asked for additional monies from NHQ. Our backlog of requests will be in line for next year's funds.

Diane passed out copies of scoring worksheets. She said she wouldn't take the time to discuss here, but would like everyone to take a look and give feedback over the next few months. She requested people send her their feedback by e-mail.

Special Presentation:

Peter Thomas – (CoalTec Energy) – Gasification

NRCS has completed a draft national practice standards for natural animal waste gasification. The focus in Virginia where this process would be applicable is in the Shenandoah Valley counties. Specifically there is excess phosphorus in Rockingham County, much more than the land should have to handle. Fibrowatt wants to put in a big facility there and combust poultry litter. The incineration process emits a lot of carbon dioxide and not very many farmers have signed up. The energy produced would be for power. In Minnesota, currently processors are bringing the litter in from a 100 mile radius and producing 55 megawats of powers. But the

pollution that results from the process is significant – trucking to move the waste by itself causes a lot of pollution, without even taking into consideration the carbon dioxide produced.

Usually poultry farmers only clean out once a year. There has to be plenty of poultry litter available or the process is not efficient. CoalTec wants to set up a regional system –a small enough area would be able to use electric trucks to avoid air emissions and pollution. Centralized facility is scalable.

Biochar is the byproduct resulting from the gasification process. Regular phosphorus is 19% water soluble, but 81% is insoluble. But almost 100% of phosphorous sticks to the Biochar. The time frame for decomposition: over five years or so, it becomes available for plant uptake.

After the gasification process, ammonia is broken apart so it is emitted into the atmosphere as nitrogen, not ammonia like it would be if it was left as litter.

Mr. Thomas's company, CoalTec, has asked NRCS to help set up the first two facilities. It is difficult to get loans/funds to set up these gasification operations, so that is why they need NRCS help.

They have applied for a $400,000 National CIG grant. Phosphorus index may prevent farmers from putting manure on their land. This gives farmers incentive to use commercial fertilizer and stop using manure.

Discussion ensued: The best source for funding from NRCS might be Practice 529, but there are some problems with that; perhaps 629 – Waste Treatment would be a better fit. NRCS contracting manual's section on joint agreements would allow farmers to form co-ops.

Wade explained the reason that we asked Peter to attend is that NRCS has an opportunity to make a program change and offer the gasification practice in our payment schedule for FY12. We are always trying to take new technology and blend with our practices. This is a practice that might have some potential in the state. We'd like to look at how we might blend this into our existing practices and cost-share programs. There are certain restrictions. We can't just pay for waste transport unless there is an excess in one place and it needs to be moved.

We are at the beginning stages of this – the talking stages. No decisions have been made. Our focus is not on revenue. Our interest is how we deal with resource issues. We try to change behaviors that are detrimental – we know there is a lot of waste being incorrectly applied to fields with high nutrient levels. This practice could possibly help us to address that situation.

Discussion: CIG – our state grants are limited to 75,000 a piece. Nationally they are larger. Perhaps watershed monies? What are the possibilities? Options? How can we best potentially cost-share? We may want to organize a smaller committee. Dale Gardner suggested setting up a working group.

Ron Wood asked where VA Poultry Growers stand on this process? Response: Peter has an upcoming meeting with Hobey Bauhan.

Mr. Parker summarized some of the things discussed. He stated that transporting the litter 100 miles is not feasible – already that is resulting in citations for pollution. That problem has to be solved. As things are set up currently, their company would have to pull everything from all four counties. They need to find a way so it doesn't have to be trucked – ideally, it would be so close they could conveyor it over. He stated that it ought to be a farmer owned co-op as far as their company is concerned.

Question: Is there a market for Biochar right now? Response: A small market, but really have not yet developed a market for it. We know it can be granulated; have already tested the process. There are a few places that need phosphorus.

Wade summarized – This is where I would like to go with this: it is a matter of exploring possibilities of adding gasification to our animal waste treatment program offerings. The joint application may work for this practice. It hasn't been done in Virginia, but it has been done in some western states on large irrigation projects. Some homework still needs to be done; ideas need to be fleshed out and brought back to the group. This is on the cutting edge, but there are other technologies out there as well. Dale asked how agency monies would be used. Response: Just like we set up pasture or animals in confinement money. We would set up a specific pot of money for gasification or waste treatment. Someone asked about just trying it as a pilot project. Response: We could set it up that way, but it does not currently fit into any of our established programs. There are some potential challenges to overcome. i.e. in Maryland, local permits couldn't be obtained. Other members of the community sometimes object to facility placement. Success would depend considerably on the state nutrient training program. Wade will send out an invitation to participate with a sub-committee discussion group on this subject.

Chad Wentz – (NRCS) – Re: State Resource Assessment. In April, every state was given six weeks to have their resource assessment done. The deadline is June 1st. The purpose is to try to help establish priorities re: goal setting with funding allocations. It's a work in progress. Six weeks is not a lot of time to come up with this. Chad presented a PowerPoint with a draft of ideas regarding things like soil erosion, intersect of high run off – erodibility factors – intercepted with highly erodible land – they are looking at areas to determine priorities. From that, they will need to dissect out crop lands, forest lands, etc. So far they have been able to come up with priority areas based on soil quality degradation/organic depletion. Next one – Insufficient water – comes from DEQ info. Then Water quality degradation – intersected info like fertilizer sales, etc. NRCS priority areas for CBWI: Water quality degradation – excessive sediment in surface waters. Degraded plant condition – soils info – capability classes – higher are more extreme soils where plants can grow. Also cross that with low available water supply – came up with hatched areas as potential at-risk areas. Also looked at inadequate habitat for fish and wildlife – took out some of the areas where endangered issues aren't present. Another one to be considered in VA is livestock production limitation. Inefficient energy use is an official NRCS focus just recently. The last one we need to look at are the air quality impacts. Purpose – to identify at-risk acres and pull out pastureland, cropland, and forestland. It looks like we're going to be asked to look at this every three years. They are trying to get a 3 year projection. Over the years, it will be further refined. Some of it is pretty raw data, but they are trying to get the information translated; it has been a tough challenge to try to get all the necessary information put together within the 6 week time frame given.

Libby wondered what would be done with the info. Response: National initially said we are going to use this for allocations. They've kind of backed off, but it looks like it will be a work in progress – the information may eventually be used to determine allocations. We're not sure exactly where it is going to go.

Mark Dubin shared that he is aware that the Maryland State Office was thinking about putting Bay issues in overlay. That would give them more of a priority and that is something for VA to think about. DEQ data was used in Maryland and by VA, too. Going through this assessment is providing a new view of things and making some things jump out – verifies observations. But right now it is really just info gathering.

Update on FY12 Farm Bill Program Development

We are probably going to activate our subcommittees to look at this info and give feedback. (Handout) A discussion ensued re: the direction aquaculture is taking. Keith Boyd commented that this year it is just getting exposure; everyone is just getting past the learning curve and they are excited about that. There is major development in this industry and we need to be a part of it. Gary Moore agreed with Keith. They talked about how we can bring private input into the business. DCR is trying to promote – particularly the oyster side of things. We want to know how to get more involved. Jim Wesson stated that the funding is going to be from private sources, but that helping people improve beds will up production and success. They are trying to add structure. Wade asked if there is available oyster shell material. Response: There is a basic shift going on in

the materials. When diseases were overwhelming, they were sold to the State and the State used to mine shells. That was stopped and they started buying house shells. That is causing kind of a jam because they are keeping the shells for their own work. Now there is more competition. Currently, that's resulted in the lowest amount ever bought for public – it's going into private, and that is the way it should be. There is just not the public money to invest in this. Private business is definitely the way to bring monies in. It is state owned land, but is leased to private industry. Mark Dubin shared that Maryland has developed a worksheet that would be good to look at. Galon Hall replied that we have been in discussions with Maryland. We aren't going exactly the same way, but we're sharing info. This is all part of CBWI funding. The monies will probably decrease. We've put about $100,000 into it in the last couple of years. We need to decide if we add the restoration side into it? Libby asked what the time frame is to get feedback on these items. Wade responded: August is going to be when we have the next STC meeting. We will try to do committee work and bring it together at that time, but that may even be a bit late. It was suggested that people get the most info available to NRCS by July 1, including initial thoughts and suggestions.

There was some discussion concerning the work NRCS has done with VT entomologist, Chris Berg, and what the options are to continue the program there. There is currently a big concern over the stink bug and that needs to be addressed aggressively. NRCS resource pest management concerns aren't really in line with the aggressive treatment approach. Implementation may not be realistic – orchard pest management – on hold until stink bug problem gets under control. Comments: Mark Dubin asked if those funds could be redirected. He suggested that threshold levels, controls etc. be looked at – and then monies should be redirected. Specifically, instead of working on mating, the monies could be used to work with producers to look for best techniques to control population. That would be more of a pesticide/IPM control, looking into appropriate times and making sure populations are adequate.

As far as groundwater conservation projects, we typically fund about 2 contracts a year. We need to talk about the needs and concerns that are out there with field people. This decision is still up in the air.

CIG – Do we look to continue? Do we decrease? We feel like we need to adopt more of existing programs instead of start new programs. CIG grants need to be in our core functions. We can't be experts on everything – need to limit to our current specialties. Gary Moore stated that there are not many funds available for looking at innovative ideas to use on issues. There is some concern that nobody is providing monies for new ideas. Libby Norris also expressed the need to keep current funding levels because there is a need for funding for new ideas.

We are not proposing to start ANY new CAPs this year. If we get applications, we will look at funding, but we will not be looking for new opportunities with CAPS. We just haven't funded a lot. There is no intent to increase. That would be a lot of extra work to try to build a new program where no one is showing interest.

New Practices:

Alternative energy – There are 29 standards that have added energy as a purpose. We'll be looking at ones we need to fund. We're not sure how this is going to be bundled. Libby Norris asked if this has been finalized or just released for comment. Response: It might be posted on the Federal Register now. These are national standards – not VA. We need to look at and adopt or revise if we want to use them as VA standards. Libby wanted to know if we should take time to comment. Response: Provide comments to Chad Wentz.

Dale Gardner asked if gasification is considered alternative energy. Response: Could very well be, although it is not currently adopted as part of the national standard, but it has potential.

Dale shared that he's not opposed to gasification, but he thinks there may be other things that might be as good or better out there or to be developed. Wade talked about letting it happen as a private enterprise if it does – if we can help and it will feed our needs, we may want to talk about and work through as we look at new practices

and new ideas. We would like to put out a nice menu so people have options and can say that one fits their specific concerns.

Wade asked the group to feel free to comment on the ranking tools and give NRCS feedback. The group was given copies of the GRP/WRP maps and asked for input on how to group GARC areas. That is something we are currently looking at and that's another work group. Question for clarification? Are the rate groups per acre? Response: Yes.

AGENCY UPDATES:

Patricia Stansbury (VABF) – Regarding sustainable and organic interests, Patricia voiced a concern about development of more policy for people who spray and affect organic farmers and wondered if that was more a VDACs question vs. something NRCS would be involved with. It would be VDACS; there is a process set up for investigation. Turf grass should be included. The Pesticide Board is part of that. On the agricultural side, there are issues that can be regulated through licensing, etc. However, the homeowners side gets harder – As more and more people have productive gardens, it becomes a big issue. VABF is working on getting grants and also working on financial planning and training to help organic farmers run their farms as businesses. The concentration is in the Tidewater area; that's where need is.

Keith Boyd – (NRCS) – Reminded the group of the long leaf pine workshop by DOF at New Kent tomorrow. He also said there is a prescribed burn scheduled for tomorrow.

John Parker – (VA Pork) – Invited everyone to Flying Squirrels game; it's BACON night tonight!

Mark Dubin – (UMD/MAWP/CBPO) – Information that is pertinent to this group partnership re: land grant universities – go back and go through expert panels to examine a lot of the different processing technologies, including manure – like this gasification. It has been set up for potential crediting for reporting and tracking. A questions that is being explored is how to give value to models for conservation easements – ag lands? forestry lands? They are trying to look at future forecasts for land use and be prepared to deal with potential value issues as they transition to future needs.

Dean Cumbria – (DOF) – On June 27th, a week-long training is scheduled. There are also upcoming events like tomorrow's New Kent Lands for Tomorrow that Keith mentioned.

Libby Norris – CBF –This last month they held a brain storming session to brainstorm buffer ideas. They are ramping up buffers. They have hired another Rockingham Co. person, focusing on Ag and runoff. They are also increasing activities in the Smith Creek Watershed.

Still waiting on general CRP sign up 41 because of a question re: EBI threshold. Other activities are moving forward. Tornadoes and flooding in April resulted in people signing up to participate in their programs. Re: BCAP – they don't have new info on harvesting woody materials. Currently they are holding off on qualifying applications because there are questions as to who can provide assistance to some of these people who have applied for help with private forestry consultants. It will probably be mid-summer before new regulations can come out. They are also participating in Lands for Tomorrow conferences – and hopefully can report at end of June.

June 1 DCR - stormwater management division – things are changing. DCR is history. New times – will be interesting.

Wade Biddix – (NRCS) - Asked for any other updates that anyone wanted to make and then adjourned the meeting at 12:35 p.m. In closing, he stated that we will follow up with everyone on program developments. We will be scheduling some subcommittee meetings in the next few months and told members to expect to hear

from us if they've indicated an interest in participating. We are slowly getting feedback from the local work group questionnaires that were just distributed. As that information comes back, we'll be in touch.

The next STC meeting is scheduled for August 17, 2011, at 10 a.m. That does not follow the established schedule; it is a Wednesday in the middle of the month, so everyone should note the modified schedule.

State Technical Committee
Agenda
May 24, 2011 - 10:00 a.m.
Richmond NRCS State Office
1606 Santa Rosa Road, Ste. 209

Welcome, Introductions and Opening Remarks	NRCS – Wade Biddix
Conservation Reserve Program (CRP & CREP)	FSA – Emily Horsley DCR – Gary Moore
CIG Projects	NRCS – Wade Biddix
Status of Financial Assistance Program Funds	
EQIP, CBWI, CSP	NRCS – Wade Biddix
WHIP/Organic	NRCS – Ron Wood
WRP/GRP	NRCS – Diane Dunaway
FRPP	NRCS – Diane Dunaway
Q & A on Current Year Programs/Funds	All
Gasification Project	Coal Tec – Peter Thomas Coal Tec – Mike McCaskey
State Resource Assessment	NRCS – Chad Wentz
Update on FY-12 Farm Bill Program Development - Potential Program Changes (Handout) - Ranking Tools (Handouts) - Potential New Practices - GRP and WRP Geographic Rate Areas - Suggestions/Comments Due By July 1st Local Area Work Groups STC Members	NRCS – Wade Biddix
Agency Updates	All

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Next Meeting – Wednesday, August 17, 2011

Conservation Reserve Enhancement Program
Sign-up Progress

As of 5/24/11

Chesapeake Bay -	1,820 contracts approved **16,679 acres** *AVAILABLE ACRES: 8,321* *Current Allocation: 25,000*
Southern Rivers -	2,232 contracts approved **13,234 acres** *AVAILABLE ACRES: 1,766* *Current Allocation: 15,000*
CP-33 - ***Habitat Buffer*** ***For Upland Birds***	234 contracts approved **1,671 acres** *AVAILABLE ACRES: 829* *Current Allocation: 2,500*
CP-36 ***Longleaf Pines***	18 contracts approved 303.8 acres *AVAILABLE ACRES: 3,446.2* *Current Allocation: 3,750*

SAFE

Culpeper Basin Bird Habitat Restoration *CP-38A – (Forested Riparian Areas)* *CP-38E – (Native Grass Areas)*	*AVAILABLE ACRES: 1000*
CP-38C *Restoration and Management of* *Eastern Shore Migratory Bird* *Tree/Shrub Habitat*	*AVAILABLE ACRES: 500*
CP-38C *Statewide Tree Planting*	*AVAILABLE ACRES: 1,800*
CP-38D *Longleaf Pine*	*10* contracts approved 224.23 acres *AVAILABLE ACRES: 775.7* *Current Allocation: 1,000*

Considerations for Program Changes FY-12

Aquaculture Options

1. Continue gear cycling (no change)
    - Establish plan, implementation and monitoring criteria
2. Stop gear cycling program
3. Implement restoration of declining habitat with oyster bed restoration

Orchard Pest Management Options

1. Continue existing program but institute better management and agency oversight
2. Stop program in FY-12 (already 4 years)
    - Stink bug invasion

Groundwater Conservation

1. Continue existing program in targeted area
2. Stop pilot program (already 4 years)
    - Need to discuss with Area & Field staff

CIG

FY-10 = 2 grants for $143,000

FY-11 = 6 grants for $248,000

Options

1. Continue in FY-12
2. Decrease limits to $150,000
3. Push adoption into programs over new ideas

CAP Options

1. Continue existing offerings
2. Do not start new CAPs unless mandated by Congress.

New Practices to consider

- Gasification
- Alternative Energy
- Energy Audit Implementation
- Roofs and Covers

MATRIX OF CHANGES TO 2012 VACS PROGRAM

Agricultural BMP	Changes Proposed	Comments	Tech. Advisory Comm. (TAC) & DCR Staff Position	DCR Director's Actions
Long Term Continuous No Till (LT-CNT)	Change name to CCI-CNT (Continuous Conservation Initiative Continuous No Till)	To maintain consistency	Recommended by all	Approved as proposed
Reforestation of Erodible Crop and Pasture Land (FR-1)	Include as priority practice	Land use change from crop or pasture to forest	Recommended by all	Approved as proposed
Alternative Water System SL-6B	Rewrite to make compatible with SL-6 language	Reorganizes and clarifies tax credit	Recommended by all	Approved as proposed
Stream Exclusion with Grazing Land Management SL-6	Allow cost share for dry wells and geotechnical studies on a case by case basis	To reduce financial risk to producer	Recommended by all	Approved as proposed
Extension of CREP watering systems SL-7	Extend coverage into Southern Rivers CREP area	To increase CREP utilization	Recommended by all	Approved as proposed
Grazing Land Management SL-9	New base practice that extends existing grazing system into upland pastures	50% cost share & tax credit; small nutrient and sediment reductions per acres for upland pasture management	Recommended by all	Approved as proposed
Nut. Man. Implementation and Record Keeping NM-2 (3 year contract)	Do not include in 2012 Program	Do not cost share to keep records (no sediment or nutrient reductions)	Recommended by all	Approved as proposed
Nut. Man. Plan Writing & Revisions NM-1 (3 year contract)	Allow cost share on pastures that only receive commercial fertilizer	Previously on pastures with manure or combination only	Recommended by all	Approved as proposed
Harvestable Cover Crop SL-8H	Allow $10/acre bonus payment for small grains raised and used for the production of biofuels in Virginia	Budget language introduced in 2011 Va General Assembly, but not passed and enacted	No position	Approved as proposed

David A. Johnson

DCR Director Authorization to include in 2012 VACS

March 25, 2011

Date

2011 Conservation Innovation Grants

Entity	Project	No. of Years	Funding
Colonial SWCD	Green Seeker Implementation	3	$15,804
Colonial SWCD	Zone Based Nitrogen Mgmt. in Corn	3	$50,000
VA Tech	Precision Fertilizer Management	3	$75,000
VA Tech	Large Animal Mortality	3	$2,900
VA Tech	Reducing P Excretions in Grazing	3	$30,000
Local Food Hub	Comprehensive Outreach and Marketing	1	$75,000

