

State Technical Committee Minutes
Richmond, Virginia
August 17, 2011

Wade Biddix, NRCS ASTC-Programs, welcomed the group and opened the meeting at 10:00 a.m., invited all to pick up handouts from front table, introduced himself, and then had each person state name and agency represented.

Attendance: Jack Bricker (NRCS), Wade Biddix (NRCS), Libby Norris (CBF), Emily Horsley (FSA), Betsy Bowles (DEQ), Chad Wentz (NRCS), Dave Byrd (USFWS), Mark Schonbeck (VABF), Diane Dunaway (NRCS), Jeremy Stone (NRCS), Dean Cumbria (VDOT), Todd Groh (VDOT), Karen Hudson (VIMS), Gary Moore (VADCR), Tim Sexton (VADCR), Seth Coffman (TU), John Parker (VA Pork), Patricia Stansbury (VABF), Antonio McLaren and Jewel Hairston (VSU), Jon Roller (EcoSys), Maribeth Pettigrew (NRCS Recorder).

Jack Bricker – (NRCS) Opening Comments: Jack thanked everyone for coming. He started his comments by saying that this would be an important meeting because there are a lot of updates as we close out FY2011. Comments included: *We have received a lot of funds, particularly with Chesapeake Bay. We have had a lot of money to obligate and still have a million and a half to go. That will be no problem because we have lots of backlog. We will also be discussing where we'll be going with FY2012. As we all know, there is a good chance of cutbacks. We've all watched the news. You know we'll probably have less money next year. EQIP has been divided into lots of fund pools. We need to consolidate. Hopefully this group can make some recommendations as to how to combine some things. We know the \$73 million allocated to the Chesapeake Bay states has already been cut by Congress to an authorization of \$50 million, and that isn't "sure" money. So they'll be at LEAST \$23M in cuts.*

Emily Horsley – FSA CRP and CREP – Handout – She gave a summary of enrollment activity in CREP and other programs. There are 300 additional acres enrolled since last report; still progress needs to be made to meet goal. Regarding the state specific initiative for wildlife enhancement practices, notice this week bumped the enrollment up. The Culpeper basin project was also modified – had required 25 acres minimum to enroll; now changed to 10 acres minimum. There are still a lot of opportunities.

Gary Moore – FSA – CREP – Several CREP easements are still in process. They are being finished up. None will be started in the foreseeable future. Staffing is the issue that slows things down.

There was a question re: interest in the SE VA project re: native range. Why is enrollment below projection?
Answer: It's a new program – relatively – that's why there is low enrollment.

Dan Solomon – (NRCS) – Programs report - HANDOUTS: EQIP and CBWI summary. We had a banner year. We have allocated all funds, so we're done. Does anyone have any particular questions? He pointed out the special projects indicated on handouts. Those projects have been very successful (includes TU and DOF) Contracts are in place to implement plans through Forestry. There have been multi-county projects providing better educational opportunities for potential participants. It's an innovative idea and has been successful so far. There is always a big backlog in this area.

Seth Coffman asked a question, beginning with the statement that the Christiansburg area has a tremendous backlog. Question: With less funds coming and the noted backlog, will other areas (like Smithfield) have less chance of getting funds because of the need from the past year. Answer: People in backlog are asked if they want to be considered but they don't get any extra "ranking" points because they've been backlogged.

Mark Schonbeck asked regarding beginning farmer allocations: Why is it 2%? The allowance was for 5%.
Answer: Dan explained that there are three groups so what he is looking at is a subset. The goal is to allocated

10% of funds to the Limited Resource Farmers, New and Beginning Farmers, and Socially Disadvantaged Farmers combined.

Question: Is the backlog indicative of more farmers wanting to be involved in the programs? Answer: Yes it is. Libby Norris commented that in the field they were able to identify more people that were eligible.

Wade Biddix – (NRCS) – WHIP – reported for Ron Wood who was absent from meeting. Referred group to handout. Discussed allocations and dedicated funding that had to be returned. Mentioned that these are the same opportunities as for limited resource farmers, etc. in WHIP.

Asked group to note that on the summary sheet, the numbers may not match exactly with the specific reports because the timing of compiling them was not exact. Wade did the summary. Dan and Ron did specifics. Wade commented on the summary sheet and went over the special projects re: specific watersheds and specific purposes.

National Conservation Innovation Grants will be announced this Friday. We won't have results of that until then but are expecting funds from them.

We have also solicited some services to get comprehensive nutrient management plans. Those are required when planning nutrient waste management systems. We don't have the staff to meet the demand for this, so we are trying to acquire services for that.

Diane Dunaway – NRCS – GRP and WRP – (handout) – Reviewed numbers on handout. **WRP** - The 10 year contract on the handout is a restoration contract, not an easement. There were four more that were eligible which we were not able to fund. There are 6 ongoing restoration projects. There is a three day WRP restoration training course coming up – in Charlottesville next week. In October, there is WRP training for USDA staff that Jeremy and Diane will be able to attend in Louisiana. Note on ranking criteria worksheet – there were some issues with ambiguities and gaps, so our staff is working on correcting that prior to next year's rankings. They should be ready by November meeting. Currently, NRCS is in the process of closing 5 new WRP easements.

Gary Moore asked question re: who will rework the ranking worksheet. He has taken comments from field after site visits and specifically wondered about timeline. Answer: Diane welcomed any input from this committee. Question: If there are members who would like to volunteer info, what is the time period? Answer: Diane said she doesn't foresee substantive changes, but if anyone sees any red flags, please get comments to her by 9/17. We will distribute copies for examination.

Libby asked how the last bullet on the handout matched with the previous bullet. Diane explained that it doesn't. One of those brings "old" projects into the picture.

GRP – All monies were obligated. We were given some extra money beyond our initial allocation. Because of requirements of specific applications, we solicited increase from National and were granted more monies. Of the GRP that are closing by the end of FY2011, 8 of them were actually from previous fiscal years. We are trying to get 13 closed by the end of September.

Jeremy Stone – NRCS – FRPP – (handout) – Rundown of FY2011 funds. Agreements were signed for 3 parcels in two different counties, protecting approximately 550 acres. That used only 47% of our allocation. There is a shortage of non-Federal match funds in the state. Right now there are funds left and there is no backlog. There was interest expressed from a number of other parties, but they weren't able to secure matching funds. They can reapply. Jeremy referred the group to the map handout. He also passed around the current Virginia state plan. To limit non-agricultural usage of prime agricultural land is the prime objective of this

program. Our plan lays out our argument re: what we expect the demand to be and our projection of monies needed.

SWAT question – Committee was asked to please review. The Watershed action team has tried to get additional people in the field through partners. We were able to sign an agreement to support longleaf pine and to get someone from the Game Department to partner with us. We have a three year agreement. Bob Glennon is his name. The other SWAT was for the Shenandoah Valley. Because we could not get the match funds needed, the money we couldn't use was sent back to NHQ and was allocated to other states.

Q&A on Current Year Programs/Funds/Projects

Wade introduced Galon Hall, our State Biologist, to give the initial part of a presentation re: aquaculture. Handouts were given out. On the sheet, we will add another box to give more updated info on what is being done and what is supposed to be done. Most producers are using this practice now.

We considered new options to add to the aquaculture program. Handout. Three specific additional options explained.

Karen Hudson added that she thought it would be helpful for aquaculturists to have an option for rebuilding the oyster bottoms. Maryland is doing that now and they are also helping with oyster establishment. Money may limit the amount we do but the other options are going to happen whether or not there are budget decreases. Gary Moore asked re: a possible approach. Galon elaborated on hard surfaces and dredging bottoms and the process Maryland is using. Here in Virginia, the situation appears to be different, and we don't seem to have the same cost factors. There was some discussion re: some of the justification that allows us to include these opportunities. One of the problems with getting things going is that shell life is only 3-5 years because of naturally occurring factors. It will break down. Once the beds are established, they are able to maintain themselves better. Discussion – questions and answers re: specifics – how many layers? Why? How to determine that? Etc. An agreement is in place to compensate the aquaculturists already. We don't see any change in funding. We'd love to see it grow, and the opportunity is there for it to grow. It will be a challenge to set up ranking criteria if/as it grows.

Discussion re: potential higher point value in high priority watersheds. Conclusion: It is a possibility but we currently don't know where we'll NEED to.

Question re: feelings about this potential program. It is a onetime deal for people. If we can grow more oysters, obviously, we can pull more oysters out of the water. Question: Will spot checks be done? Answer: Yes. VIMS and VMRC will be our "eyes and ears". Spot checks will be done. We CAN do contract involving public land as long as it has been leased by an individual contractor,

Recommendation is to try to expand program to include rare and declining habitat along with the gear cycling. Consensus was to expand the aquaculture program in FY-12.

Chad Wentz – discussed cost list and payment schedule concept – There are no bills collected; the payment scenario for each practice is something we develop every year. Audits have been done and there is some need for improvement. There is a lot of variation from one state to another, so NHQ put together a team to suggest how to better organize the payment schedule. Conclusion: NRCS will go with regionalized payment schedules. That will help consistency from one state to another. They have just started this process. New details are coming all the time. Handout map indicates the regional division proposed. We don't necessarily align closely with the regions they've given us. For FY-12 this will be used for only the top 15 commonly used practices. The next year it will be used for all practices.

Chad prepared handout with top 15 practices indicating dollars and occurrences. They often align with each other. Referred to another handout. Now there is some talk that we might have to use the 15 practices most commonly used for the regional approach so every state will look the same as the others in our region. Others will be from VA stats like it's been done before. Top 15 may be the top 15 nationwide. Jack commented that 8 of the national top 15 are within our state's top 15. The goal is to expand the list by next year. We wanted to let the committee look at the top 15 and see if they agreed, but now it appears that we're giving out the info and that it's not open for discussion per NHQ. Two reps from each state will be included on each regional team. November 1st would be when info is released – the opinion is that seems to be an ambitious timeline to come to an agreement.

Question: Will we know more before November? Answer: Chad and Wade both felt we'd know more within the week.

Question: Why did NHQ want to go for this regional consistency? Answer: Reports have shown that within states' data there is a lot of variation; O&E reviews were uncomfortable with inconsistency within cost data and wanted a more consistent approach.

Question: Will the regions be able to have separate schedules for specialty crops/historically underserved etc., or will it all be on the same schedule. Answer: We don't really know, but Wade expressed the opinion that it would most likely follow those divisions.

It wasn't just VA that had gotten away from reviewing landowners bills. All the states had done that. We will still collect average costs like we've done in the past. Libby Norris asked if the committee could assist as we learn more. Answer: We're really not sure if we will be a "winner" in this new setup or not. We're just waiting to see how it plays out. Todd Groh clarified that outside the top 15, we will still set up payment schedules as has been done previously. Then Chad explained that that is true ONLY for this next year. It will be going to ALL by next year. Gary Moore commented that it would affect their payment. Conclusion: Partners will feel the effects of this. Libby Norris questioned "splitting" VA. Jack said he thinks the regions will not change. Jack commented that most states didn't like the regions they were in despite supposed identification of "farm production areas".

Wade discussed proposed changes with Easement programs. He asked the group to compare the handouts for FY11 and FY12 – the maps for GRP and WRP. We currently do analysis of what land values are ourselves. Comments and suggestions came in to change areas as previously structured. Frederick, Clarke and Warren counties were grouped with northern Virginia counties. A new Central group was made from Charlottesville and incorporated down through New Kent. Those people had felt they weren't getting a fair land value. These seem to align better with land values in the central portion of the state. We have gone out to solicit info re: the land values. By the end of September, we will have a new geographical area rate cap established. We are limited nationally by a \$5,000 per acre cap. At this point, unless there are a lot of objections, we will move forward with this. No comments/objections. Our staff is more pleased with the updated breakdowns. More information will be given at the next STC.

Proposed Program Changes for FY-12: HANDOUT – Reviewed bullet by bullet.

Object is to consolidate and focus on core programs. There are proposals for current programs and new practices.

Pest management on fruit trees – our current contracts are still good. Stink bug problems expected next year. We propose to delete this fund pool for FY-12. Mark Schonbeck commented on the decision to drop those contracts; he pointed out existence of a task force set up to find a conservation friendly way to deal with this invader.

Proposal for Waste Gasification – may be a big discussion issue. It is hard to take money away from existing offerings. Mark Schonbeck asked if this meant that there could be technical assistance but no cost-share.

Response: The recommendation from the EQIP Subcommittee was to have gasification available only if we could get special initiative funding. Patricia Stansbury asked: Since it would be profit making, couldn't it be funded by private enterprise? Answer: It could be related to electricity generation, etc. Different companies are looking at this. It is difficult to get it scalable to one-farm size. A joint application might be something we'd want to consider if we can get some special funding. Wade commented that there are a lot of things coming into play here. We don't want to shut it down **IF** funding should become available.

Gary Moore feels like a spec should be developed, but he noted that getting involved with cost outlay with this (without really KNOWING the environmental benefits it would have) would really be going out on a limb. John Parker pointed out that it becomes viable if the power company "buys" into it.

So the conclusion was made that the committee definitely supports an interim standard, but taking funds for this from other "proven" programs seems unwise when there are so many backlog requests with current projects.

CIG – There are a total of 8 currently funded, including two from last year. Propose to reduce the funding for CIG next year to \$150,000.

Poultry pads - Unless there is a risk involved, we won't just go out and fund a poultry pad. We are looking at what's going on in Delaware and MD currently. Libby Norris questioned what was meant by revising risk assessment in terms of points. Gary said he'd want to be part of that review. Chad said we're probably just talking about clarifying some of the issues.

Specialty crops local area – We need to change to 100 miles rather than 50. There is a standard set by USDA for Specialty crops. Patricia Stansbury asked about edame. Chad said he'd have to check with Ron.

Libby asked about portable shade structure re: if there had been a problem with an interim standard. Answer: A national standard was never issued, so it's really moot. We don't have info on how much it was used/requested. Gary Moore wanted to know if we could request an extension. There were only 6 requests this past year. Libby said that in the field, people have used the standard but have gone ahead and built their own and not gone with our programs. Mark asked that if we find that people are using the standard, can we still offer tech. assistance but not cost-share. Answer: If it isn't an official part of agency, we can't offer tech assistance. We don't have a practice standard to do that. Question came up as to whether some of this would fall under roofs and covers. Answer: Portability is the issue. Conclusion – Livestock shade structure will be archived and not available for new contracts in FY-12.

Evaluation ranking dates – we have tried to get forestry earlier; that was necessitated by tree planting dates. These dates are subject to change. Sometimes we get specific directions from NHQ that we have to follow.

Tree planting now has another option for more than 350 per acre. We want to get rid of that other option. Landowner would be on their own with more than that amount of acreage.

Comment: We're in the last year of this Farm Bill, so we don't want to do a lot of changes. Next year, with a new Farm Bill coming up, that will be different.

Questions? Is there anything else? Things we need to consider for changes? Gary Moore has question re: 3 year contractual obligation? Answer: Not possible – it is a 10 year national standard. On state level, we've encouraged 3 years. . The 3 year causes some conflict with state program windows and is causing some problems with districts. Dan said it takes a lot of coordination. Gary said they'd been allowing case by case extensions. Accounting messes up the districts. Dan clarified that by statute they do have 10 years. Gary said

that in training we need to encourage the focus of getting what needs to be done in those first two years so this problem goes away.

AGENCY UPDATES:

Chad Wentz – NRCS - announced that the Federal Register has new standards that have been posted – VA specific standards are based on federal standards. There is a 30 day comment period.

Gary Moore – FSA - Mr. Reese Peck is now the director of Storm Water Management. A Division Director of Regulatory Programs has been hired; her name is Virginia Sneed. Other positions are still in the process of being filled.

Jewel Hairston/Antonio McLaren – VSU – Expressed appreciation for partnership; it has really enhanced the work they do. They invited members of the committee to 27th annual field day next Tuesday, August 23rd - Practical Tools for 21st Century Landowners. It will be held at Randolph Farm. Antonio expressed a special interest in wanting to assist with small farm programs – limited resource farmers, etc.

Mark Schonbeck – VABF – February 10 and 11 of 2012 – announced VABF conference to be held in VA.

Seth Coffman - TU – Announced that a stream restoration biologist will soon be hired. A grant provided for this position and the Game Department is helping to partner with the position which is for two years. The focus will be on streambank restoration and stabilization primarily in the Shenandoah Valley. Use it in conjunction with other cost-share programs. Hopefully position will be filled by end of week.

Dean Cumbria – (DOF) – Thanked NRCS for participation in programs. Galax, Montpelier, Warrenton and Bowling Green will have presentations in September - still coming up. We were concerned with short deadlines re: signup.

Ash borer was found in Northern VA, but is expanding. A forestry training is being held today in Abingdon. There has been a more localized quarantine. Thousand cankers disease with black walnut was just in TN but has been found in the Richmond area. It was also found in PA this week. In Richmond, it has been found in Powhatan, Goochland, Chesterfield and Henrico. It is transmitted by a very small borer and is slow moving. It probably has been here a while. Bottom line, don't move firewood. Keep it local. Question: Is that commercially or personally. Answer: Everywhere.

Re: The fire in the Great Dismal Swamp can be smelled in Richmond some days. Is it being controlled?
Answer: Controlling peat fires is questionable because it's impossible to know what's going on underneath.

Libby Norris – CBF – all the regular stuff. Farmer to the Bay trips in mid-October. Focus on Smith Creek to get a core for the trips and get recommendations from farmers. Our trips are three days. They are trying to go for shorter trips to accommodate farmers. They've organized one day fishing trip for "younger" farmers and are working with Mennonite community. They are also organizing a local canoe trip to connect folks with the local watershed. This would be a day trip down Smith Creek.

Betsy Bowles – EPA – Legislative change has allowed removal of dates – it's been annual for years, but effective July 1st, all dates have been removed; this opens up opportunity for risk-based inspection strategy. Opens up another Chesapeake TMDL - DEQ's commitment to Bay would be an evaluation of small animal feeding operations that are not typically mandated to have a permit but would fall under thresholds. It is not that there's no authority, but we're teaming up with the Ag Stewardship Program through VDACS. Evaluation and Assessment strategy is being looked at by two agencies. It will still be subject to review from Secretaries and Governor's offices. This gives more opportunity for evaluation. On the Federal side of the CAFO world –

nearing finalization – template. Some facilities may have to move from one permit to another, mirroring federal language. Getting close to finalization re: discharging into state waters; that is where the CAFO permit comes in.

Patricia Stansbury – VABF – At VSU, the VABF will have a test plot demonstrating summer squash production; have been testing organic controls for summer squash. There is an organic section at the upcoming VSU conference.

Transitioning to Organic Agriculture is the conference referred to by Mark. There is a shortage of organically raised food for organically raised animals – so there's a market for this. There's the possibility of having a session re: how NRCS can encourage farmers to adopt NRCS programs as they adopt organic sustainable agriculture. Mark added that there is a lot of opportunity there.

In Norfolk a grant from risk management is paving the way for a small farm workshop on record keeping and business management this fall.

Closing: Jack Bricker thanked everyone for coming and Wade Biddix closed the meeting at approximately 12:15 p.m.

Next STC meeting is scheduled for November 22, 2011, at 10 a.m. This is a return to the schedule of 4th Tuesday of “odd” months. However, there will NOT be a meeting in September.

State Technical Committee
Agenda
August 17, 2011 - 10:00 a.m.
Richmond NRCS State Office
1606 Santa Rosa Road, Ste. 209

Welcome and Introductions	NRCS – Wade Biddix
Opening Comments	NRCS – Jack Bricker
Conservation Reserve Program (CRP & CREP)	FSA – Emily Horsley DCR – Gary Moore
Status of Financial Assistance Program Funds EQIP, CBWI, WHIP, CSP WRP/GRP FRPP	NRCS – Dan Solomon NRCS – Diane Dunaway NRCS – Jeremy Stone
CIG, CCPI and CTA Projects and SWAT Agreements	NRCS – Wade Biddix
Q & A on Current Year Programs/Funds/Projects	All
Update on FY-12 Farm Bill Program Development - Aquaculture - Payment Schedule - Proposed Program Changes - GRP and WRP Geographic Rate Areas - Proposed Schedule and Evaluation Cut-off Dates - Miscellaneous	NRCS – Galon Hall and VIMS – Jim Wesson NRCS – Chad Wentz NRCS - Biddix
Resource Agency Updates	All



Next Meeting – Tuesday, November 22, 2011

Conservation Reserve Enhancement Program Sign-up Progress

As of 8/17/2011

Chesapeake Bay -

1,855 contracts approved
16,939 acres
AVAILABLE ACRES: 8,061
Current Allocation: 25,000

Southern Rivers -

2,257 contracts approved
13,307.9 acres
AVAILABLE ACRES: 1,692.1
Current Allocation: 15,000

CP-33 - *Habitat Buffer For Upland Birds*

235 contracts approved
1,681.40 acres
AVAILABLE ACRES: 818.6
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)

AVAILABLE ACRES: 500

CP-38E – (Native Grass Areas)

CP-38C

*Restoration and Management of
Eastern Shore Migratory Bird
Tree/Shrub Habitat*

AVAILABLE ACRES: 300

CP-38C

Statewide Tree Planting

AVAILABLE ACRES: 500

CP-38D

Longleaf Pine

10 contracts approved
224.3 acres
AVAILABLE ACRES: 775.7
Current Allocation: 1,000

FRPP FY2011 Funds		Acres
<i>Description</i>	<i>Credit/Debit</i>	
2011 Allowance	\$1,587,170.00	
Clarke	(\$437,500.00)	151.75
Clarke	(\$240,000.00)	200
Spotsylvania	(\$67,500.00)	197
<i>Total Remaining</i>	\$842,170.00	
<i>Total Allocated</i>	\$745,000.00	
<i>Percent Allocated</i>	46.94%	
<i>Percent Remaining</i>	53.06%	

2012 Aquaculture Program CBWI Program Options

1. Continue with current bivalve waste control/gear cycling scenarios using new standard VA Conservation Practice Standard (CPS) 400 with \$5000 cap/year, modify job sheet slightly to include more detail on existing operation and cycling procedures.
2. **Primary Recommended change:** add a scenario under CPS 643 (Restoration and Management of Rare and Declining Habitats) to **rebuild leased land bottom using clean shells. This will allow for successful wild sets and provide an opportunity for "spat on shell" placement.**
 - a. Cost estimate: 1000 bushels of shell/acre would provide a new layer 1 shell thick. It will take 2000-5000 bushels of shell/acre to effectively rebuild the bottom. Shell costs are \$1-\$2/bushel depending on the distance the shell travels. Shell has a 3-5 yr life once placed. Total cost /acre is \$2000 - \$10000 with a recommended \$5000 cap/year (land would not be eligible more than once).
3. **Secondary Recommended change:** add a scenario to place spat on shell on recently prepared bottom or other existing suitable substrate.
 - a. Cost estimate: 100 bu/containerized shell (\$4/bushel) requires 3.5 million oyster larvae (\$265/million) and \$100 of electricity to set the spat on shell is \$1427.50/100 bushel. Planting density of 500-1000 bu/acre of spat on shell is \$7137.50 to \$14,275 with a recommended \$8000 cap/year (land would not be eligible more than once).

**Programs Summary for State Technical Committee
August 17, 2011**

CBWI

- Allocation = \$16,274,514
- New contracts = 492 for \$14,884,058 on 56,474 acres
- 15 approved contracts for \$670,770
- 29 pre-approved for \$689,343
- Eligible backlog = \$1,736,173

EQIP

- Allocation = \$11,513,402
- New contracts = 329 for \$11,379,493 on 35,034 acres
- 1 approved for \$17,202
- 6 pre-approved for \$114,632
- Eligible backlog = \$12,744,788

WHIP

- Allocation = \$648,731.
- New contracts = 69 for \$600,743 on 3,533 acres
- 4 approved for \$17,344
- 5 pre-approved for \$17,078
- Eligible backlog = \$116,748

CSP

- Allocation = \$1,240,168
- New contracts = 89 for \$1,141,244 on 46,510 acres

Totals for CBWI, EQIP, WHIP and CSP

- Allocation = \$29,676,815
- New Contracts = 979 for \$28,005,538 on 141,550 acres
- 94.4% obligated to date and 99.5% committed
- Backlog = 621 applications for \$14,597,709

CCPI Projects = \$3,122,145

- New River- Highlands RC&D (EQIP) = \$1,008,297
- Chesapeake Bay Foundation (EQIP) = \$41,900
- Fish America (EQIP) = \$1,215,842
- Forestry Foundation (CBWI) = \$119,963
- Shenandoah RC&D (CBWI) = \$666,147
- Trout Unlimited (CBWI) = \$27,925
- VA Dept. of Game and Inland Fisheries (WHIP) = \$40,604
- Trout Unlimited (WHIP) = \$1,467

National CIG

- We expect the Secretary of Agriculture to make the announcement on Friday regarding the approved National CIG projects for FY-12.

State CIG = \$248,704

- Colonial SWCD for Green Seeker Implementation = \$15,804
- Colonial SWCD for Zone Based Nitrogen Management in Corn = \$50,000
- VA Tech for Precision Fertilizer Management = \$75,000
- VA Tech for Large Animal Mortality = \$2,900
- VA Tech for Reducing Phosphorus Excretions in Grazing = \$30,000
- Local Food Hub for Comprehensive Outreach and Marketing = \$75,000

Additional CTA Funding Projects = \$395,800

- Extend VDGIF Agreement for 2 years for Private Lands Biologists
- Renew DOF Agreement for EQIP and CSP Technical Support
- Renew DOF Agreement for Forestry Training
- Renew CBF Agreement for Technical Support in Shenandoah Valley
- Acquire services for CNMP Plan Development

Bivalve Aquaculture Gear and Biofouling Control

Virginia Conservation Practice Job Sheet

400

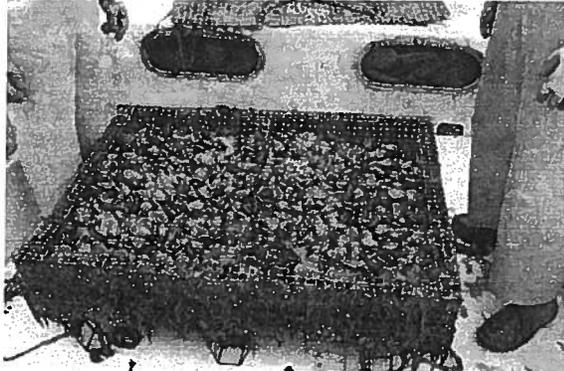


Photo source: VIMS

Definition

Actions that reduce, clean or remove biofouling organisms and other waste from bivalve production areas while minimizing environmental risk.

General Criteria

A Shellfish Aquaculture Management Plan shall be developed that addresses all of the identified resource concerns, including, but not limited to, the following:

Maintain adequate water flow through the production area by using husbandry practices including, but not limited to, the following:

- Monitor containment gear and other equipment regularly for biofouling.
- Clean and remove biofouling organisms frequently to facilitate shellfish health and growth, replacing containment gear with new and/or biofoul free equipment when necessary.
- Cycle off-bottom containment gear used for epifaunal culture with redundant gear for collection, transport and treatment of biofouling.

- Clean gear on-shore.
- Avoid the return of fouling organisms and macro algae into surface waters.
- Use only environmentally appropriate biofoul control methods, including, but not limited to: air drying, brine dip, vinegar dip, fresh water dip, sweeping or power washing.
- Collect, transport and dispose of waste gear on-shore, in a manner that is timely and does not cause environmental degradation.

Manage the risk of accidental loss of and/or damage to aquaculture gear within the environment due to inadequate securing, excessive fouling, and ice or hazardous weather damage by adopting the following actions:

- Properly demarcate lease site boundaries per VMRC regulations to prevent motor vessel collisions which can then result in gear/net entanglement.
- Secure and effectively maintain shellfish containment systems on a regular basis, and especially before hazardous weather.
- Collect and dispose of waste gear outside of the marine environment as soon as practical after removal from production areas, and especially before hazardous weather.
- Keep records of gear cycling, replacement, removal, and movement to monitor losses that may pose an environmental or navigational hazard.

Virginia Bivalve Aquaculture Gear/Biofouling Control – Practice Certification

400

Specifications

Site-specific requirements are listed on this specification sheet. This job sheet is provided as a component of a resource conservation plan. Plan maps, location of leases/fields to be managed, complementary conservation practices and measures, other relevant information and additional specifications may be included. Specifications are prepared in accordance with the NRCS Field Office Technical Guide. See Conservation Practice Standard *Bivalve Aquaculture Gear and Biofouling Control* (400).

<i>For:</i>	<i>Farm #:</i>
<i>Lease(s):</i>	<i>Tract #:</i>
<i>Designed By:</i>	<i>Approved By:</i>
<i>Drawing No(s):</i>	<i>Signature:</i>
<i>Date:</i>	<i>Date:</i>

Purpose (check all that apply)	
<input type="checkbox"/> Minimize adverse impacts of shellfish aquaculture operations and gear on water, plant, animal and human resources	<input type="checkbox"/> Ensure dependable quantity and quality of water to support shellfish production
	<input type="checkbox"/> Ensure adequate quantity and quality of food to support shellfish production

Description of current aquaculture system (include details of the aquaculture growing system, length of growth period, types of cages used, current cleaning techniques/methods, etc...):

Gear (write N/A where not applicable)		
<i>Number of current Gear prior to 706 implementation</i>	<i>Surplus for cycling</i>	<i>Total gear cycling</i>
Clams		
_____ clam nets included out of a total of _____ (typical net 14' by 60')	_____ linear feet * 100%	_____ linear feet of net
Oysters		
_____ small cages included out of a total of _____ (typically holds 500 oysters)	X 20%	_____ small cages
_____ medium cages included out of a total of _____ (typically holds 1,000 oysters)	X 20%	_____ medium cages
_____ large cages included out of a total of _____ (typically holds 2,000 oysters)	X 20%	_____ large cages
_____ oyster bags included out of a total of _____ (typically 300 oysters per bag)	X 20%	_____ bags

Proposed Gear Cycling Date:
Gear Cleaning Location:
Gear Cleaning Method:
Precautions taken to ensure runoff from cleaning does not return to water:

- * Minimum documentation required for certification includes:
- Receipts of new gear purchased
 - Record of date and type of gear that has been cycled

CHECK OUT:

Amount Completed: _____

Remarks _____

This practice meets NRCS standards and specifications Yes No

Check out by: _____ Date: _____

Self-Certification Verification:

I have completed the gear cycling plan for 100% of the gear on

Farm _____ Tract(s)/Lease _____

Field/Block _____

and have complied with specification as stated in this job sheet.

Participant Signature: _____

Date: _____

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2011 Contracts as of 7/19/2011

Code	Practice	Number	Units	Dollars	% of total allocation
313	Waste Storage Facility	109	no	\$4,381,923.00	18.5602%
561	Heavy Use Area Protection	96.77	ac	\$4,048,772.00	17.1491%
382	Fence	1357472	ft	\$2,701,679.20	11.4433%
590	Nutrient Management	69082	ac	\$1,888,503.00	7.9990%
328	Conservation Crop Rotation	37050.89	ac	\$1,149,588.00	4.8692%
516	Pipeline	470285	ft	\$956,139.00	4.0498%
528	Prescribed Grazing	27316	ac	\$861,260.00	3.6480%
329	Res. +ACY- Tillage Mgt, No-till/Strip-till	26593.8	ac	\$793,224.60	3.3598%
614	Watering Facility	613	no	\$777,475.00	3.2931%
512	Forage and Biomass Planting	9668	ac	\$677,537.00	2.8698%
340	Cover Crop	19590	ac	\$628,650.00	2.6627%
575	Animal Trails and Walkways	63184.3	ft	\$400,335.00	1.6957%
591	Amend. for Treat. of Ag. Waste			\$391,022.00	1.6562%
612	Tree and Shrub Establishment	4837	ac	\$359,589.00	1.5231%
642	Water Well	69	no	\$353,536.00	1.4974%
316	Animal Mortality Facility	12	no	\$347,171.00	1.4705%
533	Pumping Plant	810	no	\$248,115.00	1.0509%
558	Roof Runoff Structure	94	no	\$239,876.00	1.0160%
798	Seasonal High Tunnel Sys. for Crops	45	no	\$205,110.00	0.8688%
578	Streamcrossing	79	no	\$194,214.00	0.8226%
666	Forest Stand Improvement	6436	ac	\$180,665.00	0.7652%
442	Irrigation System-Sprinkler	221	ac	\$137,212.00	0.5812%
634	Waste Transfer	8	no	\$129,936.00	0.5504%
342	Critical Area Planting	139.3	ac	\$124,879.00	0.5289%
315	Herbaceous Weed Control	3773.5	ac	\$122,624.10	0.5194%
490	Forest Site Preparation	7232	ac	\$107,499.00	0.4553%
338	Prescribed Burning	3271	ac	\$105,283.00	0.4459%
317	Composting Facility	2	no	\$102,410.00	0.4338%
314	Brush Management	1513	ac	\$93,432.00	0.3957%
327	Conservation Cover	332.85	ac	\$87,970.10	0.3726%
580	Streambank +ACY- Shoreline Protection	3340	ft	\$85,291.00	0.3613%
706	Shellfish Aquaculture	432	ac	\$73,772.00	0.3125%
595	Pest Management	604	ac	\$67,428.00	0.2856%
647	Early Success. Hab. Development	907	ac	\$67,111.00	0.2843%
394	Firebreak	209985	ft	\$61,851.00	0.2620%
410	Grade Stabilization Structure	3	no	\$60,400.00	0.2558%
643	Res. +ACY- Mgt. of Declining Habitats	350	ac	\$57,750.00	0.2446%
391	Riparian Forest Buffer	57.4	ac	\$43,536.00	0.1844%
632	Solid/Liquid Waste Separation Facility	1	no	\$43,000.00	0.1821%
574	Spring Development	14	no	\$32,800.00	0.1389%

Code	Practice	Number	Units	Dollars	% of total allocation
412	Grassed Waterway	19.6	ac	\$31,360.00	0.1328%
360	Closure of Waste Impoundment	2	no	\$30,201.00	0.1279%
472	Access Control	5870	ac	\$24,575.00	0.1041%
560	Access Road	1386	ft	\$20,550.00	0.0870%
717	Livestock Shade Structure	6	no	\$20,352.00	0.0862%
422	Hedgerow Planting	15578	ft	\$13,659.00	0.0579%
386	Field Border	32.8	ac	\$11,612.00	0.0492%
527	Sinkhole +ACY- Sinkhole Area Treat.	4	no	\$10,200.00	0.0432%
106	Conservation Activity Plan - Forestry	8	no	\$9,458.00	0.0401%
468	Lined Waterway or Outlet	4390	ft	\$8,076.00	0.0342%
449	Irrigation Water Management	663	ac	\$7,896.00	0.0334%
380	Windbreak/Shelterbelt Est.	6308	ft	\$7,388.00	0.0313%
122	Conservation Activity Plan - Energy	4	no	\$6,150.00	0.0260%
362	Diversion	2916	ft	\$5,983.00	0.0253%
585	Stripcropping	22	ac	\$4,400.00	0.0186%
393	Filter Strip	16.1	ac	\$2,697.00	0.0114%
345	Res. +ACY- Tillage Mgt, Mulch-till	158.5	ac	\$2,530.00	0.0107%
332	Contour Buffer Strips	13.3	ac	\$1,265.00	0.0054%
635	Vegetated Treatment Area	2.2	ac	\$1,150.00	0.0049%
390	Riparian Herbacious Cover	4.3	ac	\$764.00	0.0032%
484	Mulching	1	ac	\$450.00	0.0019%
645	Upland Wildlife Habitat Management	1497	ac	\$0.00	0.0000%
				\$23,609,284.00	
911	Design	11	no	\$19,747.00	
912	Application	12	no	\$15,973.00	
913	Check out	12	no	\$18,456.00	

CBWI Funds Status 8_16_2011

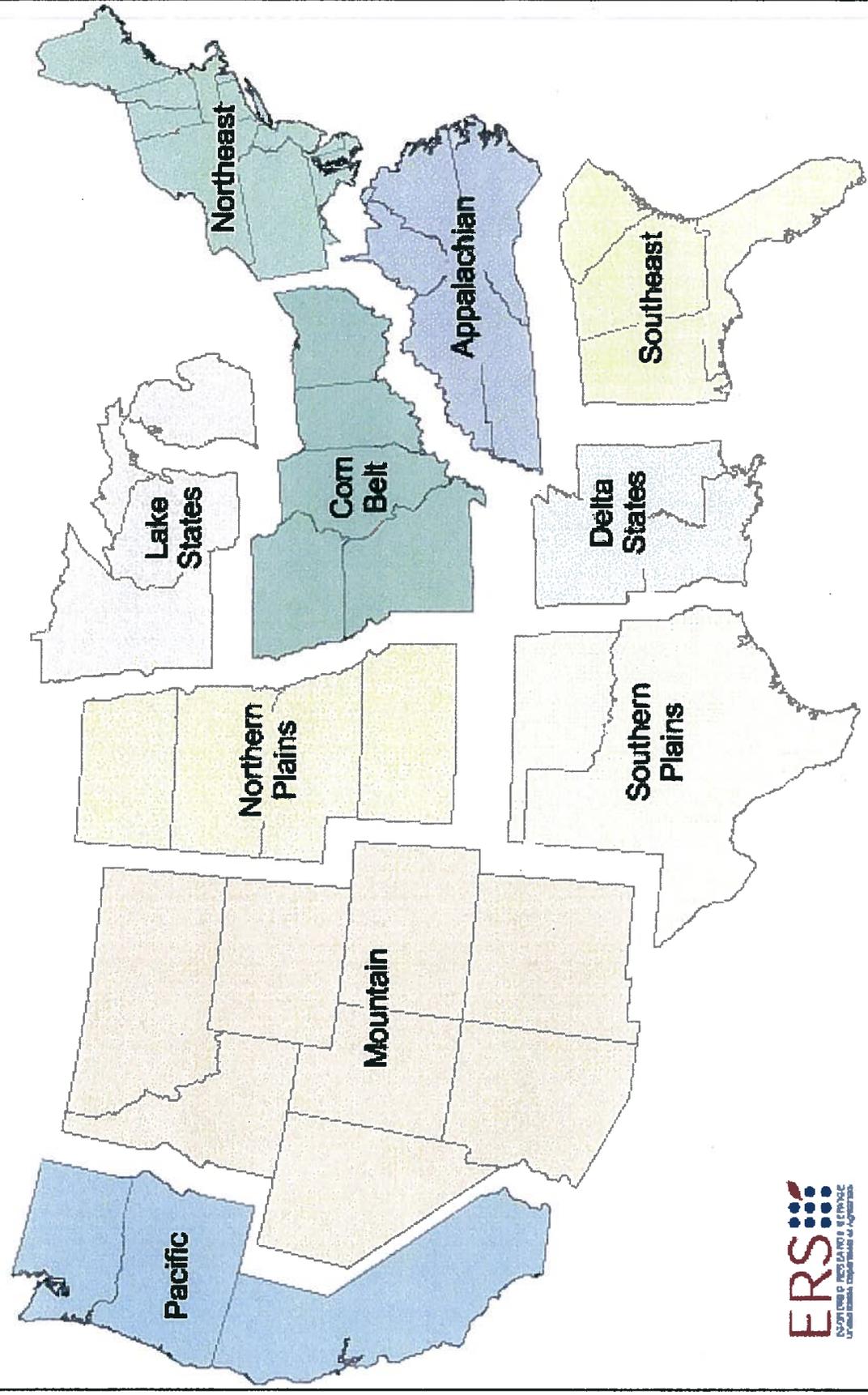
Account Name	Allocated	Contract Approval	Pre-Approved Applications	Funds Remaining	Backlog
Virginia	\$16,635,347.00	\$15,707,630.10			
Sub Funds	\$16,607,509.54	\$15,547,908.62			
Funds not committed	\$27,837.46				
CBWI - Animals in Confinement	\$7,464,005.10	\$6,721,954.10	\$741,740.00	\$311.00	\$237,822.00
CBWI - Aquaculture	\$87,518.00	\$87,518.00	\$0.00	\$0.00	\$0.00
CBWI - Cropland	\$2,684,043.00	\$2,684,043.00	\$0.00	\$0.00	\$201,717.00
CBWI - Limited Resource Farmer	\$3,175.00	\$3,175.00	\$0.00	\$0.00	\$0.00
CBWI - New Farmer	\$994,362.20	\$994,362.20	\$0.00	\$0.00	\$0.00
CBWI - Pasture	\$3,880,230.24	\$3,880,040.24	\$0.00	\$190.00	\$592,414.00
CBWI - Socially Disadvantaged	\$195,598.00	\$195,598.00	\$0.00	\$0.00	\$0.00
CBWI - Vegetative Buffers - Poultry	\$18,000.00	\$0.00	\$17,435.00	\$565.00	\$0.00
Forestry CCPI	\$119,962.50	\$60,321.00	\$55,644.00	\$3,997.50	\$57,012.00
Forestry CCPI Forest Management Plan	\$23,842.50	\$17,285.00	\$6,557.50	\$0.00	\$0.00
Shennendoah Valley RCD_CCPI	\$666,147.00	\$620,981.08	\$45,000.00	\$165.92	\$0.00
Smith Creek Showcase Watershed-Cropland	\$44,343.00	\$44,343.00	\$0.00	\$0.00	\$0.00
Smith Creek Showcase Watershed-Pasture	\$160,688.00	\$160,688.00	\$0.00	\$0.00	\$0.00
Trout Unlimited	\$27,925.00	\$27,925.00	\$0.00	\$0.00	\$0.00
Trout Unlimited - Stream Restoration	\$49,675.00	\$49,675.00	\$0.00	\$0.00	\$0.00
FY11 CBWI Reserve	\$187,995.00	\$159,721.48	\$0.00	\$28,273.52	\$0.00
			All Funds Remaining	\$61,340.40	\$1,088,965.00

EQIP Funds Status 8_16_2011

Account Name	Allocated	Contract Approval	Pre-Approved Apps	Funds Remaining	Backlog
Virginia	\$11,584,474.00	\$11,453,621.88			
Sub Funds	\$11,584,474.00	\$11,396,695.38			
Beginning Farmer	\$250,088.60	\$250,088.60	\$0.00	\$0.00	\$2,175,253.00
CAP 102 CNMP Development	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CAP 104 Nutrient Management Plan	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CAP 106 Forest Mgmt Plan	\$9,549.00	\$9,548.50	\$0.00	\$0.50	\$0.00
CAP 118 Irrigation Water Management Plan	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CAP 122 Energy Audit Headquarters	\$6,150.00	\$6,150.00	\$0.00	\$0.00	\$0.00
CAP 124 Energy Audit Field Operations	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CAP 130 Drainage Water Management	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CAP 138 Transition to Organic Conservation Plan	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CCPI-Ches Bay Foundation	\$41,900.00	\$17,202.00	\$23,697.00	\$1,001.00	\$0.00
CCPI-Fish America	\$1,215,842.00	\$1,215,842.00	\$0.00	\$0.00	\$0.00
CCPI-New River_Highlands	\$1,008,297.00	\$916,290.00	\$90,935.00	\$1,072.00	\$90,946.00
Cropland - Christiansburg	\$74,767.00	\$74,767.00	\$0.00	\$0.00	\$14,000.00
Cropland - Farmville	\$357,643.60	\$357,643.60	\$0.00	\$0.00	\$41,254.00
Cropland - Harrisonburg	\$162,329.00	\$162,329.00	\$0.00	\$0.00	\$0.00
Cropland - Smithfield	\$591,410.00	\$591,410.00	\$0.00	\$0.00	\$240,343.00
Forestry - Statewide	\$680,322.65	\$680,322.65	\$0.00	\$0.00	\$361,502.00
Groundwater Conservation	\$142,240.00	\$142,240.00	\$0.00	\$0.00	\$0.00
High Tunnel Hoop House Initiative	\$188,041.30	\$188,041.30	\$0.00	\$0.00	\$239,099.00
Limited Resource Farmer	\$19,354.72	\$19,354.72	\$0.00	\$0.00	\$0.00
Livestock in Confinement - Christiansburg	\$1,787,939.91	\$1,787,939.91	\$0.00	\$0.00	\$3,370,578.00
Livestock in Confinement - Farmville	\$1,116,957.00	\$1,116,957.00	\$0.00	\$0.00	\$836,857.00
Livestock in Confinement - Harrisonburg	\$765,228.90	\$765,228.90	\$0.00	\$0.00	\$201,600.00
Livestock in Confinement - Smithfield	\$314,867.20	\$314,867.20	\$0.00	\$0.00	\$196,970.00
Orchard - Pest Management	\$67,428.00	\$67,428.00	\$0.00	\$0.00	\$0.00
Organic Certified	\$178,922.00	\$178,922.00	\$0.00	\$0.00	\$0.00
Organic Transition	\$104,290.00	\$104,290.00	\$0.00	\$0.00	\$0.00
Pasture - Christiansburg	\$781,788.20	\$781,788.20	\$0.00	\$0.00	\$2,146,257.00

Pasture - Farmville	\$699,835.40	\$699,835.40	\$0.00	\$0.00	\$757,919.00
Pasture - Harrisonburg	\$146,280.00	\$146,280.00	\$0.00	\$0.00	\$13,500.00
Pasture - Smithfield	\$143,721.00	\$143,721.00	\$0.00	\$0.00	\$30,287.00
Socially Disadvantaged	\$658,209.00	\$658,208.40	\$0.00	\$0.60	\$522,553.00
FY11 EQIP Reserve	\$71,072.52	\$56,926.50	\$0.00	\$14,146.02	
			Totals	\$16,220.12	\$11,238,918.00

USDA Farm Production Regions



Top-15 Cons. Practices implemented by NRCS/VA by Dollars Obligated and Total Count (No. of occurrences, i.e., line items in active contracts)

No.	Practice Code	Practice Name	Number of Units Obligated	Units	Dollars Obligated	% of Total Allocation to VA
1	313	Waste Storage Facility	109	No.	\$4,382,000	18.6%
2	561	Heavy Use Area Protection	97	Ac.	\$4,049,000	17.2%
3	382	Fence	1,357,472	Ft.	\$2,702,000	11.4%
4	590	Nutrient Management	69,082	Ac.	\$1,889,000	8.0%
5	328	Conservation Crop Rotation	37,051	Ac.	\$1,150,000	4.9%
6	516	Pipeline	470,285	Ft.	\$956,000	4.0%
7	528	Prescribed Grazing	27,316	Ac.	\$861,000	3.6%
8	329	Residue and Tillage Management, No Till and Strip Till	26,594	Ac.	\$793,000	3.4%
9	614	Watering Facility	613	No.	\$777,000	3.3%
10	512	Forage and Biomass Planting	9,668	Ac.	\$678,000	2.9%
11	340	Cover Crop	19,590	Ac.	\$629,000	2.7%
12	575	Animal Trails and Walkways	63,184	Ft.	\$400,000	1.7%
13	591	Amendment for the Treatment of Agricultural Wastes	?	?	\$391,000	1.7%
14	612	Tree and Shrub Establishment	4,837	Ac.	\$360,000	1.5%
15	642	Water Well	69	No.	\$354,000	1.5%

No.	Practice Code	Practice Name	Number of Occurrences in Active Contracts	Number of Units Obligated	Dollars Obligated	% of Total No. of Line Items in Active Contracts
1	382	Fence	2,392	1,357,472	\$2,702,000	13.1%
2	328	Conservation Crop Rotation	1,369	37,051	\$1,150,000	7.5%
3	614	Watering Facility	1363	613	\$777,000	7.5%
4	528	Prescribed Grazing	1,296	27,316	\$861,000	7.1%
5	516	Pipeline	1,207	470,285	\$956,000	6.6%
6	512	Forage and Biomass Planting	1,052	9,668	\$678,000	5.8%
7	590	Nutrient Management	880	69,082	\$1,889,000	4.8%
8	472	Access Control	693	5,870	\$24,575	3.8%
9	329	Residue and Tillage Management, No Till and Strip Till	674	26,594	\$793,000	3.7%
10	340	Cover Crop	483	19,590	\$629,000	2.6%
11	612	Tree and Shrub Establishment	477	4,837	\$360,000	2.6%
12	338	Prescribed Burning	433	3,271	\$105,283	2.4%
13	533	Pumping Plant	391	810	\$248,115	2.1%
14	342	Critical Area Planting	335	139	\$124,879	1.8%
15	642	Water Well	318	69	\$354,000	1.7%

Total Obligated and % of Total Allocated funds committed to top 15 practices in VA as of 7/19/11:	\$20,371,000	86.3%
NRCS/VA - Total Allocated funds, all programs and % obligated to all practices as of 7/19/11:	\$23,609,000	100%
Total Obligated and % of Total Allocated funds committed to all other non-top 15 practices in VA as of 7/19/11:	\$3,238,000	13.7%
Total Obligated by Count and % of Total Count for the top 15 practices in VA as of 8/11/11:	\$11,297,852	71.6%
NRCS/VA - Total Allocated funds, all programs and % obligated to all practices as of 7/19/11:	\$23,609,000	100%
Total Obligated and % of Total Allocated funds committed to all other non-top 15 practices by count in VA as of 7/19/11:	\$12,311,148	28.4%

WRP :: Wetlands Reserve Program

- FY-11 Allocation is \$1,155,642. Total obligated (99.5%) is \$1,150,213 for:
 - 6 permanent easements on 284 acres, and
 - one 10-year easement on 3.4 acres.
- Restoration ongoing on 6 sites totaling 94.4 acres.
- Upcoming 3-day training course on wetland restoration in August for Va. staff in all Areas.
- Upcoming 3-day WRP Implementation training course in October for WRP easement staff in U.S.
- Adjustments to Geographic Area-Wide Maps:
Contracting for new Market Analysis is underway to develop new GARCs (Geographic Area Rate Caps.)
- WRP Ranking Criteria Worksheet: During 2011 WRP team site visits, a few ranking questions needed clarification; these will be presented for review and concurrence at the Nov. State Technical Committee meeting.
- Closing 5 new WRP in FY-11, totaling 255 acres.

GRP :: Grassland Reserve Program

- FY-11 allocation is \$694,027. Total obligated (100%) for:
 - 2 permanent easements on 200.17 acres,
 - three 10-year and one 15-year rental agreements on 473.33 acres.
- Adjustments to Geographic Area-Wide Maps:
Contracting for new Market Analysis is underway to develop new GARCs (Geographic Area Rate Caps.)
- Closing 8 new GRP in FY-11, totaling 605 acres.

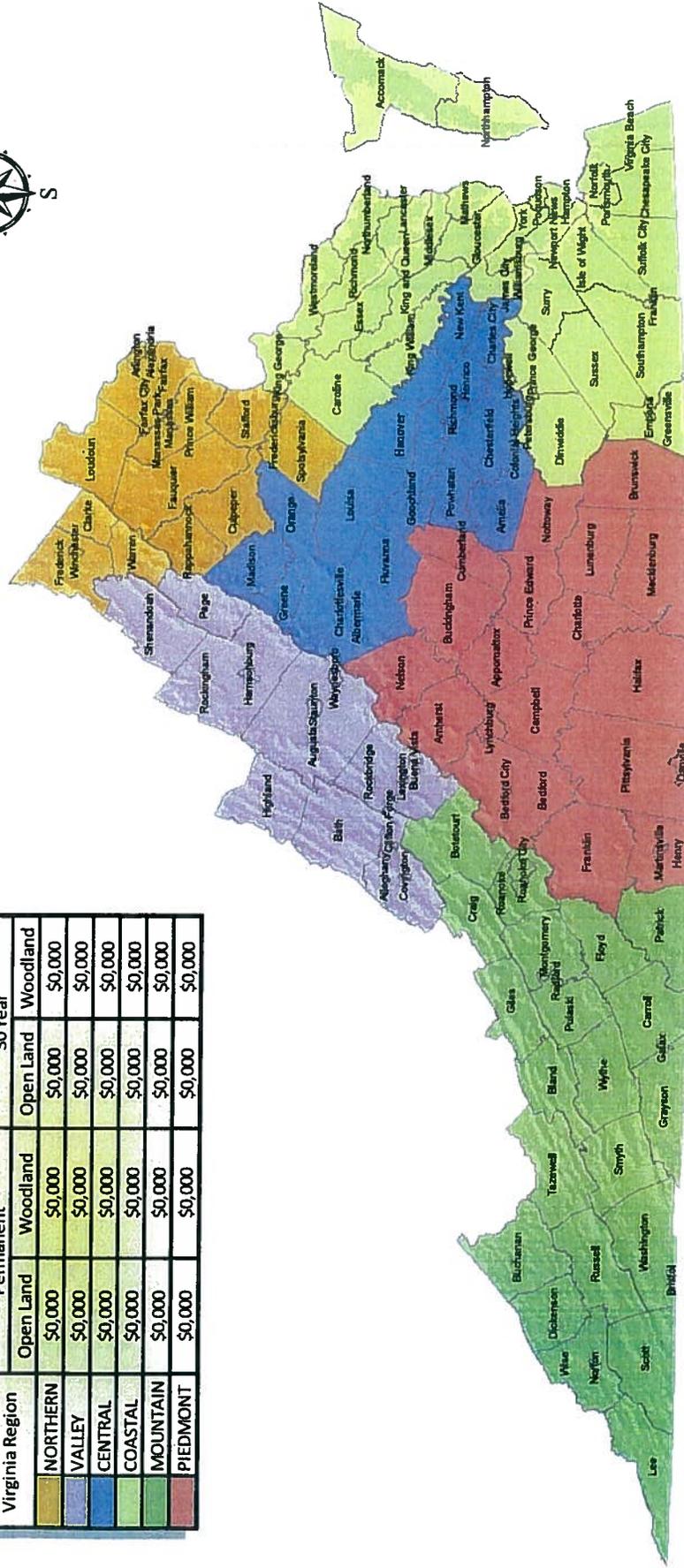


United States Department of Agriculture



GEOGRAPHIC AREA RATE CAPS FOR WETLAND RESERVE PROGRAM (WRP) BY VIRGINIA REGION FOR FY '12

Virginia Region	Permanent		30 Year	
	Open Land	Woodland	Open Land	Woodland
NORTHERN	\$0,000	\$0,000	\$0,000	\$0,000
VALLEY	\$0,000	\$0,000	\$0,000	\$0,000
CENTRAL	\$0,000	\$0,000	\$0,000	\$0,000
COASTAL	\$0,000	\$0,000	\$0,000	\$0,000
MOUNTAIN	\$0,000	\$0,000	\$0,000	\$0,000
PIEDMONT	\$0,000	\$0,000	\$0,000	\$0,000



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

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



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

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



GEOGRAPHIC AREA RATE CAPS FOR GRASSLAND RESERVE PROGRAM (GRP) BY VIRGINIA REGION FOR FY '12

LEGEND	
Virginia Region	Open Land
NORTHERN	\$0,000
VALLEY	\$0,000
CENTRAL	\$0,000
COASTAL	\$0,000
MOUNTAIN	\$0,000
PIEDMONT	\$0,000



Proposed Program Changes for FY-12
State Technical Committee Meeting
August 17, 2011

- Delete Orchard – Pest Management due to stink bug invasion.
- Delete Groundwater Conservation – due to limited funds and lower priority.
- Continue existing Conservation Activity Plan offerings but not expand to include others at this time.
- For EQIP and CBWI, allow payment for fencing and access control for livestock exclusion to include a minimum 10-foot setback from the water feature. These would not qualify as Riparian Forest Buffers.
- Poultry Waste Transfer – Do not include because litter is hard to find and this is offered in the Virginia BMP Cost-Share Program.
- New Practices To Offer:
 - Waste Gasification Facility (Code 735) but limit payment to a maximum of \$100,000 per producer. Joint applications from multiple landowners would be allowed and encouraged. This could be a separate fund pool or part of the Animals in Confinement fund pool.
 - Farmstead Energy Improvement (Code 374) but limit payment to those items identified in a previous energy audit.
 - Roofs and Covers (Code 367) is a separate practice code now.
- Offer State CIG in Virginia in FY-12 but reduce it to \$150,000 (about 2 projects per year).
- Continue with Smith Creek Pilot Watershed funding at \$500,000.
- Initiate a risk assessment for Heavy Use Area pads for poultry operations. For funding, site must include risks for one of the following: runoff, leaching, or water table <18” below surface.
- Revise risk assessment for animals in confinement (136 points currently).
- Do not set up a separate funding pool just for Specialty Crops. However, we would add a local question for additional points related to marketing and selling products within the local area (<50 miles??)

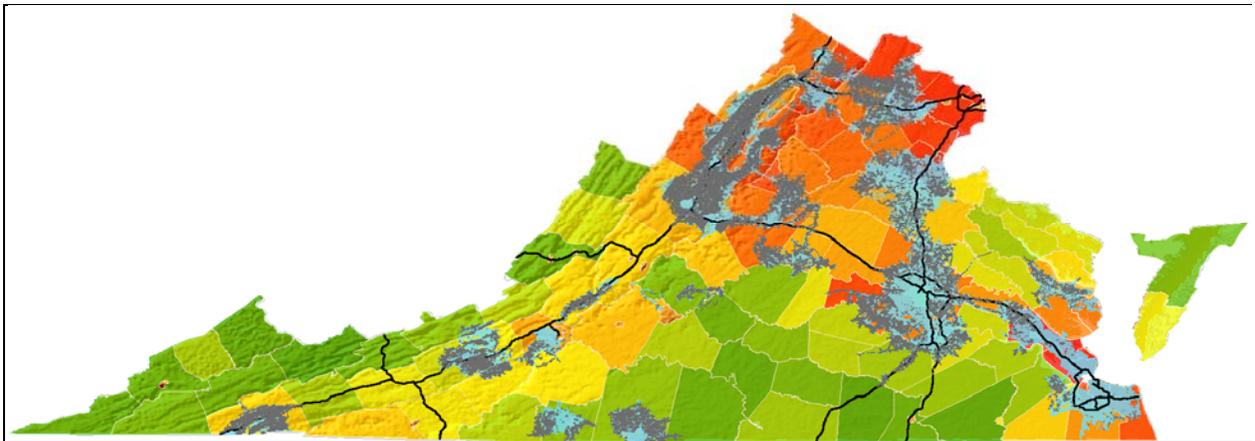
- Make revisions (mostly to eliminate ambiguity) to some of the ranking questions and the points allowed on the various ranking tools. Also revise screening tools as needed. In-house committee will draft the changes and the proposed changes will be routed to the State Technical Committee for their review and concurrence.
- Remove interim portable shade structure from practice standards in Virginia.
- Use the following evaluation ranking dates (These are subject to change):
 - Forestry
 - Continuous sign-up
 - First forestry batching period (apps in ProTracts) = 12/16/11
 - First forestry ranking deadline = January 13, 2012
 - Second forestry batching period = January 31, 2012
 - Second forestry ranking deadline = February 17, 2012
 - Monthly thereafter, if needed
 - EQIP, CBWI, WHIP and Easements
 - Continuous sign-up
 - First batching period (apps in ProTracts) = January 31, 2012
 - First ranking deadline = February 29, 2012
 - Second batching period = March 16, 2012
 - Second ranking deadline = March 30, 2012
 - Monthly thereafter, if needed
- Offer only one tree planting payment for maximum of 350 trees per acre.
- Payment Schedule – Regional and/or National payment schedule for top 15 practices.
- Revise GRP and WRP Geographic Area Rate Cap Areas (Handout).

Natural Resources Conservation Service

Virginia

Farm and Ranch Land Protection Program

2012 State Plan



**United States Department of Agriculture
Natural Resources Conservation Service
Virginia State Office
1606 Santa Rosa Road, Suite 209
Richmond, Virginia 23229-5014**

Contents

- 1. State Plan Narrative**
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 - IV. Justification of Funding Request**
- 2. State Plan Summary**
- 3. State Plan Required Content**
- 4. FRPP Priority Area Map**

Appendix

- 1. Composite Vulnerability Model**
- 2. Participating Entity Information**
- 3. Virginia 2012 Draft FRPP Ranking Factors**

I. Introduction

This Farm and Ranch Lands Protection Program (FRPP) state plan is approved by the State Conservationist to guide the FRPP program in the Commonwealth of Virginia. The plan supports Virginia's budget allocation request of \$4,841,142.

There is great potential for farmland preservation in Virginia in fiscal year 2012. In 2011 the Commonwealth of Virginia spent over \$106 million on land conservation in the state, however little of it was eligible for match against Farm and Ranch Lands Protection Program (FRPP) funds under the 2008 Farm Bill. This investment by the state will only grow in 2012 and if the next Farm Bill recognizes this commitment to conservation then NRCS could play a larger role in guiding it towards farmland preservation through FRPP.

This \$106 million expenditure preserved over 60,000 acres with a fair market value exceeding \$271 million. It also created a stewardship fund of an estimated \$2 million targeted at the long term monitoring of those 60,000 acres. In 2008, the most recent year for which statistics are available, these funds protected 20,393 acres of land in agricultural use.

This is such a major investment by Virginia that the projects with the highest fair market value are required to go through an independent review by the State's Department of Conservation and Recreation. This independent review frequently requires additional protections for the resources targeted by FRPP, including conservation plan requirements, prohibitions on development of prime farmland, and riparian buffers.

Unfortunately, none of these funds was eligible as match against FRPP, since they were an indirect expenditure through a state tax credit. Because of this limitation, there were only \$600,000 dollars of Virginia state funds available to match against FRPP in 2011, and the majority of these funds were held over to 2012 when they could be bundled with new funds.

Unless NRCS is allowed to tap into and steer a portion of this \$106 million investment by using it as match for FRPP, then we must continue to base our request for FRPP funds on the lesser amount of match funds available in the state. In fiscal year 2012, there will be \$2.4 million in state funds available for match against FRPP under the current program. Therefore, we request that \$4.8 million in FRPP funds be allocated to Virginia to fully match this portion of the state investment in land conservation. (See Section IV for a breakdown of Virginia's FY 2012 request.)

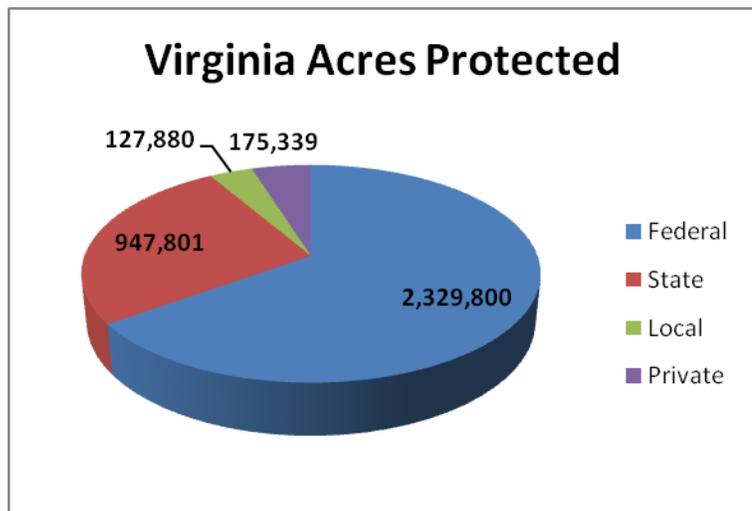


Figure 1

II. Virginia Land Conservation

The modern era of land conservation in Virginia began on June 13, 1968, when the first Virginia Outdoors Foundation (VOF) easement was recorded; it was on 102 acres in Goochland County, Virginia. VOF was created 32 years ago by the Virginia General Assembly “to preserve the natural, scenic, historic, scientific, open-space and recreational areas of the Commonwealth” amongst other land conservation related activities. Since then, VOF, a state supported foundation and the state of Virginia’s largest land trust, has protected over 600,000 acres. Almost 450,000 of those acres have been preserved in the last decade. In that same decade, 707,041 acres were protected statewide, bringing the number of acres protected in Virginia to 3,580,820 (see Figure 1).

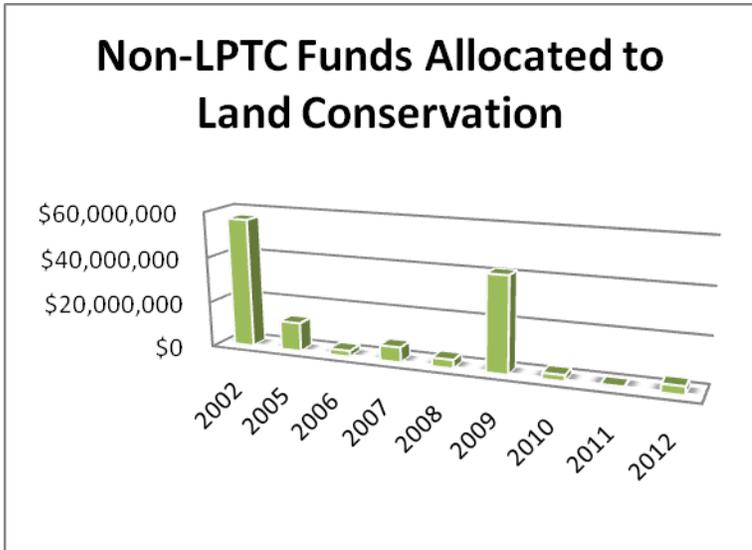


Figure 2

Both the current governor and his predecessor have made increased land conservation a priority of their administrations. With each of them announcing a goal of conserving 400,000 acres in Virginia during their 4-year terms, the Virginia land conservation community has been both inspired and challenged.

This support has not kept Virginia’s direct expenditures for land conservation from fluctuating over the last decade (Figure 2). At \$600,000, 2011 was the low point for direct funding levels. At the same time, indirect expenditures for land conservation through the Land Preservation Tax Credit (LPTC) have been increasing (Figure 3). Fortunately, the direct expenditures have seen a slight rebound for 2012.

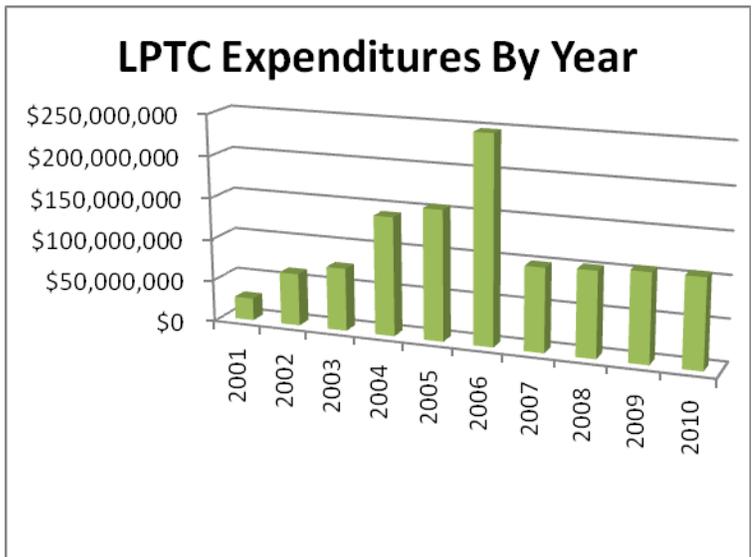


Figure 3

This unpredictable, and often limited, direct funding may be one reason so much of Virginia’s land conservation in the last ten years has been accomplished through the LPTC. In fact, VOF, the state’s largest and oldest land trust, relies almost entirely on the LPTC to drive its land

protection efforts. Their efforts account for 64% of the land protected in the state between 2001 and 2010.

An area where Virginia's land conservation effort is expanding through direct funding at the state and local level is the Purchase of Development Right's (PDR). There are 22 localities in the state with active PDR programs, many of them assisted in part by the Virginia Department of Agricultural and Consumer Service's Office of Farmland Preservation (VDACS). Several PDR programs have combined funds received from VDACS with FRPP funds to protect productive farmland in their localities. VDACS is expected to provide \$1.2 million in grant funds to the PDR programs in the first quarter of 2012. These funds will be an excellent source of match for FRPP.

The other primary source of match funding in 2012 will come from the Virginia Land Conservation Foundation (VLCF), which has \$2,437,465. According to VLCF staff, \$448,047 is dedicated to the Farmland and Forest Preservation category and another \$772,524 to the Open Space and Parks category, for a combined total of \$1,220,571. The remaining funds could go to an FRPP eligible product, but the land would have to have conservation values in addition to those found in FRPP.

Virginia is also home to an award winning state park system that includes Chippokes Plantation State Park, one of the nation's oldest and continuously working farms. This is in addition to the extensive national parks and forests in the state.

III. Farm and Ranch Lands Protection Program Priority Areas

The FRPP state plan must include information on the degree of development pressure in the state. In addition, it must show priority areas that have the potential for sustainable agricultural activity and are threatened by development. To answer both of these requirements, we have prepared the map on page 6.

The map identifies the Prime Farmlands vulnerable to the threat of urban, suburban, and rural development. The map was derived by combining information from a Composite Vulnerability Model¹ published by the Virginia Department of Conservation and Recreation's Division of Natural Heritage (Appendix 1) and the Prime Farmland from the statewide Soil Survey Geographic (SSURGO) database.

As the purpose of the FRPP program is to "protect the agricultural use and related conservation values of eligible land by limiting nonagricultural uses of that land"², it is appropriate that the priority areas of FRPP be the areas where potential agricultural use is most threatened by nonagricultural uses. This intersection of development pressure and prime farmland is the area of priority for FRPP in Virginia.

IV. Justification of Funding Request

¹ Bulluck, J.F., J.M. Ciminelli, and J.T. Weber, 2007. Natural Landscape Assessment and Green Infrastructure – Completion and Distribution: Final Report. Natural Heritage Technical Report #07-17. Virginia Department of Conservation and Recreation, Division of Natural Heritage. Richmond, Virginia.