Totals			$248,704

CBWI Funds 5_18_2011

Account Name	Allocated	Contract Approval	Pre-Approved	Funds Remaining	Backlog	
Virginia	$14,312,813.00	$11,511,029.75				
Sub Funds	$14,294,530.62	$11,419,062.62	79.88%	Obligated		
Reserve	$18,282.38		97.30%	Obligated and PreApproved		
CBWI - Animals in Confinement	$4,960,307.90	$4,201,546.90	$758,761.00	$0.00	$2,438,000.00	High
CBWI - Aquaculture	$87,518.00	$87,518.00	$0.00	$0.00	$0.00	
CBWI - Cropland	$2,634,030.00	$2,499,628.00	$134,402.00	$0.00	$747.00	Medium
CBWI - Limited Resource Farmer	$3,175.00	$3,175.00	$0.00	$0.00	$0.00	
CBWI - New Farmer	$1,164,330.00	$910,751.00	$253,579.00	$0.00	$0.00	
CBWI - Pasture	$3,834,255.72	$3,216,727.72	$617,528.00	$0.00	$475,338.00	Medium
CBWI - Socially Disadvantaged	$201,914.00	$198,714.00	$3,200.00	$0.00	$0.00	
Shenandoah Valley RCD_CCPI	$720,000.00	$0.00	$604,941.00	$115,059.00	$0.00	
Smith Creek Showcase Watershed-Cropland	$150,000.00	$44,343.00	$0.00	$105,657.00	$0.00	
Smith Creek Showcase Watershed-Pasture	$350,000.00	$256,659.00	$62,834.00	$30,507.00	$0.00	
Trout Unlimited	$50,000.00	$0.00	$24,000.00	$26,000.00	$0.00	
Trout Unlimited - Stream Restoration	$47,000.00	$0.00	$37,000.00	$10,000.00	$0.00	
FY11 CBWI Reserve	$92,000.00	$91,967.13	$0.00	$32.87	$0.00	
			$2,496,245.00			

EQIP Funds Status 5_20_2011

Account Name	Allocated	Contract Approval	PreApproved Apps
Virginia	$11,047,157.00	$9,325,000.80	
Sub Funds	$10,990,106.00	$9,291,465.80	Obligated = 86%
Reserve	$57,051.00		Obligate and PreApproved 92%
Beginning Farmer	$250,089.00	$250,089.00	
CAP 102 CNMP Development	$0.00	$0.00	
CAP 104 Nutrient Management Plan	$0.00	$0.00	
CAP 106 Forest Mgnt Pland	$9,549.00	$9,548.50	
CAP 118 Irrigation Water Management Plan	$0.00	$0.00	
CAP 122 Energy Audit Headquarters	$6,150.00	$4,650.00	$1,500.00
CAP 124 Energy Audit Field Operations	$0.00	$0.00	
CAP 130 Drainage Water Management	$0.00	$0.00	
CAP 138 Transition to Organic Conservation Plan	$0.00	$0.00	
CCPI-Fish America	$1,005,131.00	$946,128.00	$59,003.00
Cropland - Christiansburg	$74,767.00	$74,767.00	
Cropland - Farmville	$363,308.00	$312,986.00	$50,322.00
Cropland - Harrisonburg	$162,329.00	$162,329.00	$0.00
Cropland - Smithfield	$605,187.00	$360,508.00	$244,679.00
Forestry - Statewide	$684,550.00	$651,543.10	$33,006.00
Groundwater Conservation	$146,692.00	$146,692.00	$0.00
High Tunnel Hoop House Initiative	$198,837.00	$183,376.70	$15,460.00
Limited Resource Farmer	$24,374.00	$24,374.00	$0.00
Livestock in Confinement - Christiansburg	$1,793,793.00	$1,793,793.00	$0.00
Livestock in Confinement - Farmville	$1,092,457.00	$941,205.00	$151,252.00
Livestock in Confinement - Harrisonburg	$765,229.00	$546,676.00	$218,553.00
Livestock in Confinement - Smithfield	$315,418.00	$315,418.00	$0.00
Orchard - Pest Management	$67,428.00	$67,428.00	$0.00
Organic Certified	$385,000.00	$160,241.50	$0.00
Organic Transition	$385,000.00	$95,570.00	$0.00
Pasture - Christiansburg	$712,390.00	$712,390.00	$0.00
Pasture - Farmville	$708,591.00	$651,347.00	$57,244.00

Pasture - Harrisonburg	$146,280.00	$146,280.00	$0.00
Pasture - Smithfield	$143,484.00	$116,984.00	$26,500.00
Socially Disadvantaged	$660,369.00	$617,142.00	$43,227.00
FY11 CIG State Component	$248,704.00	$0.00	$0.00
FY11 EQIP Reserve	$35,000.00	$33,535.00	$0.00
		Totals	$900,746.00

Virginia State Technical Committee Meeting
Farm and Ranch Lands Protection Program
Program Update
May 24, 2011

Status of FY 2011 Obligations

Virginia Natural Resource Conservation Service (NRCS) received an allocation of $1,587,170 for the Farm and Ranch Lands Protection Program (FRPP) in FY11. .

We received two applications for $505,000 in FRPP funds for 207-acres, or 31% of our allocation. Both have passed the preliminary due diligence phase and if no problems are found during the upcoming site visits then we will be able obligate those funds within the next two weeks.

County	Acres
Clarke	152
Spotsylvania	55

There are still FRPP funds available for FY 2011; however, our potential partners report that there is a lack of matching funds to pair them with this year.

Outlook for FY 2012

NRCS expects Fiscal Year 2012 to have more opportunities for match funding in Virginia, as some potential partners have received significantly more funding in 2012 than they did in 2011. For example, both DCR's Virginia Land Conservation Foundation and VDACS's Office of Farmland Preservation received funding from the Virginia State Legislature for 2012. Neither organization was able to provide a significant source of match funds in 2011.

Proposed FRPP Program Changes in FY 2012

At this time there are no substantive changes proposed for the FRPP program at the state level. If there any changes to national policy, our national head quarters will announce them later in the year.

We continue our efforts to improve our application, obligation, and closing processes by having the most organized, consistent, and transparent program possible. With that in mind, please review the attached application materials and provide us any suggestion that you feel could help us improve our process.

FRPP FY 2012 State Plan

We are in the process of drafting our FRPP State Plan for the upcoming year. We hope to provide this committee with a draft prior to submitting it to our national headquarters. You can contribute to that process now by answering two questions:

1. Has your organization identified any priority areas that have the potential for sustainable agricultural activity and are threatened by development?

2. Do you anticipate making an application to FRPP for Fiscal Year 2012 funds? If so what portion of the subject property(ies) do you estimate will be:
    a) Active farmland
    b) Prime, unique, or statewide and locally important soils
    c) Contain historic sites

Please send any responses to jeremy.stone@va.usda.gov.

FARM AND RANCHLAND PROTECTION PROGRAM (FRPP)
USDA-Natural Resources Conservation Services (NRCS)
VIRGINIA
APPLICATION SUBMISSION INFORMATION

I. Application Process

A. Application Content and Format

Proposals must contain the information set forth below in order to receive consideration. Applicants should not assume prior knowledge on the part of NRCS as to the relative merits of the project described in the application. Applications must contain a summary of not more than one page that provides the following:

- Project title;
- Project duration (beginning and ending dates);
- Name, address, telephone, e-mail, and other contact information for the project; director(Provide a mailing address, not a Post Office Box,);
- Names and affiliations of project collaborators;
- Number of parcels and acres to be addressed by the proposal;
- Project objectives;
- Summary of the work to be performed;
- Total project cost;
- Total Federal share of the total project; and
- Total partner contribution in terms of financial and technical assistance.

B. Submission Requirements

Applications must be submitted as hard copy to:

Mr. John A. Bricker, State Conservationist
USDA, NRCS
1606 Santa Rosa Road, Suite 209
Richmond, VA 23229

Applications must include narrative sections described in this notice and the Application Checklist and Supporting Documentation Checklist attached to this grant application notice. Incomplete applications will not be considered.

If submitting proposals for more than one project, submit a separate, complete application package for each project. Applications are to be typewritten on 8½" x 11" white paper, double spaced, and on one side only. The text of the proposal must be typewritten in a font no smaller than 12-point, with one-inch margins. Applicants must submit one signed original and two complete copies of each project application. Each copy of the proposal must be stapled securely in the upper left hand corner. Hard copies must be accompanied by an electronic copy on a 3½-inch diskette or compact disc. Electronic files must be either Microsoft Word or Acrobat (PDF) files.

C. Proposal Due Date
Proposals must be received at the previously aforementioned address by 5:00 p.m. EDT on **January 14, 2011**. A proposal's postmark date is not a factor in whether an application is received on time. The applicant assumes the risk of any delays in proposal delivery. Proposals that have been selected will be notified by mail within 10 business days of the final selection. Applicants whose proposals have not been selected will be notified within 15 business days of the final selection. Notification of elimination will be e-mailed or mailed to the applicant.

D. Acknowledgement of Submission
Receipt of all applications will be acknowledged by e-mail. Therefore, applicants are strongly encouraged to provide accurate e-mail addresses. If the applicant's e-mail address is not indicated, NRCS will acknowledge receipt of the application by letter. If the applicant does not receive an acknowledgment within 7 days of the submission deadline, please contact Jeremy Stone, FRPP Program Manager, Tel. 804-287-1666, jeremy.stone@va.usda.gov.

II. Review

A. Proposal Review and Selection Process
Prior to proposal review, the NRCS State Office will screen each application for completeness and eligibility. Incomplete and ineligible applications will be eliminated from competition. Applications meeting the requirements of this Notice will be ranked by NRCS utilizing a comprehensive ranking worksheet.

B. Anticipated Announcement and Award Dates
Awards are anticipated to be announced by **February 14, 2011**.

C. Award Notification
Applicants who have been selected will be notified by official notice from the NRCS State Conservationist. NRCS staff will develop cooperative agreements with those cooperating entities whose parcels have been selected. Applicants whose proposals have not been selected will be notified by official letter.

III. Administrative Review

A. Administrative and Technical Reviews
NRCS will perform an administrative review of the appraisals on ninety percent of the parcels that are accepted for purchase of an easement. NRCS will also perform a technical review of the appraisals of 10 percent of the parcels accepted for purchase of an easement. The NRCS National Appraiser will also perform a technical review of all appraisals with a fair market value of more than $1 million and all appraisals performed by appraisers who are performing their first appraisal for NRCS.

B. Review of Conveyance Document and Title

The conveyance document (i.e., conservation easement deed or conservation easement deed template) used by the eligible entity must be reviewed and approved by the USDA NRCS National Headquarters. NRCS reserves the right to require additional specific language or to remove language in the conservation easement deed to protect the interest of the United States. The conveyance document must include a "Rights of Enforcement" clause for the United States. NRCS shall specify the terms for the "Rights of Enforcement" clause to read as set forth in the cooperative agreement. The conveyance document must also contain a clause that all rights conveyed by the landowner under the document will become vested in the United States should the cooperating entity abandon, or attempt to terminate the conservation easement. The conveyance document must also specify the impervious surfaces shall not exceed two percent of the easement area.

The title must be approved before an easement can be closed. USDA reserves the right to deny funding for any application where there are exceptions to clear title on any property

C. Conservation Compliance

As a condition of participation, all highly erodible land in the easement must be managed in accordance with a conservation plan. The conservation plan will be developed using the standards and specifications of the NRCS Field Office Technical Guide and 7 CFR Part 12, unless otherwise determined by the State Conservationist, in partnership with the eligible entity. The conservation plan must be implemented on the highly erodible land, as determined by the State Conservationist, prior to the easement being recorded.

D. Cooperative Agreement

The Commodity Credit Corporation (CCC), through NRCS, enters into a cooperative agreement with a selected eligible entity to document participation in FRPP. The cooperative agreement will address, among other subjects:

- The easement type, terms, and conditions;
- The management and enforcement of the rights acquired;
- The role and responsibilities of NRCS and the cooperating entity;
- The responsibilities of the easement manager on lands acquired with FRPP assistance; and
- Other requirements deemed necessary by the CCC, acting through NRCS, to protect the interests of the United States. The cooperative agreement will also include an attachment listing the pending offers accepted in FRPP, landowners' names, addresses, location map(s), and other relevant information. Interested entities should contact Jeremy Stone, jeremy.stone@va.usda.gov for a copy of a sample cooperative agreement.

Farm and Ranchland Protection Program (FRPP)
Virginia
Application Checklist

Please complete a copy of this worksheet for <u>each parcel</u> in your application.

Entity: _____
Entity DUNS: _____
Point of Contact: _____
Telephone: _____
E-Mail: _____
Mailing Address: _____

Prior to completing the worksheet, please review the attached support document. Ranking will depend upon the clarity and completeness of supporting documentation. Incomplete or unclear applications will receive lower rankings.

Interested entities with farm and ranch lands protection programs wishing to apply for FRPP funds must submit proposals to the State Conservationist prior to the announced ranking deadline. All entities must complete and submit with the proposal the:

- SF-424 "Application for Federal Assistance",
- SF-424A "Budget Information for Non-Construction Programs" and
- SF-424B review and sign the "Assurances Non-Construction Programs".

Indicate the page(s) of your proposal where each ranking element is addressed in the table below. <u>If you exclude an element, please attach a brief explanation as to why it is not included.</u>

I) <u>Parcel Name</u>:	
II) <u>Landowner Meets Farm Bill Eligibility Requirements</u>.	◯ **Yes** ◯ **No**
III) <u>Entity Capability</u> Eligible entities must describe their farm and ranch lands protection program and their record of acquiring and holding permanent agricultural land protection easements. Information provided in the proposal should:	**Page #**
1) Demonstrate a commitment to long-term conservation of agricultural or ranch lands through the use of voluntary conservation easements that protect farm or ranch lands from conversion to nonagricultural uses.	
2) Demonstrate a capability to acquire, manage, and enforce conservation easements.	
3) Demonstrate staff capacity that will be dedicated to monitoring and conservation easement stewardship.	
4) Demonstrate the availability of funds equal to at least 50 percent of the estimated fair market value of the conservation easement (including landowner donation).	
5) Title and appraisal policy.	
6) Pending offer on a parcel or parcels.	
IV) <u>Lands to be acquired</u> The proposal should describe the lands to be acquired with assistance from	

FRPP. Specifically, the proposal must include the following for each parcel:	
1) Tract and Farm number	
2) The names of the landowners of each parcel.	
3) The address and location maps of each parcel.	
4) The size of each parcel, in acres.	
5) The acres of the prime, unique, or statewide and locally important soil in each parcel and a map of the prime, unique, or statewide or locally important soils for each parcel (*one of three eligibility criteria*).	
6) The number or acreage of historic or archaeological sites, if any, proposed to be protected, a brief description of the sites' significance and documentation of the site's listing on the Federal, Tribal, or State register and a map of historic or archaeological sites. The listing document that describes the significance of the site must be included in the application to compare with the cooperating entity's ability to manage and enforce the easement for historic preservation of the site (*one of three eligibility criteria*).	
7) The manner that each parcel supports a State or local farm or ranch land protection program, if applicable (*one of three eligibility criteria*).	
8) The acres of cropland, grazing land (includes pastureland and rangeland), forestland and incidental in each parcel and a map of the cropland, grazing land, forestland and incidental for each parcel.	
9) A map showing the location of other protected parcels in relation to the land parcels proposed to be protected.	
10) Estimated value of the easement for each parcel.	
11) Estimated contribution by the cooperating entity, landowner donation, and expected Federal contribution to the acquisition.	
12) Estimated cooperating entity's recommended stewardship fee to be paid by the landowner.	
13) Indication of the accessibility to markets for each parcel.	
14) Indication of an existing agricultural infrastructure, on- and off-farm, and other support systems.	
15) Statement regarding the level of threat from urban development for each parcel.	
16) Percent of impervious surface. Impervious surface on FRPP easements is limited to 2 percent of the easement area	
17) Ownership of subsurface mineral rights for each parcel	
18) Desire of landowners to subdivide each parcel. Subdivision in FRPP is generally prohibited.	
19) Desire of the landowner to construct additional residences on the easement parcel	
20) Other Public Values to be Protected by Easement	

Signature: _____ **Date:** _____

Address questions to:
Jeremy Stone, FRPP Program Manager
(804) 287-1666
jeremy.stone@va.usda.gov

Submit proposal, including a signed copy of this checklist, to:
John A. Bricker, State Conservationist
USDA, Natural Resources Conservation Service
1606 Santa Rosa Road, Ste. 209
Richmond, VA 23229

Farm and Ranch Lands Protection Program
USDA -Natural Resources Conservation Service
Virginia
Supporting Documentation Checklist

1. Introduction

Applicants for FRPP assistance in Virginia should respond to the criteria established in the national Request for Proposals (RFP) and the state ranking criteria outlined in this document. Awards will be based upon the state ranking criteria and applicants are strongly encouraged to structure their proposals to facilitate application of the state ranking criteria outlined here. Please contact the Virginia FRPP Coordinator before preparing your application to discuss your application and proposed parcels. This is especially important if you are a first-time applicant. Communication early in the application process will help you understand current FRPP rules, and efficiently develop a complete and competitive application.

Jeremy Stone, FRPP Program Manager
USDA, NRCS 1606 Santa Rosa Rd., Ste.209
Richmond, VA 23229
(804) 287-1658
E-mail: jeremy.stone@va.usda.gov

These guidelines describe information needed to determine eligibility for FRPP funding and to rank programs and parcels for FRPP participation. Prior to application, applicants must be familiar with the materials in this document, as well as other documents available from the Virginia FRPP web site (currentlywww.va.nrcs.usda.gov/programs/#Farm%20and%20Ranchland%20Protection%20Program%20(FRPP)) and the national FRPP website (currently www.nrcs.usda.gov/programs/frpp). If you do not have web access or have other difficulties, please contact the Virginia FRPP Program Manager.

The websites contain important information on eligibility requirements, and participant responsibilities not included in this document. Please consider the ability of your farmland protection organization to meet these responsibilities, and contact the FRPP Coordinator to discuss any concerns or questions.

To ensure your application is competitive for FRPP funding, be as thorough and complete as you can in providing the requested information. Provide supplemental information if you feel this will help provide a more accurate or complete picture.

There is no required application format. However, an outline approach similar to that below, supported as necessary with additional documentation is recommended. Insufficiently documented responses may receive lower points than they might otherwise warrant.

2. Timeline

Application review and ranking will begin immediately after the application deadline (**January 14, 2011**). The NRCS State Office will screen each application for its completeness. Incomplete

applications, including those that do not meet eligibility requirements, will be eliminated from this round of competition. NRCS will attempt to contact each applicant by telephone within 3 weeks of the close of the application period with requests for clarification or additional information as needed. New or updated information will be accepted and considered in the evaluation and ranking process for the next round of evaluations. Funds should be used for easement purchase within 18 months of obligation.

3. Virginia Ranking Criteria Checklist

The following explanation is provided to help explain what reviewers will be looking for when evaluating your application. Failure to clearly and concisely address each element will result in lower scores.

3.1 Entity Capability

Please describe your entity. Provide sufficient detail on the entity's structure and policy to enable reviewers to completely evaluate the potential success of acquiring and managing the easements in accordance with program rules and regulations. If more than one entity is included on your proposal, clearly outline the roles and responsibilities of each, and summarize the capabilities of each separately.

3.1.1 Background Information about Each Entity

Provide information about your entity:

- Include the entity's history, objectives, accomplishments and plans. Brochures, newsletters, and other informational handouts are helpful. Maps showing the program area, land use, protected areas, and planned acquisitions are also helpful.
- The applicant must be a unit of state government, local government, Indian Tribe, or non-profit organization. The application should clearly state in which category the applicant qualifies. Non-profit organizations must submit documentation that they are recognized as such by the Internal Revenue Service and that farmland protection is part of their mission. See the Federal Register notice, or contact NRCS, for more details.
- Describe your agency, Tribe, or organization's history of acquiring and managing easements on farmland or open space. What criteria are used to set acquisition priorities?

3.1.2 Easements Being Managed and Easement Management Experience

List the easements which were acquired in the last two years that are currently being managed (include a description of purpose for each e.g., primary open space, secondary wildlife habitat protection), and how each was acquired (donation, purchase, leveraged purchase, etc), and when it was acquired. Enumerate the experience that each participating entity has in easement management in Virginia.

3.1.3 Entity/Team Plan and Project Viability

Provide information on the following aspects of your organization and easement acquisition / protection plan:

- Describe your entity's years of experience in each of the following areas: acquiring easements, managing easements, and enforcing easements.
- Describe the number, ability and experience of staff that will be dedicated to monitoring easement stewardship.
- Describe your agency, Tribe, or organization's interest in and ability to work with the landowner/farmer to assure the conservation plan developed by the landowner and NRCS

is being implemented. Does the landowner/farmer already have a current NRCS conservation plan?

- Provide organizational detail on your entity, and contact information for board members, responsible decision makers, and day-to-day contacts.
- Describe entity's methodology for completing baseline documentation. Baseline documentation must be prepared within one year of easement closing, including photos and Grantor and Grantee signatures.
- Describe existing monitoring program, and include annual written monitoring reports, with a copy to NRCS. All existing FRPP monitoring reports must be current to be eligible for additional funding.
- Describe proposed enforcement plan, including staffing and funding.
- Describe appraisal standards and means of providing appraisal reviews. An appraisal using "before and after" valuation method, by a state certified or licensed appraiser, conforming to USPAP or USFLA standards is required before FRPP funds are released. Appraisals should be less than one year old on the easement closing date. Administrative reviews will be completed on all appraisals. A second independent appraisal may be required for easements with a high dollar value per acre (exceeding $5,000/acre), unusual terms, or in cases where the easement review raises significant questions.
- Describe entity's ranking system and rank for each included parcel. Describe efforts undertaken to assure that if nominated easements(s) cannot be acquired, meaningful alternatives are available, and could be obtained within the two year funding period.

3.1.4 Funding

Provide detailed information on funding needed from USDA and available funding already secured for each proposed easement purchase. Describe how easement values were estimated. This information is used to determine program and parcel eligibility. At a minimum, provide information for the following categories:

- Funds not yet available for easement purchases, but anticipated.
- Funds available now for the proposed easement purchases, pending only FRPP funding or final approval of the specific easements.
- Funds provided by a grant from another entity are not considered available until they have passed all internal approvals of the granting entity. Common sources of available funds include: Funds in a bank account, an approved bank line of credit, or an approved grant from another entity. For each category provide information on:
    - ✓ Amount of funds
    - ✓ Source of funds
    - ✓ Date available, or expected to be available

Include supporting documentation such as Board approvals, bank statements, or loan history records. Matching funds must be available before FRPP funds can be obligated. However, if adequate matching funds are not available at the time of application, you can still apply.

3.1.5 Pending Offer

- The FRPP program requires a "pending offer" on an eligible piece of agricultural land. A "pending offer" is a "written bid, contract, commitment, or option extended to a landowner by a State, Tribe, local governmental entity, or eligible non-governmental organization…." <u>If you do not have a pending offer on a particular parcel, it should not be included in the application.</u>

- If you are negotiating with a landowner, and intend to apply for USDA FRPP funds, be certain the owner is aware of the requirements of the FRPP program. NRCS will review the proposed deed/covenant language and require the insertion of a "contingent right" clause and conservation plan requirement into the deed documents. Also, NRCS will need to review and approve the appraisal. In addition, parcels must be owned by individuals or entities meeting other eligibility criteria described on the FRPP website, including income limitations and private ownership. More information on Farm Bill Income and payment limitations is available at: http://www.nrcs.usda.gov/programs/farmbill/2008/pdfs/AGI_At_a_Glance_101508final.pdf. Contact the FRPP coordinator if you have questions about parcel or land owner eligibility.
- For each parcel subject to a copy the pending offer, with at a minimum:
  - ✓ The landowner's name, address and phone numbers (if the operator is different from the landowner please provide their name, address, and phone number),
  - ✓ The address and location of the sites offered,
  - ✓ The size of the sites (in acres),
  - ✓ The type of easement or other interest to be acquired
  - ✓ The estimated easement or interest price FRPP share, entity contribution and any other contributions detailing all proposed cost arrangements.

3.2 Lands to be acquired

- The following information is needed to complete the ranking:

3.2.1 Tract and Farm number

List the Tract and Farm number assigned to the farm by the USDA Service Center. If none exists, have the landowner contact the USDA Service Center to fill out and sign Form AD-1026 to have a Tract and Farm number assigned. This information is needed to develop the conservation plan required of all participants in the FRPP. A list of USDA Service Center offices and phone numbers is listed at the end of this checklist for your use.

3.2.2 Soil Map

A soil map or USGS 7.5 minute quadrangle map showing outline of the parcel. Outline on the map those areas of the farm actively being farmed. For this purpose, "actively farmed" means regularly tilled or regularly harvested areas. For grazed land, it must be quality forage to be considered actively farmed.

3.4.3 Cultural Resources

Are historic and/or archaeological resources present at the site? Is the property listed on the State or National Register of Historic Places? Has the site been formally determined to be eligible for listing on the State or National Register of Historic Places? Have significant archaeological resources been found on the property? If the answer is "yes" to any of these questions, please include documentation and provide a brief description of the site's significance.

3.2.4 Acres of Cropland

Provide a list of crops recently grown, the approximate acreage of each, and how the products are marketed and the level of on-site investments. Describe the existing infrastructure essential to the agricultural operation, include means of irrigation. (barns, farm stand, irrigation system, conservation practices, implementation of conservation plan, stewardship, etc.).

3.2.5 Natural Surface Water Map

May be the same map as above, but must show the site in relation to natural surface water.

3.2.6 Accessibility to Markets

Briefly describe the agricultural industry in the area (e.g. county, or sub-county area), and its ability to support a viable agricultural economy.

3.2.7 Existing Agricultural Infrastructure

Briefly describe the local agricultural economy and the site's importance in sufficient detail for NRCS to be able to generally assess the viability of the agriculture in the area in the presence and absence of agricultural operations at the site. Address the following questions: is sufficient infrastructure available in the vicinity to support the site? How much of the site's agricultural related supplies must be imported from outside the county? Does the site generate a significant percentage of the local demand for agricultural infrastructure?

3.2.8 Map of Other Protected Lands

Indicate the presence or absence of other of 1) protected agricultural lands in the project vicinity and indicate distance to other protected lands and 2) describe the relationship of the parcel to adopted local land use plans. In referencing plans, be sure to distinguish between zoning and planning.

3.2.9 Conservation Plan

Indicate whether or not a conservation plan, prepared in cooperation with the local NRCS office and approved by the local conservation district, is in place. Many producers already have these plans in place. Check with the producer and NRCS to see if a current plan is being applied. If FRPP funds are used to assist in acquiring the development rights, then the farm MUST have a conservation plan on all highly erodible lands (most lands in Virginia are) and a statement to this effect must be included in the easement deed to this effect.

3.3 Development Pressure on Site

Include at a minimum the following maps and descriptive materials for each parcel subject to a pending offer:

3.3.1 Aerial Photo/Map

Include recent dated aerial photos topographic map of each parcel and surrounding area, showing the limits of each parcel.

3.3.2 Nearby Land Use Map

Include land use map(s) showing land uses on properties within a 1.0 mile radius surrounding each applicant parcel. This information may be overlaid on the aerial photo map (above) if sufficient detail is shown.

3.3.3 Land/Easement Value

Describe the size of each parcel and the amount of FRPP funds being requested for each parcel. Attach a description of method used to determine easement value. Estimate the easement cost on a per acre basis (i.e. $/acre).

3.4 Other Public Values Impacting the FRPP Funding Decision

3.4.1 Educational/Research Opportunities

Describe whether or not the proposed easement will assure the public and or researchers access to education or research opportunities not available elsewhere in the county/state/nation.

3.4.2 Proximity to Flood Hazard Zones
Describe the site's proximity to flood protection projects. Is the site in a floodplain where development might entail risk to future residents?
3.4.3 Wildlife Habitat/Threatened and Endangered Species
Describe any unique environmental or ecological attributes of the land that would be protected, such as threatened and endangered species or a recognized greenway or wildlife corridor.
3.4.4 Agricultural Existence Value
Describe the relationship of the parcel to local, regional and national community values. Even if the site is not on (or eligible for) one of the historic registers, describe any unique social significance the farm has for the community (Town, County, State, Nation), such as being a landmark in the community, or its special value to underserved people, etc.

The information requested above will allow your application package to be evaluated for basic eligibility and then to be scored.

VIRGINIA 2011 FARM & RANCH LANDS PROTECTION PROGRAM (FRPP)

RANKING WORKSHEET

Entity Information

Entity_____

Entity DUNS _____

Land Information

Cong. Dist _____ FIP Code _____

FSA Farm #(s) _____ Tract #(s) _____ Field #(s)_____

Size of Land Offer _____ acres

Land is eligible[i]: ◯ Yes ◯ No If no, reason why ineligible: _____

Landowner Information

Landowner Name _____ County _____

Address _____

_____

Phone _____ Tax ID # _____

Is the Adjusted Gross Income (AGI) of the Landowner ≥ $1 million? ◯ Yes ◯ No

Is 66.66 percent or more of the Landowner's AGI average *adjusted gross farm income?*

◯ Yes ◯ No

Does the Landowner/operator meet the Conservation Compliance Requirements?

◯ Yes ◯ No

Ranking Criteria

1) Percent of prime, unique, and important farmland in the parcel to be protected:

≤ 25%	0 points
26-50%	10 points
51-75%	15 points
> 75%	25 points

Score: 25 **_____ points**

2) Cultural resource consideration:

Is the site listed on the National Register of Historic Places, formally determined to be eligible for listing on the National Register of Historic Places, or listed on the State or Tribal Register of

Historic Places and will an easement protect this site from development?

◯ Yes (15 points) ◯ No (0 points)

Score: 15 _____ **points**

3) Agricultural use:

Percent of cropland, pastureland, grassland, and rangeland in the parcel to be protected.

≤ 25%	0 points
26-50%	3 points
51-75%	6 points
> 75%	10 points

Score: 10 _____ **points**

4) Funding of easement

A. USDA Funds

Requesting 50% USDA Funding	0 points
Requesting 40-49% USDA Funding	2 points
Requesting 30-39% USDA Funding	3 points
Requesting 20-29% USDA Funding	4 points
Requesting <20% USDA Funding	5 points

B. Other Sources

Landowner donation or multiple (>1) entities contributing funds to the purchase.	5 points

Score: 10 _____ **points**

5) County data:

A. Ratio of the total acres of land in the parcel to be protected to the average farm size in the county according to the most recent USDA Census of Agriculture.

County _____ Average Farm Size _____

< 1:1	0 points
1.5:1	5 points
2:1	10 points

Score: 10 _____ **points**

B. Decrease in the percentage of acreage of farm and ranch land in the county in which the parcel is located between the last two USDA Censuses of Agriculture.

County _____

0-5%	0 points
5-10%	3 points
10-15%	6 points
15-20%	10 points

Score: 10 _____ **points**

C. Percent of population growth in the County as documented by the United States Census.

County: _____

0-5%	0 points
5-10%	3 points
10-15%	6 points
15-20%	10 points

Score: 10 _____ **points**

D. Population density (population per square mile) as documented by the most recent United States Census

County _____ State_____

< State	0 points
≥ State	5 points

Score: 5 _____ **points**

6) Significance.

A. Proximity of the parcel to other protected land, including military installations, land owned in fee title by the United States or a State or local government, or by an entity whose purpose is to protect agricultural use and related conservation values, or **land that is already subject to an easement or deed restriction that limits the conversion of the land to nonagricultural use.**

◯ Adjacent (5 points) ◯ Not Adjacent (0 points)

Score: 5 _____ **points**

B. Proximity of the parcel to other agricultural operations and infrastructure?

◯ Yes (5 points) ◯ No (0 points)

Score: 5 **_____ points**

7) Local support for farmland preservation

Is the tract covered under agricultural zoning or designated agricultural use in a comprehensive plan?

Designated or zoned agricultural use	15 points
Not Designated or zoned agricultural	0 points

Score: 15 **_____ points**

8) Existence of a farm or ranch succession plan or similar plan established to encourage farm viability for future generations.

◯ Yes (10 points) ◯ No (0 points)

Score: 10 **_____ points**

9) Additional considerations.

Does the easement protect wetlands or other sensitive habitat?

◯ Yes (2 points) ◯ No (0 points)

Score: 2 **_____ points**

A. Geographic Region Location

Chesapeake Bay	3 points
Southern Rivers	0 points

Score: 3 **_____ points**

B. Are there any significant local social, economic or cultural considerations that make this tract unique?

◯ Yes (2 points) ◯ No (0 points)

Score: 2 **_____ points**

If yes, please explain:_____

10) Performance of the entity including but not limited to, managing and enforcing easements, closing efficiency and monitoring.

A) Past easements have closed within:

< 0-12 months	5 points
13-18 months	3 points
19+ months	0 points

B) Monitoring:

Once a year or more	10 points

Score: 15 _____ **points**

TOTAL POINTS 0 **points**

As a representative of _____ _____
this information is complete and accurate to the best of my knowledge.

_____
Entity Representative Date

I have verified the accuracy of this information to the best of my ability.

_____
FRPP Program Manager Date

_____

[i] 7 C.F.R. § 1491.4

Eligible land:

(1) Must be privately owned land on a farm or ranch and contain at least 50 percent prime, unique, Statewide, or locally important farmland, unless otherwise determined by the State Conservationist; contain historical or archaeological resources; or furthers a State or local policy consistent with the purposes of the program; and is subject to a pending offer by an eligible entity;

(2) Must be cropland, rangeland, grassland, pasture land, or forest land that contributes to the economic viability of an agricultural operation or serves as a buffer to protect an agricultural operation from development;

(3) May include land that is incidental to the cropland, rangeland, grassland, pasture land, or forest land if the incidental land is determined by the Secretary to be necessary for the efficient administration of a conservation easement;

(4) May include parts of or entire farms or ranches;

(5) Must not include forest land of greater than two-thirds of the easement area. Forest land that exceeds the greater of 10 acres or 10 percent of the easement area shall have a forest management plan before closing;

(6) NRCS shall not enroll land in FRPP that is owned in fee title by an agency of the United States, a State or local government, or by an entity whose purpose is to protect agricultural use and related conservation values, including those listed in the statute under eligible land, or land that is already subject to an easement or deed restriction that limits the conversion of the land to nonagricultural use, unless otherwise determined by the Chief;

(7) Must be owned by landowners who certify that they do not exceed the adjusted gross income limitation eligibility requirements set forth in part Code of Federal Regulations Title 7 Part 1400;

(8) Must possess suitable on-site and off-site conditions which will allow the easement to be effective in achieving the purposes of the program. Suitability conditions may include, but are not limited to, hazardous substances on or in the vicinity of the parcel, land use surrounding the parcel that is not compatible with agriculture, and highway or utility corridors that are planned to pass through or immediately adjacent to the parcel; and

(9) May be land on which gas, oil, earth, or other mineral rights exploration has been leased or is owned by someone other than the applicant may be offered for participation in the program. However, if an applicant submits an offer for an easement project, USDA will assess the potential impact that the third party rights may have upon achieving the program purposes. USDA reserves the right to deny funding for any application where there are exceptions to clear title on any property.

Data current as of: 5/20/2011 4:32:43 AM

		Applications									Contracts					
		Pending		Eligible		Preapproved		Approved						%	% of Allocation Used	
Fund	Allocation	Count	Est. Cost	Count	Est. Cost	Count	Est. Cost	Count	Acres	Cost	Count	Acres	Obligation	Obligated	Potential	Actual
	$441,628.00	**12**	**$33,550.00**	**70**	**$340,719.70**	**3**	**$44,674.00**	**4**	**261.50**	**$33,110.00**	**27**	**1,822.80**	**$303,023.00**	**68.615%**	**86.228%**	**76.112%**
Beginning Farmer	$29,943.00	1	$0.00	9	$46,791.50	0	$0.00	0	0.00	$0.00	5	52.60	$29,943.00	100.00 %	100.00 %	100.00 %
CCPI - DGIF	$61,082.00	0	$0.00	0	$0.00	0	$0.00	0	0.00	$0.00	8	470.30	$34,956.00	57.23 %	57.23 %	57.23 %
CCPI - Trout Unlimited	$30,000.00	0	$0.00	0	$0.00	0	$0.00	0	0.00	$0.00	0	0.00	$0.00	0.00 %	0.00 %	0.00 %
Limited Resource	$0.00	0	$0.00	0	$0.00	0	$0.00	0	0.00	$0.00	0	0.00	$0.00	0.00 %	0.00 %	0.00 %
Long Leaf Pine	$150,000.00	0	$0.00	0	$0.00	1	$35,105.00	0	0.00	$0.00	1	280.00	$110,200.00	73.47 %	96.87 %	73.47 %
Socially Disadvantaged	$2,256.00	0	$0.00	0	$0.00	0	$0.00	0	0.00	$0.00	1	4.70	$2,256.00	100.00 %	100.00 %	100.00 %
Aquatic Wildlife Habitat Creation	$7,069.00	0	$0.00	1	$0.00	1	$7,069.00	0	0.00	$0.00	0	0.00	$0.00	0.00 %	100.00 %	0.00 %
Habitat Maintenance/Protecti	$54,686.00	0	$0.00	11	$82,324.00	0	$0.00	2	217.50	$17,319.00	3	454.60	$37,367.00	68.33 %	100.00 %	100.00 %
Upland Wildlife Habitat Creation	$106,592.00	11	$33,550.00	49	$211,604.20	1	$2,500.00	2	44.00	$15,791.00	9	560.60	$88,301.00	82.84 %	100.00 %	97.65 %
Total:	**$441,628.00**	**12**	**$33,550.00**	**70**	**$340,719.70**	**3**	**$44,674.00**	**4**	**261.50**	**$33,110.00**	**27**	**1,822.80**	**$303,023.00**	**68.615%**	**86.228%**	**76.112%**
EQIP Org Transition	$385,000.00	1	$0.00	1	$5,490.00	0	$0.00	1	3.00	$14,865.00	3	25.50	$80,705.00	20.96 %	24.82 %	24.82 %
EQIP Org Certified	$385,000.00	0	$0.00	2	$7,492.00	0	$0.00	0	0.00	$0.00	6	336.75	$160,241.50	41.62 %	41.62 %	41.62 %

Formula Definitions:

Actual: **% of the alloction that has gone to contract**

Obligated: **% of the allocation that includes applications Approved for funding + applications that have gone to contract**

Potential: **Obligated + Preapproved Applications**

Indicates Funding Pools that are fixed, i.e., once created, we cannot move funds to other pools

Discussion of a Conservation Practice Standard for Animal Waste Gasification
Virginia NRCS State Technical Committee Meeting
Tuesday, May 24, 2011

Animal waste gasification is a new NRCS Conservation Practice Standard.

Gasification is a scalable, low-emissions, biomass combustion process. When using manure or poultry litter as a fuel source, gasification removes very large quantities of both N and P at a single site.

Gasification is often confused with pyrolysis. Generally, the operators of pyrolysis systems attempt to co-produce a crude oil and/or a syngas. The new NRCS Practice Standard for gasification does not include pyrolysis.

Because gasification is oxygen-starved, and because it is carried out at much lower temperatures (500-700° F), it is not the same as oxygen-rich incineration, and it does not consume all of the carbon in the fuel (such as poultry litter)

Effective July 1, 2011, animal waste gasification in Virginia is a BMP point-source nutrient removal technology, thus allowing farmers to qualify for nutrient offset trading on a 1-for-1 basis rather than 2-for-1.

Animal waste gasification is economically viable in the long-term because it will have three (3) primary sources of revenue:

- Nutrient offset trading (and VA is expanding nutrient trading to meet the WIP)

- The generation of power under Virginia's net metering law. (Va Code 56-594.1 and Va Code 56-265 (b) (10) allows an aggregation of farms to participate in net metering, even if the farms are not contiguous)

- The sale of granulated carbon- and P-rich charcoal (often called biochar)

Farm-scale solutions can not solve the nutrient management problem

For 30 years, the EQIP BMP's and the EPA's AgStar anaerobic digester program have focused on **farm-scale** nutrient management solutions. If these two programs had been effective, there would not be a need for the EPA to step in with the TMDL Program to reduce nutrients, but now that they have, we need to begin using a far larger-scale, more centralized, cost-effective solution.