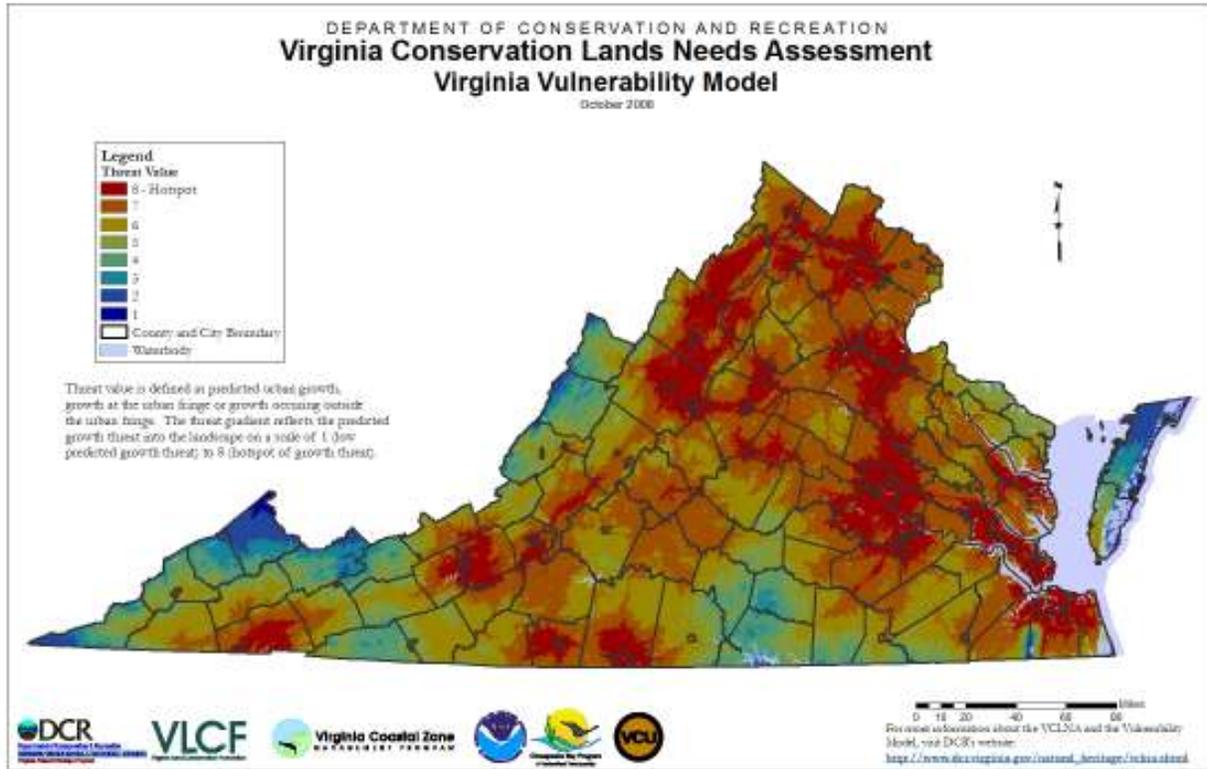
² 16 U.S.C. 3838i(b)

Based on information from state land conservation agencies, land trusts operating in the state, and local officials, the minimum amount of funding to match FRPP that will be available in federal fiscal year 2012 is \$2,420,571. Funding scenario 5 from Figure 519-F2 on page 519-F6 of the FRPP policy manual, which allows for the maximum FRPP Share of 50% of fair market value, minimum entity contribution of 25% of the purchase price or entity basis, and a landowner donation of 25% of the fair market value, is the most common FRPP scenario in Virginia. Due to Virginia's substantial tax credit for land preservation, this scenario provides the greatest incentive to both the landowner and the entity to participate in FRPP. To utilize only the minimum available match funding in Virginia for fiscal year 2012 in scenarios like this, we require an allocation of \$4,841,142.

2012 STATE FRPP PLAN Summary	
State: Virginia	
Topic	Data
Total FRPP Funds Requested for FY 2012 (Oct 2011 to Sept 2011)	\$ 4,841,142.00
Total Acres to be Protected in Fiscal Year 2012 (in FRPP)	2,454
Acres of Prime, Unique, and Important Farmland Soil to be Protected in FY 2012 (in FRPP)	1,227
Information on Potential Cooperating Entities (complete information below for each entity expected to participate in FRPP in FY 2012)	
Non-FRPP Entity Farmland Protection Easement Cash Expenditures(\$ in the State in FY2011 (including land value, appraisal, survey, legal, closing, and monitoring costs, but excluding funds used for matching FRPP funds)	
	Dollars for Each Entity
Commonwealth of Virginia (Land Preservation Tax Credit)	\$ 106,000,000.00
Virginia Land Conservation Foundation	\$ 500,000.00
Virginia Office of Farmland Preservation	\$ 100,000.00
Non-FRPP Farmland Protection Easement Donations of Land Value Received by the Entity in the State in FY2011 (excluding donations of land value used for matching FRPP funds)	
	Dollars for Each Entity
Based on meeting statewide cap on Virginia Land Preservation Tax Credit Cap in 2011	\$ 265,000,000.00

FRPP STATE PLAN REQUIREMENTS		
Topic	Data	Source
1. Degree of development pressure, such as local rates of land conversion, as documented by population growth and density (U.S. Census) and farmland loss (Agricultural Census, National Agricultural Statistics Service)	See Appendix # 1	Bulluck, J.F., J.M. Ciminelli, and J.T. Weber, 2007. Natural Landscape Assessment and Green Infrastructure – Completion and Distribution: Final Report. Natural Heritage Technical Report #07-17. Virginia Department of Conservation and Recreation, Division of Natural Heritage. Richmond, Virginia.
2. Priority areas that have the potential for sustainable agricultural activity and are threatened by development	See Map # 1	428,341 acres of Prime Farmland under the greatest threat of development in Virginia.
3. Acreage of prime, unique, and statewide and locally important farmland lost (according to the two most recent reports of the National Resources Inventory)	43,200	2007 NATIONAL RESOURCES INVENTORY; Virginia; April 22, 2010; Table D. Prime farmland area in thousands of acres, by broad cover/use and year (2002 to 2007)
4. Acreage of total farmland lost (according to the two most recent reports of the National Resources Inventory)	240,300	2007 NATIONAL RESOURCES INVENTORY; Virginia; April 22, 2010; Table B-2. Changes in broad cover/use in thousands of acres between 2002 and 2007
5. Total acres proposed for protection for the duration of the plan	428,341	Acres within FRPP Priority Area
6. Acreage of total farmland estimated to be protected for the duration of the plan	428,431	Acres of farmland within FRPP Priority Area
7. Acreage of prime, unique, and statewide and locally important farmland estimated to be protected for the duration of the plan	428,431	Acres of Prime Farmland within FRPP Priority Area
8. Number or acreage of historic and archaeological sites estimated to be protected with FRPP funds on farm or ranch lands	NA	Data requested from Virginia Department of Historic Resources
9. Average value of farmland in areas targeted in the plan	5,261	Average per acre price of lands in FRPP Priority Area
10. Estimated average FRPP contribution per acre of land targeted in the plan	\$1,973	Estimated FRPP Contribution = (Average per acre price - Estimated Loss in FMV due to Easement of 75%) x (Maximum FRPP Contribution of 50%)
11. Amount of the average Federal share (dollars) to be contributed to the acquisition of the estimated acres needing to be protected	\$845,063,250	(Estimated average FRPP contribution per acre of land targeted in the plan) x (Total acres proposed for protection for the duration of the plan)
12. Amount of FRPP dollars requested by fiscal year and for the duration of the plan	\$4,841,142	Based on potential match of \$2.4 M and Cost Share Formula for 2009 and Subsequent years
13. History of participating entities' experience in acquiring, managing, holding, and enforcing conservation easements, (including annual farm and ranch lands protection expenditures, monetary donations received, accomplishments, and staff)	See Appendix # 2	Information provided by participating entities in FRPP applications or published on their webpages.
14. History of participating entities' commitment to conservation planning and conservation practice implementation (requirements in State statute, local ordinances, or nongovernmental organization articles of incorporation and annual accomplishments)	See Appendix # 2	
15. History of an eligible entity's commitment to assisting beginning farmers and ranchers, to promoting opportunities for farming and ranching, and farm and ranch succession and transfer	See Appendix # 2	
16. Eligible entities' estimated unfunded portfolio: number and acreage of all parcels and acreage of prime, unique, and statewide and locally important soils	NA	Data requested from Virginia Land Conservation Community
17. Ranking factors including weights and the quantitative scoring criteria for each factor	See Appendix # 3	

Virginia Conservation Lands Needs Assessment Virginia Vulnerability Model



Virginia Department of Conservation and Recreation Division of Natural Heritage
Virginia DEQ Coastal Zone Management Program



This work is funded by the Virginia Coastal Zone Management Program at DEQ through grant #NAO5NOS4191180 from the National Oceanic and Atmospheric Administration to the Virginia Department of Conservation and Recreation's Natural Heritage Program

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INTRODUCTION

The Virginia Vulnerability Model was developed in an effort to map predicted growth in Virginia. The growth prediction may be used as an indication of potential land use change from the current use to an urban or suburban use.

In an effort to map the predicted growth in Virginia, four models were developed:

- Virginia Urban Vulnerability Model which shows predicted urban growth
- Virginia Urban Fringe Vulnerability Model which shows the predicted urban fringe, or metropolitan fringe growth.
- Virginia Vulnerability beyond the Urban Fringe Model which show the predicted growth beyond the urban fringe (ex-urban growth).
- Virginia Vulnerability Model which shows a composite of all the vulnerability models integrated into one model representing growth pressures across the urban, suburban and rural landscape.

(E. H. Wilson et al. 2003, R. E. Heimlich and W. D. Anderson, 2001)

The Vulnerability models represent predicted urban growth into the landscape and it is incumbent on the end user to assess what growth represents in terms of sprawl (E. H. Wilson et al. 2003). Urban growth that continues in an unplanned fashion, particularly into previously undeveloped areas, typically has a negative effect on the environment, ecologically, economically and socially (E. H. Wilson et al. 2003, R. E. Heimlich and W. D. Anderson, 2001). As growth and subsequent development continues across the state, remaining resources are being damaged and irretrievably lost.

The development of a GIS vulnerability model puts growth into context in relation to the state; it provides a large scale picture of growth patterns across jurisdictional boundaries. Traditionally state and local government has been reactive to population growth, and while some efforts are being made to control growth, often “strategically directing development to the most favorable areas well in advance of urban pressures” does not happen (R. E. Heimlich and W. D. Anderson, 2001).

The models, detailed above, represent different growth effects. The only model showing all predicted growth effects is the Virginia Vulnerability Model. The Urban Vulnerability Model shows the predicted urban growth into the landscape, it does not include the suburban or rural growth pressures. The Urban Fringe Vulnerability Model shows the predicted urban fringe, also typically called suburban, growth into the landscape, it does not include urban or rural growth pressures. The Beyond the Urban Fringe Vulnerability Model shows predicted growth outside of the urban fringe, or rural growth pressures, it does not include urban or suburban growth pressures.

The Vulnerability model may serve as a guide to state and local government, consultants, and developers as to the location of growth patterns, particularly in relation to the current environment. The model can be used alone or integrated with other datasets, such as the VCLNA Cultural Model or Ecological Model, to identify which cultural resources or ecological cores are most at risk to these growth pressures. The model may also be used to help guide local land use planners in the development of their comprehensive plans in an effort to control growth and subsequent development within their jurisdiction. It is important to look at the landscape as a whole and assess how growth may impact the environment, what remaining farmland or timberland is available or how water quality will be affected, before more development is introduced.

The models serve as part of a larger green infrastructure plan, which aims to model where Virginia’s conservation priorities are located to facilitate an integrated approach to planning and development. For information on the Virginia Conservation Lands Needs Assessment and the Green Infrastructure Modeling effort, please visit the VCLNA website at <http://www.dcr.virginia.gov/dnh/vclna.htm>.

Application of the Vulnerability Model

Some general categories of uses to which the vulnerability model can be applied include:

- Targeting – to identify targets for protection activities
- Prioritizing – to provide primary or additional justification for key conservation land purchases and other protection activities.
- Local planning – guidance for comprehensive planning and local ordinance and zoning development.
- Assessment – to review the state of the land and assess growth in context of the landscape
- Land Management – to guide property owners and public and private land managers in making land management decisions that enhance ecological, social and economic services
- Public Education – to inform the citizenry about the development and growth of their community, helping them stay informed about the state of growth of their area.

The Vulnerability Model serves as a base model, upon which local datasets can be added, such as zoning information, comprehensive plans, parcel data, septic suitability information and any other datasets which may help drive local decision making processes. The constraints of a statewide model include the incorporation of existing, statewide GIS datasets. Incorporation of datasets such as individual locality septic sewer information may not be available statewide and are not included in the model since the effect would skew overall model results. Individuals should use the Vulnerability Models and incorporate any additional datasets as needed to make informed decisions. It is at this local level the end user may be able to draw his / her own conclusions on growth, sprawl and the impending consequences.

Deliverables

Maps will be produced for the entire Coastal Zone and the Planning District Commissions and included as part of the final report. The report will be available online and on CD by request and include:

- Maps showing:
 - Virginia Urban Vulnerability Model
 - Virginia Urban Fringe Vulnerability Model
 - Virginia Vulnerability outside the Urban Fringe Model
 - Virginia Vulnerability Model which shows a composite of all the vulnerability models integrated into one model representing growth pressures across the urban, suburban and rural landscape.
- A report detailing the methodology
- Metadata
- Four (4) GRID coverages representing the above detailed models.
- Four (4) shapefiles representing the above detailed models.
- An ArcGIS geodatabase with threat feature classes.

METHODOLOGY

Data methods were based on the Chesapeake Bay Program's Vulnerability Model. The methodology has been modified in some places and changed in others to reflect Virginia specific needs. Please refer to the Chesapeake Bay Program's Resource Lands Assessment for a review of the CPB RLA Vulnerability Model methodology (<http://www.chesapeakebay.net/rla.htm>).

Base Data

LAYER	DESCRIPTION	SOURCE
rd3_33x33_0	Road density grid	<ul style="list-style-type: none"> Tiger Roads (2000)
slope_pct22	Grid representing slope greater than or less than and equal to 22 %	<ul style="list-style-type: none"> National Elevation Dataset
blkgrp_90	1990 Census block group boundaries with associated summary file information	<ul style="list-style-type: none"> Geography Network (polygon shapefile) American Fact Finder (SF tables)
blkgrp_00	2000 Census block group boundaries with associated summary file information	<ul style="list-style-type: none"> Geography Network (polygon shapefile) American Fact Finder (SF tables)
zero_blks	2000 Census block group grid that has 0 population and 0 housing units	<ul style="list-style-type: none"> blkgrp_00
wwte	Grid representing livable area	<ul style="list-style-type: none"> RESAC 2000
exlands_2	Road density in livable area	<ul style="list-style-type: none"> rd3_33x33_0 slope_pct22 zero_00blks wwte
rddent_90	Census block group road density	<ul style="list-style-type: none"> blkgrp_90 rd3_33x33_0
rddent_00	Census block group road density	<ul style="list-style-type: none"> blkgrp_00 rd3_33x33_0
rdalloc_90	Relative percentage of road density per census block group pixel	<ul style="list-style-type: none"> exlands_2 rddent_90
rdalloc_00	Relative percentage of road density per census block group pixel	<ul style="list-style-type: none"> exlands_2 rddent_00
shu_90	Housing unit block group grid	<ul style="list-style-type: none"> blkgrp_90
shu_00	Housing unit block group grid	<ul style="list-style-type: none"> blkgrp_00
shu_90pix	Single family detached housing units per pixel grid	<ul style="list-style-type: none"> shu_90
shu_00pix	Single family detached housing units per pixel grid	<ul style="list-style-type: none"> shu_00
regnet	1 square mile grid	<ul style="list-style-type: none"> Generated in ArcINFO
vaimp90	1990 Impervious surface image of the Chesapeake Bay portion of VA	<ul style="list-style-type: none"> Chesapeake Bay Program- RESAC
vaimp00	2000 Impervious surface image of the Chesapeake Bay portion of VA	<ul style="list-style-type: none"> Chesapeake Bay Program- RESAC
diffimp90_00	Change in impervious surface from 1990 to 2000	<ul style="list-style-type: none"> vaimp90 vaimp00
f_diffimp	Filtered change in impervious surface.	<ul style="list-style-type: none"> diffimp90_00

imp90_00_2	Grid where pixel value is considered to be at least 20%.	<ul style="list-style-type: none"> • f_diffimp
hspots_imp	Impervious hotspot	<ul style="list-style-type: none"> • regnet
urban core	Urban areas	<ul style="list-style-type: none"> • regnet • RUCA table • 2000 census block group
urban commute	Suburban areas / urban fringe area	<ul style="list-style-type: none"> • regnet • RUCA table • 2000 census block group
rural	Area outside the urban fringe	<ul style="list-style-type: none"> • regnet • RUCA table • 2000 census block group
hspots_core	Urban hotspots	<ul style="list-style-type: none"> • regnet
hspots_urbcomm	Urban fringe hotspots	<ul style="list-style-type: none"> • regnet
hspots_rural	Hotspots outside the urban fringe	<ul style="list-style-type: none"> • regnet
hspots_1	Combined impervious and urban hotspots	<ul style="list-style-type: none"> • hspots_imp • hspots_core
hspots_2	Combined impervious and urban fringe hotspots	<ul style="list-style-type: none"> • hspots_imp • hspots_commute
hspots_3	Combined impervious and rural hotspots	<ul style="list-style-type: none"> • hspots_imp • hspots_rural
rds_ttime2	Travel time grid	<ul style="list-style-type: none"> • Tiger Roads (2000)
➤ threat_1 ➤ thrt_urb	Urban growth prediction grid	<ul style="list-style-type: none"> • hspots_1 • rds_ttime2
➤ threat_2 ➤ thrt_urbfrg	Urban fringe growth prediction grid	<ul style="list-style-type: none"> • hspots_2 • rds_ttime2
➤ threat_3 ➤ thrt_ourbfrg	Prediction grid for growth outside the urban fringe.	<ul style="list-style-type: none"> • hspots_3 • rds_ttime2
threat1_x33	Proportional urban growth prediction grid	<ul style="list-style-type: none"> • threat_1
threat2_x33	Proportional urban fringe growth prediction grid.	<ul style="list-style-type: none"> • threat_2
threat3_x33	Proportional growth prediction grid for growth outside the urban fringe.	<ul style="list-style-type: none"> • threat_3
threat1_x33_0	Proportional urban growth prediction grid with NODATA values set to 0.	<ul style="list-style-type: none"> • threat1_x33
threat2_x33_0	Proportional urban fringe growth prediction grid with NODATA values set to 0.	<ul style="list-style-type: none"> • threat2_x33
threat3_x33_0	Proportional growth prediction grid for growth outside the urban fringe with NODATA values set to 0.	<ul style="list-style-type: none"> • threat3_x33
threat_sum	Integrated growth prediction grid.	<ul style="list-style-type: none"> • threat1_x33_0 • threat2_x33_0 • threat3_x33_0

Projection

Lambert Conformal Conic

NAD 83

Meters

Virginia Grid

- Set snap environment to RESAC
- Generated a 1 square mile grid for the state using the GENERATE and FISHNET commands in ArcINFO.
- Exported to a feature class called REGNET

Slope

In GRID:

- Generated slope from the NED dataset
- Selected slope > 22% = 0, other 1
Grid: |> setwindow resac resac <|
Grid: |> setcell resac <|
Grid: |> slope_pct22 = con(slope > 22, 0, 1) <|

Roads

- Downloaded TIGER roads
- Calculated a road density grid in a 1km area
Grid: |> rd_33x33 = focalsum ((roads), rectangle, 33, 33, data) <|
Running... Value range for c:\projects\rla\vulnerability\data\tiger_rds\rd_33x33 exceeds 100000 and number of unique values exceeds 500.
Please use BUILDVAT if a VAT is required.
Grid: |> buildvat <|
Usage: BUILDVAT <grid>
Grid: |> buildvat rd_33x33 <|
Grid: |> q <|

Census Data

- Downloaded census block group data from ESRI Geography Network (http://arcdata.esri.com/data/tiger2000/tiger_statelayer.cfm).
- Downloaded 2000 Census tabular data from American Fact Finder.
- Downloaded 1990 Census block group tabular data from the SF3A Census Bureau CD.

1990 Block Group	ATTRIBUTE
Total Population	P0010001
Total Housing Units (100% count)	H0020001
1-unit, detached housing units (100%)	H0200001

2000 Block Group	ATTRIBUTE
Total Population	P001001
Total Housing Units (100%)	H003001
1-unit, detached housing units (100%)	H030002

zero_00blks

- In ArcMap, calculated Block Group 00 poly where total population = 0 and where housing units = 0. Coded the zero_blk as = 0. Reversed selection and calculated zero_blk = 1. Converted to a 30 meter grid.

Livable area road density

- Generate a grid (wwte) where livable areas are classed with a value = 1 and non-livable are classed = 0. Non-livable areas are set as open water, emergent wetlands, transportation and extractive. Used the VA LULC 2003 generated from RESAC and edited in house by Joe Weber.
- Generate a grid (ex_lands2) showing livable area road density values.
Grid: |> ex_lands2 = rd3_33x33_0 * slope_pct22 * zero_00blks2 * wwte <|

Housing Allocation Procedure

Estimating the total number of single family housing units per pixel

1. Summarize livable area road density grid by unique block group for 1990 and 2000 census block groups.
2. Add a field to blkgrp_90 called rddent_90 and to blkgrp_00 called rddent_00. Calculate the SUM from the summarize into the rddent_tot field.
3. Convert blkgrp_90 to a grid.
rddent_90 grid
Field: rddent_tot
Output cell size: 30 meter
Output raster: rddent_90

rddent_00 grid
Field: rddent_tot
Output cell size: 30 meter
Output raster: rddent_00
4. Calculate relative percentage of blk grp road density per pixel.
Arc: |> grid <|
Grid: |> setwindow ex_lands2 ex_lands2 <|
Grid: |> setcell ex_lands2 <|
Grid: |> rdalloc_90 = (ex_lands2 * 1000000) / rddent_90 <|
Running... Grid: |> setwindow ex_lands2 ex_lands2 <|
Grid: |> setcell ex_lands2 <|
Grid: |> rdalloc_00 = (ex_lands2 * 1000000) / rddent_00 <|
Running... Grid: |> q <|
5. Convert blkgrps to grids. Set ex_lands2 as snap environment in ArcMap.
Field: H0200001
Output cell size: 30 meter
Output raster: shu_90
and
Field: H0300002
Output cell size: 30 meter
Output raster: shu_00
6. Create single family detached housing units per pixel grid (grid representing proportional # of housing units per pixel).
Arc: |> grid <|
Grid: |> setwindow ex_lands2 ex_lands2 <|
Grid: |> setcell ex_lands2 <|
Grid: |> shu_90pix = (rdalloc_90 / 1000000) * shu_90 <|
Running...
Grid: |> setwindow ex_lands2 ex_lands2 <|

```
Grid: |> setcell ex_lands2 <|
Grid: |> shu_00pix = (rdalloc_00 / 1000000) * shu_00 <|
Running...
```

Lot Size Estimation

Development of a regression model to predict lot size from road density values in order to determine land consumption rates.

1. Gather parcel data from select counties (including rural, suburban and urban counties) including zoning information.
2. Parcels not zoned residential as determined by the Municode or Zoning Ordinance deleted. Parcels zoned residential:
 - Attributed with a GIS_Acreage field (double)
 - Acreage calculated
 - Reprojected to Lambert NAD 83
 - Converted to centroid
 - Merged into one feature class
 - In ArcMap, run a spatial join to with REGNET and parcel centroids. Unique ID is REGNET_ID.
3. Set 0 values in the ex_lands2 grid to NO DATA for averaging purposes. Called exld_null.
Grid: |> exld_null = setnull (ex_lands2 == 0, ex_lands2) <|
4. Use Zonal Statistics to Summarize exld_null in ArcMap (this is the average road density per unique REGNET grid cell).
 - Set snap environment to RESAC
 - Zone dataset: REGNET3
 - Zone field: REGNET_ID
 - Value: exld_null
 - Ignore NoData in calculations
 - Join table
 - Calculate MEAN road density into RDD_exnull attribute in REGNET.
5. Select REGNET where rdd_exldnull > 0 and export as REGNET2.
6. Select from REGNET2 cells that are completely within the Virginia state boundary. This is to remove any fragment areas. Called grid REGENT3.
7. In Access, create queries to calculate the average GIS acreage for each unique REGNET_ID.

Statistical Analyses

Statistical analyses were performed in SAS System 9.1. The full dataset included a total of 35 cities and counties from whom parcel information was obtained (see Table 1). Data for GIS Acreage less than 11 acres was subset for the regression analysis. The acreage was subset at 11 acres to establish a group of data with which to test full and submodels. Acreage above 11 acres was highly variable in the datasets indicating a potential lack of relationship between road density and parcel size.

Univariate statistics were run to test for data normality. Tests on the full dataset indicated non-normal data. The GIS Acreage was transformed with a natural log transformation. Univariate statistics and residual plots indicated data were normal. Transformed data residuals indicated the transformation captured the structure of the data.

8. In SAS System 9.x ran Univariate statistics and plotted residuals to test for normalcy. Transformed the average road density data with a natural log transformation. Tested again for normalcy. Ran regression analyses (PROC REG) to derive regression equation:

$$\text{LNMeanLotSize} = 1.8497 - (0.0128 * [\text{rdd_exld}]) + (0.00001154 * ([\text{rdd_exld}] * [\text{rdd_exld}]))$$

r-sq = .5365

p < .0001

This regression is applicable for lot sizes up to mean 10 acres as the regression data went up to 10 acre lot sizes total.

Growth Hot Spots

Identifying areas considered to be hot spots for population growth.

1. Add attributes to REGNET3 (double):

- SHU_90
- SHU_00
- SHU90_00
- CNVRT90_00
- IMP90_00

2. Summarize shu_90pix and shu_00 pix by REGNET_ID:

- Set snap environment to RESAC
- Zone dataset REGNET3
- Zone field REGNET_ID
- Value raster shu_90pix and shu_00pix
- Ignore NoData in calculations
- Join table
- Calculate SUM into shu_00 and shu_90 attributes in REGNET.

3. Calculate the change in housing units $shu_{00} - shu_{90} = shu90_{00}$

4. Add a field called MeanLotSize (double). Calculate the natural log and subsequent average lot size using the regression formula:

$$LNMeanLotSize = 1.8497 - (0.0128 * [rdd_exld]) + (0.00001154 * ([rdd_exld] * [rdd_exld]))$$

$$r\text{-square} = 0.5365$$

$$p\text{-value} < .0001$$

5. Calculate the change in land consumption rate:

$$CNVRT90_{00} = shu90_{00} * MeanLotSize$$

6. In ArcMap, Spatial Analyst, calculated the change in impervious surfaces from 1990 to 2000:

- Set snap environment to RESAC
- Raster calculator:
 - $diffimp00_{90} = [vaimp00_lam83 - vaimp90_lam83]$
- Ran a filter on the difference in impervious surface grid to smooth the data. Ran a 3 x 3 filter because larger filters were altering the data too much. I checked a 9 x 9 filtered grid against the 2000 RESAC data and saw many areas classed as having a large change in impervious in the diffimp grid, when RESAC was not classed as impervious. I felt the 9 x 9 filter misrepresented impervious surface change.

```
Grid: |> setwindow resac <|
```

```
Grid: |> setwindow resac resac <|
```

```
Grid: |> f_diffimp = focalmean(diffimp00_90, rectangle, 3, 3, data) <|
```

- Select pixels where change in value is considered to be at least 20%:

```
Grid: |> setwindow resac resac <|
```

```
Grid: |> setcell resac <|
```

```
Grid: |> imp20_100_2 = select(F_DIFFIMP, 'value > 19') <|
```

7. Summarize change in impervious by REGNET_ID:

- Set snap environment to RESAC
- Zone dataset REGNET3

- Zone field REGNET_ID
- Value raster imp20_100_2
- Ignore NoData in calculations
- Join table
- Calculate MEAN into imp90_00_2 attribute in REGNET.

Impervious Hot Spots

Identifying areas considered to represent significant impervious growth.

8. Add a field to REGNET attribute table called LNIMP90_00_2 (double). Take the Log of imp90_00_2 (to normalize the data) and calculate into LNIMP90_00_2.
9. Ran PROC MEANS on LNIMP90_00_2 where values > 0 (alpha = .10, Standard Error = 1.64) (because this is an upper one tail test, so p value = .05). Use the Upper CL to select out impervious hotspots. Upper CL = 3.335.
10. Exported REGNET cells considered to be impervious hot spots:
 - Select by Attribute
 - Where
 - LNimp90_00_2 >= 3.335
 - Export as hspotsimp

Residential Land Conversion Hot Spots

Identifying areas considered to represent significant changes in residential land conversion / land consumption.

11. Downloaded RUCA codes from <http://www.ers.usda.gov/briefing/rural/data/ruca/rucc.htm>
12. Reclassify tracts per RLA:

Grow Zone	Reclassified category	Original RUCA
“1”	Urban Core Zone =	Metropolitan-area cores (1.0, 1.1)
“2”	Urban Commuting Zone =	Metropolitan-area high commuting (2.x), Metropolitan-area low commuting (3.x), and all secondary flows to Urban Areas (ranging from 5 – 50%).
“3” or “4”	Rural Zone =	All other areas (encompassing Large town, Small town, and Rural areas lacking secondary flow to Urban Areas).

13. Select all RUCA polygons where grow zone = 1 and acres > 50. Select from REGNET all polygons that have their center in the selected RUCA polygons. Export as Urban_Core.
14. Select all RUCA polygons where grow zone = 2 and acres > 50. Select from REGNET all polygons that have their center in the selected RUCA polygons. Export as Urban_Commute.
15. Select all RUCA polygons where grow zone = 3 and acres > 50. Select from REGNET all polygons that have their center in the selected RUCA polygons. Export as Rural.
16. Add an attribute to REGNET called LogCNVRT90_00. Select by attribute from REGNET where CNVRT90_00 > 0. Calculate the log: $\text{LogCNVRT90}_00 = \log(\text{CNVRT90}_00 + .0001)$.
17. In SAS, run PROC UNIVARIATE / CLM / PROC MEAN to calculate the significant STD on each rural, urban and urban commute attribute table at $p < .05$, $SE = 1.64$. This provides the statistically significant values are related to the upper and lower limits:

$$SE = (\text{upper CL} - \text{Mean}) / \text{STD}$$

18. Use calculated Upper CL from SAS PROC MEANS (alpha = .10, upper one tail test $p < .05$, SE = 1.64) to select out from Urban_Core, Urban_Commute and Rural where LogCNVRT90_00 = Upper CL:
 - Select by Attribute from Urban_Core where LogCNVRT90_00 \geq 2.6343854. Export as hspots_core.
 - Select by Attribute from Urban_Commute where LogCNVRT90_00 \geq 1.677184. Export as hspots_commute.
 - Select by Attribute from Rural where LogCNVRT90_00 \geq 1.0177744. Export as hspots_rural.
17. Merge impervious surface hotspots and urban hotspots to create hotspots_1. Ran a UNION in ArcToolbox - hspots_imp + hspots_core = hspots_1.
18. Merge impervious surface hotspots and urban commute hotspots to create hspots_2. Ran a UNION in ArcToolbox - hspots_imp + hspots_commute = hspots_2.
19. Merge impervious surface hotspots and rural hotspots to create hotspots_3. Ran a UNION in ArcToolbox - hspots_imp + hspots_rural = hspots_3.
20. Converted each feature class to a grid:
 - a. In ArcMap, calculated ID_1 = 1. Set snap environment to RESAC. Convert to a grid:
 - Field: ID_1
 - Output cell size: 30 meter
 - Output raster: hspots_1, hspots_2, hspots_3

Threat Grids

Travel Time

Creating a travel time grid to incorporate the influence of distance to hot spots on surrounding areas.

1. Download Tiger Roads data. Added an attribute called RDS_TTIME (Long Integer). Calculated travel time based on CFCC codes and RLA methodology:

CFCC	Description	MPH	TTIME (minutes per meter * 100K)
A1	Primary highway with limited access (e.g., Interstates)	65	57
A2	Primary road without limited access (mainly US Highways)	55	68
A3	Secondary and connecting roads (e.g., State and County highways)	40	93
A4	Local, neighborhood, and rural roads	30	124
A6	Road with special characteristics (ramps, traffic circles, etc.)	15	249
Other	A5x's and A7x's (off-road trails, driveways, alleys, etc.)	5	746

65 * 1.60934 = 104.6 kph * 1000/60 = 1743 meters per minute, 1/1743 = 0.000574 minutes per meter

2. Convert tiger roads to a grid in ArcMap (Spatial Analyst → Features to Raster):
 - Field: rds_ttime
 - Output cell size: 30 meter
 - Output raster: RDS_TTIME2
3. Change NoData values in TTIME to 746 (consider off road travel per RLA):
 - Grid: |> setwindow resac <|
 - Grid: |> setwindow resac resac <|
 - Grid: |> rds_ttime2 = con (isnull (rds_ttime), 746, rds_ttime2) <|
4. Calculate the urban growth treat grid based on travel time to nearest hot spot:
 - Grid: |> setwindow resac resac <|
 - Grid: |> setcell resac <|
 - Grid: |> threat_1 = int(costdistance(hspots_1, rds_ttime2)) <|
5. Calculate urban fringe / metropolitan fringe growth threat based on travel time:
 - Grid: |> setwindow resac resac <|
 - Grid: |> setcell resac <|

- Grid: |> threat_2 = int(costdistance(hspots_2, rds_ttime2)) <|
- Calculate outside the urban fringe growth threat based on travel time:
 Grid: |> setwindow resac resac <|
 Grid: |> setcell resac <|
 Grid: |> threat_3 = int(costdistance(hspots_3, rds_ttime2)) <|

Threat

- Multiply each grid by .33 to get a proportional value of threat / travel time in order to generate a summed threat grid of all three layers:
 Grid: |> threat1_x33 = threat_1 * .33 <|
 Grid: |> threat2_x33 = threat_2 * .33 <|
 Grid: |> threat3_x33 = threat_3 * .33 <|
- Set NODATA values to 0 to sum layers:
 Grid: |> threat1_x33_0 = con(isnull(threat1_x33), 0, threat1_x33) <|
 Grid: |> threat2_x33_0 = con(isnull(threat2_x33), 0, threat2_x33) <|
 Grid: |> threat3_x33_0 = con(isnull(threat3_x33), 0, threat3_x33) <|
- Sum threat layers together to generate a threat_sum grid showing an integrated threat grid:
 Grid: |> setwindow resac resac <|
 Grid: |> setcell resac <|
 Grid: |> threat_sum = sum(threat1_x33_0, threat2_x33_0, threat3_x33_0) <|
- Display threat_1 (urban growth threat), threat_2 (urban fringe growth) and urban_3 (outside the urban fringe growth) with 5 manual breaks in ArcMap, with a higher threat value indicates a great threat:

THREAT	GRID VALUE	TRAVEL TIME (minutes)
5	0	0
4	0.001 - 1,500,000	0 to 15
3	1,500,000.001 - 3,000,000	15 to 30
2	3,000,000.001 - 6,000,000	30 to 60
1	6,000,000.001 - 12,000,000	60 to 120

- Display threat_sum (compiled threat model showing predicted growth in the urban, urban fringe and outside the urban fringe areas with 8 manual breaks in ArcMap (higher threat value indicates a greater growth threat):

THREAT	GRID VALUE	TRAVEL TIME (approx minutes)
8	0 – 1,000,000	0 to 10
7	> 1,000,000 – 2,000,000	10 to 20
6	> 2,000,000 – 3,000,000	20 to 30
5	> 3,000,000 – 4,000,000	30 to 40
4	> 4,000,000 – 5,000,000	40 to 50
3	> 5,000,000 – 6,000,000	50 to 60
2	> 6,000,000 – 9,000,000	60 to 90
1	> 9,000,000	> 90

The gradient is spread at smaller increments on the threat_sum grid because it proportionally reduced the original number to add into the final grid. .