Poultry farmers usually only clean out their houses a few times per year, thus they could only operate a gasifier during these sporadic clean-outs, not often enough to

make them cost-effective. We have this situation with demonstration gasifiers that we have installed at a broiler operation in WVa and at a turkey farm in Minnesota.

The most cost-effective practices often require a larger-scale, centralized solution. Besides, farmers would much prefer to focus on farming and literally hand their manure off to someone else, and gasification is a great way for them to hand it off.

According to the chart on page 25 of the 2010 World Resources Institute report on nutrient trading in the Chesapeake Bay, the nitrogen (N) reduction cost using **farm-scale**, Enhanced Nutrient Management Plans (EQIP Code 590) is **$21.90**.

Centralized animal waste gasification systems are completely scalable, beginning from 1,500 lbs per hour (6,000 tons per year), they can receive litter from 20-30 farms and operate around the-clock like a small power plant. The efficiency of nutrient reduction and the nutrient removal cost per pound is dramatically lower. Here is an example using 3,000 lbs of litter per hour.

There is almost 1,700 lbs of P per day in 72,000 lbs of gasified poultry litter. Nearly 100% of the P remains bound to the biochar. The biochar-bound ~81% of the P is water-insoluble (i.e. is recalcitrant), but when land-applied as a soil amendment, this 81% slowly becomes plant-available over time.

3,000 lbs of litter / hr. represents a capture rate of 561,000 pounds of P per year

There will be 3,350 lbs of N per day in 72,000 lbs of gasified poultry litter. During drying, the ammonia that is driven off is diverted into the oxidizer and combusted, where the N and the H separate. Almost 90% (3,000 lbs per day) of the N is emitted into the air as N_2 gas, the air we breathe. 250 pounds of N remains with the biochar, and less than 100 pounds of N per day is emitted into the air in the form of NOx.

3,000 lbs of litter / hr. represents a capture rate of 990,000 pounds of N per year

Gasification is an ideal, farmer-owned cooperative, BMP solution for off-site, large-scale, cost-effective removal of nutrients from the Shenandoah River watershed in Augusta, Rockingham, Page and Shenandoah Counties.

The facility cost, including the land, litter shed, dryer, gasifier, automation controls, generator, granulator, an all-electric tractor tractor, and all required equipment is $3.0 to $3.5 million. If 20 large poultry farms in Rockingham County provide a total 33,600 tons of litter to their gasification cooperative per year, and if the NRCS provides $67,200 per farm, the total first-year cost will be $1,344,000.

With only revenue from net metering guaranteed currently, neither loans nor investment capital will be available for the first two facilities.

For that reason, we propose that the NRCS funding for the new animal waste gasification standard be established at $40 per ton of fresh manure for both broilers and turkeys per ASABE Standard D384.2 for up to twenty four (24) months for each of the first two (2) gasification facilities.

Ignoring for a moment how much N would be replaced by commercial fertilizer and thus the net N offsets that the DEQ could certify, this level of NRCS funding would result in a N reduction cost of $1.36 per pound, and a P reduction cost of $2.40 per pound in the first year alone. As mentioned above, the N reduction cost using Enhanced Nutrient Management Plans is $21.90 per pound.

The NRCS funding would be guaranteed during the first twenty four months for each facility, but this funding would be reduced as contracts are signed by the co-op and revenue begins to flow from the sale of nutrient offsets and biochar. The same two-year guarantee and reductions from sales would apply to the second facility. The poultry farmer-owned cooperative would vigorously pursue the sale of nutrient offsets to the state's new Nutrient Trading Sub-fund (Senate Bill 1100), and as the Virginia Nutrient Credit Exchange Association is expanded to include agriculture.

Applied for $400K CIG - NRCS -

What is the best source NRCS funding during the current fiscal year?

We have discussed EQIP, but EQIP is currently limited to **farm-scale** practices.

We are businessmen and we do not understand EQIP as well as we would like, but we do know that a large-scale centralized gasification facility can:

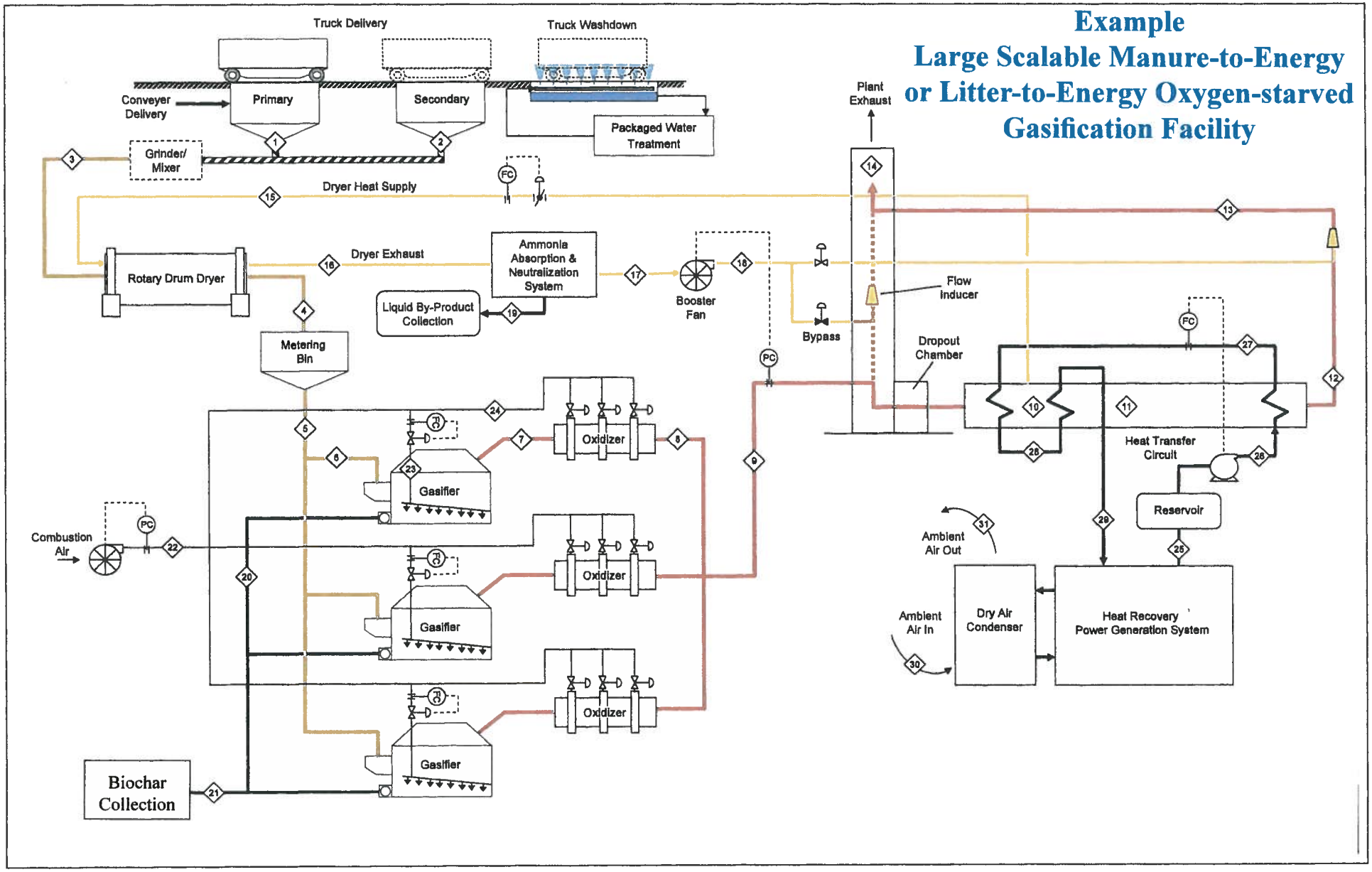
- accept litter 6 days per week from 20+ farms that are in close proximity,
- use all-electric tractors to haul the litter and biochar short distances, and
- operate most cost-effectively around-the-clock, like a small power plant,

thus making it the lowest cost, most environmentally sound option to help the Commonwealth meet its TMDL obligations under Virginia's WIP.

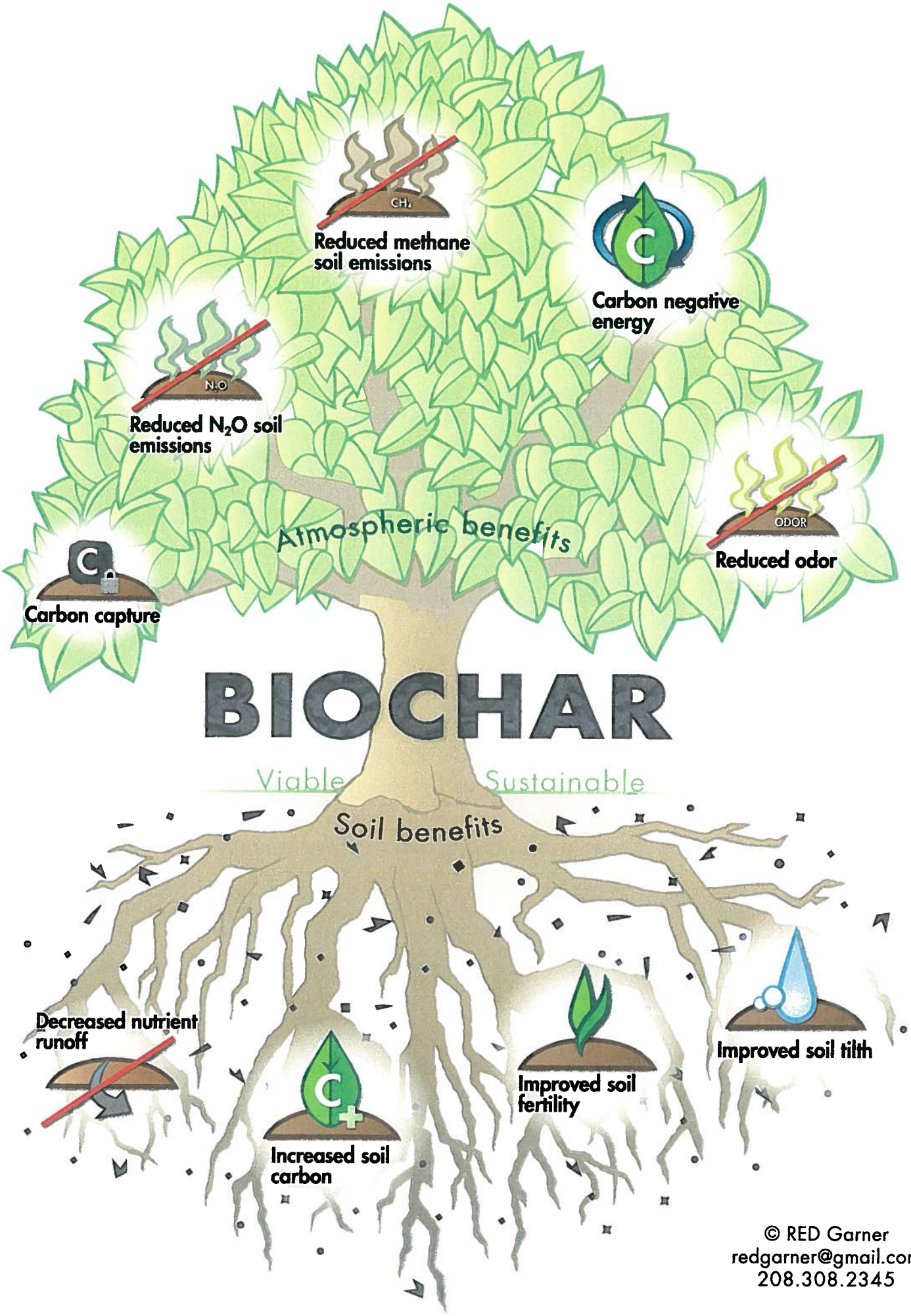
We are open to suggestions regarding an alternative NRCS funding source for the establishment of the first two cost-effective, large-scale, poultry-farmer-owned gasification facilities in the Valley.

Peter Thomas, Coaltec Energy USA ***434-989-1417***

Example
Large Scalable Manure-to-Energy or Litter-to-Energy Oxygen-starved Gasification Facility



Illustrations by Kevin D. Brown



GRP Ranking Criteria - Worksheet

GRASSLAND RESERVE PROGRAM (GRP), NRCS Virginia (rev. 10/2010)

Name _____ County _____

Address _____ FIPS Code 51-_____

_____

FY_____ Congressional District _____

Phone _____ Tax ID # or DUNS # _____

FSA Farm #(s) _____ Tract #(s) _____

Field #(s) _____

Size of offered Grassland: _____ acres

Type of agricultural operation: _____

Is the Adjusted Gross Income (AGI) of the applicant <$1 million? ☐ Yes ☐ No

Has applicant completed AGI form with FSA? ☐ Yes ☐ No

Does the landowner/operator meet the Conservation Compliance Requirements? ☐ Yes ☐ No

Is there an existing WRP, CRP, FRPP, EQIP, CBWI or WHIP contract on this land? ☐ Yes ☐ No

Parcel is eligible[1]: ☐ Yes ☐ No Reason why ineligible:

_____

1) Is this a resubmission of a prior year application? 10 points

☐ Yes (10 points) ☐ No (0 points)

_____ **points**

2) TYPE OF APPLICATION (circle one) 20 points

Permanent Easement	20
20 Year Rental Agreement	15
15 Year Rental Agreement	10
10 Year Rental Agreement	0

_____ **points**

3) THREAT OF CONVERSION[2] (Complete A, B and C)

READ FOOTNOTE[2] PRIOR TO COMPLETING THIS QUESTION

A) Urban/Suburban Development Pressure

High	20
Medium	7
Low	0

_____ **points**

B) Conversion to other agricultural uses
(Conversion expected to take place within the next two years)

Retiring CRP (CP-1, CP-2 only)	20
Conversion to forestry, poultry houses, crops, horticulture, etc.	15

_____ **points**

C) Soils

> 50% of offered acres is Class I	20
</= 50% of offered acres is Class I & II	15
< 50% of offered acres is Class II	10

_____ **points**

4) ESTIMATED EASEMENT OR RENTAL COST[3] 20 points

Rental

(County annual rental rate) x (# of years) x (acres offered) = $ _____

(Complete A or B but not both.)

A) Estimated easement cost per acre is:

> GARC	0 pts.
= GARC	10 pts.
< GARC	20 pts.

(G.A.R.C. is Geographic Area Rate Cap.)

_____ **points**

OR

B) Rental payment is:

$8-9/acre	14 pts
$10-11/acre	13 pts
>$12/acre	12 pts

_____ **points**

C) Funding Of Entity

Entity Contribution	< 50%	0 pt
Entity Contribution	>/= 50%	5 pts

_____ **points**

5) SUPPORT FOR GRAZING OPERATIONS 40 points

Is this an active grazing operation now? ☐ Yes 40 pts
☐ No 0 pts

_____ **points**

6) BIO-DIVERSITY 50 points

Does the offered acreage contain a stream or wetland? ☐ Yes ☐ No

If yes, is the stream buffered to 390 or 391 standards? ☐ Yes (10 pts) ☐ No (0 pts)

_____ **points**

Amount of wetland in the offered area: Size: < 1 ac (5 pts); 1-3 ac (7 pts); > 3 ac (10 pts) (No wetlands - 0 pts)

_____ **points**

Is the wetland currently fenced or is the landowner willing to fence the wetland to exclude livestock? (May have to manage wetland to maintain the desired herbaceous vegetative state.)

☐ Yes 10 pts ☐ No 0 pts _____ **points**

Support for Grassland Dependent Threatened and Endangered Species (documentation required)

If intended acreage supports 2 or more T&E species 20 pts
If intended acreage supports a single T&E species 15 pts

_____ **points**

7) LEVEL OF BIO-DIVERSITY 25 points

Cover	Calculation	Subtotal	Total
A) Pasture or Hay 1) Introduced species of grasses (i.e. fescue, orchard grass), or legume (i.e. clover, alfalfa)	___ ac x 5=	_____	
2) Combination of grass legume mix. Minority component must make up at least 25% of the stand.	___ ac x 10=	_____	
3) Land or portion of the land managed for or containing 40% or more native grasses and forbs, (broom straw; bluestem, switch grass, gammagrass, Indian grass and forbs i.e. Black Eyed Susan)	___ ac x 15=	_____	
B) Unique and declining herbaceous and grassland habitats. (State office field check required for all.) 1) Long leaf pine/wiregrass ecosystems (established). (State office field check required.) 2) Bluestem dominated grasslands near Bath/Highland Cty. line. 3) Remnant prairie grasslands in vicinity of Rapidan, VA[4] 4) Unique herbaceous vegetation communities along South River near Stuarts Draft.	___ ac x 25= ___ ac x 25= ___ ac x 20= ___ ac x 25=	_____ _____ _____ _____	
TOTAL			

Total ÷ ac = _____ points

8) RESTORATION REQUIRED[5] (Complete A or B but not both) 10 points

A) Is the acreage being managed to an RMS level? ☐ Yes (10 points) ☐ No (0 points)

_____ **points**

If no to the above question:

B) Estimated percent of Practices already installed to meet the required RMS Level.

<10%	0 points	50%	4 points
10%	1	70%	6
30%	2	>90%	8

_____ **points**

9) BONUS POINTS: 25 points

Is landowner willing to leave a minimum of 5% of the area in blocks no less than two acres in size undisturbed during the primary nesting season of April 15 – August 15?

☐ Yes (10 pts) ☐ No (0 pts)

_____ **points**

Within the first year is landowner willing to establish or add an additional 10% of offered acreage to native grasses and forbs. ☐ Yes (10 pts) ☐ No (0 pts)

_____ **points**

Is the area listed on or eligible for listing on the National Register of Historic Properties (NRHP) (i.e. Civil War battlefield, Indian site - must be documented).

☐ Yes (5 pts) ☐ No (0 pts) _____**points**

TOTAL POINTS ☐ **points**

Estimated total cost of conservation practices to obtain an RMS Level: $_____

Estimated total cost required to establish native grass and forbs if applicable:

$_____

Total Cost: $_____

_____ _____

Landowner Date District Conservationist Date

Points checked and verified by _____

Program Manager Date

Give the landowner a copy of the Easement Document or Rental Agreement for his/her information.

[1] Eligibility: If parcel is under a WRP, FRPP or CRP contract, then it is not eligible. If this tract has a WHIP, CBWI or EQIP contract that is dependent on grass for fulfillment of the contract, then the tract is ineligible (i.e. EQIP grazing land contract).

[2] Item 2: Threat of conversion

A) Urban/Suburban Development Pressure refers to the conversion of the majority of the tract due to intensive commercial and or residential development.

High Conversion potential: To receive a high rating the conversion of the grassland is expected to occur within 3 years and 60% of the area is 0-20% slopes. Other factors to include in this decision are location along a major highway, interstate interchange or hard surface thoroughfares (usually high traffic areas); recent large scale development within 0.5 miles; water and sewer available; located on a shoreline; personal knowledge of the area.

Medium Conversion potential: To receive a medium rating the conversion of the grassland is expected to occur within 3 to 10 years and 60% of the area is 0-20% slopes. Other factors to include in this decision are location along state paved highways; recent large scale development within 0.5 -5 miles, personal knowledge of the area.

Low Conversion potential: To receive a low rating the conversion of the grassland is not expected to occur within 10 years and 60% of the area is 0-20% slopes. Other factors to include in this decision are location along state paved highways; recent large scale development within 5+ miles, personal knowledge of the area.

B) Conversion to other agricultural uses for 15 point category "Conversion to forestry, poultry houses, crops, horticulture, etc". The landowner must state that within the next 2 years he is definitely committed to convert the offered grassland to woodland, cropland, horticulture, or other agricultural non-grass uses.

[3] Complete only the applicable easement or the rental section - not both. Use appropriate GARC to estimate the easement cost. The actual easement compensation will be determined by the lowest of the following: a market analysis, the geographic area rate cap (GARC) or the offer made by the landowner.

[4] Area includes land north of the town of Orange with Rt. 230 and Rt. 20 as the southern boundaries to the town of Culpeper, bordered on the west by Rt. 29 and the East by Rt. 522.

[5] Cost sharing is available for restoration work at the same rate as provided by EQIP. If the area is currently at an RMS level and some work is necessary to complete enhancement work, the estimated cost should be indicated; however the applicant would still receive the 10 points.

Print Close

Ranking Tool Summary
for FY2011 - Habitat Maintenance/Protection
(Released 11/30/2010)

Description:

This tool applies to the following project types (not exclusive) • Manage existing native hardwood forests (primarily oaks) to create widely spaced hardwoods with early successional understory (savannas; 666 with 338); 645 Upland Wildlife Habitat Management required as part of the application • Invasive species control (use 595 for herbaceous and 314 for woody); 644 Wetland Wildlife Habitat Management OR 645 Upland Wildlife Habitat Management required as part of the application depending on project location • Management of existing early successional habitat ; 645 Upland Wildlife Habitat Management required as part of the application • Management of existing wetlands and/or riparian buffers (forested or herbaceous); 644 Wetland Wildlife Habitat Management required as part of the application • Exclude cattle (382) from existing riparian or wildlife areas; 644 Wetland Wildlife Habitat Management OR 645 Upland Wildlife Habitat Management required as part of the application depending on project location

Land Uses:

Crop, Forest, Hay, Mined, Native/Naturalized Pasture, Pasture, Water, Wildlife

Efficiency Score:

Scoring Multiplier: 10.000
Scoring Ranges and Results Text:

High: 100 - 66	Medium: 65 - 33	Low: 32 - 1
The practices in the application are in the high score range	The practices in the application are in the medium score range	The practices in the application are in the low score range

Optional Notes:

National Priorities:

Scoring Multiplier: 1.000
Scoring Ranges and Results Text:

High: 250 - 170	Medium: 169 - 90	Low: 89 - 1
The application is in the high score range	The application is in the medium score range	The application is in the low score range

Questions:

Number	Question	Points
1	a. Retain wildlife and plant benefits on land exiting the Conservation Reserve Program?	40
1	b. Address and support existing conservation initiatives such as but not limited to the following or new conservation initiatives that support State, National or tribal fish or wildlife plans: Sage Grouse, Lesser Prairie Chicken, Longleaf Pine, New England-New York Forestry	40
1	c. Benefit federally listed threatened and endangered, at-risk, candidate, fish or wildlife species of concern?	20
1	d. Benefit prioritized native habitat critical to a fish or wildlife species?	20
1	e. Increase, improve or establish pollinator habitat?	20
1	f. Eradicate or control prioritized noxious or invasive species?	20
1	g. Benefit declining or important aquatic wildlife species prioritized in the State WHIP Plan?	20
1	h. Implement conservation practices which benefit prioritized fish or wildlife species in forested areas?	15
1	i. Establish habitat on pivot corners and irregular areas on agricultural land?	10
1	j. Provide self-sustaining habitat for prioritized fish and wildlife while reducing net carbon emissions or boosting carbon storage (e.g., warm season perennial grasses, trees or shrubs)?	10
1	k. Benefit migration and other movement corridors for prioritized wildlife?	15
2	a. Complete habitat development within the first two years of the agreement?	20
	Total Points	250

State Issues:

Scoring Multiplier: 1.000
Scoring Ranges and Results Text:

High: 400 - 270	Medium: 269 - 140	Low: 139 - 1
The application is in the high score range	The application is in the medium score range	The application is in the low score range

Questions:

Sub-heading Number	Question Number	Question	Points
1		For questions 1-3, only ONE yes answer may be given (use the appropriate habitat evaluation worksheet).	
	1	The planned habitat is >50 points and at least 60 points higher than the benchmark.	75
	2	The planned habitat is >50 points and at least 40-59 points higher than the benchmark.	50
	3	The planned habitat is >50 points and at least 20-39 points higher than the benchmark.	25
2		For question 4-6, only ONE yes answer may be given.	
	4	The size of the planned 645 area is greater than 25 acres.	50
	5	The size of the planned 645 area is 11-25 acres.	30
	6	The size of the planned 645 area is 2-10 acres	10
3		For question 7-8, only ONE yes answer may be given.	
	7	The planned area will serve as a >50 ft wide corridor for wildlife travel, regardless of total acreage.	50
	8	The planned area will serve as a 35-49 ft wide corridor for wildlife travel, regardless of total acreage.	30
4		General questions.	
	9	Is there an existing wildlife habitat plan approved by the State Biologist or Private Lands Wildlife Biologist?	25
	10	Have any maintenance activities (other than mowing) occurred on the habitat prior to the planned practice?	25
	11	The area controlled is either adjacent to or within 0.25 miles of a permanently managed/protected wildlife area.	25
	12	Livestock will be excluded from wildlife habitat.	50
	13	Prescribed burning will be used to manage any of the habitat.	25
		Maximum Points: Total Points	470

Local Issues:

Scoring Multiplier: 1.000
Scoring Ranges and Results Text:

High: 250 - 170	Medium: 169 - 90	Low: 89 - 1
The application is in the high score range	The application is in the medium score range	The application is in the low score range

Questions:

Sub-heading Number	Question Number	Question	Points
	1	Will the project benefit Early Successional species in the Quail Action Plan focus Districts (Big Walker, Headwaters, Culpeper, Three Rivers, Chowan Basin, Halifax)?	75
	2	Does the project include activities that improve the quality of an existing riparian buffer?	75
	3	Will the project occur within 2 miles of and benefit a species that is in the Toolkit layer T&E species (either DGIF or Natural Heritage)?	50
	4	Will the project occur within 2 miles of a listed water (Toolkit layer "T&E Water) and improve stream quality?	50

			Maximum Points:	Total Points	250

Selected Resource Concerns and Practices:

Fish and Wildlife: Habitat Fragmentation
- Brush Management (314)
- Critical Area Planting (342)
- Early Successional Habitat Development/M (647)
- Fence (382)
- Firebreak (394)
- Forest Stand Improvement (666)
- Herbaceous Weed Control (315)
- Prescribed Burning (338)
- Upland Wildlife Habitat Management (645)
- Wetland Enhancement (659)
- Wetland Wildlife Habitat Management (644)

Fish and Wildlife: Imbalance Among and Within Populations
- Brush Management (314)
- Critical Area Planting (342)
- Early Successional Habitat Development/M (647)
- Fence (382)
- Forest Stand Improvement (666)
- Herbaceous Weed Control (315)
- Prescribed Burning (338)
- Upland Wildlife Habitat Management (645)
- Wetland Enhancement (659)
- Wetland Wildlife Habitat Management (644)

Fish and Wildlife: Inadequate Cover/Shelter
- Brush Management (314)
- Critical Area Planting (342)
- Early Successional Habitat Development/M (647)
- Fence (382)
- Firebreak (394)
- Forest Stand Improvement (666)
- Herbaceous Weed Control (315)
- Prescribed Burning (338)
- Upland Wildlife Habitat Management (645)
- Wetland Enhancement (659)
- Wetland Wildlife Habitat Management (644)

Fish and Wildlife: Inadequate Food
- Brush Management (314)
- Critical Area Planting (342)
- Early Successional Habitat Development/M (647)
- Forest Stand Improvement (666)
- Herbaceous Weed Control (315)
- Prescribed Burning (338)
- Upland Wildlife Habitat Management (645)
- Wetland Enhancement (659)
- Wetland Wildlife Habitat Management (644)

Fish and Wildlife: Inadequate Space
- Brush Management (314)
- Critical Area Planting (342)
- Early Successional Habitat Development/M (647)
- Forest Stand Improvement (666)
- Herbaceous Weed Control (315)
- Prescribed Burning (338)
- Upland Wildlife Habitat Management (645)
- Wetland Enhancement (659)
- Wetland Wildlife Habitat Management (644)

Fish and Wildlife: Inadequate Water
- Upland Wildlife Habitat Management (645)
- Wetland Enhancement (659)
- Wetland Wildlife Habitat Management (644)

Fish and Wildlife: T&E Species: Declining Species, Species of Concern
- Brush Management (314)
- Critical Area Planting (342)

Early Successional Habitat Development/M (647)
Fence (382)
Firebreak (394)
Forest Stand Improvement (666)
Herbaceous Weed Control (315)
Prescribed Burning (338)
Upland Wildlife Habitat Management (645)
Wetland Enhancement (659)
Wetland Wildlife Habitat Management (644)

Fish and Wildlife: Threatened and Endangered Fish and Wildlife Species
Brush Management (314)
Critical Area Planting (342)
Early Successional Habitat Development/M (647)
Fence (382)
Firebreak (394)
Forest Stand Improvement (666)
Herbaceous Weed Control (315)
Prescribed Burning (338)
Upland Wildlife Habitat Management (645)
Wetland Enhancement (659)
Wetland Wildlife Habitat Management (644)

Plant Condition: Productivity, Health and Vigor
Brush Management (314)
Conservation Cover (327)
Early Successional Habitat Development/M (647)
Firebreak (394)
Forest Stand Improvement (666)
Hedgerow Planting (422)
Prescribed Burning (338)

Plant Condition: T&E Plant Species: Declining Species, Species of Concern
Brush Management (314)
Conservation Cover (327)
Early Successional Habitat Development/M (647)
Firebreak (394)
Forest Stand Improvement (666)
Hedgerow Planting (422)
Prescribed Burning (338)

Plant Condition: Threatened and Endangered Plant Species
Brush Management (314)
Conservation Cover (327)
Early Successional Habitat Development/M (647)
Firebreak (394)
Forest Stand Improvement (666)
Hedgerow Planting (422)
Prescribed Burning (338)

Plant Condition: Wildfire Hazard
Brush Management (314)
Conservation Cover (327)
Early Successional Habitat Development/M (647)
Firebreak (394)
Forest Stand Improvement (666)
Hedgerow Planting (422)
Prescribed Burning (338)

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Print Close

Ranking Tool Summary
for FY2011 - Organic Certified
(Released 12/13/2010)

Description:

Land Uses:
Crop, Hay, Headquarters, Pasture

Efficiency Score:
Scoring Multiplier: 100.000
Scoring Ranges and Results Text:

High: 100 - 75	Medium: 74 - 50	Low: 49 - 0
The conservation practices that will be established in the proposed contract are in the high point score range	The conservation practices that will be established in the proposed contract are in the medium point score range	The conservation practices that will be established in the proposed contract are in the low point score range

Optional Notes:

National Priorities:
Scoring Multiplier: 1.000
Scoring Ranges and Results Text:

High: 250 - 175	Medium: 174 - 90	Low: 89 - 0
The application is in the high point score range for addressing national priorities	The application is in the medium point score range for addressing national priorities	The application is in the low point score range for addressing national priorities

Questions:

Number	Question	Points
1	a. Meet regulatory requirements relating to animal feeding operations, or proactively avoid the need for regulatory measures?	15
1	b. Reduce sediment, nutrients or pesticides from agricultural operations located within a field that adjoins a designated impaired water body?	10
1	c. Reduce sediment, nutrients or pesticides from agricultural operations located within a field that adjoins a water body?	5
2	a. Increase groundwater recharge in identified groundwater depletion areas (http://water.usgs.gov/ogw/rasa/html/TOC.html)?	15
2	b. Conserve water from irrigation system improvements and result in estimated water savings of at least 5% and saved water will be available for other beneficial uses?	10
2	c. Conserve water in an area where the applicant participates in a geographically established or watershed-wide project?	5
3	a. Meet regulatory requirements relating to air quality or proactively avoid the need for regulatory measures?	15
3	b. Reduce green house gases such as methane, nitrous oxide, and volatile organic compounds (VOC)?	15
3	c. Increase carbon sequestration?	5
4	a. Reduce erosion to tolerable limits (Soil "T")?	15
5	a. Benefit threatened and endangered, at-risk, candidate, or species of concern as	15

	identified in a State wildlife plan?	
5	b. Retain wildlife and plant benefits on land exiting the Conservation Reserve Program (CRP)?	15
6	a. Eradicate or control noxious or invasive species?	10
6	b. Increase, improve or establish pollinator habitat?	10
6	c. Implement precision agricultural methods?	10
6	d. Properly dispose of animal carcasses?	5
6	e. Implement an Integrated Pest Management plan?	5
7	a. Reduce energy consumption on the agricultural operation?	15
7	b. Increase on-farm energy efficiency with more efficient equipment?	10
7	c. Assist in producing energy from renewable resources (solar, wind, biofuel, etc)?	10
8	a. Implementation of all planned conservation practices within three years of contract obligation?	10
8	b. Improvement of existing conservation practices or conservation systems already in place at the time the application is accepted, or will complete an existing conservation system?	10
9	a. If the applicant has an existing EQIP contract, has it been, and is it now, on schedule and in full compliance?	5
9	b. Did the applicant successfully complete any past contract(s) in full compliance?	5
9	c. Is this the applicant's first EQIP application?	5
	Total Points	250

State Issues:

Scoring Multiplier: 1.000

Scoring Ranges and Results Text:

High: 400 - 300	Medium: 299 - 200	Low: 199 - 0
The application is in the high point score range for addressing state resource concerns	The application is in the medium point score range for addressing state resource concerns	The application is in the low point score range for addressing state resource concerns

Questions:

Sub-heading Number	Question Number	Question	Points
1		Practice Implementation to Support Organic (maximum of 50 points, only one selection allowed)	
	1	Practice schedule provides for implementsation of all funded practices within two years or less.	50
	2	Practice schedule provides for implementation of all funded practices within three years or less.	30
2		Soil Resource Issues (maximum of 85 points)	
	1	EQIP plan includes implementation of two or more soil building/enhancing practices that address soil tith, crusting, water infiltration, organic matter, compaction, etc., to FOTG quality criteria standards. These practices are: 317, 328, 340, and 633.	75
	2	EQIP plan includes implementation of one soil building/enhancing practices that address soil tith, crusting, water infiltration, organic matter, compaction, etc., to FOTG quality criteria standards. These practices are: 317, 328, 340, and 633.	50
	3	Soil Condition: EQIP plan includes implementation of practice 590 Nutrient Management to FOTG quality criteria for management of soil fertility, plant nutrients, and soil amendments.	10
3		Soil Erosion Resource Issues:	

	1	EQIP plan includes practices that will result in measurable reduction of erosion from all sources or participant has already addressed all erosion problems to FOTG quality criteria standards. These practices are: 329, 330, 332, 340, 342, 345, 410, 412, 468, 561, 575, 585, & 600.	40
4		Water Quality Resource Issues:	
	1	EQIP plan includes practices that will result in reduction of non point source pollution, such as nutrients, pesticides, and sediment, leaving the treatment unit to FOTG quality criteria standards. These practices are: 350, 390, 391, 393, 472, 527, 558, 574, 578, 633 & 638	40
	2	EQIP plan includes implementation of practice 595 Pest Management and an IPM plan to FOTG quality criteria for management of pests and noxious and invasive species to FOTG quality criteria standards.	15
	3	EQIP plan includes implementation of practice 633 Waste Util ization to manage domestic livestock manure to FOTG quality criteria standards to protect surface and groundwater resources.	15
5		Plant Condition Resource Issues:	
	1	Plant Condition: EQIP plan includes practices that will result in management of vegetation and surface residues to FOTG quality criteria standards. These practices include: 314, 380, 382, 511, 512, 528 & 595	30
6		Domestic Animal Resource Issues:	
	1	EQIP plan includes implementation of practices that limit and manage domestic livestock access to streams, creeks, and other natural water bodies to FOTG quality criteria standards. These practices include: 472 & 578	50
	2	EQIP plan includes implementation of practices to assure adequate clean off-stream domestic livestock drinking water sources are available in the treatment unit and meets FOTG quality criteria standards. These practices include: 516, 533,574,614, 642	30
	3	EQIP plan includes implementation of practice 528 Prescribed Grazing to FOTG quality criteria standards for management of plant species, livestock, residues, feed, and other identified resource needs.	25
	4	EQIP plan includes implementation of practice 511 Forage Harvest Management to address National Organic Prorgram requirements for management of feed supplements and forage supplies.	10
7		Fish and Wildlife Resourec Issues:	
	1	EQIP plan includes implementation of conservation practices that include pollinator plant species for organic production systems (e.g., filter and buffer strips, hedge rows, windbreaks, etc.). These practices include: 386, 390, 422, 612	30
	2	EQIP plan includes implementation of practices that include pollinator-friendly plant species in the crop rotation system. These practices include: 327 & 340 (annual practices)	20
		Maximum Points: Total Points	520

Local Issues:

Scoring Multiplier: 1.000

Scoring Ranges and Results Text:

High: 250 - 200	Medium: 199 - 100	Low: 99 - 0
The application is in the high point score range for addressing local resource concerns	The application is in the medium point score range for addressing local resource concerns	The application is in the low point score range for addressing local resource concerns

Questions:

Sub-heading	Question	Question	Points

Number	Number		
1		Impaired Watershed Improvement	
	1	EQIP plan includes practices that will manage excess surface water discharge from the treatment unit to an impaired water body (e.g., EPA 303d list, etc.) to FOTG quality criteria standards.	50
2		Local Food Systems	
	2	EQIP plan includes installation of a High Tunnel.	20
		Maximum Points: Total Points	70

Selected Resource Concerns and Practices:

Domestic Animals: Inadequate Quantities and Quality of Feed and Forage
- Herbaceous Weed Control (315)

Domestic Animals: Inadequate Shelter
- Livestock Shade Structure (717)

Domestic Animals: Inadequate Stock Water
- Pipeline (516)
- Pumping Plant (533)
- Spring Development (574)
- Water Well (642)
- Watering Facility (614)

Domestic Animals: Stress and Mortality
- Livestock Shade Structure (717)
- Pipeline (516)
- Pumping Plant (533)
- Spring Development (574)
- Water Well (642)
- Watering Facility (614)

Fish and Wildlife: Inadequate Cover/Shelter
- Conservation Cover (327)
- Field Border (386)
- Hedgerow Planting (422)
- Tree/Shrub Establishment (612)

Fish and Wildlife: Inadequate Food
- Conservation Cover (327)
- Field Border (386)
- Hedgerow Planting (422)
- Tree/Shrub Establishment (612)

Plant Condition: Forage Quality and Palatability
- Brush Management (314)
- Fence (382)
- Herbaceous Weed Control (315)
- Pasture and Hay Planting (512)
- Prescribed Grazing (528)

Plant Condition: Noxious and Invasive Plants
- Brush Management (314)
- Fence (382)
- Herbaceous Weed Control (315)
- Mulching (484)
- Pasture and Hay Planting (512)
- Prescribed Grazing (528)

Plant Condition: Productivity, Health and Vigor
- Brush Management (314)
- Fence (382)
- Herbaceous Weed Control (315)
- Mulching (484)
- Nutrient Management (590)
- Pasture and Hay Planting (512)
- Pest Management (595)

Prescribed Grazing (528)
Seasonal High Tunnel System for Crops (798)
Windbreak/Shelterbelt Establishment (380)

Soil Condition: Compaction
Cover Crop (340)

Soil Condition: Contaminants-Animal Waste and Other Organics - N
Composting Facility (317)
Cover Crop (340)

Soil Condition: Contaminants-Animal Waste and Other Organics - P
Composting Facility (317)
Cover Crop (340)