- Set threat grid values to numbers based on threat defined above in GRID.

For threat_1, threat_2 and threat_3 grids:

```
Grid: |> threat1_xx = con(threat_xx = 0, 5, con(threat_xx > 0, con(threat_xx <= 1500000, 4, con(threat_xx > 1500000, con (threat_xx <= 3000000, 3, con(threat_xx > 3000000, con(threat_xx <= 6000000, 2, 1)))))) <|
```

For threat_all:

```
thrt_all= con(thrtall_va <= 1000000, 8, con(thrtall_va > 1000000, con(thrtall_va <= 2000000, 7, con(thrtall_va > 2000000, con(thrtall_va <= 3000000, 6, con(thrtall_va > 3000000, con(thrtall_va <= 4000000, 5, con(thrtall_va > 4000000, con(thrtall_va <= 5000000, 4, con(thrtall_va > 5000000, con(thrtall_va <= 6000000, 3, con(thrtall_va > 6000000, con(thrtall_va <= 9000000, 2, 1)))))))))) <|
```

7. Convert grids to a shapefile.
8. Generate metadata in ArcCatalog.
9. Convert shapefile to geodatabase feature classes.
10. Topology:
 - a. Created a topology for UrbanGrowthThreat, UrbanFringeGrowthThreat, GrowthOutsidetheUrbanFringeThreat and VulnerabilityModel_AllThreat feature classes for the following rules:
 - i. Must Not Overlap
 - ii. Must Not Have Gaps
 - b. Validated topology and cleaned where necessary.

Model Validation

The original version of the Vulnerability Model was sent to:

- Crater PDC
- Hampton Roads PDC
- Goochland County
- Middle Peninsula PDC
- Northern Neck PDC
- Thomas Jefferson PDC

Comments indicated the model was representing too much land as being hotspots or heavily weighted to indicate potential growth.

The model was re-run with statistical analyses to pick out values representing statistically significant hotspot values. Four models were developed instead of one overall vulnerability model to account for urban, suburban and rural growth pressures as individual issues, instead of compiling into one overall model. The data was becoming lost in over-generalization of values in order to develop a single model.

The final model was passed through an internal review at the Division of Natural Heritage.

The revised Vulnerability model was validated in house. Comments from the version 1 validation were applied to the model.

The VCLNA website will be equipped to receive comments regarding the Vulnerability model results. These comments will be reviewed and assessed in relation to the model; this will enable a continuing evaluation of the model. The Vulnerability Models represent prediction models, ground truthing hotspots at this point in time may not prove ineffective as the model projects out ten + years in time.

Discussion

The Vulnerability Model naming convention reflects U.S. Census designations and can be translated as the following:

- Urban Growth Prediction – Shows predicted urban growth patterns in Virginia.
- Urban Fringe Growth Prediction – Shows predicted suburban growth patterns in Virginia. Suburban growth is defined as growth occurring in suburban designated areas. These areas are typically at the fringe or edge of urban growth and represent less dense growth than found in traditional urban settings.

- Growth Outside the Urban Fringe – Shows predicted rural growth patterns in Virginia. Rural growth is defined as growth in rural designated areas (i.e. larger lot size).

Model 2 Refinements

This version of the Vulnerability Model used more parcel data in the development of the regression model. The model was refined for a closer fit to the structure of the data. This can be seen in the hotspot analysis. The previous version of the model had hotspots located across Virginia, without a great deal of structure, reflecting noise in the data and potential over-representation of hotspots. Refinement of the SAS methodology allowed for tighter clusters of hotspots, reflecting a more accurate portrayal of landscape growth patterns. This can be seen in the number of hotspots identified during the two analyses:

Layer	Version 1 Count	Version 2 Count
hotspots 1	6135	2797
hotspots 2	11681	8916
hotspots 3	12798	9673

FUTURE APPLICATIONS

Additional Data Incorporation

Development of a statewide model constrains the model to available statewide datasets. The Vulnerability Model serves as a base growth prediction model developed on a ten year increment of data, projecting out to approximately ten years and more into the future. It is important for the end user to apply specific datasets as needed to make decisions with the model.

It is difficult to model parameters that influence growth and development, such as politics or economic influences, particularly at a statewide scale. Local knowledge should be applied to the model to assess the growth patterns and influences at a local scale.

Additional datasets that can be applied to the model to assess actual growth versus predicted growth may include:

- Soils data in an attempt to model septic sewer capacity as an influence on growth / development
- Economic development data to identify areas promoted for development, such as enterprise zones.
- Comprehensive plans
- Zoning information

REFERENCES

Claggett, P. R. and C. Bisland. 2004. Assessing the vulnerability of forests and farmlands to development in the Chesapeake Bay Watershed. Proceedings of the IASTED International Conference Environmental Modeling and Simulation, 22-24 November 2004, St. Thomas, US Virgin Islands.

Claggett, P. R., Jantz, C. A., Goetz, S. J., and C. Bisland. 2004. Assessing development pressure in the Chesapeake Bay Watershed: An evaluation of two land-use change models. *Environmental Monitoring and Assessment* 94: 129-146.

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Heimlich, R. E. and W. D. Anderson. 2001. Development at the urban fringe and beyond: impacts on agriculture and rural land. U.S. Department of Agriculture, Agricultural Economic Report 803, Washington, D.C., USA.

RESAC 2000 CBW Impervious Surface Product - Version 1.3. 2000. Mid-Atlantic RESAC, University of Maryland. College Park, MD.

Wilson, E. H. et al. 2003. Development of a geospatial model to quantify, describe and map urban growth. *Remote Sensing of Environment* 82: 275-285.

Table 1. List of cities and counties used in the final regression model.

<i>LOCALITY</i>
Alexandria
Alleghany
Arlington
Charlottesville
Chesterfield
Covington
Emporia
Fairfax City
Fairfax County
Galax
Hampton
Hanover
Harrisonburg
Henrico
Lancaster
Louisa
Madison
New Kent
Newport News
Norton
Pittsylvania
Poquoson
Prince George
Prince William
Radford
Richmond City
Roanoke City
Roanoke County
Salem
Surry
Sussex
VA Beach
Williamsburg
Winchester

Figure 1. PDC 1 LENOWISCO Vulnerability Model.

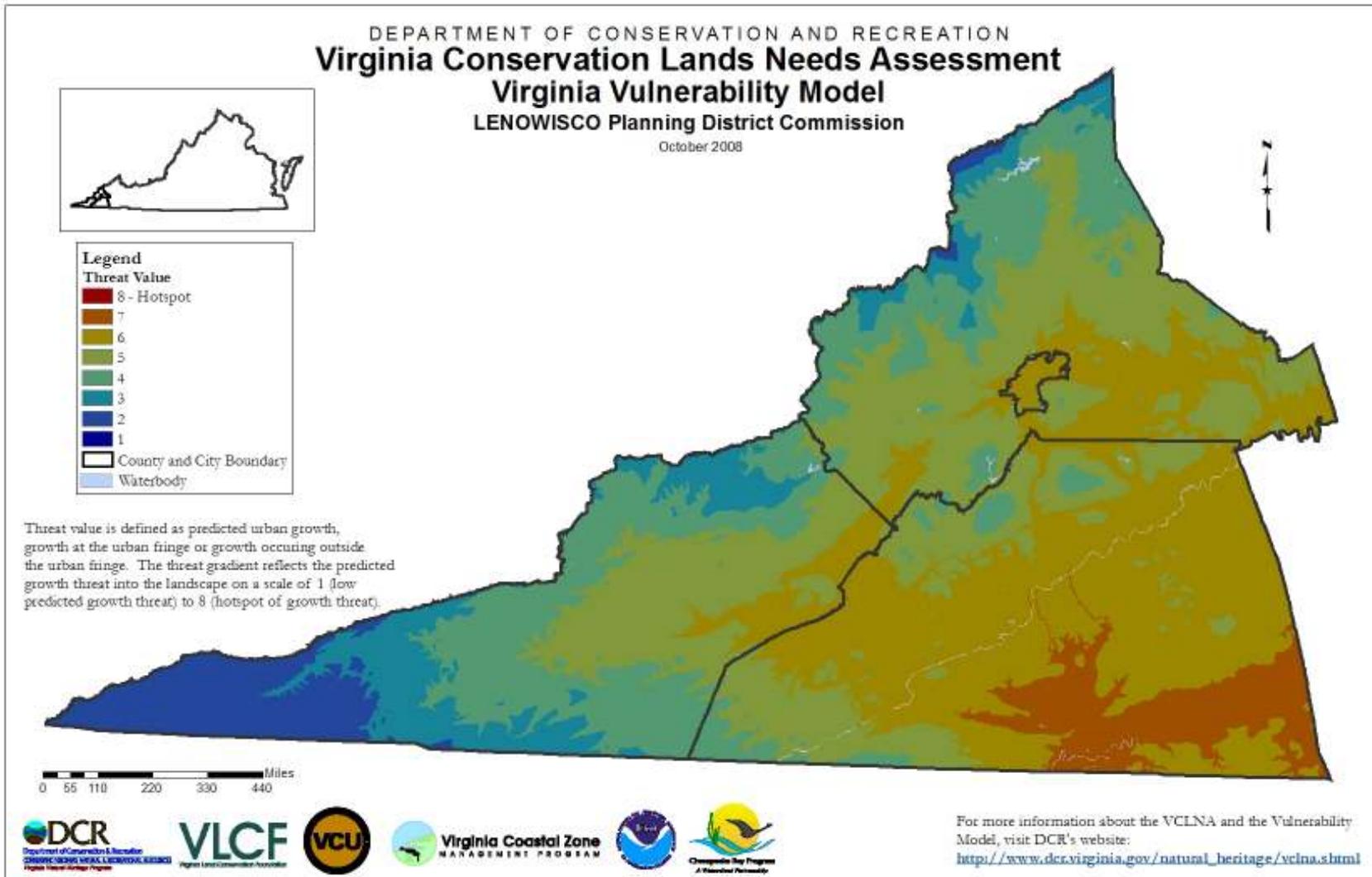


Figure 2. PDC 1 LENOWISCO Urban Vulnerability Model.

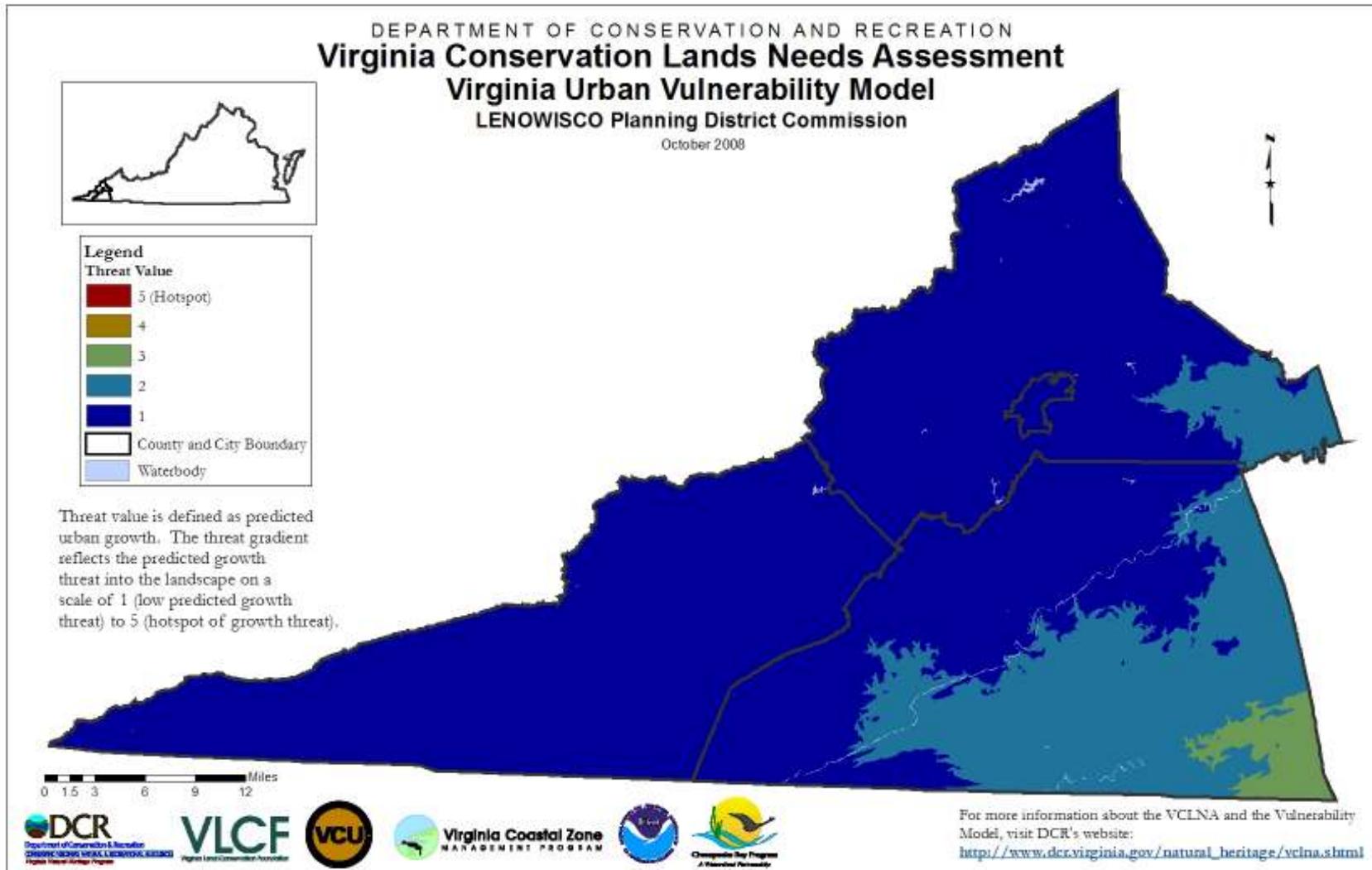


Figure 3. PDC 1 LENOWISCO Urban Fringe Vulnerability Model.

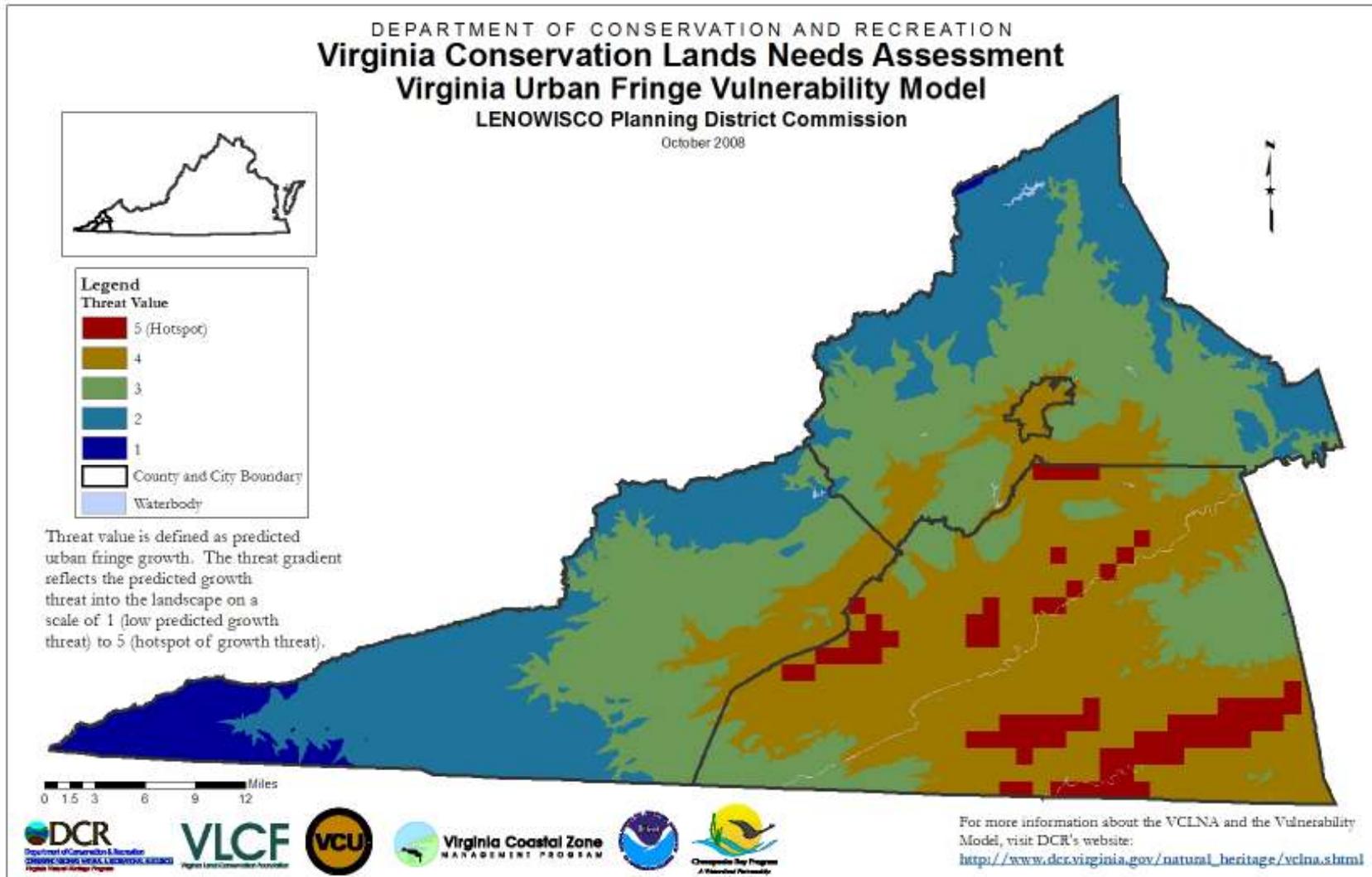


Figure 4. PDC 1 LENOWISCO Outside the Urban Fringe Vulnerability Model.

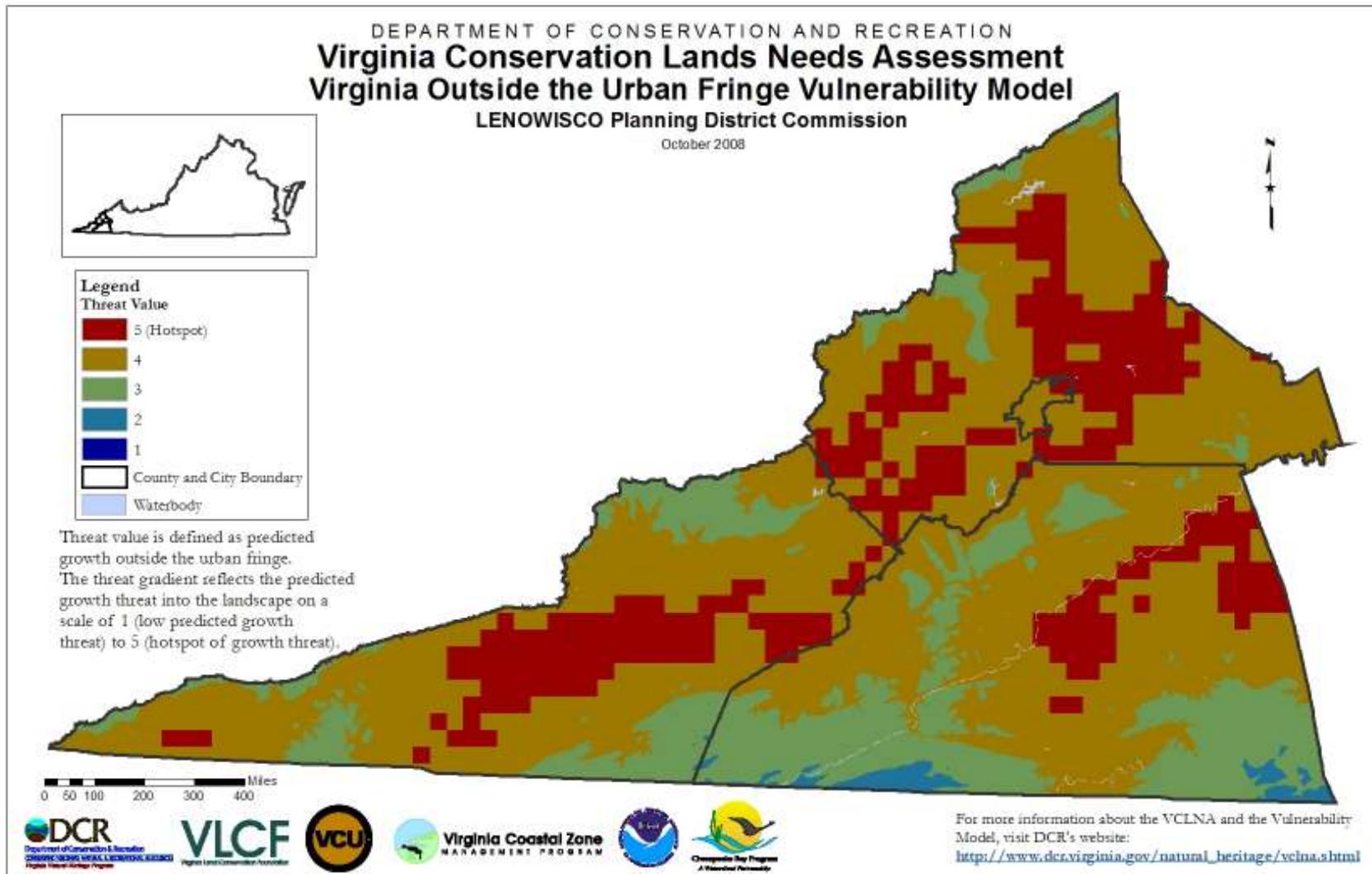


Figure 5. PDC 2 Cumberland Plateau Vulnerability Model.

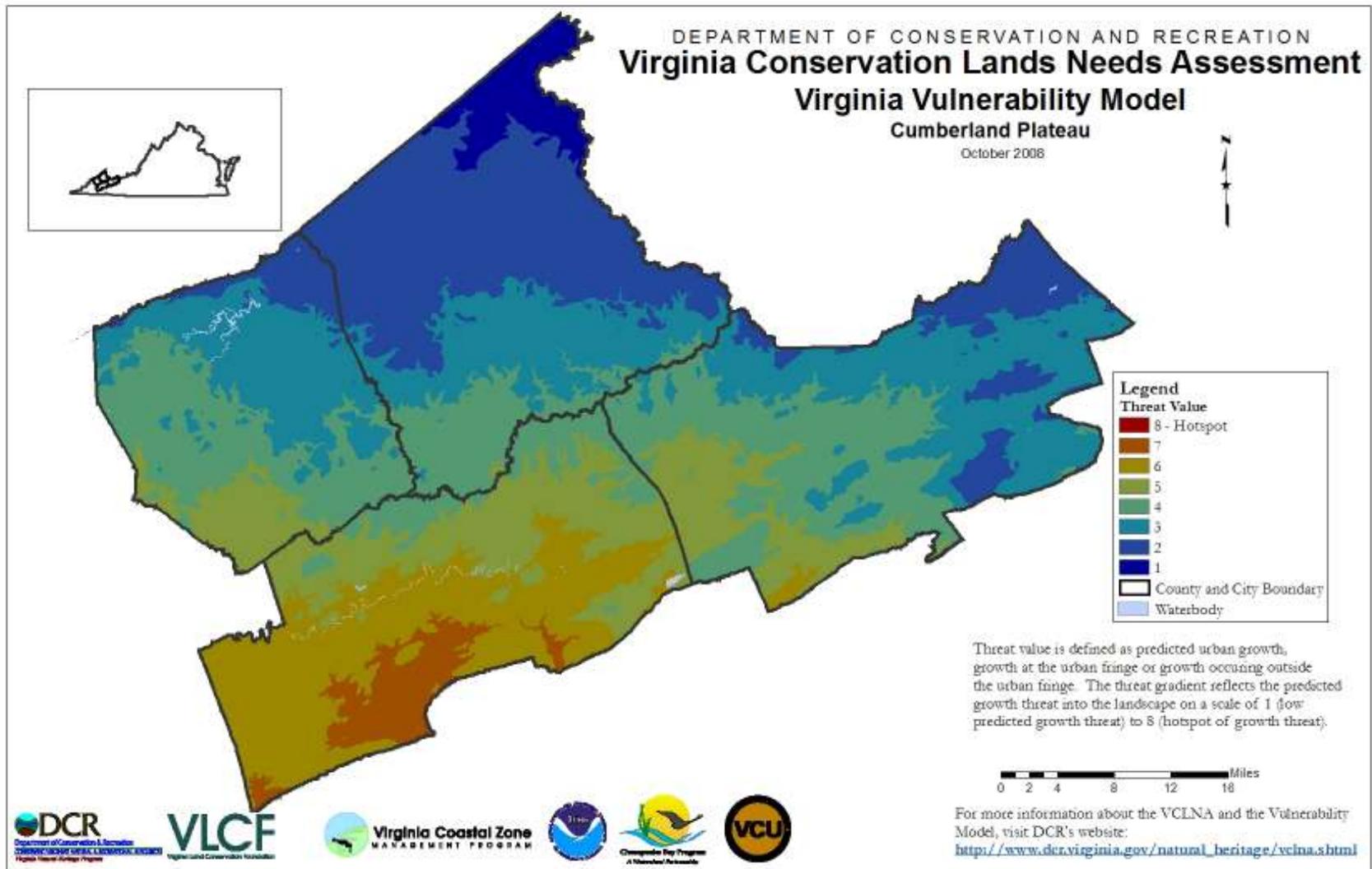


Figure 6. PDC 2 Cumberland Plateau Urban Vulnerability Model.

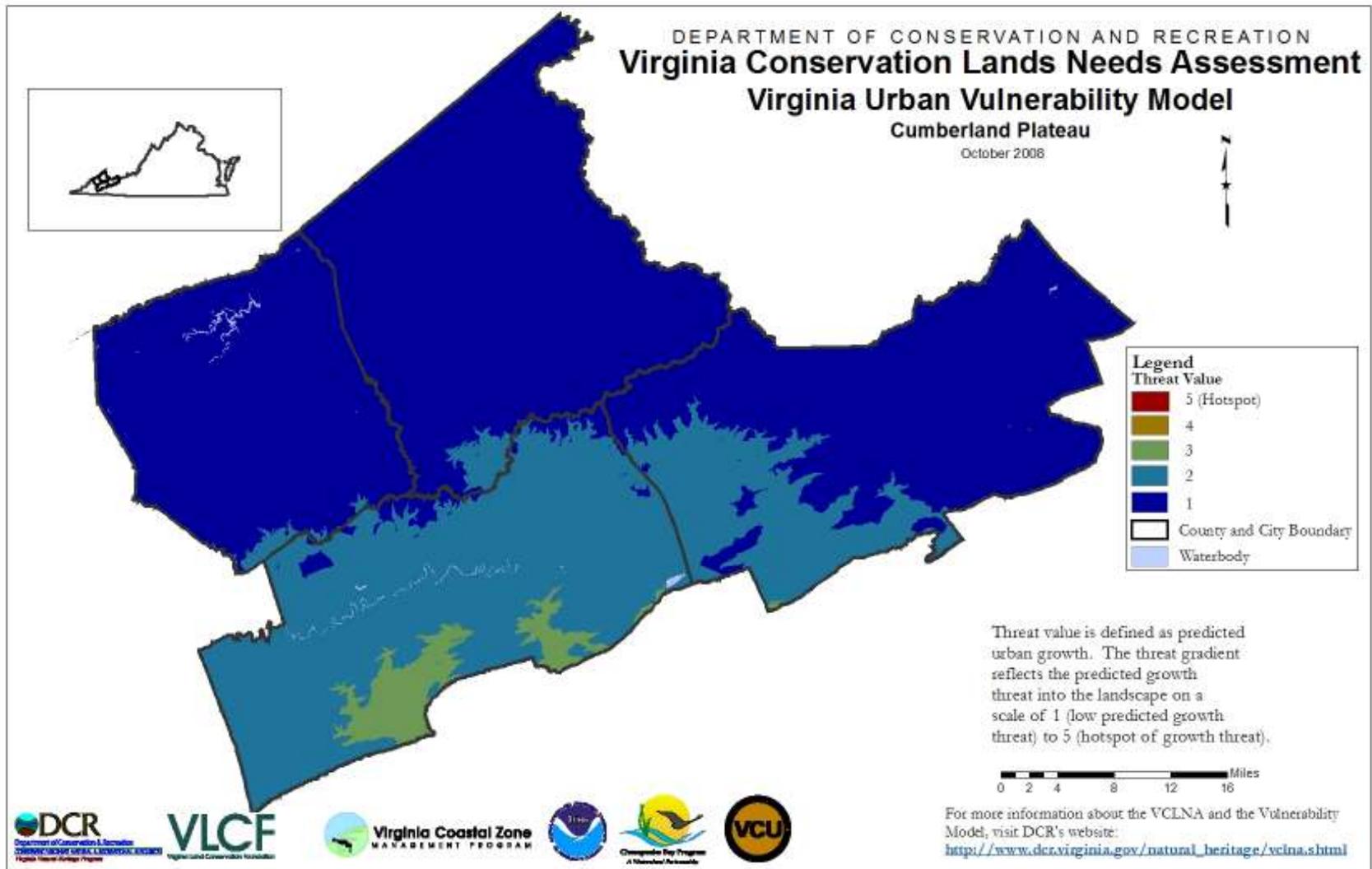


Figure 7. PDC 2 Cumberland Plateau Urban Fringe Vulnerability Model.

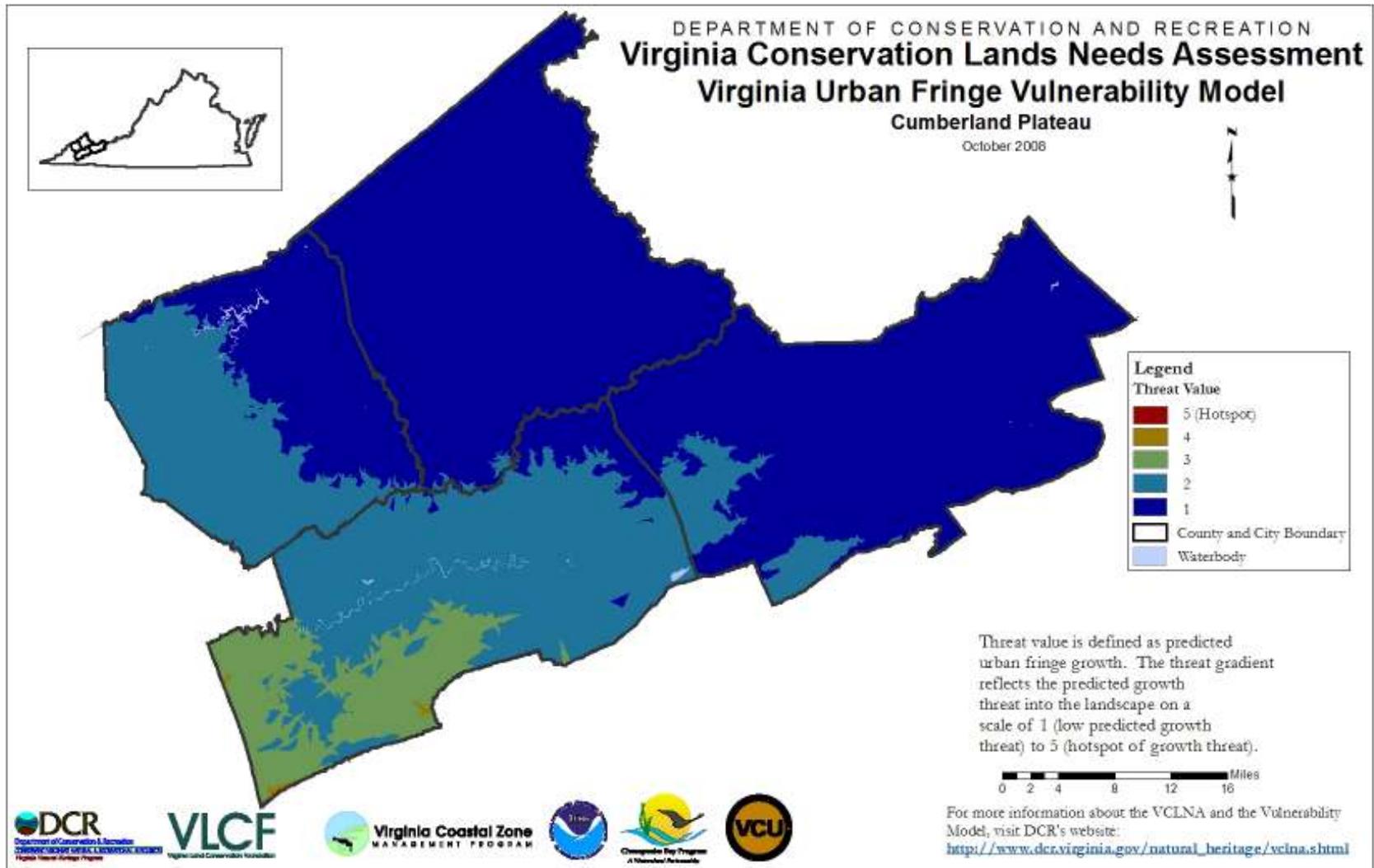


Figure 8. PDC 2 Cumberland Plateau Outside the Urban Fringe Vulnerability Model.