Soil Condition: Organic Matter Depletion
Composting Facility (317)
Conservation Crop Rotation (328)
Cover Crop (340)
Mulching (484)
Waste Utilization (633)

Soil Erosion: Classic Gully
Critical Area Planting (342)
Diversion (362)
Grade Stabilization Structure (410)
Grassed Waterway (412)
Lined Waterway or Outlet (468)
Water and Sediment Control Basin (638)

Soil Erosion: Ephemeral Gully
Animal Trails and Walkways (575)
Critical Area Planting (342)
Diversion (362)
Grassed Waterway (412)
Heavy Use Area Protection (561)
Lined Waterway or Outlet (468)
Stripcropping (585)
Terrace (600)
Water and Sediment Control Basin (638)

Soil Erosion: Sheet and Rill
Animal Trails and Walkways (575)
Contour Buffer Strips (332)
Contour Farming (330)
Cover Crop (340)
Diversion (362)
Heavy Use Area Protection (561)
Residue Mgmt, Mulch Till (345)
Residue Mgmt-No-Till/Strip Till/Direct S (329)
Stripcropping (585)
Terrace (600)

Water Quality: Excessive Nutrients and Organics in Groundwater
Access Control (472)
Animal Mortality Facility (316)
Filter Strip (393)
Nutrient Management (590)
Riparian Forest Buffer (391)
Riparian Herbaceous Cover (390)
Sinkhole and Sinkhole Area Treatment (527)
Solid/Liquid Waste Separation Facility (632)
Vegetated Treatment Area (635)
Waste Storage Facility (313)
Waste Utilization (633)

Water Quality: Excessive Nutrients and Organics in Surface Water
Access Control (472)
Animal Mortality Facility (316)
Filter Strip (393)

Nutrient Management (590)
Riparian Forest Buffer (391)
Riparian Herbaceous Cover (390)
Roof Runoff Structure (558)
Sediment Basin (350)
Sinkhole and Sinkhole Area Treatment (527)
Solid/Liquid Waste Separation Facility (632)
Stream Crossing (578)
Vegetated Treatment Area (635)
Waste Storage Facility (313)
Waste Utilization (633)

Water Quality: Excessive Suspended Sediment and Turbidity in Surface Water
Access Control (472)
Access Road (560)
Filter Strip (393)
Riparian Forest Buffer (391)
Riparian Herbaceous Cover (390)
Roof Runoff Structure (558)
Sediment Basin (350)
Sinkhole and Sinkhole Area Treatment (527)
Spring Development (574)
Stream Crossing (578)
Vegetated Treatment Area (635)
Water and Sediment Control Basin (638)

Water Quality: Harmful Levels of Pathogens in Groundwater
Access Control (472)
Animal Mortality Facility (316)
Filter Strip (393)
Nutrient Management (590)
Riparian Forest Buffer (391)
Riparian Herbaceous Cover (390)
Sinkhole and Sinkhole Area Treatment (527)
Waste Storage Facility (313)
Waste Utilization (633)

Water Quality: Harmful Levels of Pathogens in Surface Water
Access Control (472)
Animal Mortality Facility (316)
Filter Strip (393)
Nutrient Management (590)
Riparian Forest Buffer (391)
Riparian Herbaceous Cover (390)
Roof Runoff Structure (558)
Sediment Basin (350)
Solid/Liquid Waste Separation Facility (632)
Spring Development (574)
Stream Crossing (578)
Vegetated Treatment Area (635)
Waste Storage Facility (313)

Water Quality: Harmful Temperatures of Surface Water
Riparian Forest Buffer (391)
Riparian Herbaceous Cover (390)

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Print Close

Ranking Tool Summary
for FY2011 - Upland Wildlife Habitat Creation
(Released 11/30/2010)

Description:

This tool applies ONLY to the following project types • Establish native hardwood forests (primarily oaks) to create widely spaced hardwoods with early successional understory (savannas; use 612 and coordinate with the State Biologist); 645 Upland Wildlife Habitat Management required as part of the application • Restore rare or declining habitat: Eastern Shore Atlantic Flyway Habitat (643), Longleaf Pine Historic Range (Brunswick, Greensville, Sussex, Prince George, Southampton, Isle of Wight, Surry, Suffolk, Chesapeake, Virginia Beach, James City and York Counties; 643), Mine Shaft and Adit Closing (457), Grassland >25 acres for Grassland Birds (327d); 645 Upland Wildlife Habitat Management required as part of the application • Creation of new early successional habitat (for pollinator habitat use Wildflower Meadows for Wildlife, 327a); 645 Upland Wildlife Habitat Management required as part of the application

Land Uses:

Crop, Forest, Hay, Mined, Native/Naturalized Pasture, Pasture, Water, Wildlife

Efficiency Score:

Scoring Multiplier: 10.000
Scoring Ranges and Results Text:

High: 100 - 66	Medium: 65 - 33	Low: 32 - 1
The practices in the application are in the high score range	The practices in the application are in the medium score range	The practices in the application are in the low score range

Optional Notes:

National Priorities:

Scoring Multiplier: 1.000
Scoring Ranges and Results Text:

High: 250 - 170	Medium: 169 - 90	Low: 89 - 1
The application is in the high score range	The application is in the medium score range	The application is in the low score range

Questions:

Number	Question	Points
1	a. Retain wildlife and plant benefits on land exiting the Conservation Reserve Program?	40
1	b. Address and support existing conservation initiatives such as but not limited to the following or new conservation initiatives that support State, National or tribal fish or wildlife plans: Sage Grouse, Lesser Prairie Chicken, Longleaf Pine, New England-New York Forestry	40
1	c. Benefit federally listed threatened and endangered, at-risk, candidate, fish or wildlife species of concern?	20
1	d. Benefit prioritized native habitat critical to a fish or wildlife species?	20
1	e. Increase, improve or establish pollinator habitat?	20
1	f. Eradicate or control prioritized noxious or invasive species?	20
1	g. Benefit declining or important aquatic wildlife species prioritized in the State WHIP Plan?	20
1	h. Implement conservation practices which benefit prioritized fish or wildlife species in forested areas?	15
1	i. Establish habitat on pivot corners and irregular areas on agricultural land?	10
1	j. Provide self-sustaining habitat for prioritized fish and wildlife while reducing net carbon emissions or boosting carbon storage (e.g., warm season perennial grasses, trees or shrubs)?	10
1	k. Benefit migration and other movement corridors for prioritized wildlife?	15
2	a. Complete habitat development within the first two years of the agreement?	20
	Total Points	250

State Issues:

Scoring Multiplier: 1.000
Scoring Ranges and Results Text:

High: 400 - 270	Medium: 269 - 140	Low: 139 - 1
The application is in the high score range	The application is in the medium score range	The application is in the low score range

Questions:

Sub-heading Number	Question Number	Question	Points
1		For questions 1-3, only ONE yes answer may be given (use the appropriate habitat evaluation worksheet).	
	1	The planned habitat is >50 points and at least 60 points higher than the benchmark.	75
	2	The planned habitat is >50 points and at least 40-59 points higher than the benchmark.	50
	3	The planned habitat is >50 points and at least 20-39 points higher than the benchmark.	25
2		For question 4-6, only ONE yes answer may be given.	
	4	The size of the planned 645 area is greater than 25 acres.	50
	5	The size of the planned 645 area is 11-25 acres.	30
	6	The size of the planned 645 area is 2-10 acres	10
3		For question 7-8, only ONE yes answer may be given.	
	7	The planned area will serve as a >50 ft wide corridor for wildlife travel, regardless of total acreage.	50
	8	The planned area will serve as a 35-49 ft wide corridor for wildlife travel, regardless of total acreage.	30
4		Will the proposed practices protect, promote or create any of the following rare or declining habitats:	
	9	Oak Savanna Restoration (612)	100
	10	Prescribed burning will be used to manage oak savannas	25
	11	Longleaf Pine forests (643)	100
	12	Prescribed burning will be used to manage longleaf pine	25
	13	Eastern Shore Bird Habitat (643)	100
	14	Mine Shaft & Adit Closing (457)	350
	15	Creation of grassland bird habitat that contains a single >25 acre block of mixed native warm season grasses and no planted woody species (327)	100
5		General questions:	
	16	Is there an existing wildlife habitat plan approved by the State Biologist or Private Lands Wildlife Biologist?	25
	17	Prescribed burning will be used to manage any of the habitat.	25
	18	Livestock will be excluded from wildlife habitat.	25
	19	The proposed project establishes new early successional habitat.	25
	20	Planting of pollinator habitat (327a) containing a minimum of 2 native warm season grass species and 9 native wildflower species is planned.	50
		Maximum Points: Total Points	1270

Local Issues:

Scoring Multiplier: 1.000
Scoring Ranges and Results Text:

High: 250 - 170	Medium: 169 - 90	Low: 89 - 1
The application is in the high score range	The application is in the medium score range	The application is in the low score range

Questions:

Sub-heading	Question Number	Question	Points

Number			
	1	Will the project benefit Early Successional species in the Quail Action Plan focus Districts (Big Walker, Headwaters, Culpeper, Three Rivers, Chowan Basin, Halifax)?	80
	2	Will the project occur within 2 miles of and benefit a species that is in the Toolkit layer T&E species (either DGIF or Natural Heritage)?	60
	3	Will the project occur within 2 miles of a listed water (Toolkit layer "T&E Water) and improve stream quality?	60
	4	The location of the planned Eastern Shore Bird Habitat area (643) is within 6 miles of the southernmost tip of Northampton County (from outlet of Plantation Creek and south).	25
	5	The location of the planned Eastern Shore Bird Habitat area (643) is within one mile from either coastline (bayside or oceanside).	25
		Maximum Points: Total Points	250

Selected Resource Concerns and Practices:

Fish and Wildlife: Habitat Fragmentation
- Brush Management (314)
- Conservation Cover (327)
- Critical Area Planting (342)
- Early Successional Habitat Development/M (647)
- Fence (382)
- Field Border (386)
- Firebreak (394)
- Forest Stand Improvement (666)
- Hedgerow Planting (422)
- Herbaceous Weed Control (315)
- Prescribed Burning (338)
- Restoration and Management of Declining (643)
- Tree/Shrub Establishment (612)
- Upland Wildlife Habitat Management (645)

Fish and Wildlife: Imbalance Among and Within Populations
- Brush Management (314)
- Conservation Cover (327)
- Critical Area Planting (342)
- Early Successional Habitat Development/M (647)
- Fence (382)
- Field Border (386)
- Forest Stand Improvement (666)
- Hedgerow Planting (422)
- Herbaceous Weed Control (315)
- Mine Shaft and Adit Closing (457)
- Prescribed Burning (338)
- Restoration and Management of Declining (643)
- Tree/Shrub Establishment (612)
- Upland Wildlife Habitat Management (645)

Fish and Wildlife: Inadequate Cover/Shelter
- Brush Management (314)
- Conservation Cover (327)
- Critical Area Planting (342)
- Early Successional Habitat Development/M (647)
- Fence (382)
- Field Border (386)
- Firebreak (394)
- Forest Stand Improvement (666)
- Hedgerow Planting (422)
- Herbaceous Weed Control (315)
- Mine Shaft and Adit Closing (457)
- Prescribed Burning (338)
- Restoration and Management of Declining (643)
- Tree/Shrub Establishment (612)
- Upland Wildlife Habitat Management (645)

Fish and Wildlife: Inadequate Food
- Brush Management (314)
- Conservation Cover (327)

Critical Area Planting (342)
Early Successional Habitat Development/M (647)
Field Border (386)
Forest Stand Improvement (666)
Hedgerow Planting (422)
Herbaceous Weed Control (315)
Prescribed Burning (338)
Restoration and Management of Declining (643)
Tree/Shrub Establishment (612)
Upland Wildlife Habitat Management (645)

Fish and Wildlife: Inadequate Space
Brush Management (314)
Conservation Cover (327)
Critical Area Planting (342)
Early Successional Habitat Development/M (647)
Field Border (386)
Forest Stand Improvement (666)
Hedgerow Planting (422)
Herbaceous Weed Control (315)
Mine Shaft and Adit Closing (457)
Prescribed Burning (338)
Restoration and Management of Declining (643)
Tree/Shrub Establishment (612)
Upland Wildlife Habitat Management (645)

Fish and Wildlife: Inadequate Water
Restoration and Management of Declining (643)
Upland Wildlife Habitat Management (645)

Fish and Wildlife: T&E Species: Declining Species, Species of Concern
Brush Management (314)
Conservation Cover (327)
Critical Area Planting (342)
Early Successional Habitat Development/M (647)
Fence (382)
Field Border (386)
Firebreak (394)
Forest Stand Improvement (666)
Hedgerow Planting (422)
Herbaceous Weed Control (315)
Mine Shaft and Adit Closing (457)
Prescribed Burning (338)
Restoration and Management of Declining (643)
Tree/Shrub Establishment (612)
Upland Wildlife Habitat Management (645)

Fish and Wildlife: Threatened and Endangered Fish and Wildlife Species
Brush Management (314)
Conservation Cover (327)
Critical Area Planting (342)
Early Successional Habitat Development/M (647)
Fence (382)
Field Border (386)
Firebreak (394)
Forest Stand Improvement (666)
Hedgerow Planting (422)
Herbaceous Weed Control (315)
Mine Shaft and Adit Closing (457)
Prescribed Burning (338)
Restoration and Management of Declining (643)
Tree/Shrub Establishment (612)
Upland Wildlife Habitat Management (645)

Plant Condition: Productivity, Health and Vigor
Brush Management (314)
Conservation Cover (327)
Early Successional Habitat Development/M (647)
Field Border (386)
Firebreak (394)
Forest Stand Improvement (666)
Hedgerow Planting (422)
Herbaceous Weed Control (315)

Prescribed Burning (338)
Restoration and Management of Declining (643)
Riparian Forest Buffer (391)
Riparian Herbaceous Cover (390)
Tree/Shrub Establishment (612)

Plant Condition: T&E Plant Species: Declining Species, Species of Concern
Brush Management (314)
Conservation Cover (327)
Early Successional Habitat Development/M (647)
Field Border (386)
Firebreak (394)
Forest Stand Improvement (666)
Hedgerow Planting (422)
Herbaceous Weed Control (315)
Prescribed Burning (338)
Restoration and Management of Declining (643)
Riparian Forest Buffer (391)
Riparian Herbaceous Cover (390)
Tree/Shrub Establishment (612)

Plant Condition: Threatened and Endangered Plant Species
Brush Management (314)
Conservation Cover (327)
Early Successional Habitat Development/M (647)
Field Border (386)
Firebreak (394)
Forest Stand Improvement (666)
Hedgerow Planting (422)
Herbaceous Weed Control (315)
Prescribed Burning (338)
Restoration and Management of Declining (643)
Riparian Forest Buffer (391)
Riparian Herbaceous Cover (390)
Tree/Shrub Establishment (612)

Plant Condition: Wildfire Hazard
Brush Management (314)
Conservation Cover (327)
Early Successional Habitat Development/M (647)
Field Border (386)
Firebreak (394)
Forest Stand Improvement (666)
Hedgerow Planting (422)
Herbaceous Weed Control (315)
Prescribed Burning (338)
Restoration and Management of Declining (643)
Riparian Forest Buffer (391)
Riparian Herbaceous Cover (390)
Tree/Shrub Establishment (612)

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NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

WASTE GASIFICATION FACILITY

(No.)

CODE ???

DEFINITION

Thermo-chemical treatment facility for animal and agricultural waste in an oxygen starved environment.

PURPOSE

Gasification of animal manure and other agricultural by-products is to address one or more of the following:

- To improve ground and surface water quality by reducing or concentrating the nutrient content, reducing organic strength, and/or reducing pathogen levels of agricultural operations
- To improve air quality by reducing odors and gaseous emissions
- To produce syngas for energy production and other value added by-products
- To facilitate desirable waste handling, storage, efficient transfer or land application alternatives for nutrients

CONDITIONS WHERE PRACTICE APPLIES

This practice applies where:

- The facility and associated components are part of an agricultural waste management system.
- Raw agricultural waste contains excess nutrients for land application based on crop utilization requirements or nutrient ratios need to be modified to be more consistent with crop utilization requirements. There is a need to reduce the potential for leaching or runoff of nutrients.
- Reduction of pathogens is desired.
- Odors and/or gaseous emissions from livestock production facilities and waste storage/treatment system components must be reduced.
- Syngas and/or process heat can be captured and used to dry manure or other agricultural products and/or generate electricity.
- Value-added byproducts can be produced to offset treatment costs.

CRITERIA

General Criteria Applicable to All Gasification Treatment Systems.

Laws and Regulations. Agricultural waste gasification facilities must be planned, designed, and constructed to meet all Federal/State/Tribal/Local laws and regulations.

Feasibility Study. The system provider shall conduct a feasibility study to determine whether the proposed project is feasible and meets the landowner's objectives. Identify the components of the proposed system and provide the costs, in time, money, or other resources, of the installation, start-up, and operation of the facility. Include information on feedstock availability, marketing the products and by-products, and the anticipated return on the investment. Identify any parts of the system that would require a commitment from an outside entity if their actions would impact feasibility. Include a clear identification of the resource concerns to be addressed and the anticipated effects on the environment.

Design. The system provider will complete and supply to the landowner/operator a

detailed design of the gasification system. If needed for proper operation, include designs for pre-processing and post-processing facilities such as solid/liquid separation and pelletizers.

As a minimum, include a process diagram in the design documentation along with the following information:

1. The volume and characteristics of the feedstock and of the anticipated products and by-products.

2. Projections of pre-processing and post-processing requirements, including storage, handling, transfer and utilization.

3. Expected air emissions from the system.

4. Nutrient fate projections within the system.

5. Expected pathogen reductions.

6. Process monitoring and control system requirements as described below in the monitoring section.

Feedstock Pre-processing. For the gasification system to function efficiently, pre-processing of the manure such as solid/liquid separation, drying and/or particle size manipulation may be required. Consult the Conservation Practice Standards, Solid/Liquid Separation Facility, Code 632, or Waste Treatment, Code 629 for pre-processing guidance.

Components. The gasification system provider will furnish a minimum one year warranty on all construction or applied processes. In addition, the manufacturer will provide a warranty with documentation that describes the service life of each component and what the warranty covers.

The minimum practice life for a gasification system is ten years. Clearly identify in the Operation and Maintenance Plan the expected replacement of any components which have less than a 10 year service life.

Monitoring. Install the necessary equipment to properly monitor and control the waste stream as part of the gasification system. Monitor the process control parameters identified in the design documentation.

If the gasification unit is located in a confined facility, environmental monitoring must be maintained to ensure proper air quality for working conditions.

Monitor the run status of critical equipment and unit processes.

The landowner/operator must have the interest and skills to monitor and maintain processes or contracts with a consultant to provide these services.

Gasification By-Products. Properly dispose of or beneficially use all gasification by-products in a safe and environmentally sensitive manner.

Handle and store all by-products in such a manner as to prevent nuisances to neighbors or to the public at large.

Use NRCS Conservation Practice Standard, Nutrient Management, Code 590, when by-products are land applied to supply plant nutrients.

Some of the potential gasification by-products include:

- Syngas. If the syngas is not self-consumed through the gasification process, it can be used for electricity generation, heating, cooling and/or pipeline quality gas. Additional processing of the syngas may be necessary for it to be properly utilized.
- Ash. Through complete gasification, most nitrogen and carbon is converted to a gas phase, while many of the other nutrients (i.e. phosphorus and potassium) remain in a concentrated form in the ash. Use of this material can reduce transportation costs for land application and improve nutrient placement.
- Biochar. Depending on the operating temperature, pressure and other parameters, the resulting ash may qualify as biochar, which is a carbon rich product. Biochar can be used as a soil amendment, carbon source or filtration medium for soil water. Evaluate the biochar produced to ensure it meets the desired use.
- Heat. One by-product of gasification is heat which can be used for drying, heating, cooling, and/or electricity generation.