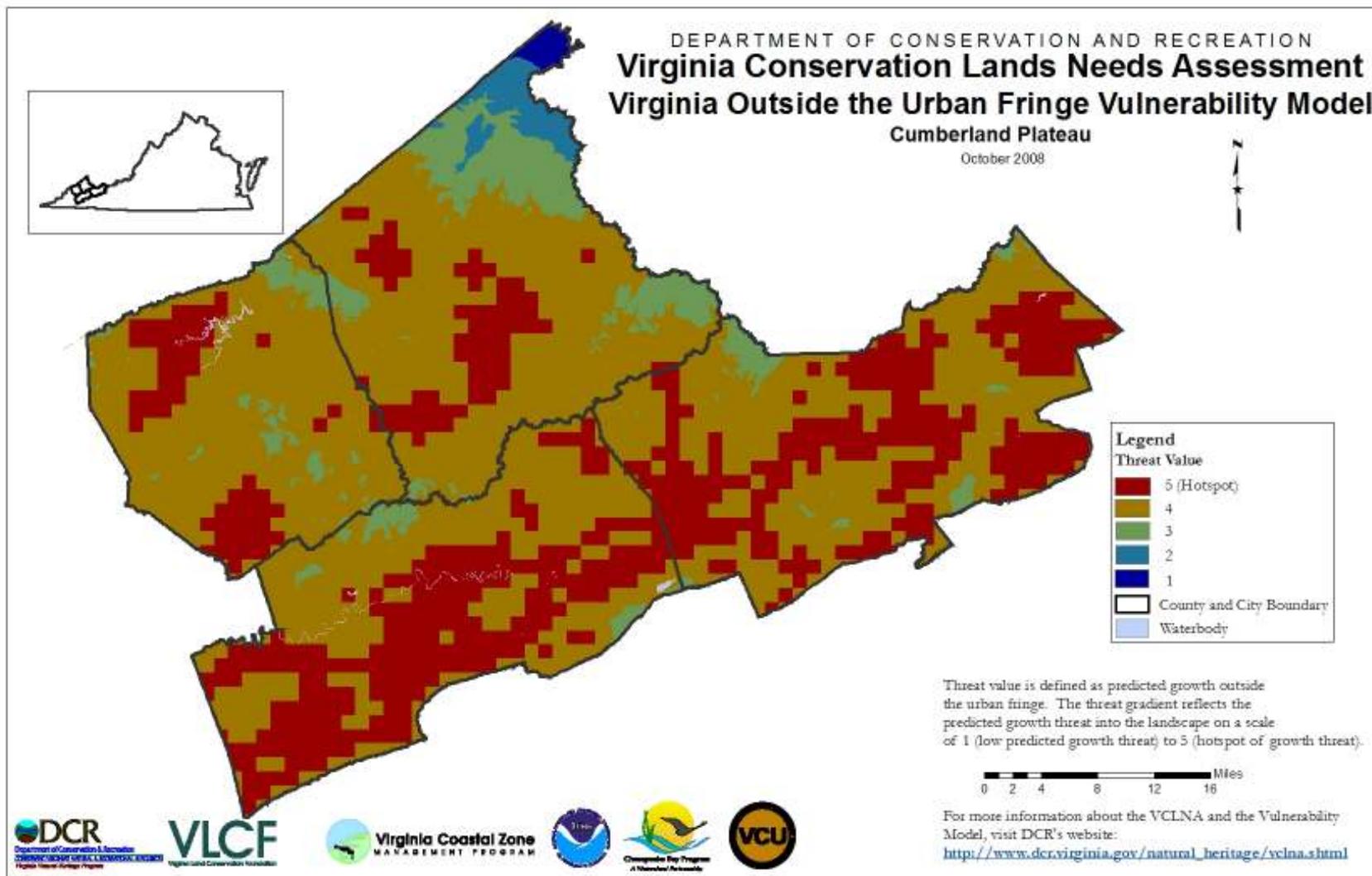


Figure 9. PDC 3 Mount Rogers Vulnerability Model

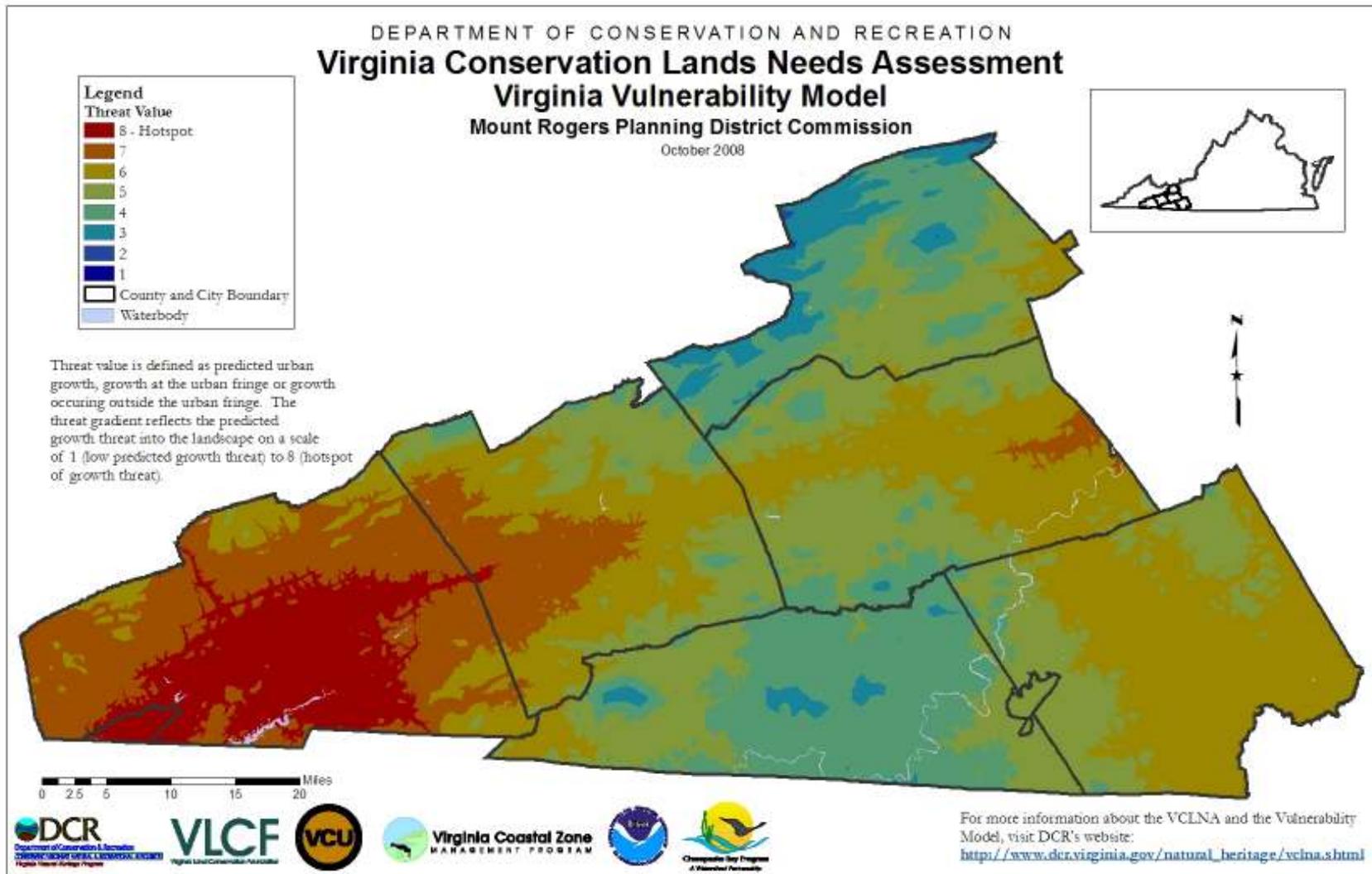


Figure 10. PDC 3 Mount Rogers Urban Vulnerability Model

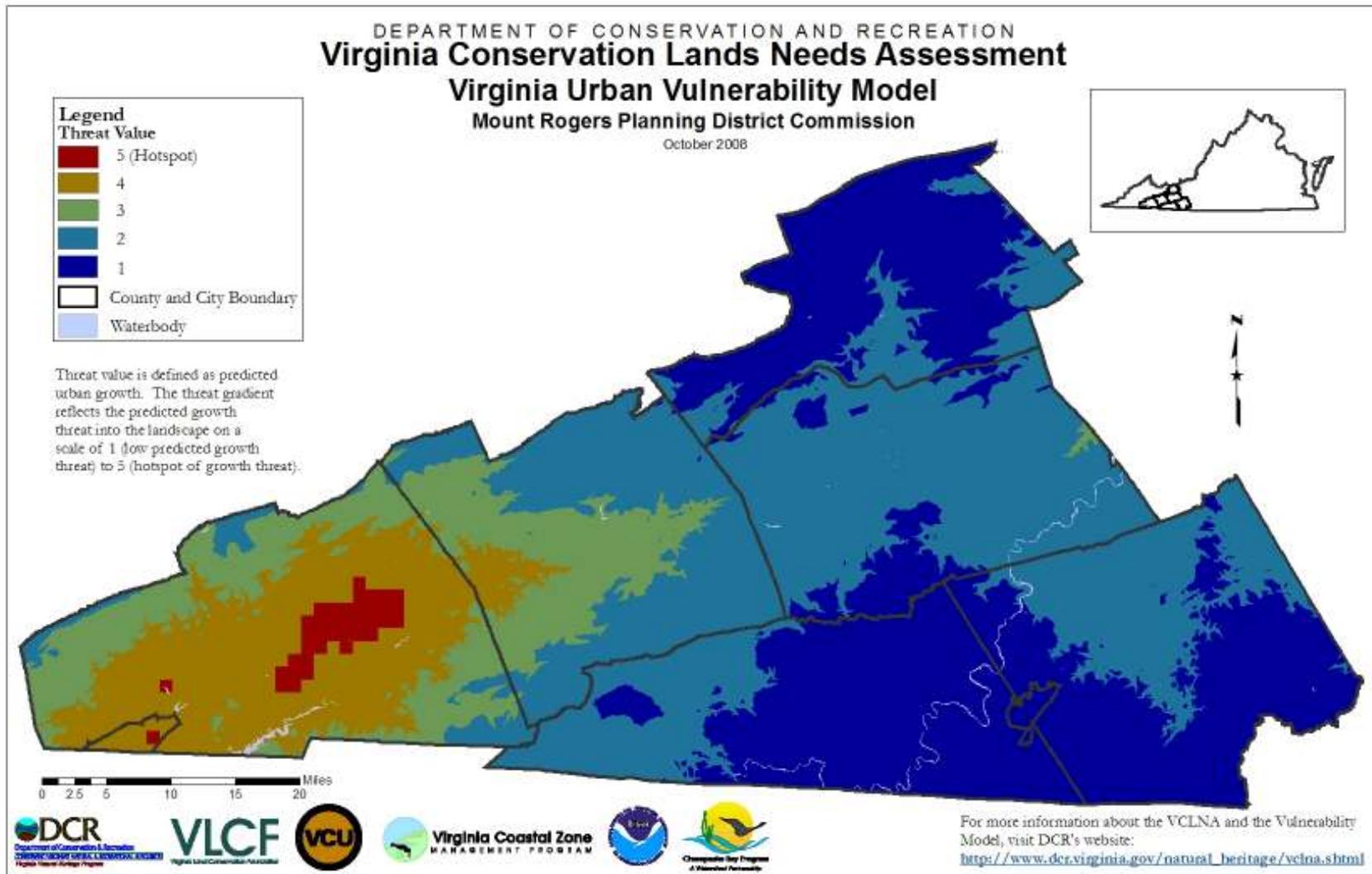


Figure 11. PDC 3 Mount Rogers Urban Fringe Vulnerability Model

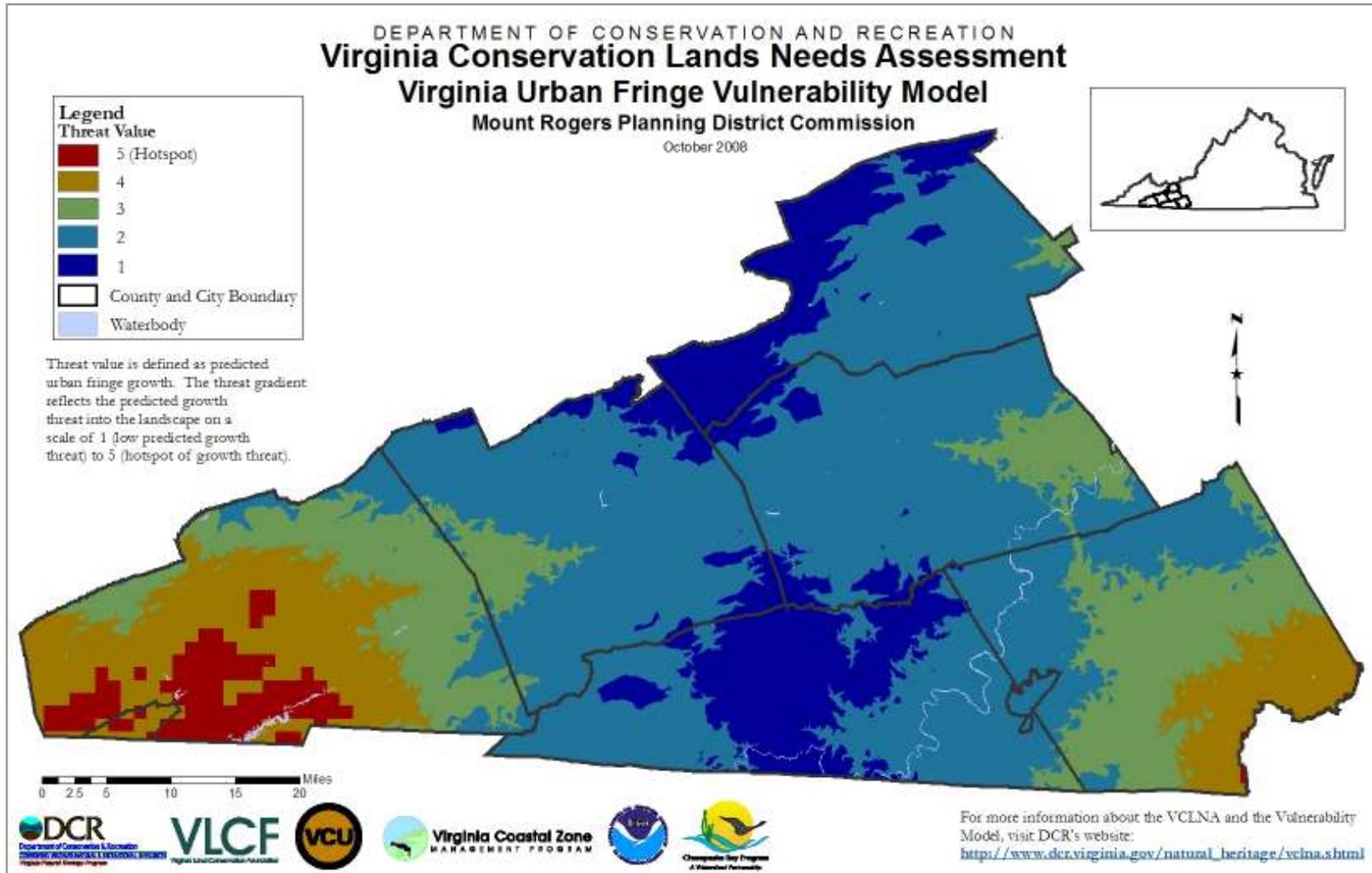


Figure 12. PDC 3 Mount Rogers Growth Outside the Urban Fringe Vulnerability Model

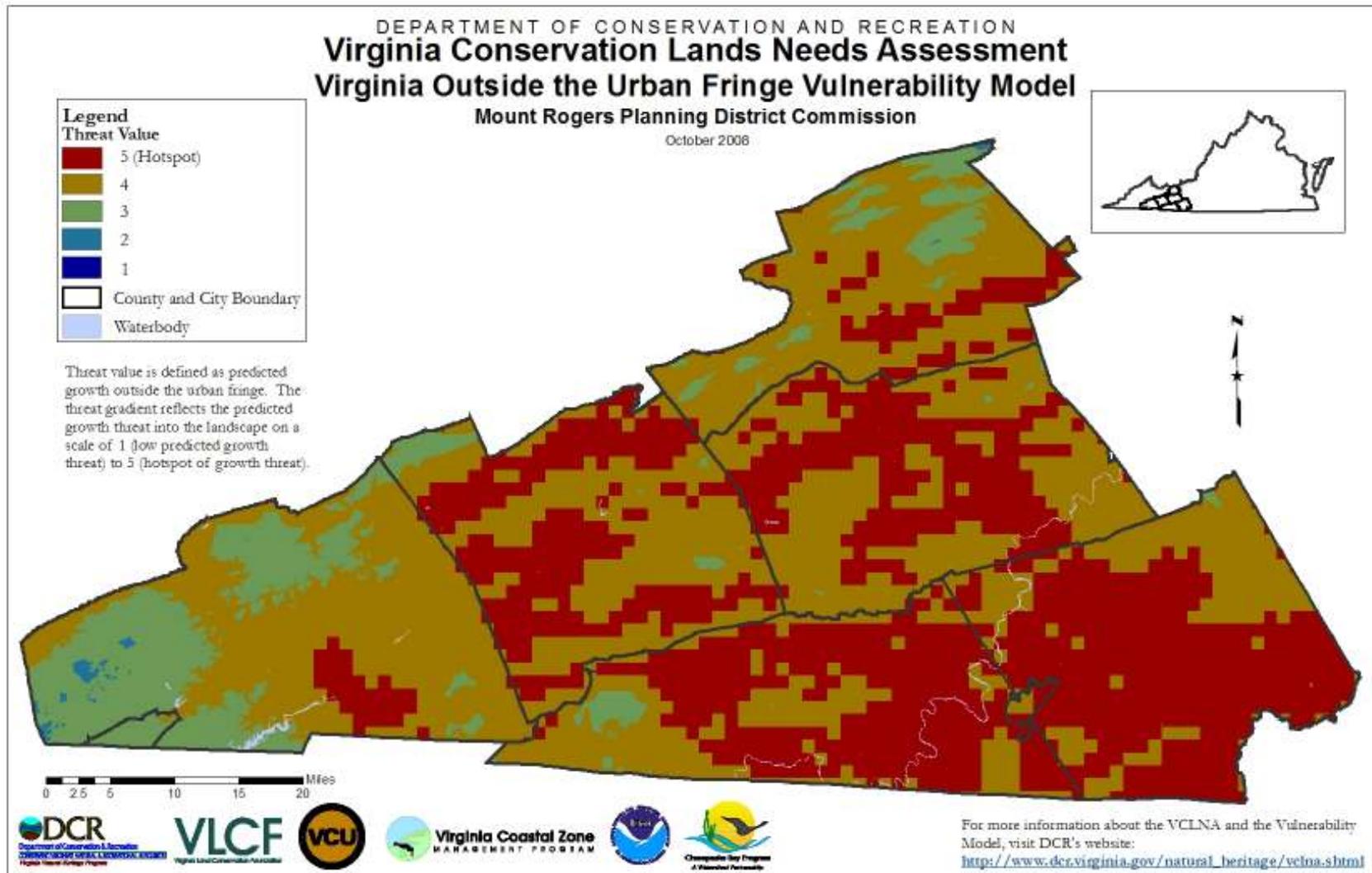


Figure 13. PDC 4 New River Valley Vulnerability Model

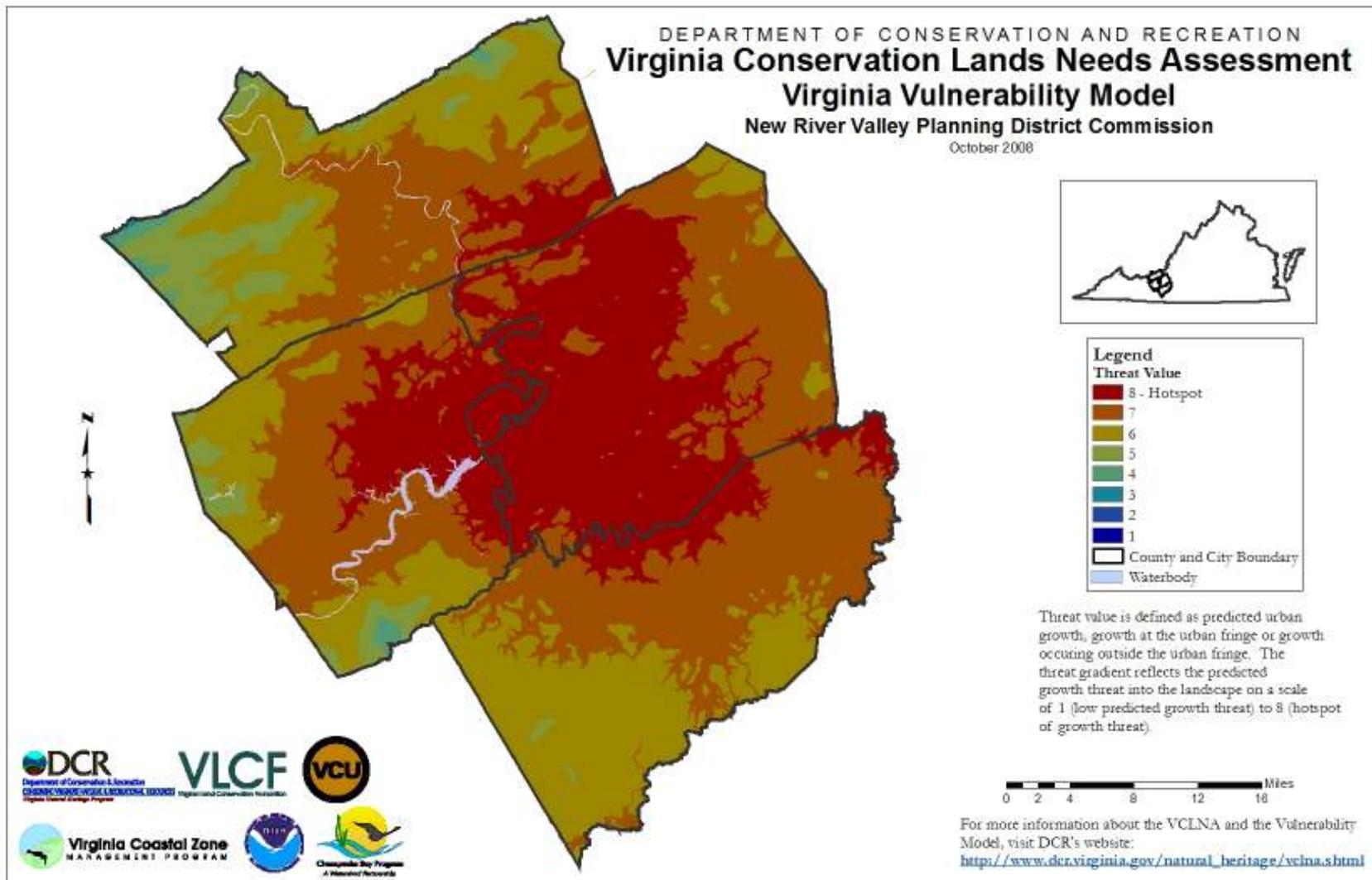


Figure 14. PDC 4 New River Valley Urban Vulnerability Model

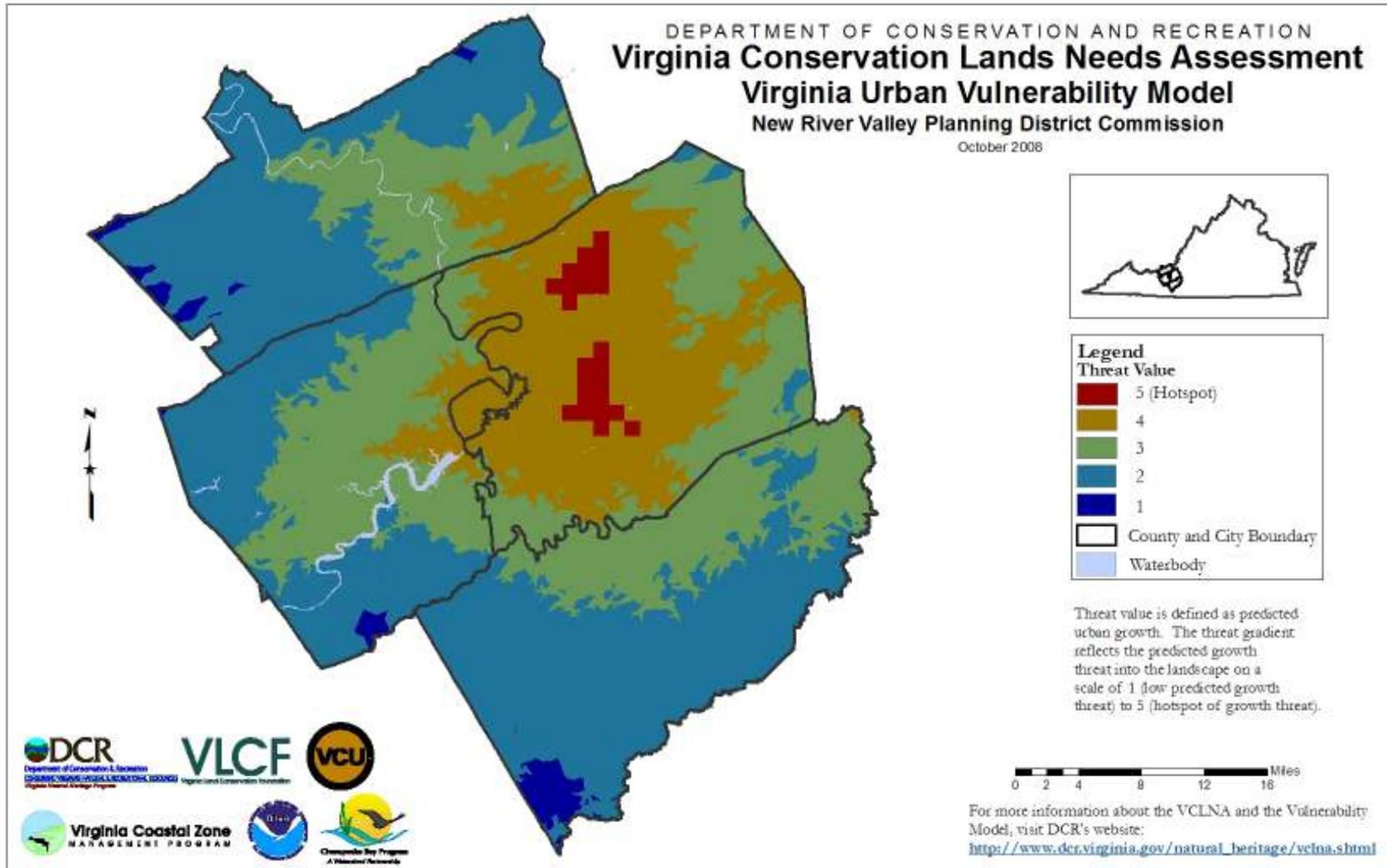


Figure 15. PDC 4 New River Valley Urban Fringe Vulnerability Model

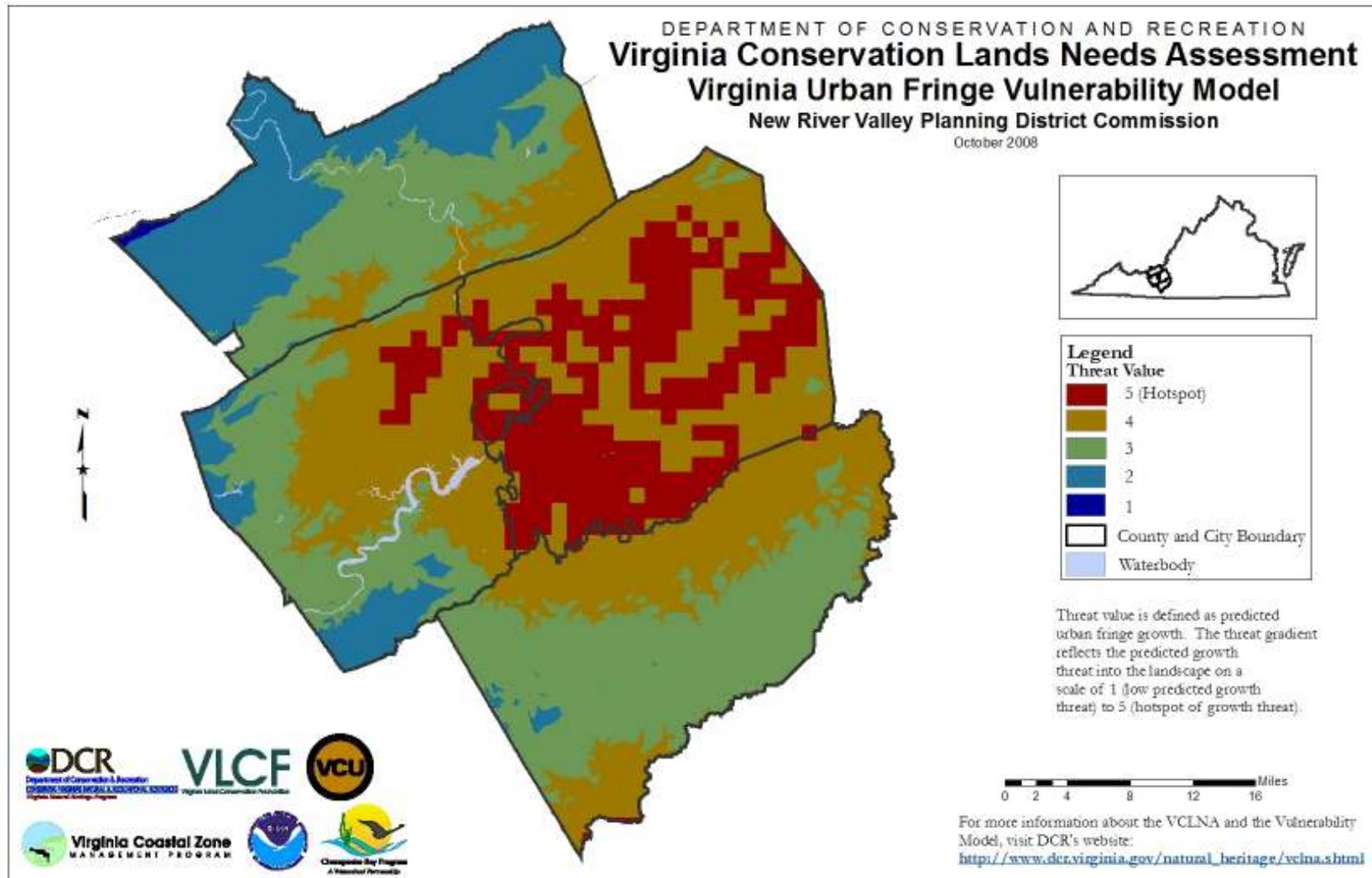


Figure 16. PDC 4 New River Valley Growth Outside the Urban Fringe Vulnerability Model

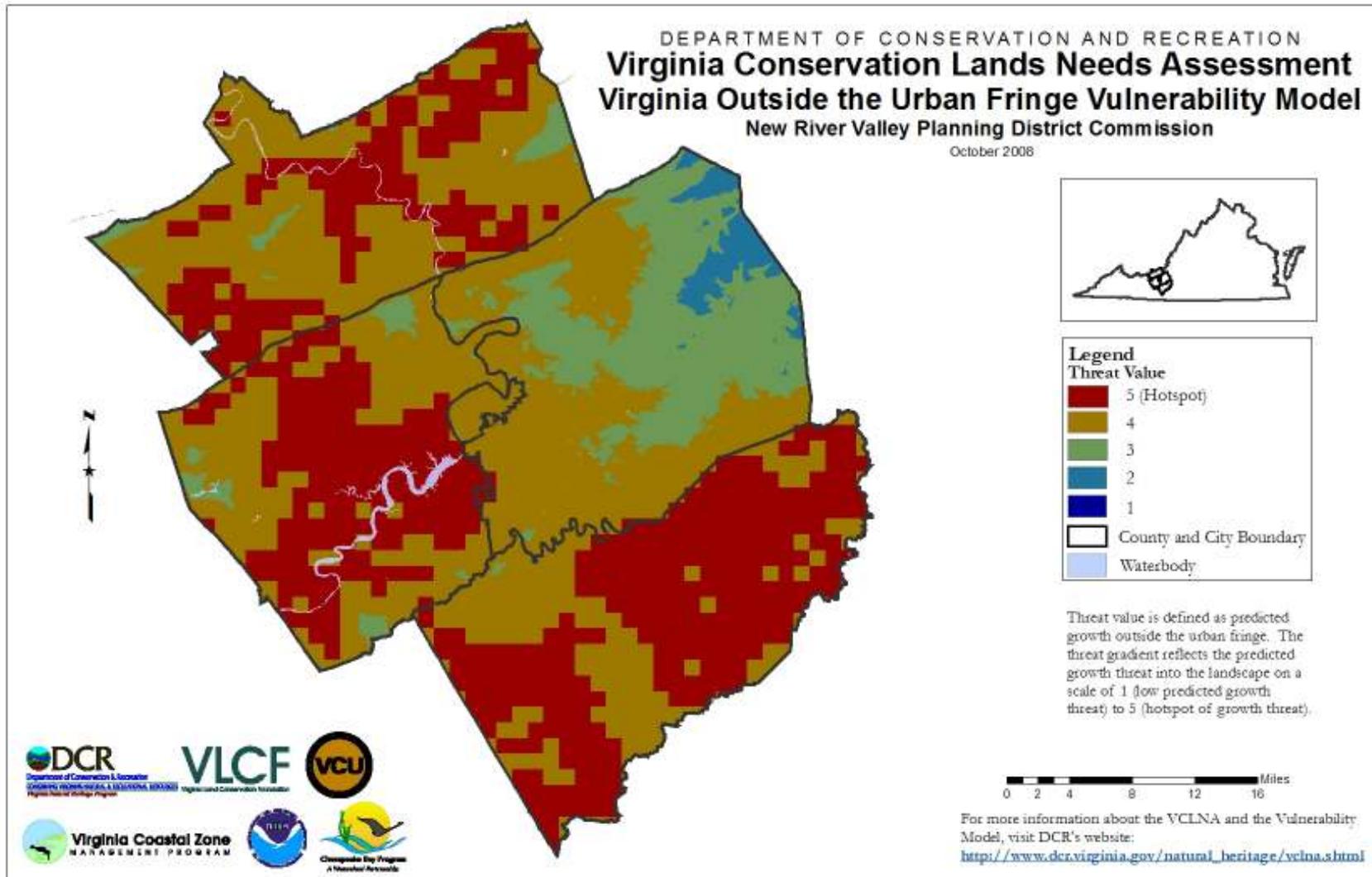


Figure 17. PDC 5 Roanoke Valley-Alleghany Regional Commission Vulnerability Model.

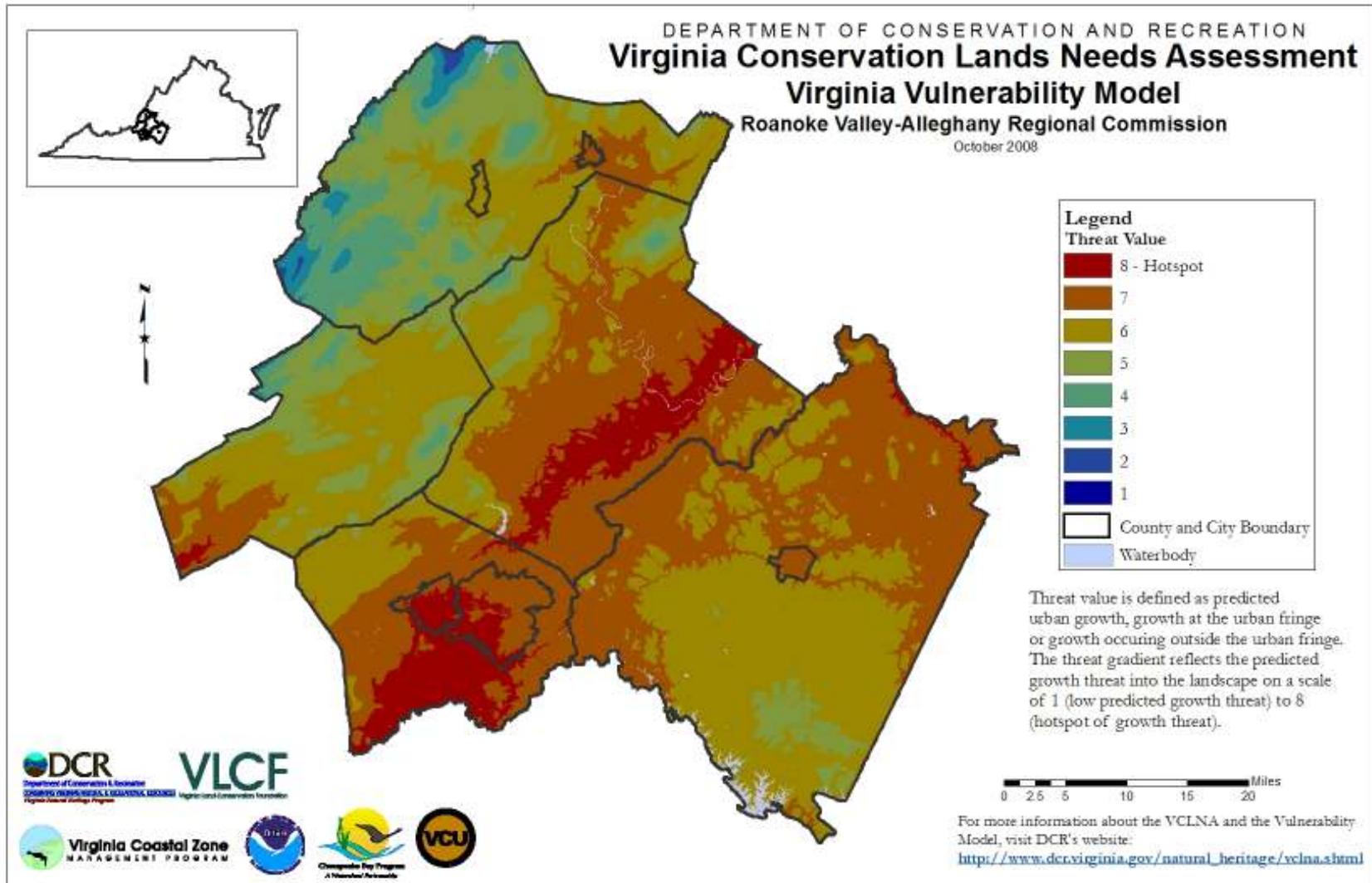


Figure 18. PDC 5 Roanoke Valley-Alleghany Regional Commission Urban Vulnerability Model.

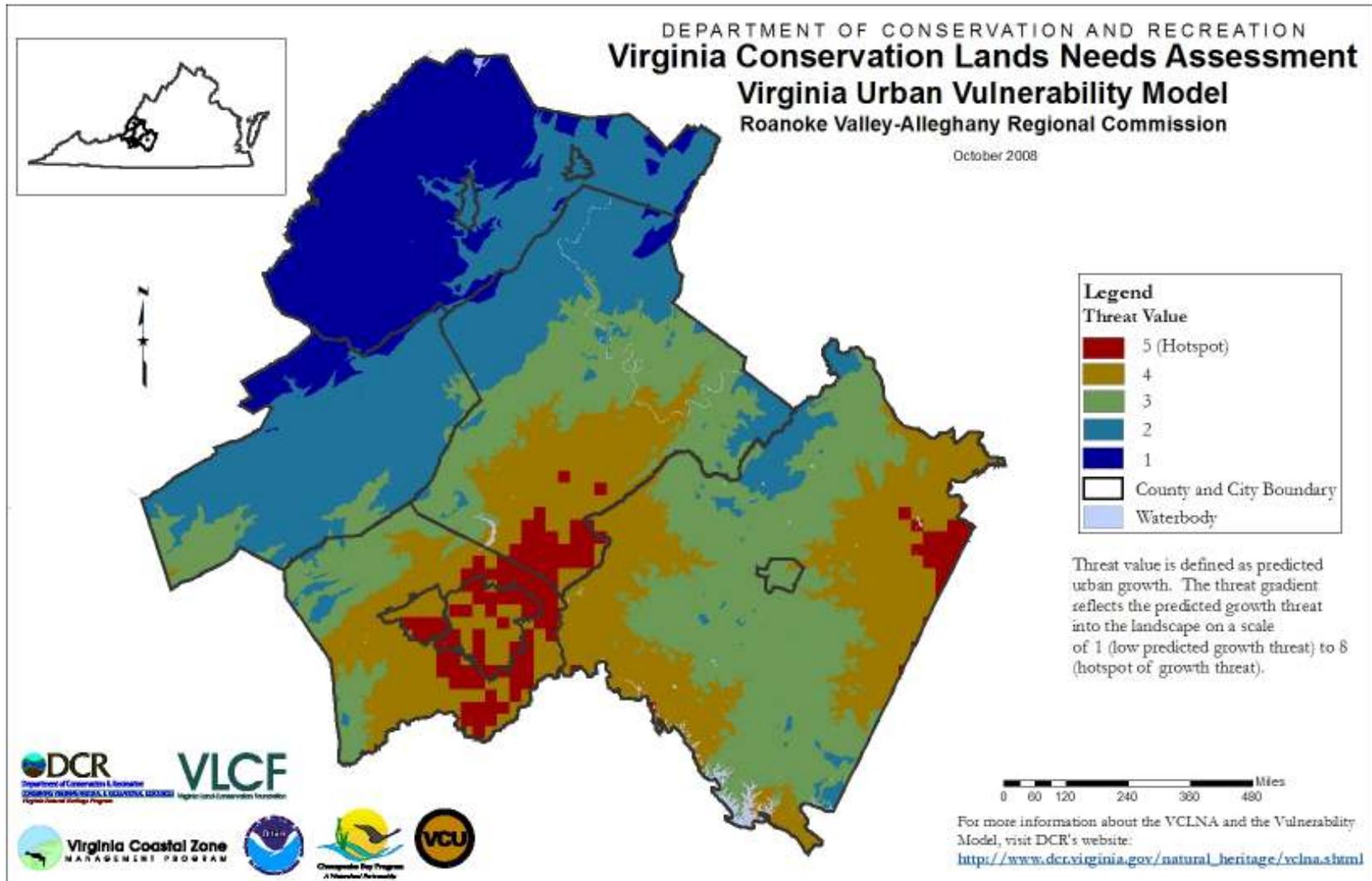


Figure 19. PDC 5 Roanoke Valley-Alleghany Regional Commission Urban Fringe Vulnerability Model.

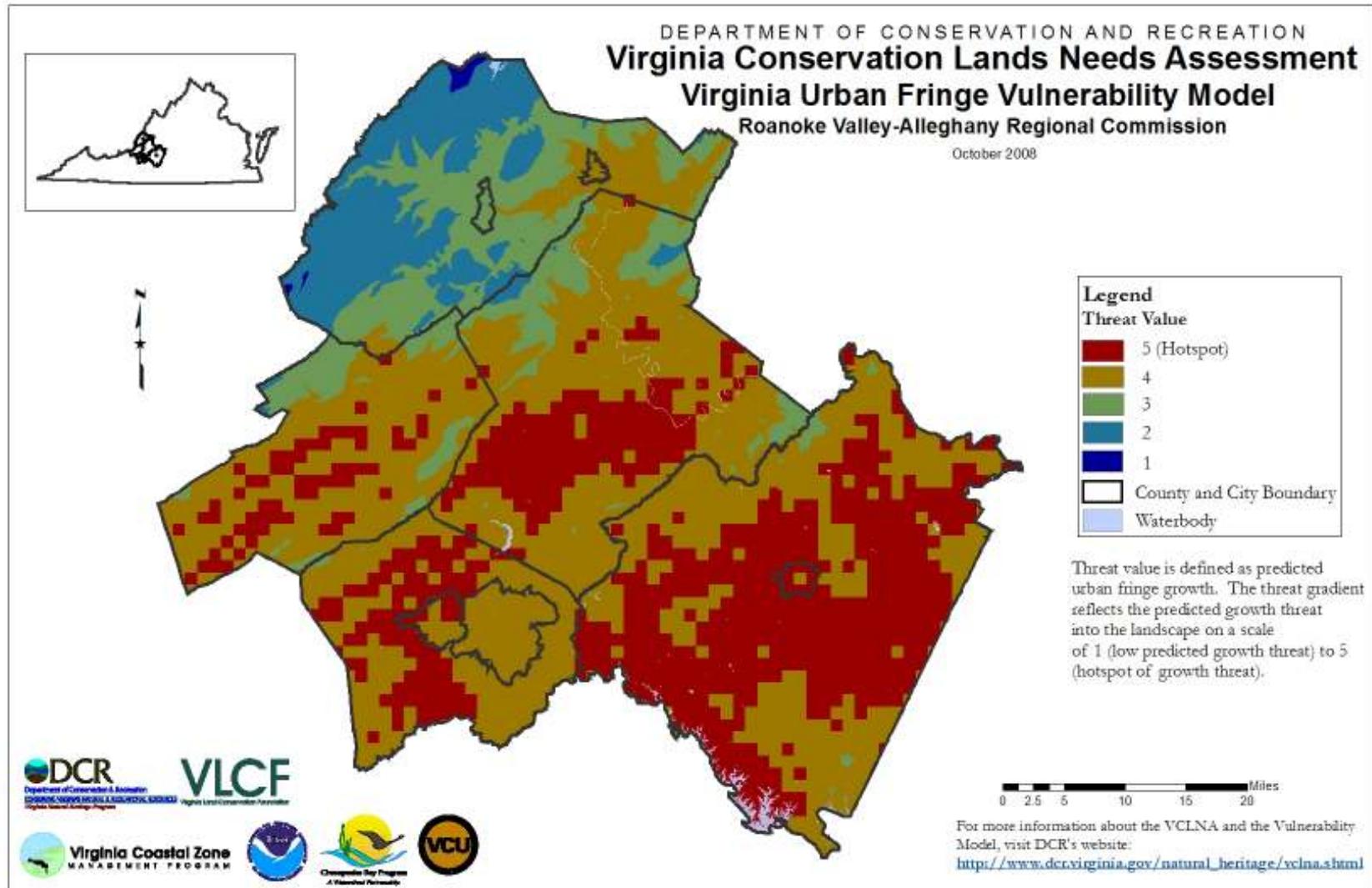


Figure 20. PDC 5 Roanoke Valley-Alleghany Regional Commission Outside the Urban Fringe Vulnerability Model.

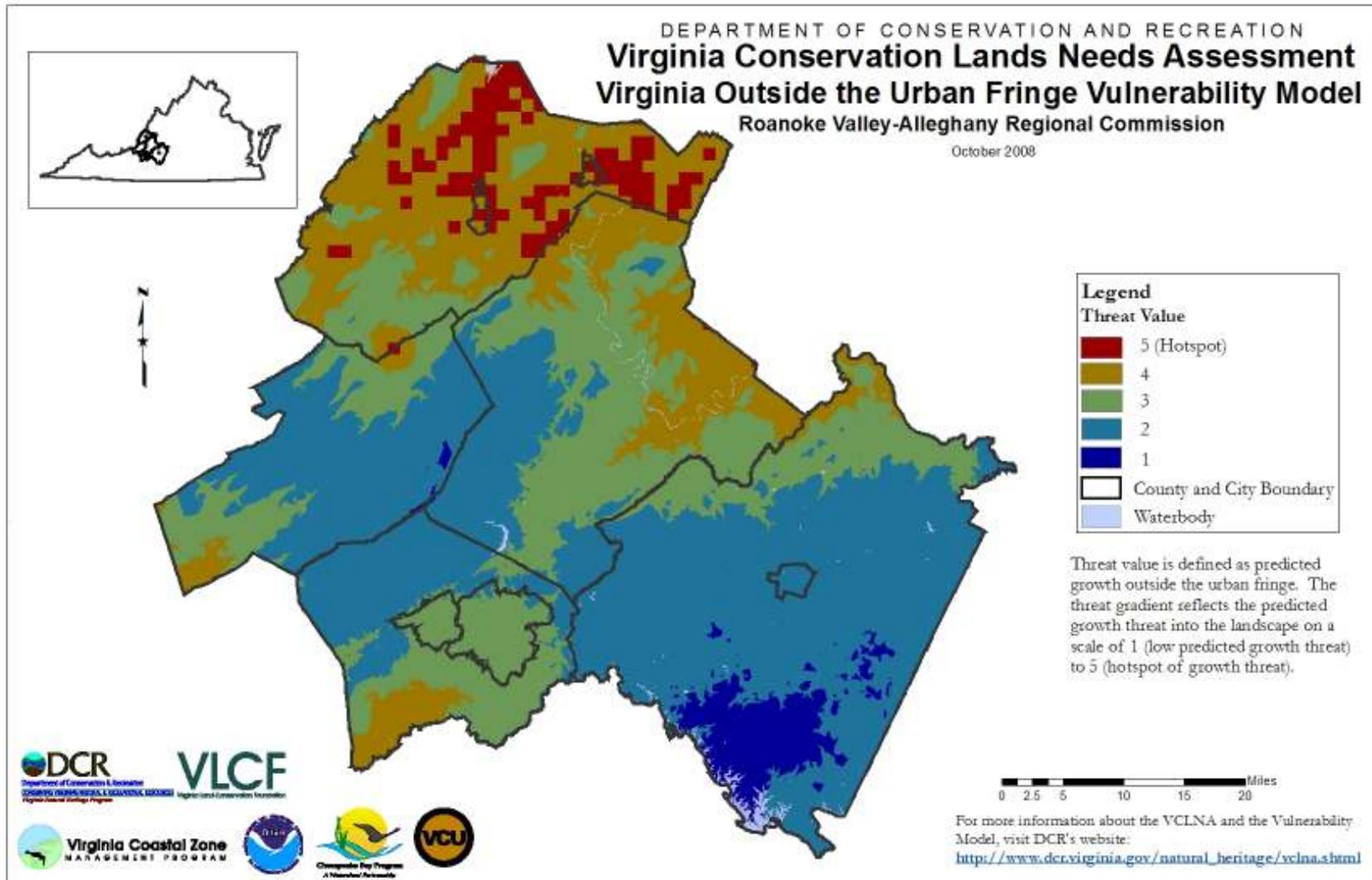
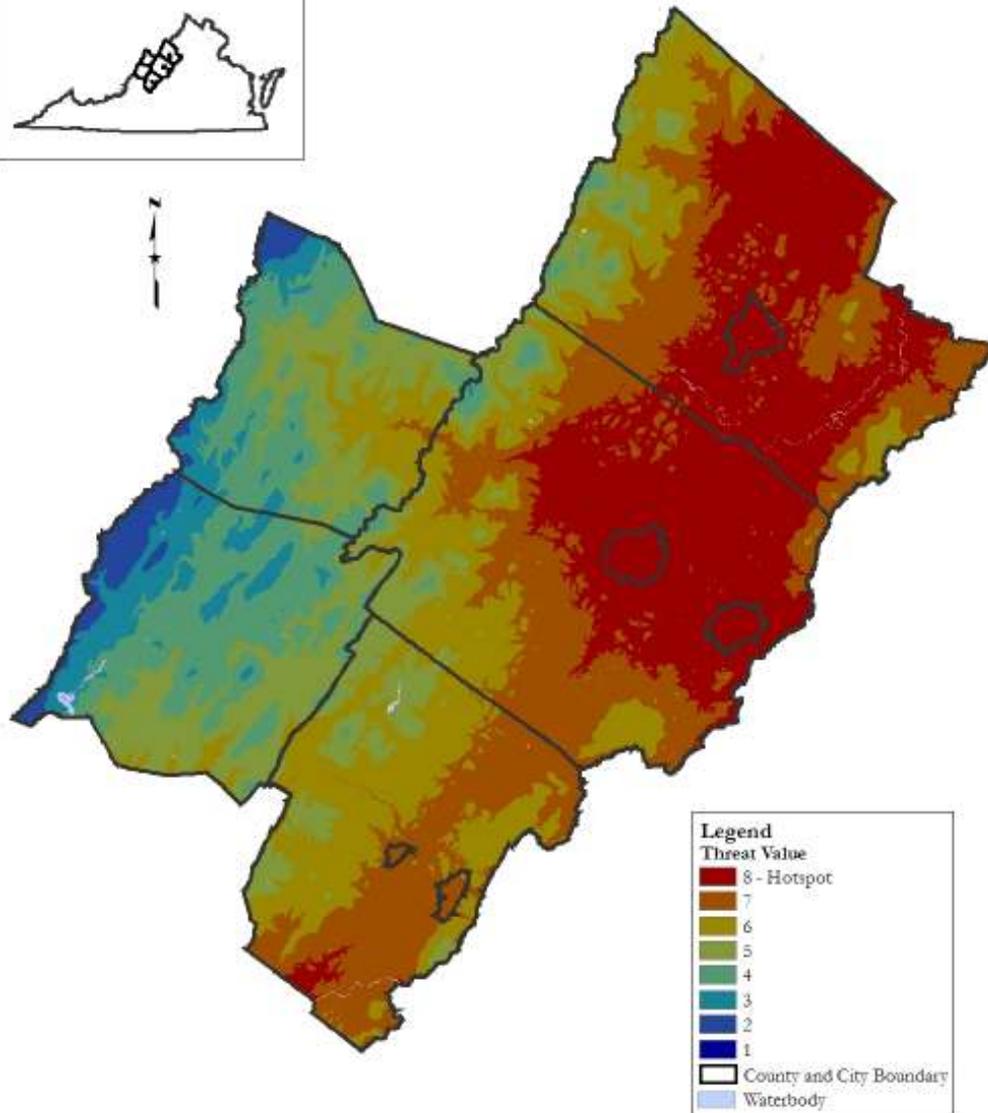
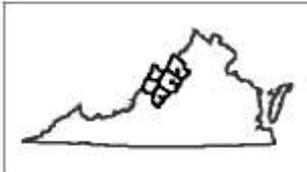


Figure 21. PDC 6 Central Shenandoah Vulnerability Model.

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Virginia Vulnerability Model

Central Shenandoah Planning District Commission
 October 2008



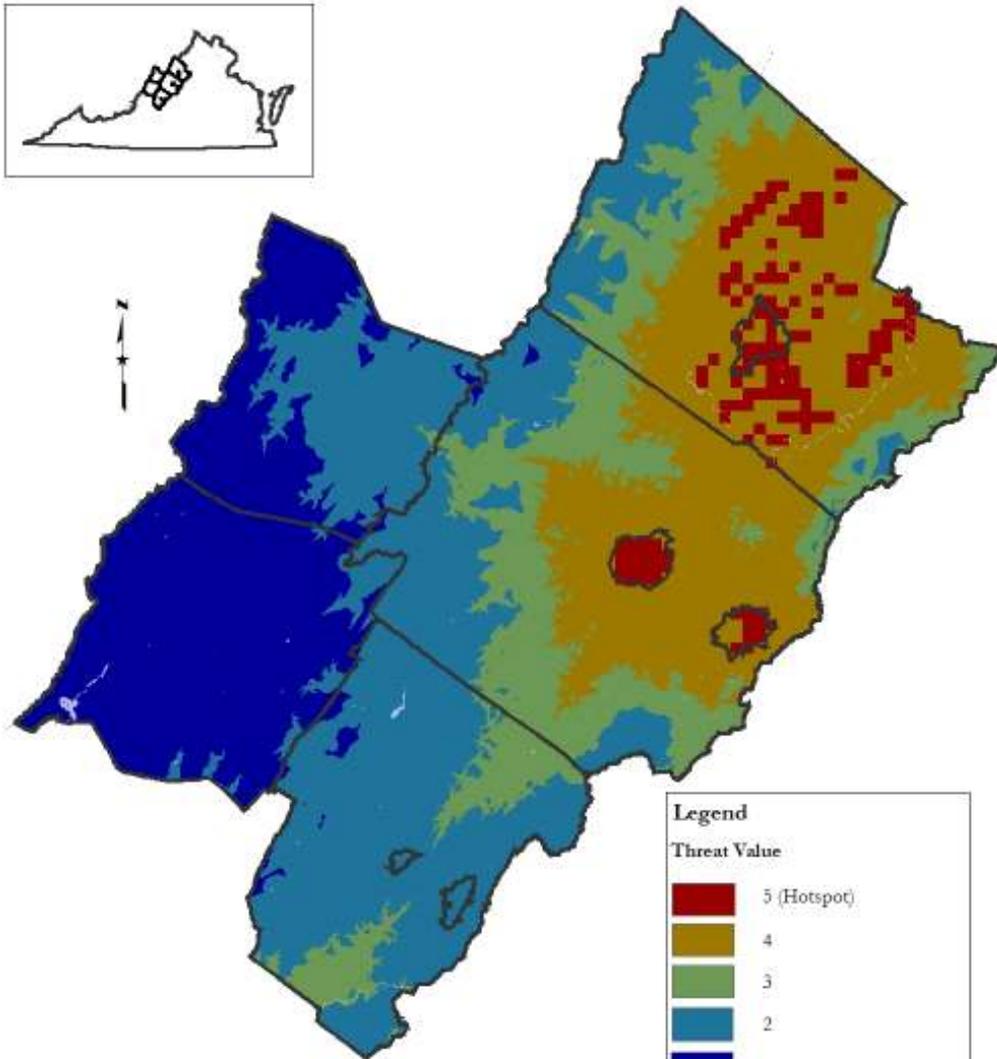
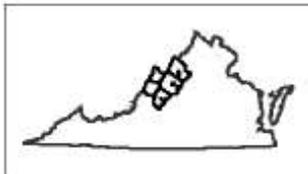
Threat value is defined as predicted urban growth, growth at the urban fringe or growth occurring outside the urban fringe. The threat gradient reflects the predicted growth threat into the landscape on a scale of 1 (low predicted growth threat) to 8 (hotspot of growth threat).

For more information about the VCLNA and the Vulnerability Model, visit DCR's website:
http://www.dcr.virginia.gov/natural_heritage/vclna.shtml



Figure 22. PDC 6 Central Shenandoah Urban Vulnerability Model.

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Threat value is defined as predicted urban fringe growth. The threat gradient reflects the predicted growth threat into the landscape on a scale of 1 (low predicted growth threat) to 5 (hotspot of growth threat).

Legend

Threat Value

- 5 (Hotspot)
- 4
- 3
- 2
- 1
- County and City Boundary
- Waterbody

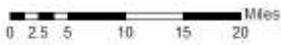
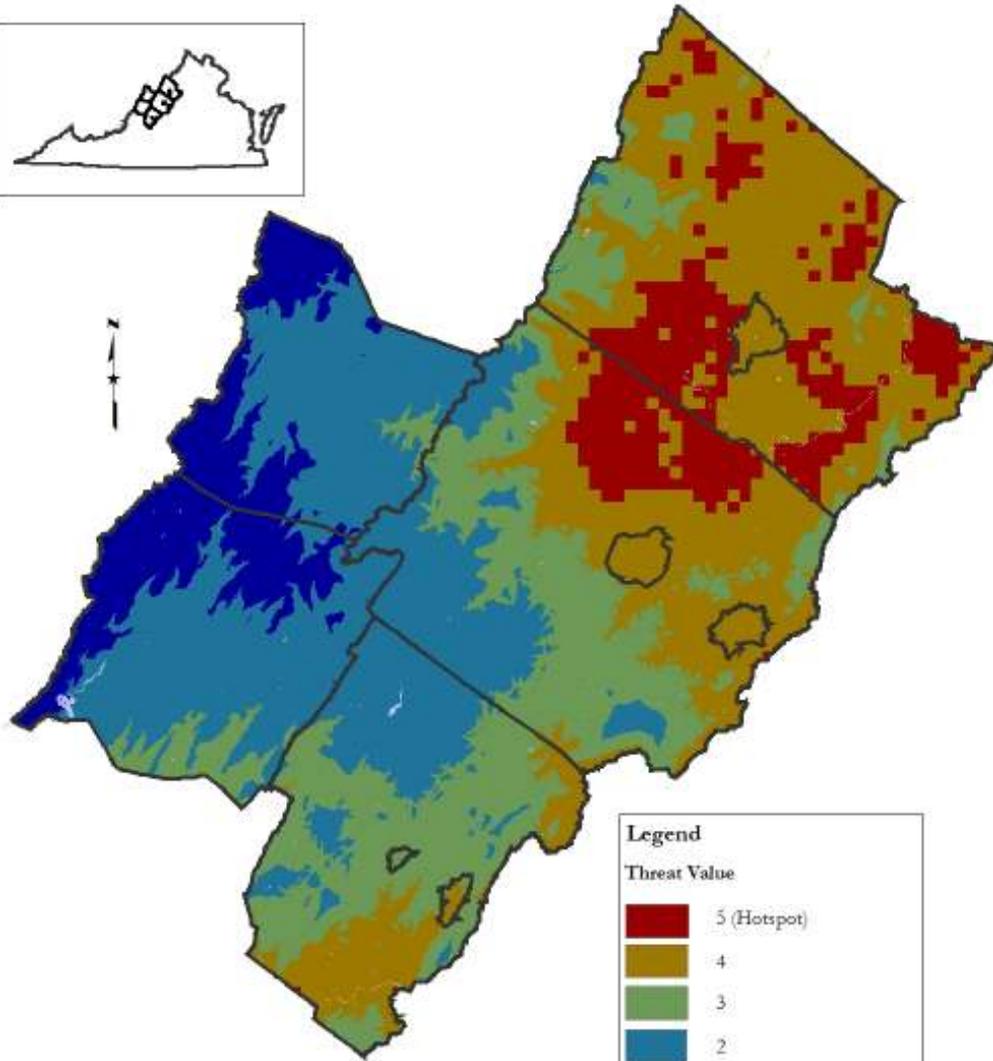
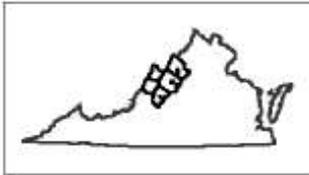
For more information about the VCLNA and the Vulnerability Model, visit DCR's website:
http://www.dcr.virginia.gov/natural_heritage/vclna.shtml



Figure 23. PDC 6 Central Shenandoah Urban Fringe Vulnerability Model.

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 Central Shenandoah Planning District Commission

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Threat value is defined as predicted urban fringe growth. The threat gradient reflects the predicted growth threat into the landscape on a scale of 1 (low predicted growth threat) to 5 (hotspot of growth threat).



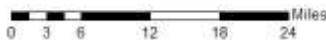
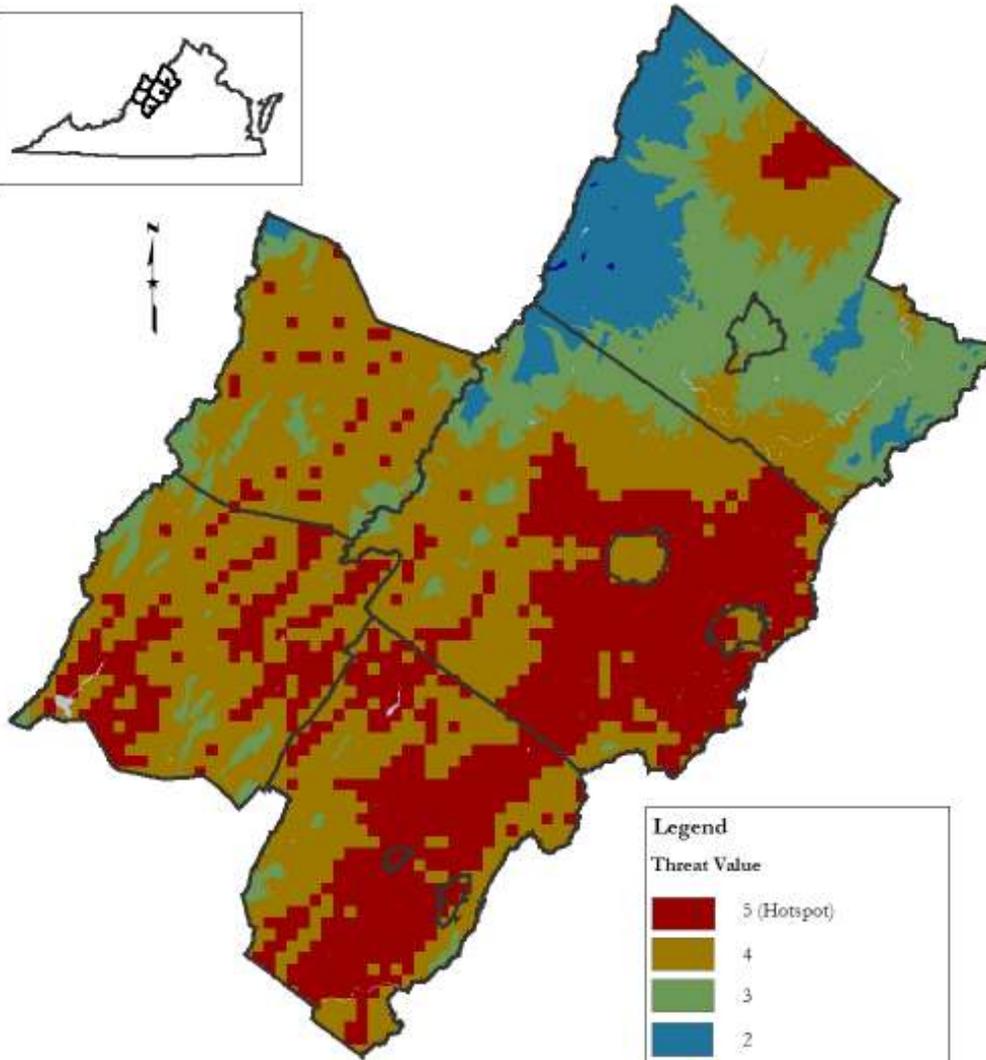
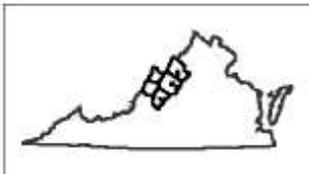
For more information about the VCLNA and the Vulnerability Model, visit DCR's website:
http://www.dcr.virginia.gov/natural_heritage/vclna.shtml



Figure 24. PDC 6 Central Shenandoah Outside the Urban Fringe Vulnerability Model.

DEPARTMENT OF CONSERVATION AND RECREATION
Virginia Conservation Lands Needs Assessment
Virginia Outside the Urban Fringe Vulnerability Model
 Central Shenandoah Planning District Commission

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Threat value is defined as predicted growth outside the urban fringe. The threat gradient reflects the predicted growth threat into the landscape on a scale of 1 (low predicted growth threat) to 5 (hotspot of growth threat).

For more information about the VCLNA and the Vulnerability Model, visit DCR's website:
http://www.dcr.virginia.gov/natural_heritage/vclna.shtml



Figure 25. PDC 7 Northern Shenandoah Valley Regional Commission Vulnerability Model

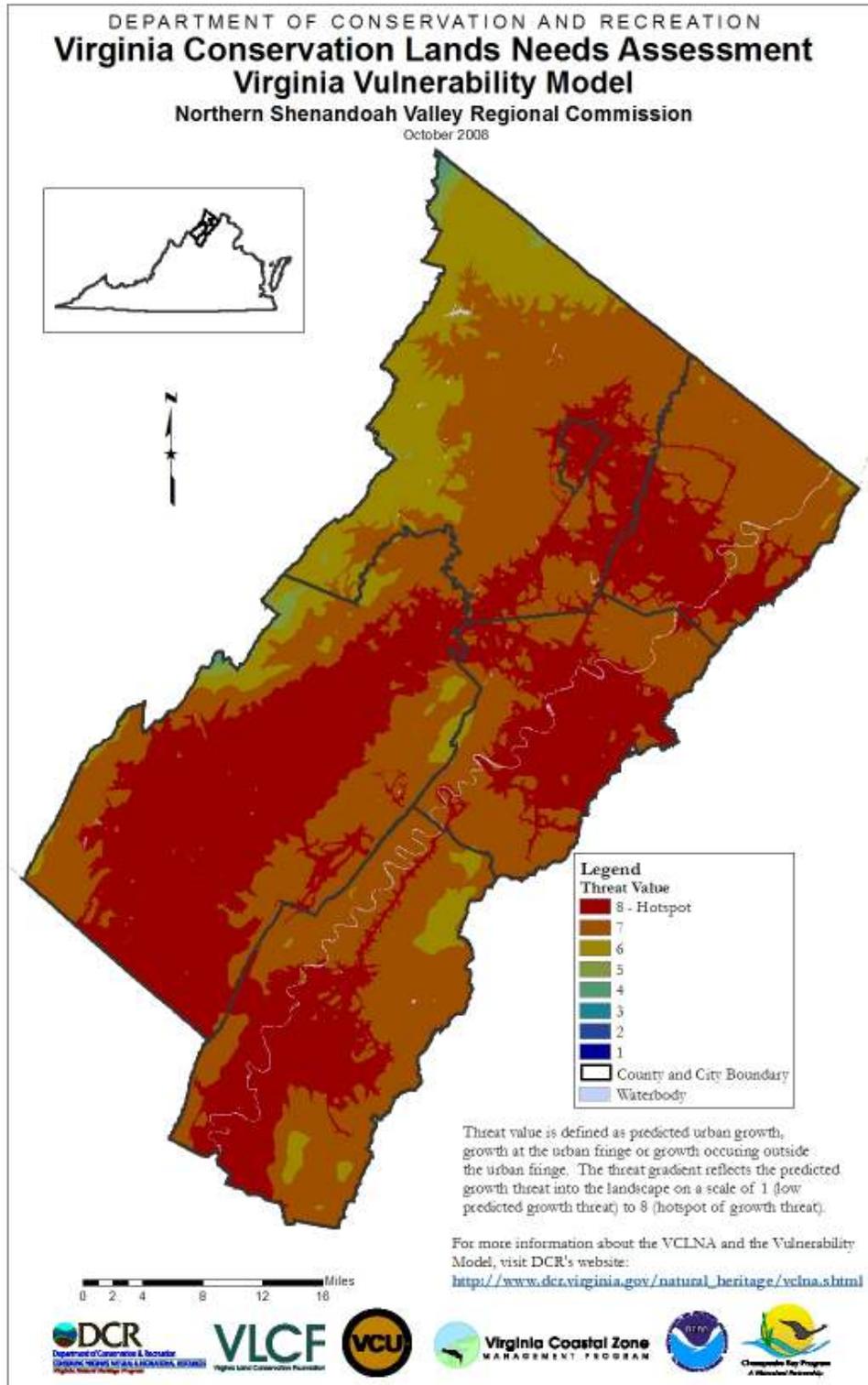


Figure 26. PDC 7 Northern Shenandoah Valley Regional Commission Urban Vulnerability Model.