- Liquid Fuels. Through further processing of the syngas, various types of liquid fuels can also be produced.

Structural Design. Design roofs and enclosures in accordance with the requirements of NRCS Conservation Practice Standards, Roofs and Covers, Code 367, and Waste Storage Facility, Code 313.

Facility Closure. Prepare a plan that describes the procedures required to close the facility.

Outside Fuel Source. Identify needed start-up or supplemental energy sources and provide appropriate storage and handling plans.

Safety. Include adequate safety features in the design of the gasification system to minimize hazards. Provide guards and shields for moving parts of the equipment used in the gasification process.

A considerable amount of heat is generated by gasification. Use of proper protective equipment such as gloves and insulated clothes is required.

Ensure that the gasifier and associated appurtenances are gas tight to avoid gas escape and air intake which could lead to the release of toxic gases and/or accumulation of flammable gases.

If the gasification system will create a safety hazard, fence the area and post warning signs to prevent usage for purposes other than intended.

As a minimum, post "Warning-Flammable Gas" and "No Smoking" signs. Provide appropriate fire protection equipment and syngas leak detection sensors, especially in confined areas.

Design the ventilation controls to maintain an environment that will prevent the release of smoke, gas or potential blow out from the system.

Carry out all treatment processes in accordance with all safety regulations.

If required, mark the location of underground gas lines with signs to prevent accidental disturbance or rupture. Properly label exposed pipe to indicate whether gas line or other.

Additional Criteria for Gasifiers that Do Not Self-Consume Syngas.

Syngas is flammable, highly toxic and potentially explosive. The design of a gasification system, including gas collection, control, storage and utilization processes, must address the hazards associated with normal operation and maintenance. Provide adequate safety measures and be in accordance with standard engineering practice for handling a flammable gas and to prevent undue safety hazards. As a minimum:

- Locate flares an appropriate distance from syngas sources and storage. Place enclosed flares as recommended by the manufacturer. The minimum distance of open flares from the syngas source or storage area is 95 feet. Maintain a minimum flare height of 10 feet. Ensure that flares are grounded or otherwise protected to minimize the chance of lightning strikes.
- Equip the flare with automatic ignition and powered by battery/solar or direct connection to electrical service. Ensure that the flare has a capacity equal to or greater than the anticipated maximum syngas production. Install a windshield to protect an open flare against wind.
- Install a flame trap device in the syngas line between the gasifier and sources of ignition or as recommended by the flame arrester manufacturer.

Gas Collection, Transfer, and Control System. Design the syngas collection, transfer, and control system to convey captured gas from the gasification unit to gas utilization equipment/devices (flare, boiler, engine, etc.) or storage.

1. Gas collection and transfer – Meet the following for pipe and/or appurtenances:
   - Securely anchor pipe and components to prevent displacement from normal forces and loads.
   - Pipe used for transfer of gas must include provisions for drainage of condensate, pressure and vacuum relief, and flame traps.

- For steel pipe meet the requirements of AWWA Specification C-200 or ASTM A53/A211 for stainless steel.
- For plastic pipe meet the requirements of AWWA Specification C-906 or ASTM D-3350 for HDPE.
- Install pipes to enable all sections to be safely isolated and cleaned as part of routine maintenance.

2. Gas Control
   - Locate and shelter equipment and components from the elements along with making them readily accessible for replacement or repair.
   - Ensure that the size of equipment and connecting pipe has a capacity consistent with its intended use.
   - Where electrical service is required at the control facility, meet the National Electrical Code, state and local requirements for all electrical wire, fixtures, and equipment.

3. Syngas Storage

   If syngas is to be stored for future use or post-processing, provide adequate volume to meet the requirements for its final use.

   Incorporate necessary safety precautions to prevent excess pressure in the gas storage area.

   Follow the guidelines outlined for the use of flares and flame traps for syngas storage units.

Gas Utilization. Design and install gas utilization equipment in accordance with standard engineering practice and the manufacturer's recommendations. Include a flare to burn off excess gas.

- Design gas-fired boilers, fuel cells, turbines, and internal combustion engines, when a component of the system, for burning syngas directly or burning as a mix with other fuel. Some equipment may require the removal of H_2S and other contaminants from the syngas before it will operate properly.
- Install and maintain a gas meter, suitable for measuring syngas.

CONSIDERATIONS

Location. Consider locating the gasification facility as near the source of manure or other waste as practicable and as far from neighboring dwellings or public areas as possible. Proper location should also consider slope, distance of manure and other waste transmission, vehicle access, wind direction, proximity of streams and flood plains, and visibility.

Visual Screening. Evaluate the visual impact of the gasification facility within the overall landscape context. Screening with vegetative plantings, landforms, or other measures may be implemented to alleviate a negative impact or enhance the view.

PLANS AND SPECIFICATIONS

Plans shall include all engineering drawings and supporting documentation as well as other plans required to manage the system such as a nutrient management plan for proper land application of by-products.

Prepare plans and specifications for gasification facilities in accordance with the criteria of this standard and good engineering practice.

As a minimum, provide the following in the plans and specifications:

1. Environmental Evaluation
2. Layout and installation details of livestock facilities, waste collection points, waste transfer components, storage facilities and gasification system.
3. Documentation that all necessary outside commitments have been confirmed.
4. Location of all inflow and discharge pipes, construction materials, and necessary appurtenances.
5. Details of support systems for all components of the gasification facility.
6. Fencing and signage as appropriate for safety purposes.

OPERATION AND MAINTENANCE

Develop an operation and maintenance (O&M) plan and review it with the owner/operator prior to construction of a gasification facility. Identify parameters considered critical to proper system function in the Operation and Maintenance Plan. Ensure that the O&M plan is consistent with the proper operation of all system components and contains requirements including but not limited to:

- Recommended loading rates and capacities of the gasification system.
- Proper operating procedures for the gasification system.
- Operation and maintenance manuals for pumps, blowers, instrumentation and control devices, and other equipment used as components of the gasification system.
- Description of the planned startup procedures, normal operation, safety issues, and normal maintenance items. This includes procedures for the planned replacement of components with less than a ten year service life.
- Alternative operation procedures in the event of equipment malfunction.
- Shut-down procedures for both maintenance and for permanent closure.
- Troubleshooting guide.

Monitoring and reporting plan designed to demonstrate system performance on an ongoing basis.

REFERENCES

Biochar for Environmental Management. Lehmann and Joseph. Earthscan. 2009.

Biomethane from Dairy Waste. A Sourcebook for the Production and Use of Renewable Natural Gas in California. Western United Dairymen. 2005. http://www.suscon.org/news/biomethane_report/Full_Report.pdf

Guide For Siting Small-Scale Biomass Projects in New York State. New York State Energy Research and Development Authority. 2009. http://www.nyserda.org/publications/Report09-07

Guideline for Safe and Eco-friendly Biomass Gasification – Gasification Guide. Intelligent Energy Europe – European Commission. 2009. http://gasification-guide.eu/gsg_uploads/documenten/D10_Final-Guideline.pdf

WRP Geographic Area Rate Caps (GARCs) historically were based upon:

Step 1 NASS/Census of agriculture data for market value/acre of land and buildings by county and counties grouped into regions;

Step 2 Excluding outlier data from one or two very high cost counties within some areas;

Step 3 Average/acre calculated for each area;

Step 4

Ave./acre -20% of the total value/acre assuming that 80% of the total value reported was the value of land alone yielded/acre land values (this was just a simple assumption to attempt to account for and subtract out the value due to improvements);

Step 5 Ave./acre -10% of the land value/acre assuming that retained recreational value was on average worth 10% of the land value reported by NASS (this was just a simple assumption to attempt to account and subtract out the value retained for recreational purposes); Recreational value could range from very important to completely irrelevant; we chose a number that assumes this property right is not a major determinant of agricultural land value; a number that satisfied NHQ;

Summary:

Notes: Compensation for the encumberance of the easement is included, i.e., they are receiving fair market value (perhaps higher than fair market value as the GARCs are based on whole tracts and what the easements we are acquiring are only for a subset of the entire tract, i.e., land suitable for WRP may or may not be in production; could be wooded, open, but not drained and thus unfarmable, drained and cropped, hayed and/or grazed and the values we start with presumably are weighted towards the productuve land on any given farm, not the unproductive land.

The 10% assumed retained recreational value that was subtracted out ranged from $283/acre (mountain regions) to $507/acre (northern region). This meant that WRP GARCS were lower than GRP GARCS.

GRP Geographic Area Rate Caps (GARCs) historically were based upon:

Steps 1-4 above +

Step 5 Ave./acre -the grassland value calculated and reported by the Agricultural Economics Department of VA Tech to the Virginia General Assembly for use-value taxation purposes: Their calculations are intended to estimate agricultural land value based upon capitalized income streams for cropland and pastureland (with and witrhout flood risk). This allows the general assembly to tax agricultural lands in counties that have adopted the use-value assessment program at agricultural rates instead of property values influenced by development pressure. Therefore, I used the use values as an attempt to reflect the value retained with a GRP easement since grazing continues.

Summary:

Note: The VA Tech pasture land use value estimates ranged from $60/acre (central region) to $180/acre (coastal region). As a percent of agricultural land value these deductions ranged from 1.45% (northern region) to 5.4% (coastal region)

Compensation for the encumberance of the easement is included in that they are receiving the full market value minus assumed value for improvements and minus the retained grazing value.

In practice, these methods for establishing the GARCs resulted in lower GARCs for WRP than for GRP.

Past/Current Data:	WRP			GRP		
Region	FY09	FY10[1/]	FY11[2/]	FY09	FY10[1/]	FY11[2/]
Northern region	$4,560	$4,470	**$8,410**	$5,000	$4,900	**$7,360**
Valley region	$3,510	$3,440	$4,460	$3,820	$3,740	$4,430
Mountain region	$2,540	$2,490	$2,730	$2,725	$2,670	$2,670
Central region	$2,740	$2,680	$2,550	$2,990	$2,930	$2,510
Coastal region	$2,960	$2,900	$3,030	$3,110	$3,050	$2,860
State-wide average:	$3,260	$3,200	$4,240	$3,530	$3,435	$3,970

Notes:

1/ FY10 values were adjusted for 2% inflation in '08 and 4% deflation through Nov. '09 per USDA/NASS;

2/ FY11 caps for the northern region were forced to $5,000 by NHQ;

Beginning with FY11 the WRP and GRP Geographic Area Rate Caps (GARCs) were based upon market analyses prepared by Hallmark Properties, Inc.:

For WRP:

The contractor used "a representative sample of mid-price range agricultural land sales and some statistical analysis within"...each region of Virginia.

They selected farm sales data from January 2009 through September 30, 2010 for farms considered most likely to remain in agricultural use, i.e., "The sales are not in the path of rapid development and the highest and best use is for continued agricultural use."

They used from 12 to 20+ sales per region and came up with fee simple, i.e., unemcumbered valuations. We then subtracted 5% for retained recreational use to derive the FY11 GARCs for for WRP for each region of Virginia using the same administrative areas as used in prior years.

For GRP:

The contractor used "a representative sample of mid-price range agricultural land sales and some statistical analysis within"...each region of Virginia.

They selected farm sales data from January 2009 through September 30, 2010 for farms considered most likely to remain in agricultural use, i.e., "The sales are not in the path of rapid development and the highest and best use is for continued agricultural use."

They used from 12 to 20+ sales per region and came up with fee simple, i.e., unemcumbered valuations, then subtracted 10% to 20% for loss of agricultural uses other than grazing to derive the FY11 GARCs for GRP for each region of Virginia using the same administrative areas as used in prior years.

Advantages and Disadvantages of the Census Data and Market Analysis approaches to valuation of WRP and GRP easements

Advantages of the Census data approach:

1) a very large, state-wide and low-cost data set for estimating market value (only costs staff time to use);
2) simple transparent assumptions;
3) filled void of national guidance (my methods were shared around the country by Ken Murray);

Disadvantages of the Census data approach:

1) market values comingle value of land and improvements (buildings);
2) market values comingle value of productive and undproductive land when what we are often acquiring with WRP are unproductive lands;
3) non-agricultural pressures included in reported values;
4) hard to get at compensation for easement encumberance;
5) values become dated with time since the Census of ag. is only done evey five years (2012 is next and should be avialable for use in FY13;

Advantages of the Market analysis approach:

1) use of certified land appraisers?
2) they selected farm sales that were not under imminent threat/pressure from development?

Disadvantages of the Market analysis approach:

1) certified land appraisers are not accustomed to estimating valuation of land that will be encumbered with easements;
2) "...a schedule of agricultural sales with only grazing rights permitted is not available in the market,...";
3) farms for which they collected data may or may not have wetland inclusions reflected in market valuation, i.e., there are no explicit adjustments to value for unproductive land;

4) the method/assumptions used to reflect a 10%-20% reduction in value due to encumberance on GRP easements is opaque/unclear ("Most open-space conservation easements in Virginia indicate a reduction of 25% to 50% of the pre-easement value, with variations based upon the highest and best use, development trends, market perception, and various other factors. Since the residential development potential is not included in most of the Schedule of Sales in the previous analysis, the adjustment for the loss of alternative agricultural and forestal uses is significantly less than the reduction in value for most open space conservation easements. Therefore, I adjust each sale from 10% to 20% for the loss of alternative agricultural and forestal uses, with the adjusted sale price reflecting a pastureland use.") - Appears to be conceptually flawed: we should pay market value - retained rights = mkt. value - grazing use?
5) the cost for these services is not insignificant (approximately $19,000 for FY11);

Other Considerations

1) GARCs based upon regions pull up low valuation counties and pull down high valuation counties;
2) GARCs based upon regions also have high and low inclusions that either need to be thrown out or associated with other, more comparable regions;
3) county by county GARCs would cost a significant amount more to estimate using a contractor, especially if we break-out sales by open, woodland and other as Tenneessee does (if NHQ pays, then this is less of a concern overall, but still a concern);
4) county by county based GARCs will be very inexpensive to estimate after the 2012 Census of Agriculture is completed;
5) Playing the devil's advocate: So what if the Central Region GARC pulls down what we can offer to Albemarle County's farmers, i.e., I don't think that there are many "farmers" interested anyway due to the nature of land markets there;
6) I don't know why NHQ insists on less than fee simple valuation for WRP?
7) It seems that market value for agricultural lands in Virginia invariably have influence from land speculation and development to one degree or another everywhere in the state as the market values don't appear to me to reflect purely agricultural use values and separating out/isolating sold tracts to just those with agriculture as the highest and best use is subjective.

WRP Ranking Criteria - Worksheet

WETLANDS RESERVE PROGRAM (WRP), NRCS Virginia (rev. 2/11/2011)

Name _____ Date _____

Address _____

FSA Farm # _____ Tract # _____

FY _____ County _____

Planning Team Members _____

_____

Easement Length: Perpetual ___ 30 Year ___ Restoration Cost Share (10 year) _____

ECOLOGICAL CONSIDERATIONS

Restorable Area Condition (Weighted): (Suitable to be restored to pre-existing hydrology and vegetative functions.)	Points		Acres
PC (Frequently cropped and/or no longer meets hydrology)	20	X	_____ /Total Ac. = _____ Pts.
PC (Not frequently cropped [woodies] and/or meets hydrology)	18	X	_____ /Total Ac. = _____ Pts.
FW (Effectively drained)	22	X	_____/Total Ac. = _____Pts.
FW (Hydrology present)	20	X	_____/Total Ac. = _____Pts.
FWP (Frequently grazed or cut)	16	X	_____/Total Ac. =_____Pts.
FWP (Not frequently grazed or cut, woodies present)	14	X	_____/Total Ac. =_____Pts.
Native Wet Woodland (or other natural) wetland, effectively drained	12	X	_____/Total Ac. =_____Pts.
Riparian (connected by 2 eligible wetlands)	8	X	_____/Total Ac. =_____Pts.

TOTAL _____ Pts.

Significance of Future Conditions (Maximum 30 points)

Native Woody Cover * - minimum of 600 ft. wide, surrounding entire outer limits of created pool area (Created and Existing Cover) *30*

Native Woody Cover* - minimum of 600 ft. wide, surrounding at least ½ the outer limits of created pool area, with at least 200' wide woody cover on remainder (Created and Existing Cover) *25*

Native Woody Cover *- minimum of 300 ft. wide, surrounding entire outer limits of created pool area (Created and Existing Cover) *15*

Native Woody Cover* - minimum of 300 ft. wide, surrounding at least ½ the outer limits of created pool area, with at least 100'wide woody cover on remainder (Created and Existing Cover) *10*

Native Woody Cover *– minimum of 200 ft. wide, surrounding entire outer limits of created pool area (Created and Existing Cover) *5*

Less than above minimum Native Woody Cover* *0*

Total _____ Pts.

*Does not include pine plantations or pure pine situations

Significance of Surrounding Cover Conditions (Adjacent to projected easement area)

Most (greater than 50%) of the surrounding area consists of:
Permanently protected conservation area containing predominantly deciduous woody and/or wetland cover *20*

Any portion of the surrounding area consists of: Permanently protected conservation area containing predominantly deciduous woody and/or wetland cover *10*

Any other or unprotected cover condition *0*

Total _____ Pts.

Restored Wetland Area

Eastern Counties (E. of Blue Ridge)		*Western Counties (W. of Blue Ridge)*	
1. 30 or > ac.	*20 pts.*	1. > 5 ac.	*20pts.*
2. 20-29 ac.	*14 pts.*	2. 4.1-5 ac.	*14pts.*
3. 15-19 ac.	*10 pts.*	3. 3.1-4 ac.	*10pts.*
4. 10-14 ac.	*8pts.*	4. 2.1-3 ac.	*8pts.*
5. 5-9 ac.	*6pts.*	5. 1.1-2 ac.	*6pts.*
6. < 5 ac.	*2pts.*	6. 1 or less ac.	*2pts.*

Total_____Pts.

Estimated easement cost per acre is:

> GARC	0 pts.
= GARC	10 pts.
< GARC	20 pts.

(G.A.R.C. is Geographical Area Rate Cap.)

Total_____Pts.

Length of Contract

Permanent Easement	*30 pts.*
30 Year Term Easement	*15*
Restoration Cost Share (10 year)	*5*

Total _____Pts.

Positive Impact to T&E or Special Concern Species, or a Natural Heritage Resource Area

Create/add habitat for listed State or Federal T&E Species (Consult with DNH/VDGIF) *30 pts.*

Create habitat for Proposed State or Federal T&E Species, or Species of Concern (Consult with DNH/VDGIF) *20*

Add to existing identified DCR/DNH Natural Heritage Resource Area *15*

Total _____Pts.

Other Considerations – Add (+) or Subtract Points (-)

Occupied building(s) within 300' of outer edge of restoration area	*-15*
Occupied building(s) within 500' or outer edge of easement area	*-5*

Fragmentation:

Connects 2 fragmented native habitats	*+20*
Adjacent to 1 fragmented native habitat	*+10*
Provides no connection	*0*
Vernal pool complex (4 or more) present or planned	+15

Total _____Pts.

Grand Total (Ecological) _____Pts.

COST CONSIDERATIONS

Restoration Unit Costs

When the estimated per unit restoration cost is:

Less than the per-unit cost on the established cost list	*20*
Equal to the per-unit cost on the established cost list	*0*
More than the per-unit cost on the established cost list	- 20

Total Cost _____Pts.

TOTAL POINTS : _____ (Total Environmental and Cost Ranking)

NRCS Concurrence:
A program eligibility determination and preliminary restoration plan have been completed for this offer. This ranking procedure has been completed based on the preliminary restoration plan and the best natural resources information available. The ranking procedure has been reviewed for completeness and accuracy.