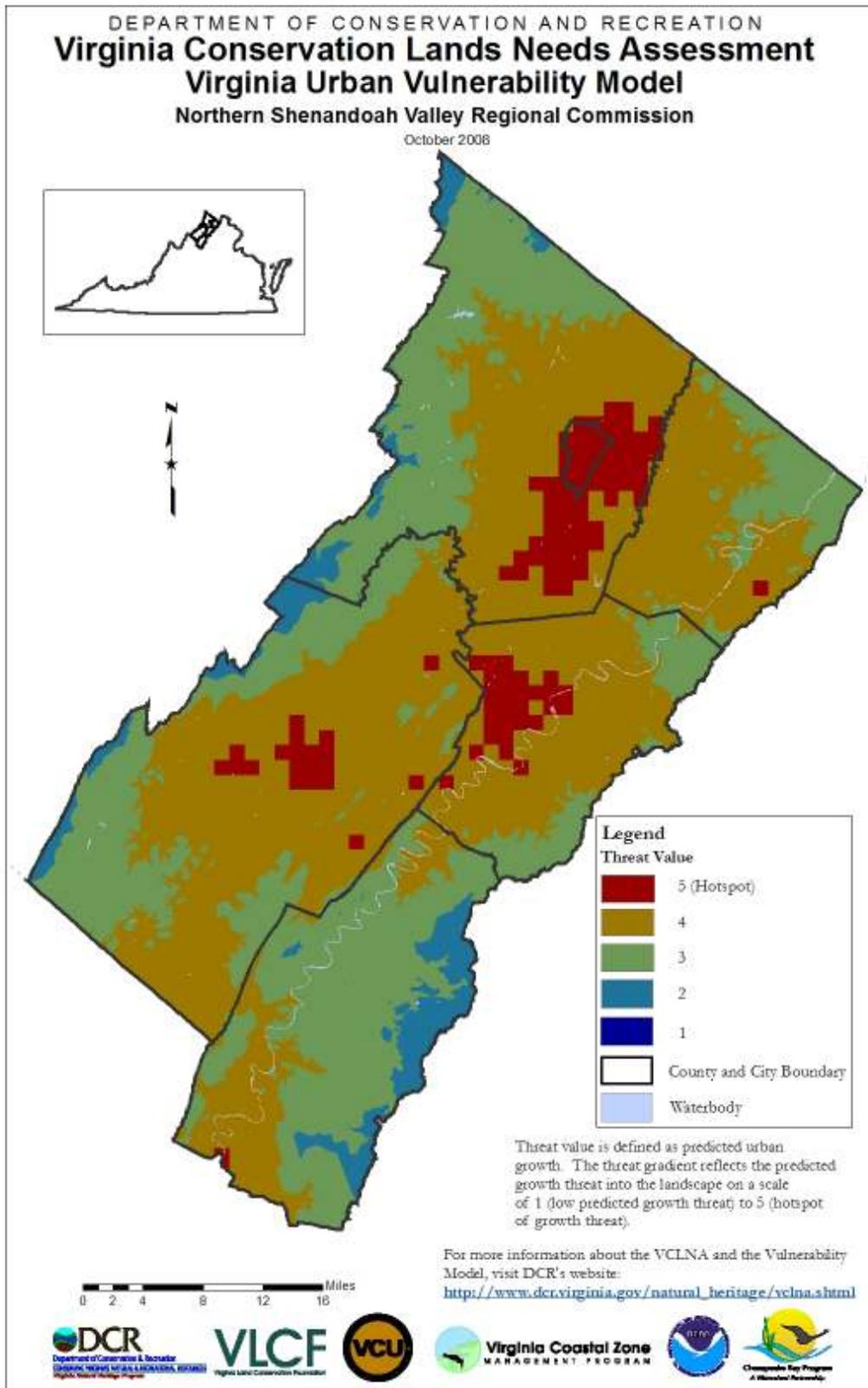


Figure 27. PDC 7 Northern Shenandoah Valley Regional Commission Urban Fringe Vulnerability Model.

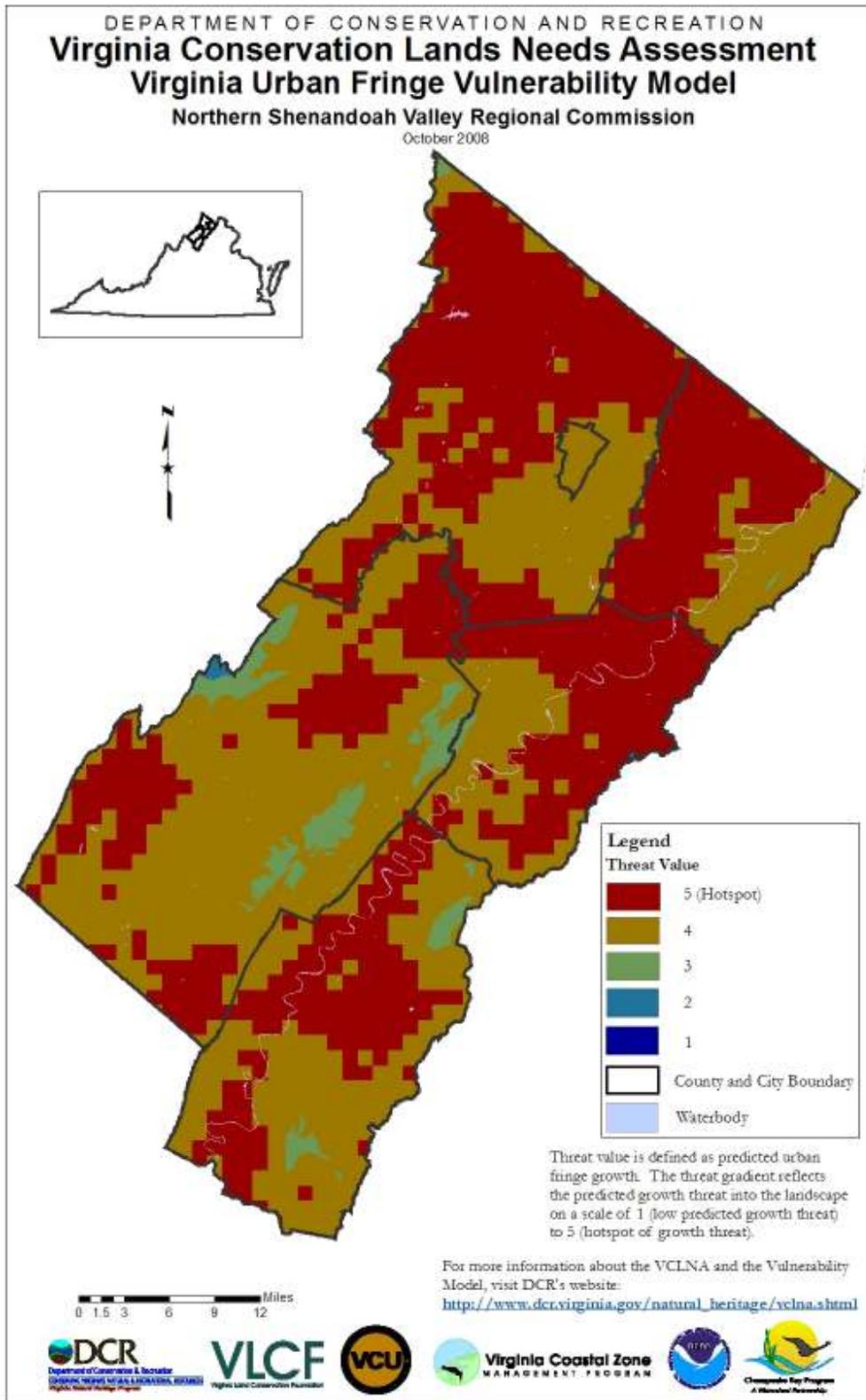


Figure 28. PDC 7 Northern Shenandoah Valley Regional Commission Outside the Urban Fringe Vulnerability Model.

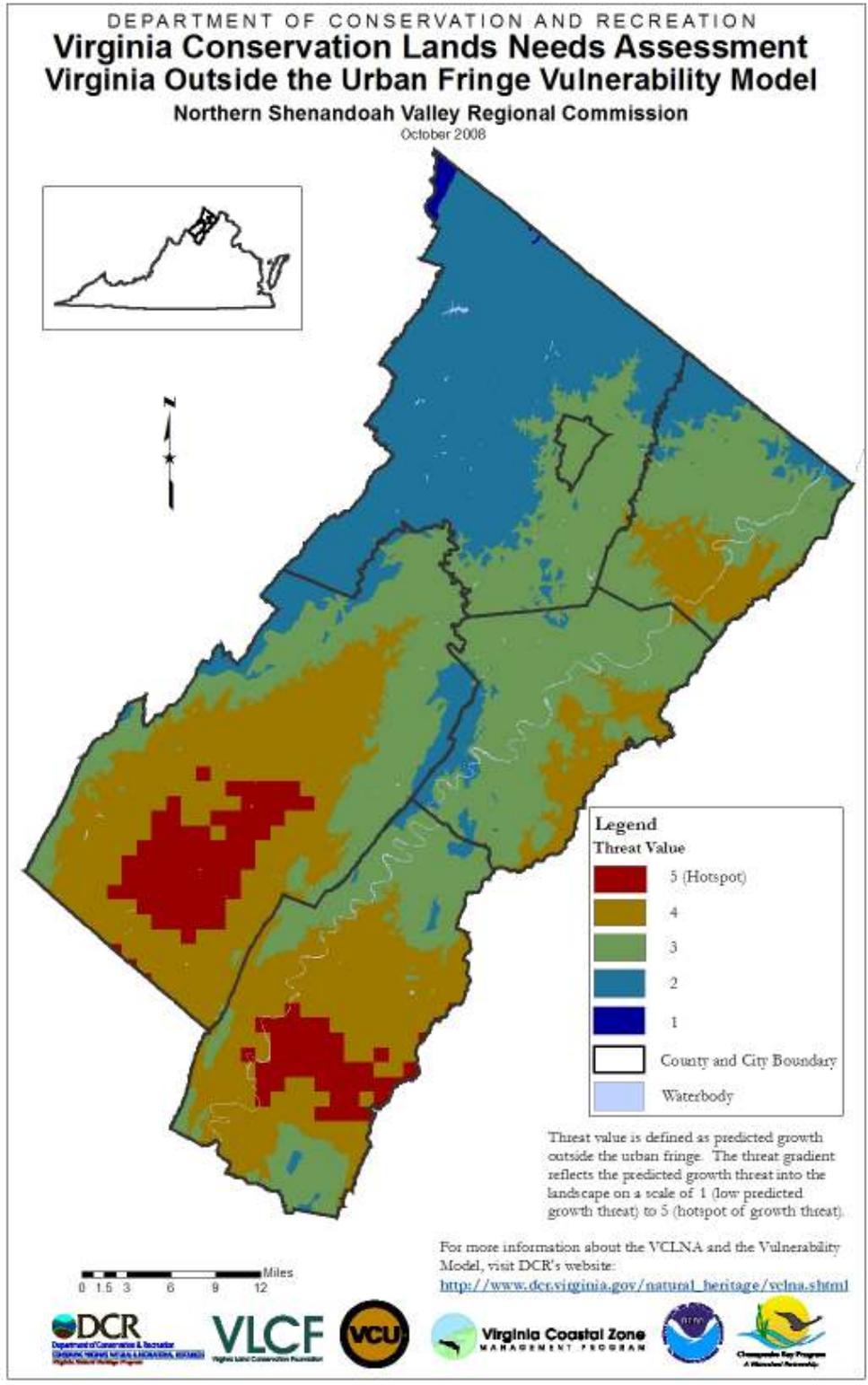


Figure 29. PDC 8 Northern Virginia Regional Commission Vulnerability Model.

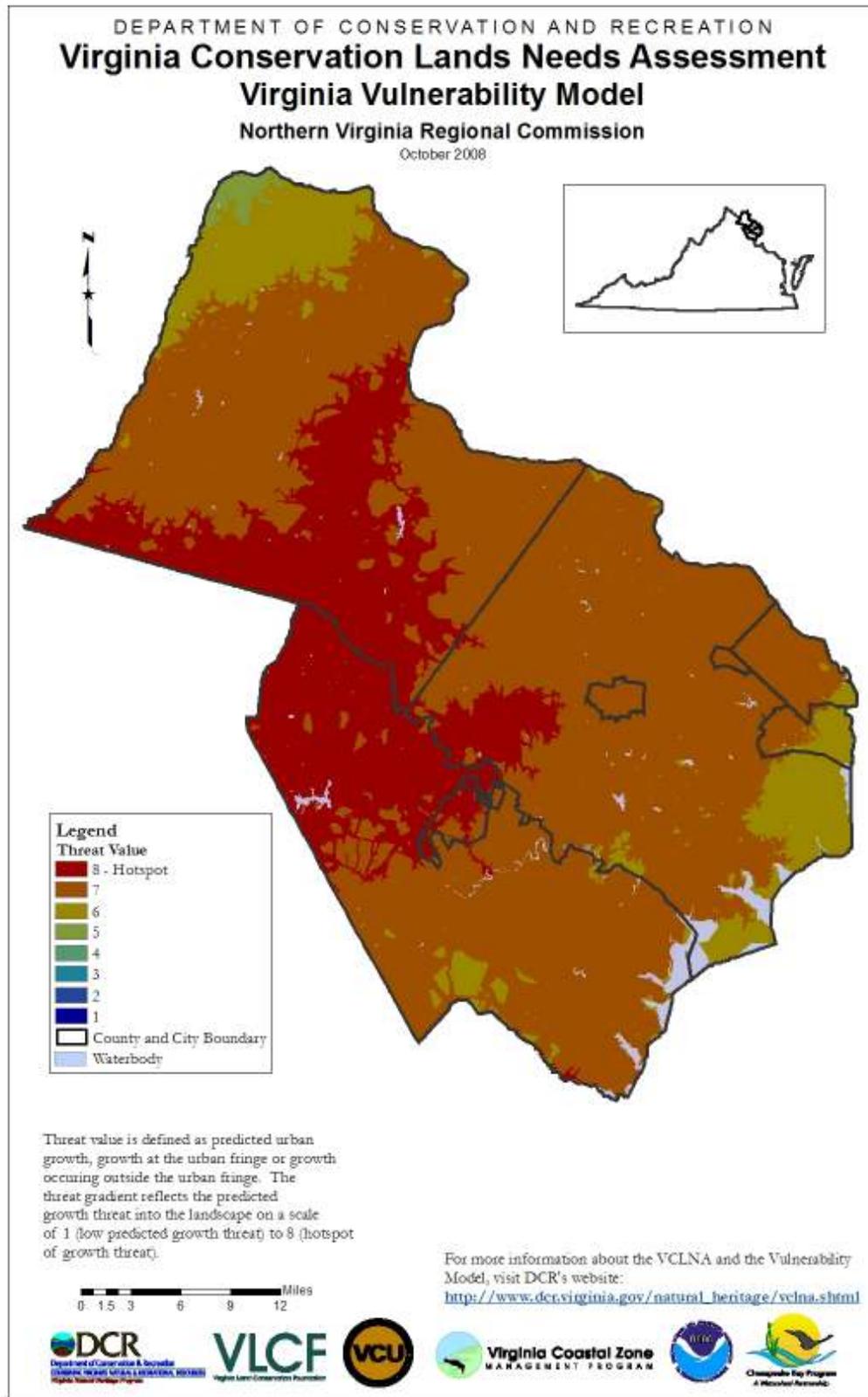


Figure 30. PDC 8 Northern Virginia Regional Commission Urban Vulnerability Model.

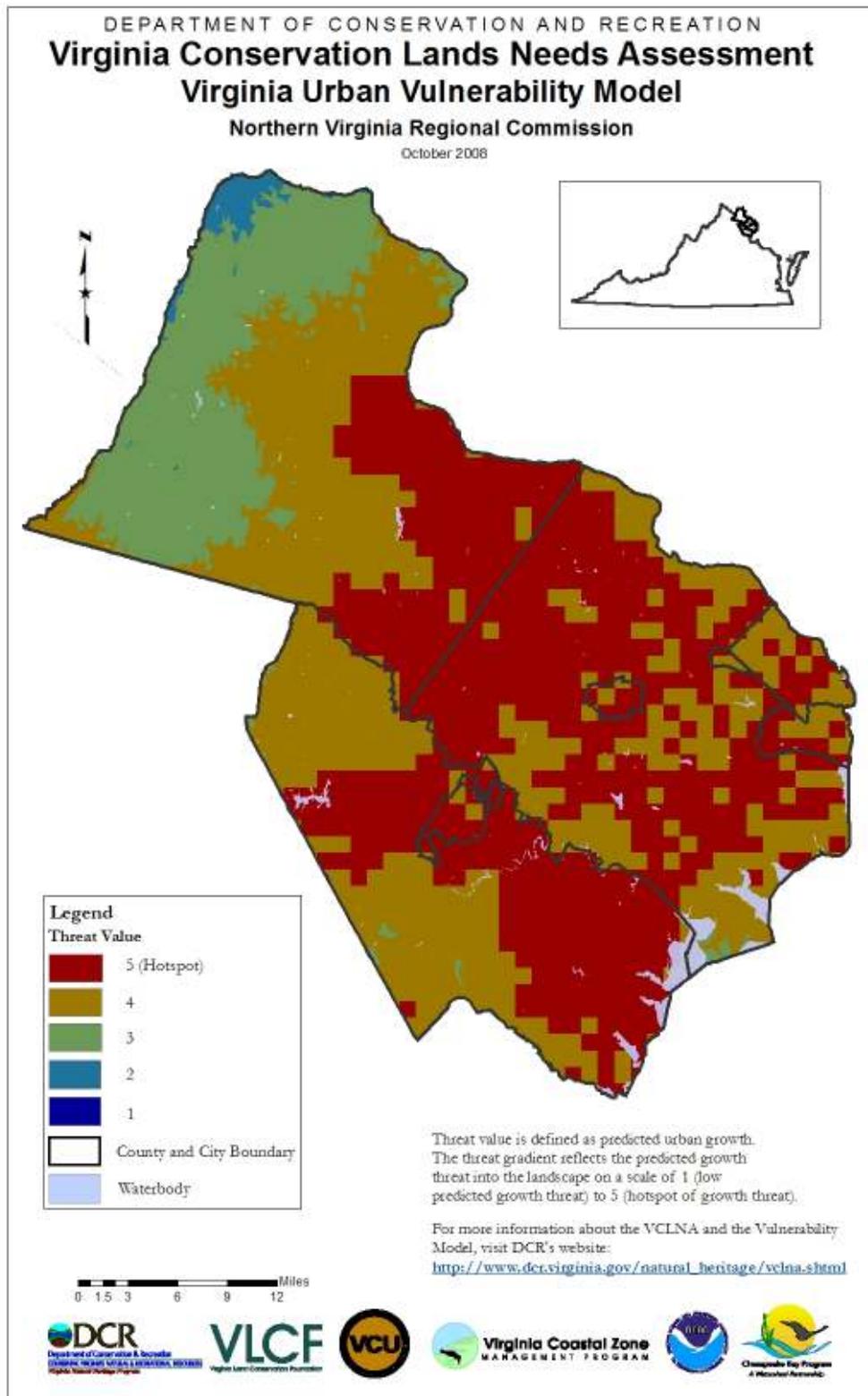


Figure 31. PDC 8 Northern Virginia Regional Commission Urban Fringe Vulnerability Model.

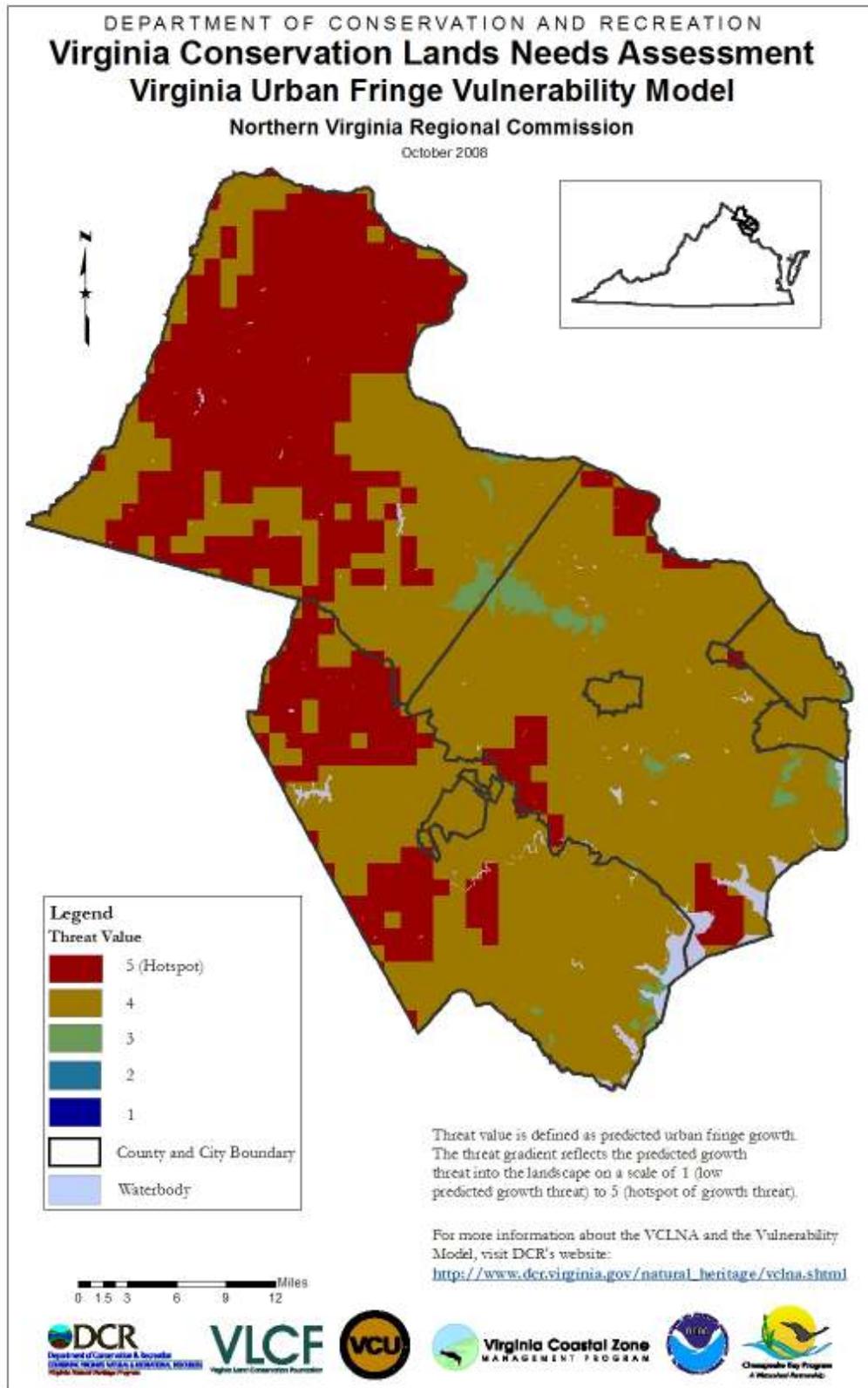


Figure 32. PDC 8 Northern Virginia Regional Commission Outside the Urban Fringe Vulnerability Model.

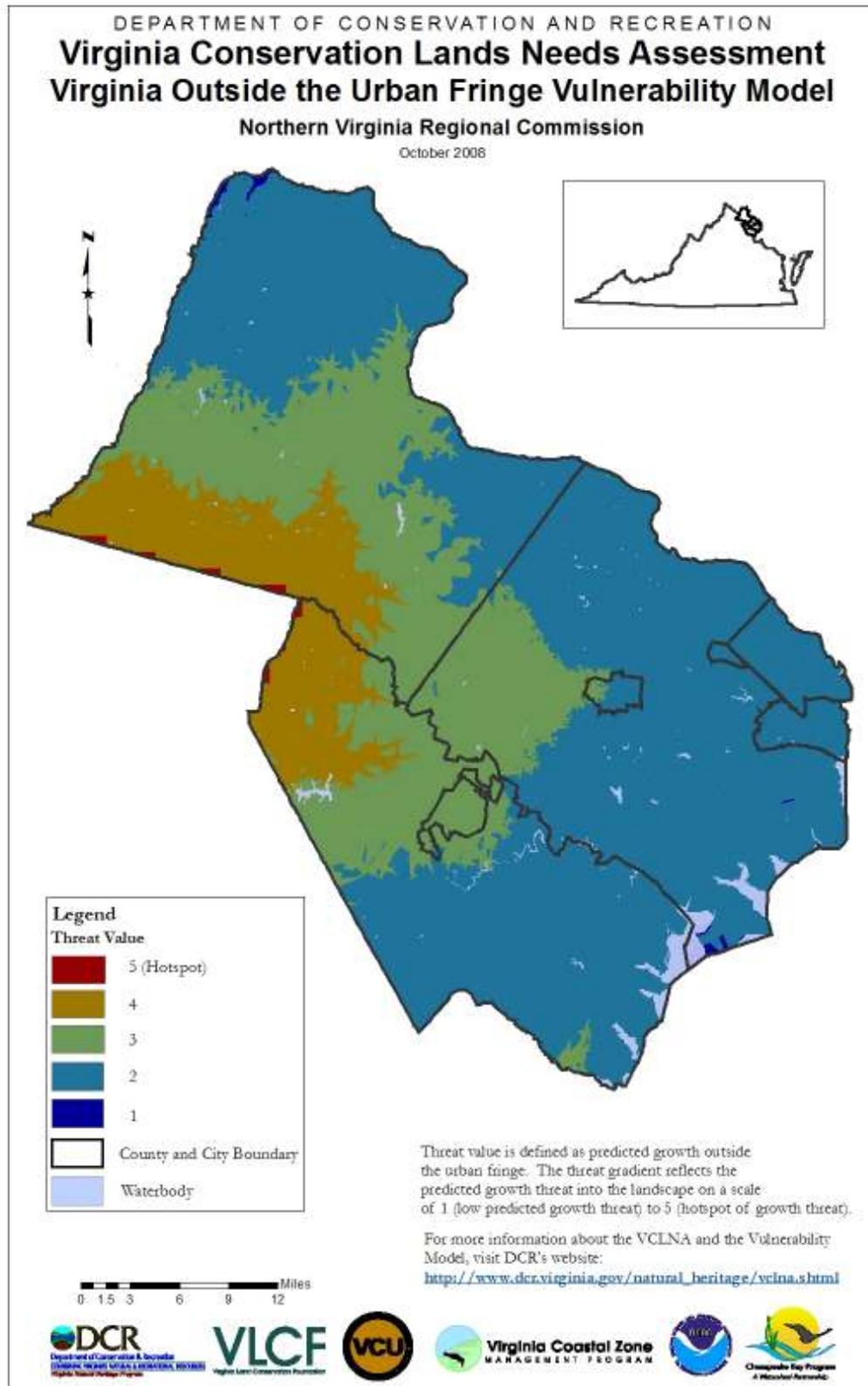


Figure 33. PDC 9 Rappahannock-Rapidan Regional Commission Vulnerability Model.

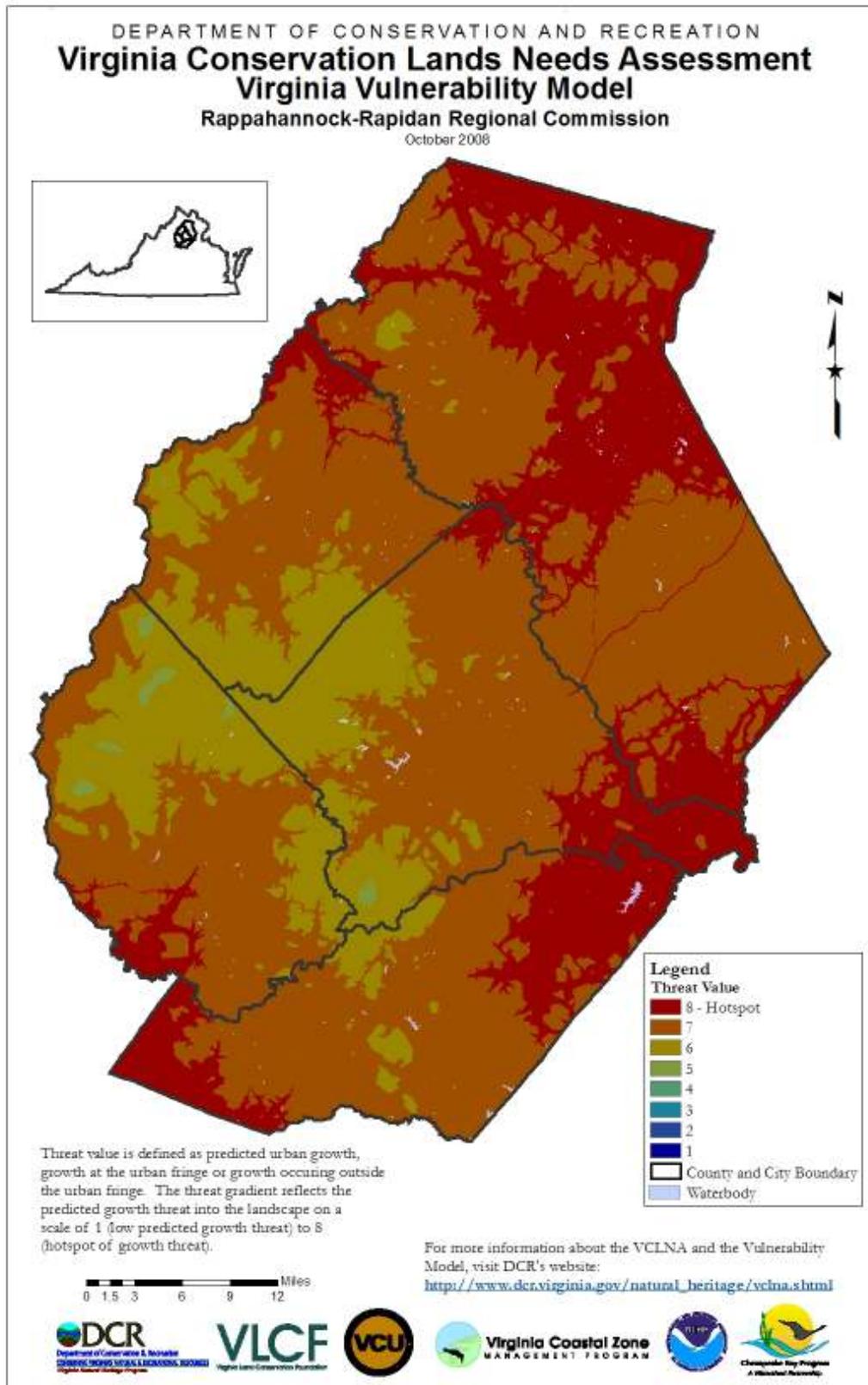


Figure 34. PDC 9 Rappahannock-Rapidan Regional Commission Urban Vulnerability Model.

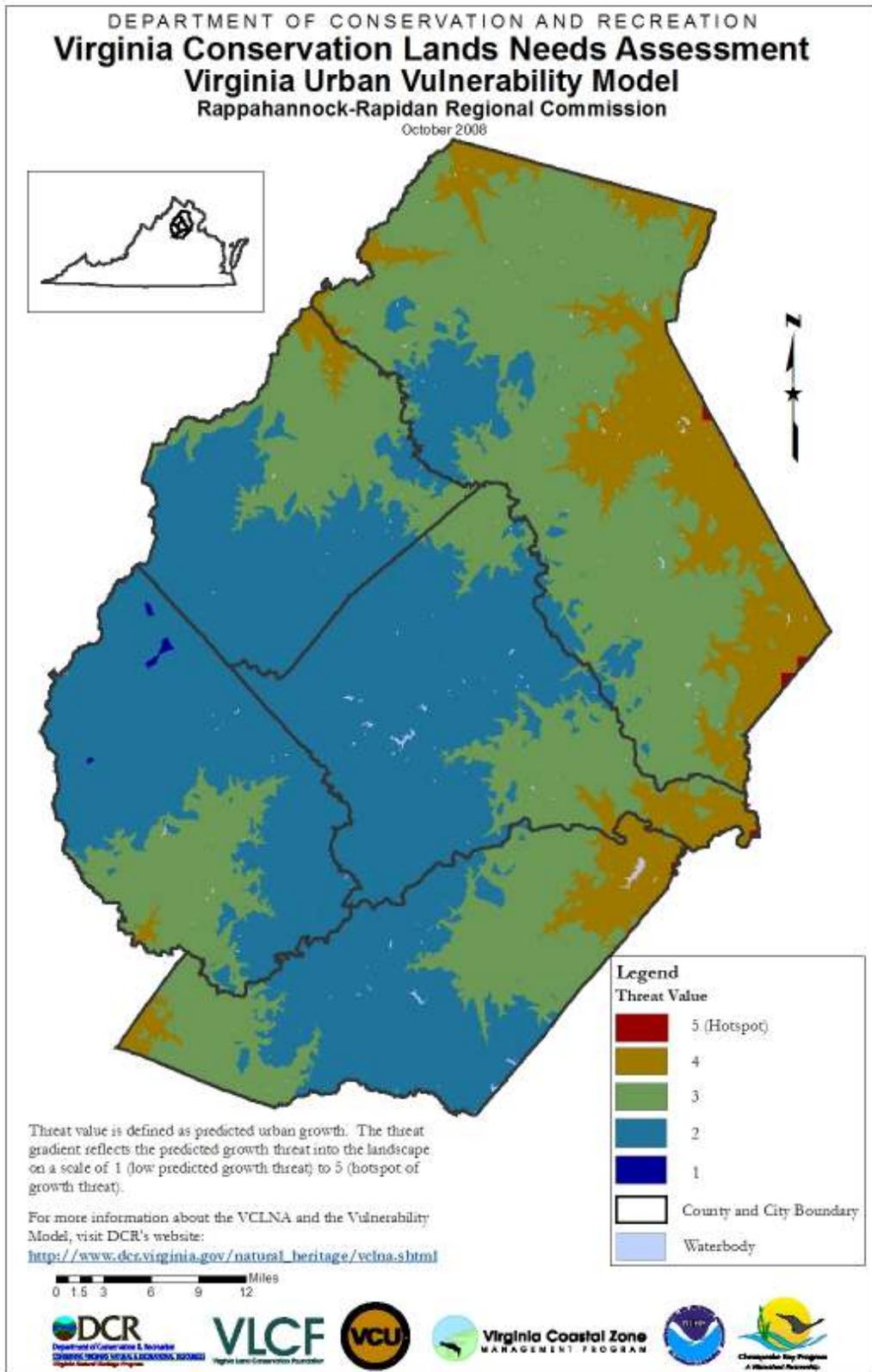


Figure 35. PDC 9 Rappahannock-Rapidan Regional Commission Urban Fringe Vulnerability Model.