_____ _____
District Conservationist Date

Other Ranking Team Members:

_____ _____
Name Representing

_____ _____
Name Representing

_____ _____
Name Representing

WRP/ Wetlands Reserve Program **GRP / Grassland Reserve Program**

Status of Financial Assistance Program Funds (STCmte Report 5-24-11)

WRP - New Easements, to obligate FY-2011 Funds ($1,155,642) **7**

Evaluated 11 new WRP sites in April 2011. Able to fund 6 easements, plus one 10 yr. restoration site.

County	Acres
Accomac	154.0
Accomac	21.0
Caroline	32.0
Craig	47.0
Frederick	2.3
Madison	27.8
Pittsylvania (10 yr.)	3.4
Total	*287.5*

WRP - Easements In-Progress, Scheduled to Close in 2011 **6**

Bedford
Bedford
Chesapeake
Fauquier
Halifax
Halifax

WRP - Closed Easements, Restoration Underway **6**

Bedford
Bedford
Fauquier
Fluvanna
Frederick
Southampton

GRP Easements NEW, FY-2011 funds ($634,720) **2**

Augusta 100 ac.
Halifax 100 ac.

GRP Easements In-Progress, Scheduled to Close in 2011 **8**

Buckingham
Halifax
Halifax
Halifax
King George
Page
Southampton
Spotsylvania

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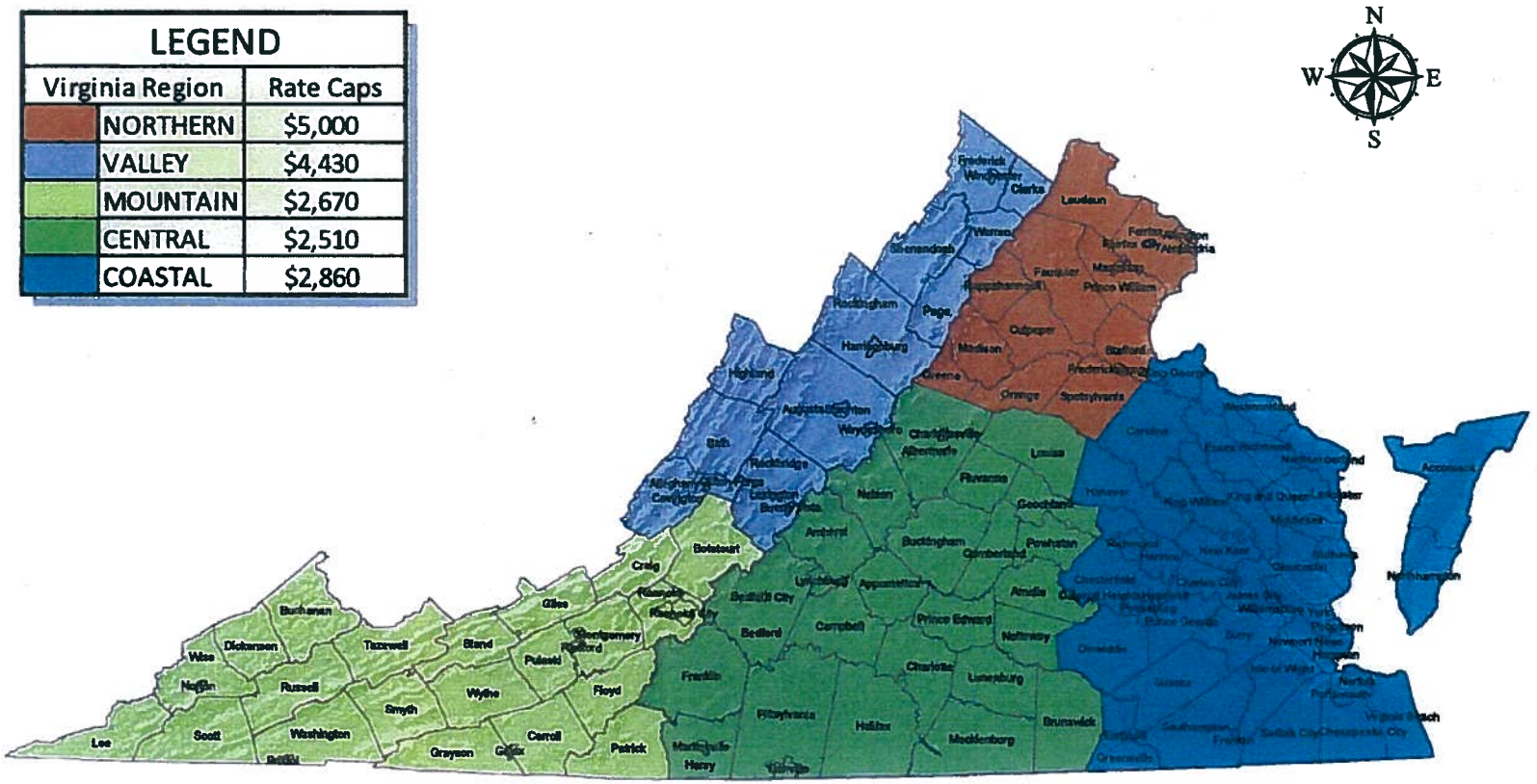
United States Department of Agriculture
Natural Resources Conservation Service

USDA
United States Department of Agriculture

GEOGRAPHIC AREA RATE CAPS FOR GRASSLAND RESERVE PROGRAM (GRP) BY VIRGINIA REGION FOR FY '11

NRCS Natural Resources Conservation Service

LEGEND	
Virginia Region	Rate Caps
NORTHERN	$5,000
VALLEY	$4,430
MOUNTAIN	$2,670
CENTRAL	$2,510
COASTAL	$2,860



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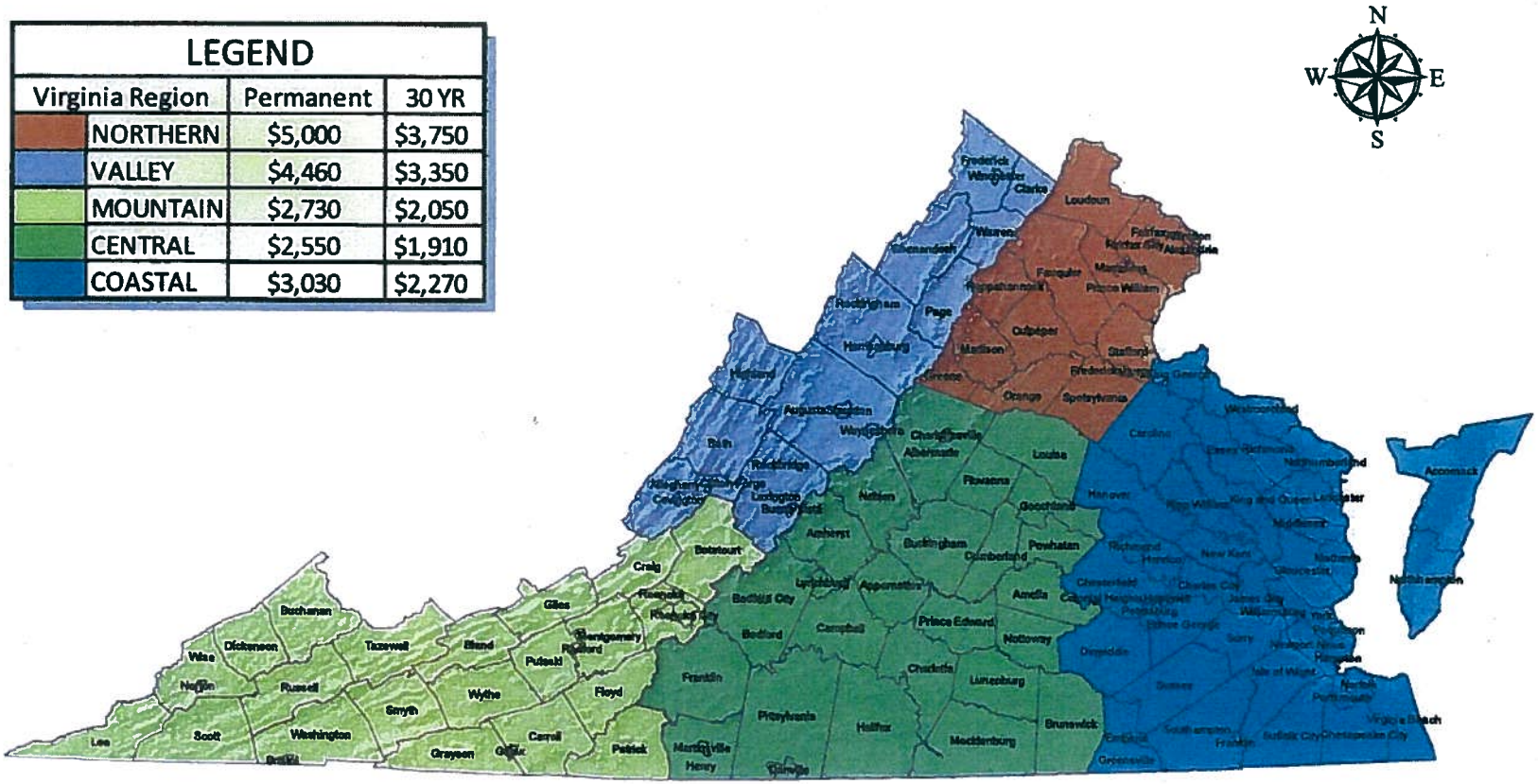
USDA
United States Department of Agriculture

GEOGRAPHIC AREA RATE CAPS FOR WETLANDS RESERVE PROGRAM (WRP) BY VIRGINIA REGION FOR FY '11

NRCS Natural Resources Conservation Service

LEGEND		
Virginia Region	Permanent	30 YR
NORTHERN	$5,000	$3,750
VALLEY	$4,460	$3,350
MOUNTAIN	$2,730	$2,050
CENTRAL	$2,550	$1,910
COASTAL	$3,030	$2,270



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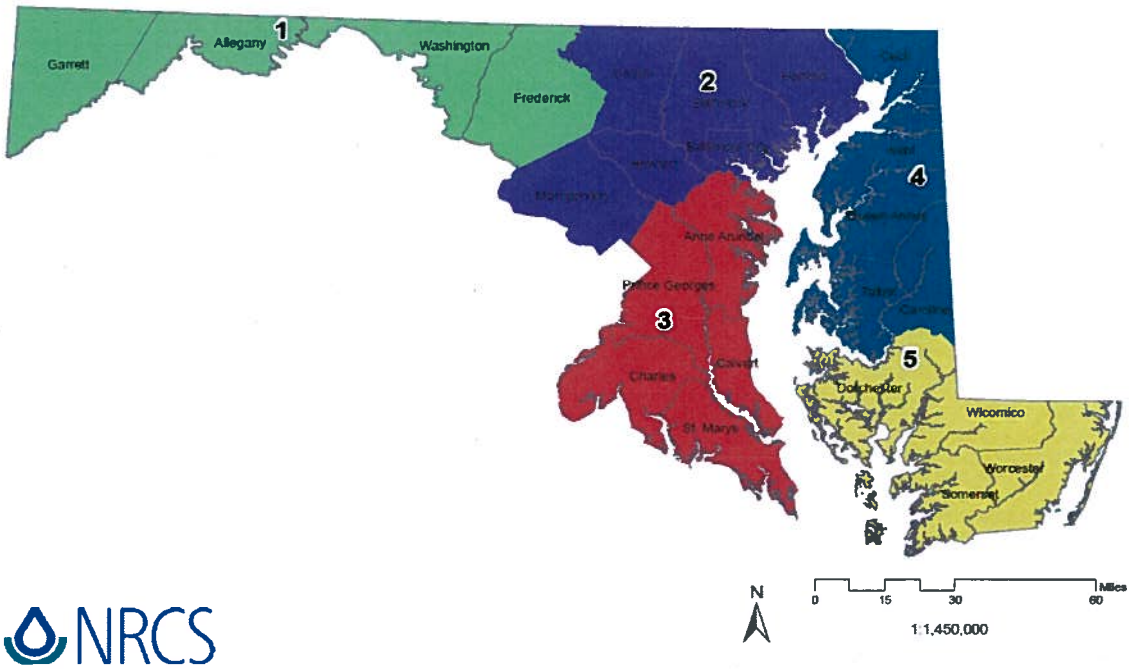
TENNESSEE
WRP 2011 Easement Values Per Acre

Area	Counties (95)	Open Land Market Analysis	Open Land Geographic Cap	Other Land Market Analysis	Other Land Geographic Cap	Woodland Market Analysis	Woodland Geographic Cap
4	Anderson	$ 3,030.00	$ 2,880.00	$ 2,560.00	$ 2,440.00	$ 1,870.00	$ 1,780.00
2	Bedford	$ 3,700.00	$ 3,520.00	$ 1,250.00	$ 1,190.00	$ 1,250.00	$ 1,190.00
1	Benton	$ 2,300.00	$ 2,190.00	$ 2,200.00	$ 2,090.00	$ 1,360.00	$ 1,300.00
3	Bledsoe	$ 2,180.00	$ 2,080.00	$ 1,020.00	$ 970.00	$ 1,530.00	$ 1,460.00
4	Blount	$ 2,650.00	$ 2,520.00	$ 1,990.00	$ 1,890.00	$ 1,820.00	$ 1,730.00
4	Bradley	$ 3,950.00	$ 3,760.00	$ 1,835.00	$ 1,750.00	$ 2,000.00	$ 1,900.00
4	Campbell	$ 3,700.00	$ 3,520.00	$ 850.00	$ 810.00	$ 1,870.00	$ 1,780.00
3	Cannon	$ 2,050.00	$ 1,950.00	$ 970.00	$ 930.00	$ 1,680.00	$ 1,600.00
1	Carroll	$ 2,300.00	$ 2,190.00	$ 1,480.00	$ 1,410.00	$ 1,160.00	$ 1,110.00
4	Carter	$ 5,610.00	$ 5,330.00	$ 1,530.00	$ 1,460.00	$ 1,780.00	$ 1,700.00
2	Cheatham	$ 4,910.00	$ 4,670.00	$ 1,290.00	$ 1,230.00	$ 3,000.00	$ 2,850.00
1	Chester	$ 2,810.00	$ 2,670.00	$ 970.00	$ 930.00	$ 1,300.00	$ 1,240.00
4	Claiborne	$ 3,070.00	$ 2,920.00	$ 1,050.00	$ 1,000.00	$ 1,420.00	$ 1,350.00
3	Clay	$ 2,670.00	$ 2,540.00	$ 1,170.00	$ 1,120.00	$ 950.00	$ 910.00
4	Cocke	$ 2,430.00	$ 2,310.00	$ 1,370.00	$ 1,310.00	$ 2,100.00	$ 2,000.00
2	Coffee	$ 3,000.00	$ 2,850.00	$ 1,182.00	$ 1,130.00	$ 1,495.00	$ 1,420.00
1	Crockett	$ 3,050.00	$ 2,900.00	$ 1,260.00	$ 1,200.00	$ 1,460.00	$ 1,390.00
3	Cumberland	$ 3,240.00	$ 3,080.00	$ 1,790.00	$ 1,700.00	$ 1,910.00	$ 1,820.00
2	Davidson	$ 4,190.00	$ 3,980.00	$ 8,650.00	$ 8,220.00	$ 2,920.00	$ 2,780.00
1	Decatur	$ 4,180.00	$ 3,980.00	$ 1,390.00	$ 1,320.00	$ 1,550.00	$ 1,480.00
2	DeKalb	$ 3,500.00	$ 3,330.00	$ 920.00	$ 880.00	$ 1,700.00	$ 1,620.00
2	Dickson	$ 2,710.00	$ 2,580.00	$ 1,000.00	$ 950.00	$ 1,510.00	$ 1,440.00
1	Dyer	$ 2,670.00	$ 2,540.00	$ 870.00	$ 830.00	$ 1,510.00	$ 1,440.00
1	Fayette	$ 2,990.00	$ 2,840.00	$ 1,600.00	$ 1,520.00	$ 1,575.00	$ 1,500.00
3	Fentress	$ 2,670.00	$ 2,540.00	$ 1,500.00	$ 1,430.00	$ 1,060.00	$ 1,010.00
2	Franklin	$ 3,890.00	$ 3,700.00	$ 1,650.00	$ 1,570.00	$ 2,010.00	$ 1,910.00
1	Gibson	$ 2,820.00	$ 2,680.00	$ 1,130.00	$ 1,080.00	$ 1,410.00	$ 1,340.00
2	Giles	$ 3,470.00	$ 3,300.00	$ 1,370.00	$ 1,310.00	$ 1,700.00	$ 1,620.00

MARYLAND	FY 2011 Market Analysis Average Value	FY 2011 GARCs Permanent Easement	% of Avg Value	Comparison GARC 2010	Comparison % of Avg Value FY 2010	Delaware
Group 1 (Counties: Frederick, Allegany, Garrett, Washington)						
crop	$ 6,679.00	$ 5,343.20	80%	$ 6,342.00	80%	
wood	$ 4,089.00	$ 2,862.30	70%	$ 4,750.00	60%	
Group 2 (Counties: Baltimore, Carroll, Harford, Howard and Montgomery)						
crop	$ 10,214.00	$ 8,171.20	80%	$ 9,139.00	80%	
wood	$ 8,475.00	$ 5,932.50	70%	$ 6,800.00	60%	
Group 3 (Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)						
crop	$ 7,531.00	$ 6,024.80	80%	$ 8,434.00	80%	
wood	$ 5,606.00	$ 3,924.20	70%	$ 6,325.00	60%	
Group 4 (Counties: Caroline, Cecil, Kent, Talbot and Queen Anne's)						**New Castle Co**
crop	$ 6,694.00	$ 6,024.60	90%	$ 6,657.00	80%	$ 5,532.00
wood	$ 4,486.00	$ 3,588.80	80%	$ 4,900.00	60%	$ 3,550.20
Group 5 (Counties: Dorchester, Somerset, Wicomico and Worcester)						**Kent/Sussex**
crop	$ 4,814.00	$ 4,332.60	90%	$ 3,209.00	80%	$ 3,978.93
wood	$ 2,651.00	$ 2,120.80	80%	$ 2,750.00	60%	$ 2,601.24

Salt marsh will be available again for FY 2011. These lands have been used for pasture area or may be used for pasture when not flooded. Tidal marsh is only available in those counties with tidal water shoreline along a major river or the Chesapeake Bay.
Tidal Marsh is available at a rate of $375 only in Groups 3, 4 and 5 and Baltimore and Harford Counties



NRCS

North Carolina

FY 2010 Geographic Area Rate Cap (GARC) - Market Analysis

Geographic Area (CRA)	Land/Vegetation Type	Market analysis	GARC	GARC	GARC	GARC	GARC	Dated Process Reviewed With	Date Certified by	Date Approved by
		$/ac	$/ac	$/ac	$/ac	$/ac	$/ac	State Technical Committee	STC	EPD
				GA	VA	TN	SC			
Tidewater 153B.1, 153B.2, 153B.3	Prior converted cropland, pasture	1,879	1,750							
	Ditched and drained woodland w/ merchantable timber	1,893	1,750							
	Ditched and drained woodland w/o merchantable timber	727	650							
Atlantic Coast Flatwoods 153A.1, 153A.2; Southern Coastal Plain 133A.5, 133A.7; Carolina and Georgia Sandhills, 137.1	Prior converted cropland, pasture	2,220	2,000							
	Ditched and drained woodland w/ merchantable timber	2,945	2,200							
	Ditched and drained woodland w/o merchantable timber	1,352	1,000							
Southern Piedmont 136.1, 136.2, 136.3, 136.4	Prior converted cropland, pasture	4,372	3,500							
	Ditched and drained woodland w/ merchantable timber	4,625	3,500							

	Ditched and drained woodland w/o merchantable timber	2,643	2,000							
Southern Blue Ridge 130B.1, 130B.2, 130B.3, 130B.4, 130B.5	Floodplain or riparian cropland, pasture	10,287	6,000							
	Floodplain or riparian woodland w/ merchantable timber	6,826	5,500							
	Floodplain or riparian woodland w/o merchantable timber	3,786	3,000							