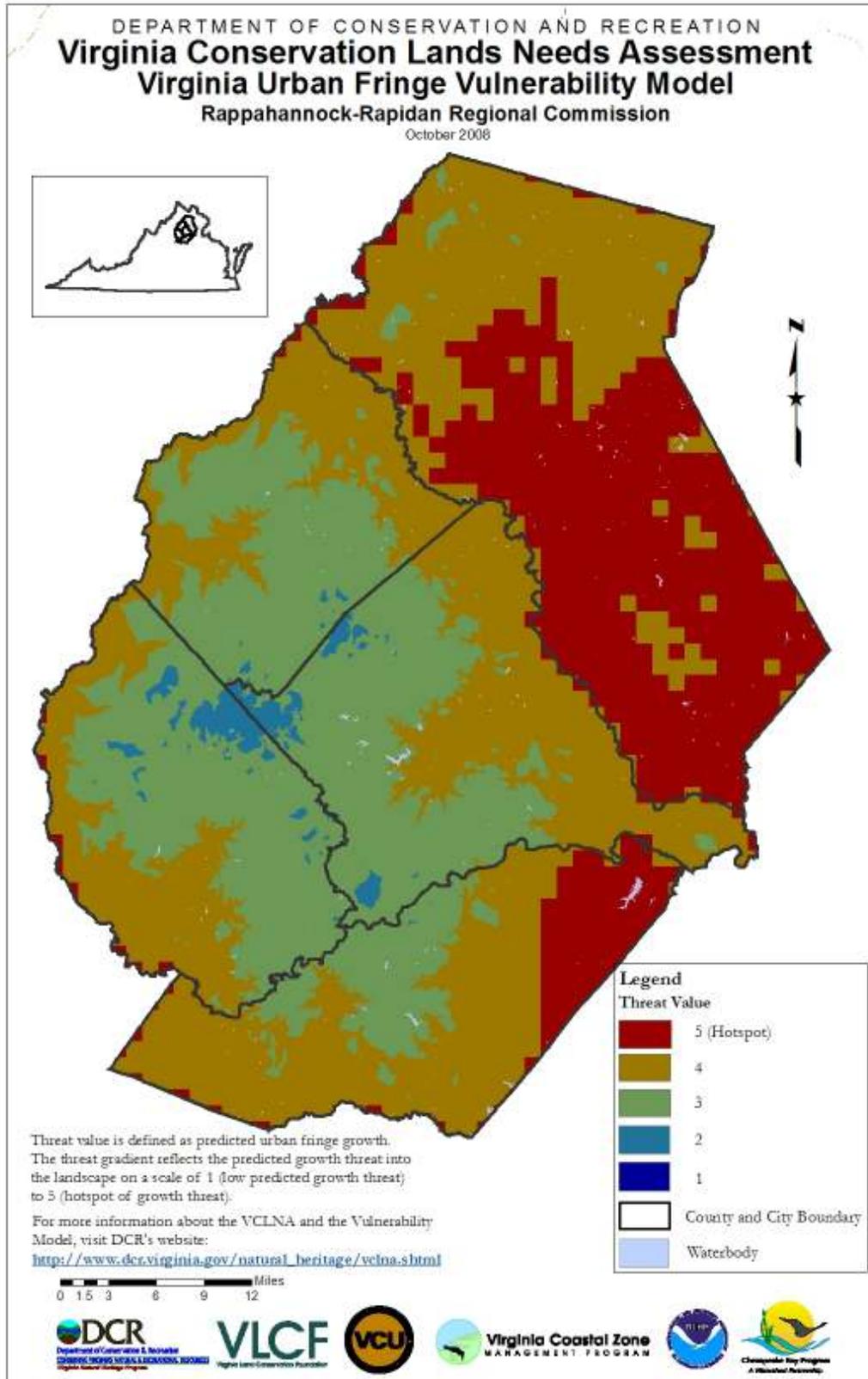


Figure 36. PDC 9 Rappahannock-Rapidan Regional Commission Outside the Urban Fringe Vulnerability Model.

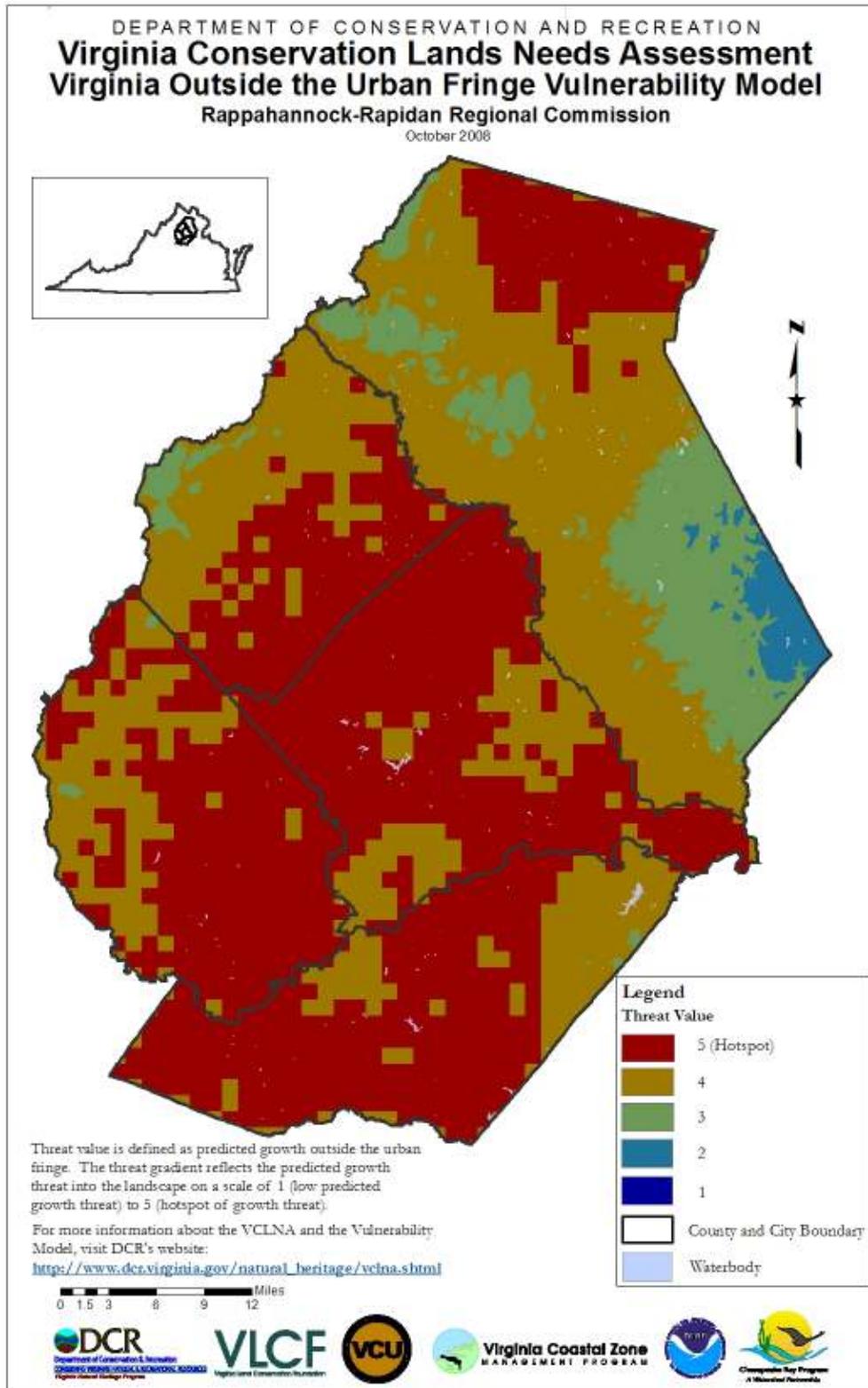


Figure 37. PDC 10 Thomas Jefferson Planning District Commission Vulnerability Model.

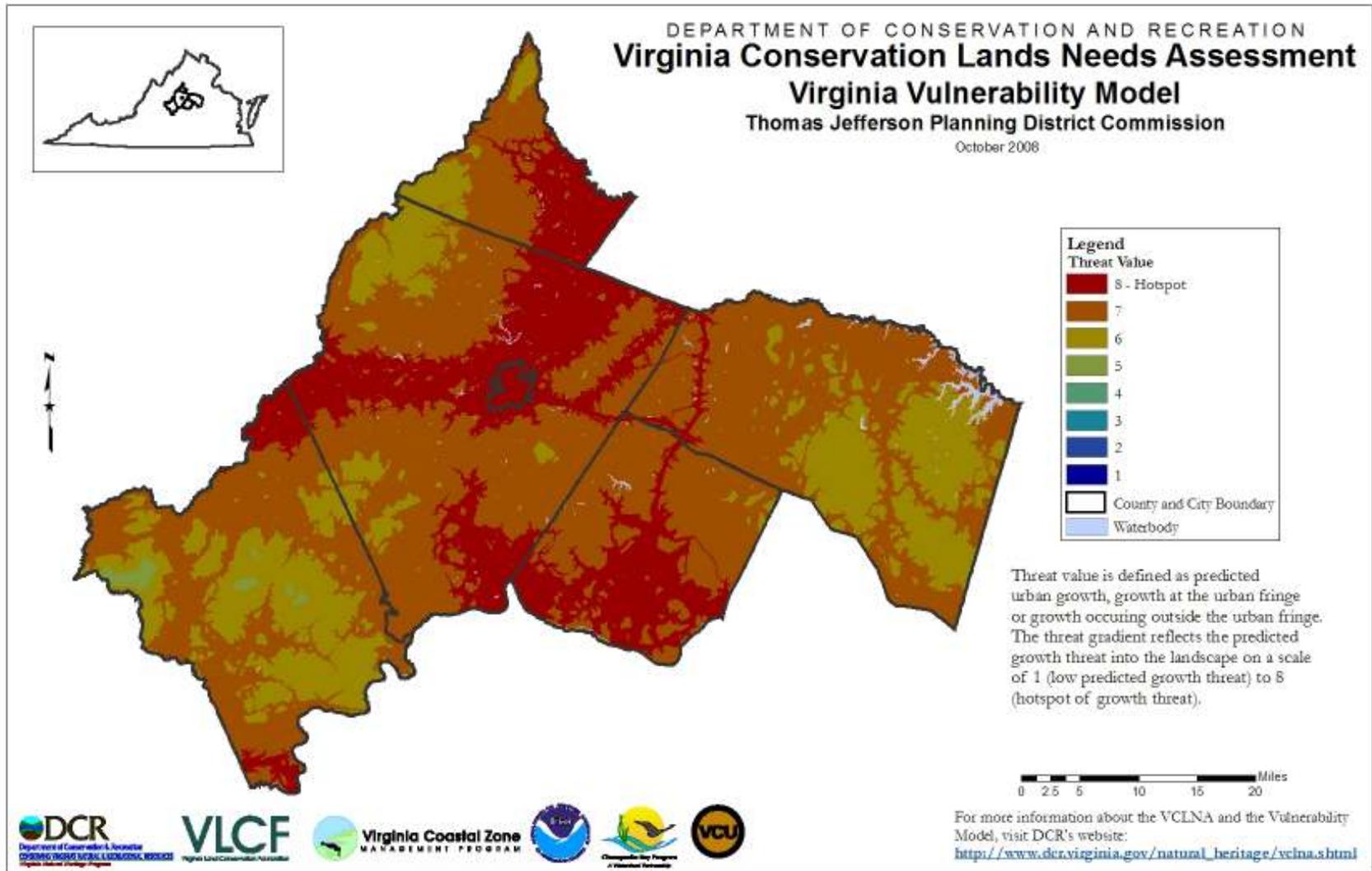


Figure 38. PDC 10 Thomas Jefferson Planning District Commission Urban Vulnerability Model.

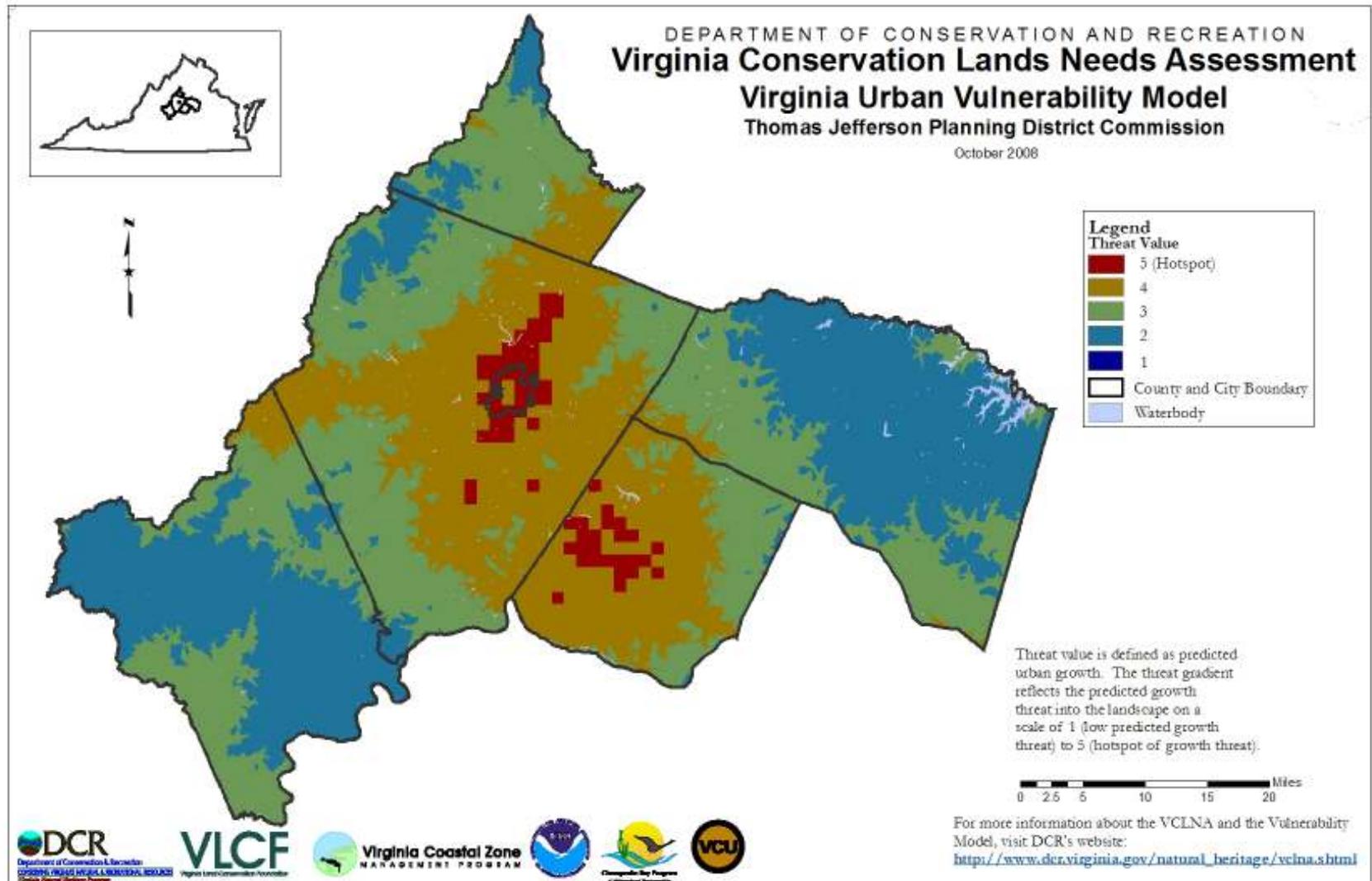


Figure 39. PDC 10 Thomas Jefferson Planning District Commission Urban Fringe Vulnerability Model.

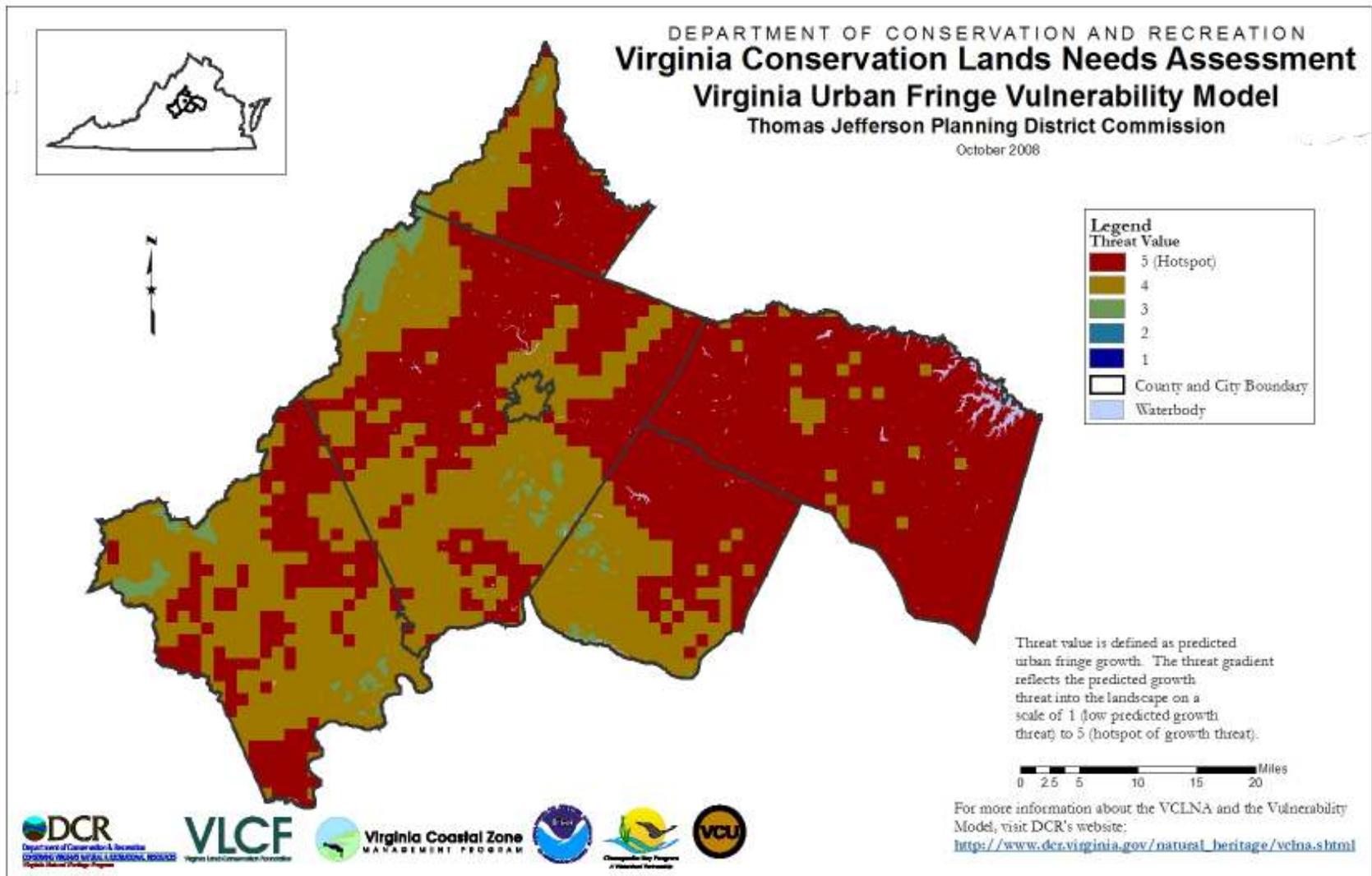


Figure 40. PDC 10 Thomas Jefferson Planning District Commission Outside the Urban Fringe Vulnerability Model.

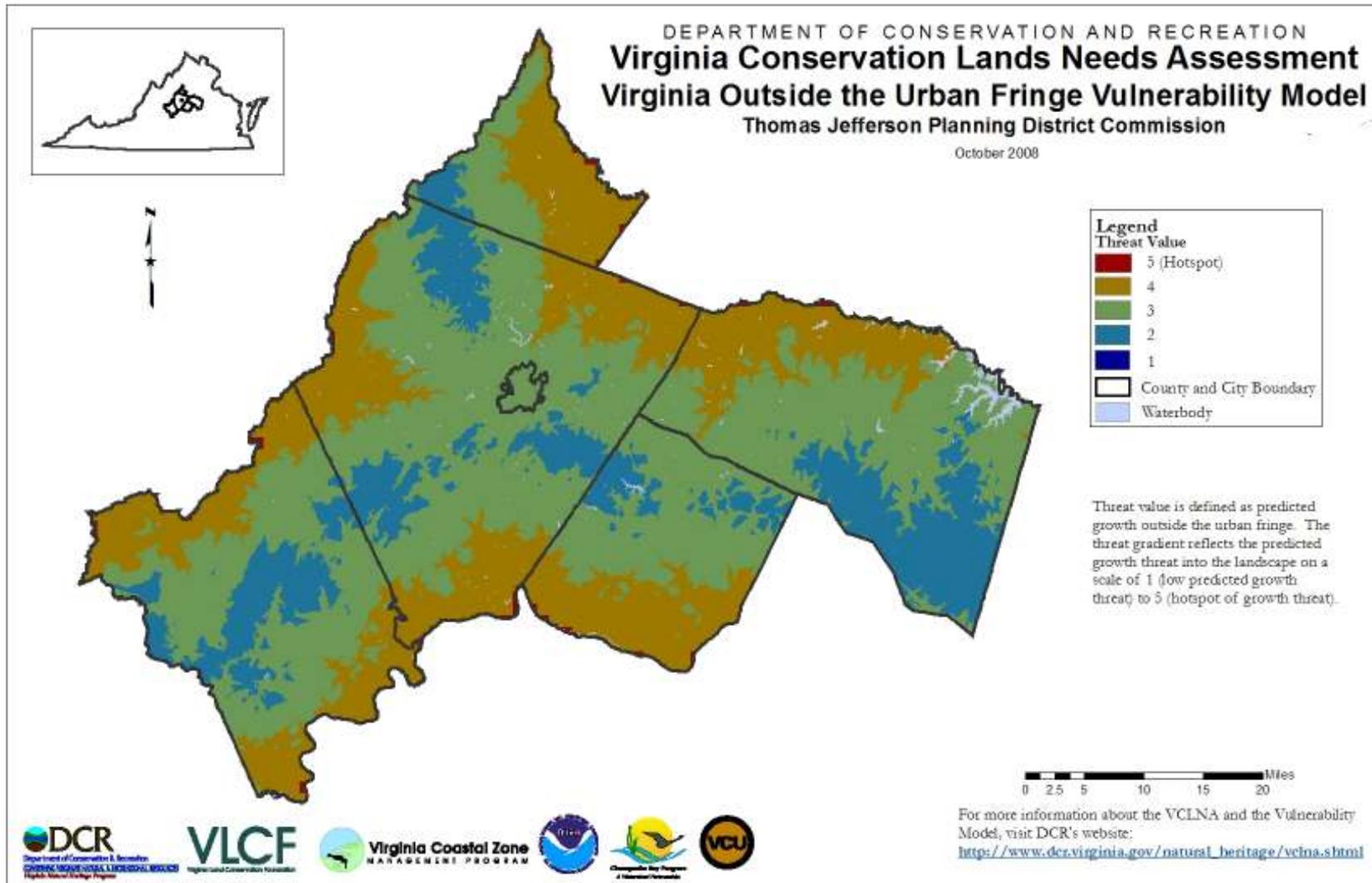


Figure 41. PDC 11 Region 2000 Local Government Council Vulnerability Model.

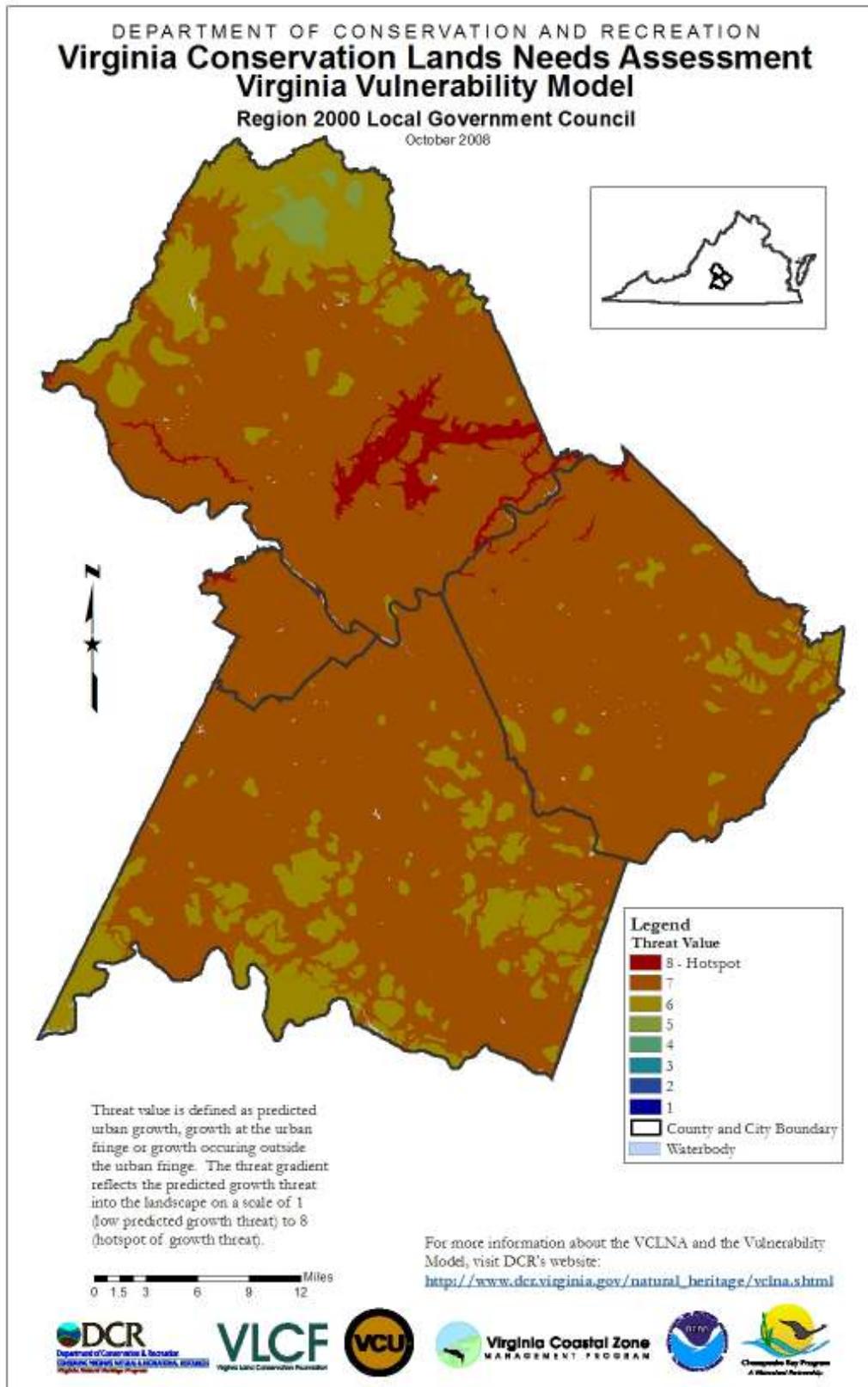


Figure 42. PDC 11 Region 2000 Local Government Council Urban Vulnerability Model.

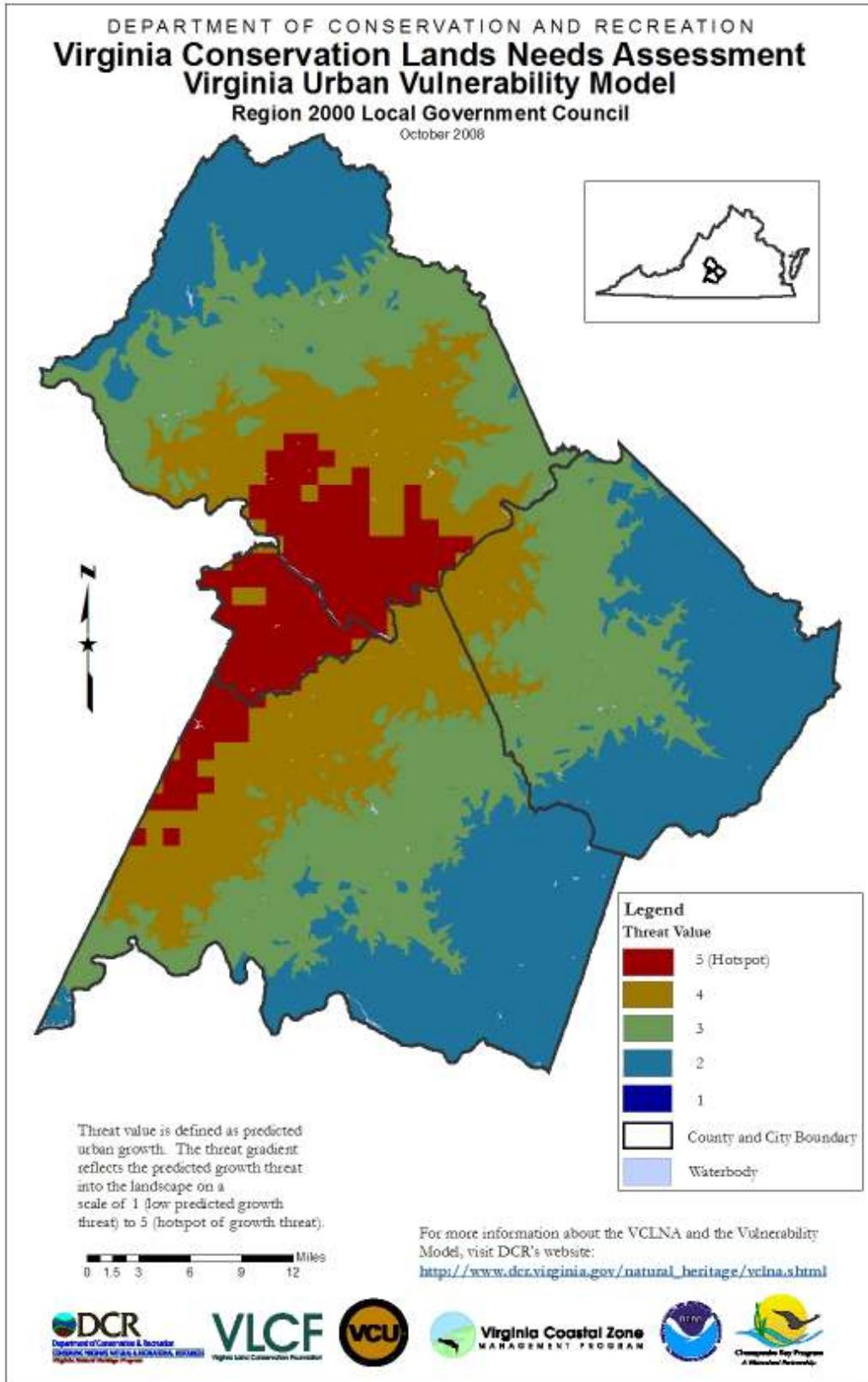


Figure 43. PDC 11 Region 2000 Local Government Council Urban Fringe Vulnerability Model.

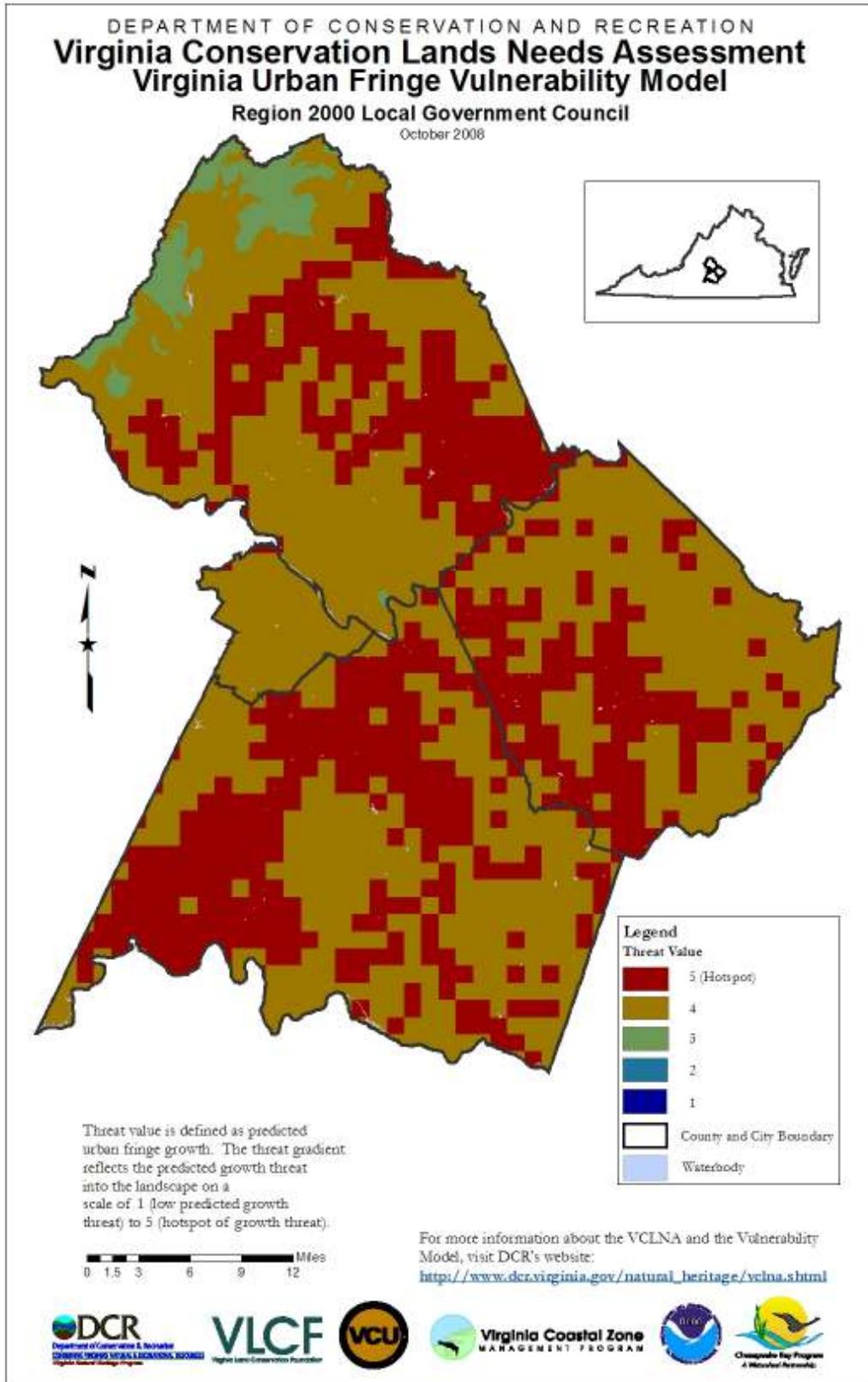


Figure 44. PDC 11 Region 2000 Local Government Council Outside the Urban Fringe Vulnerability Model.

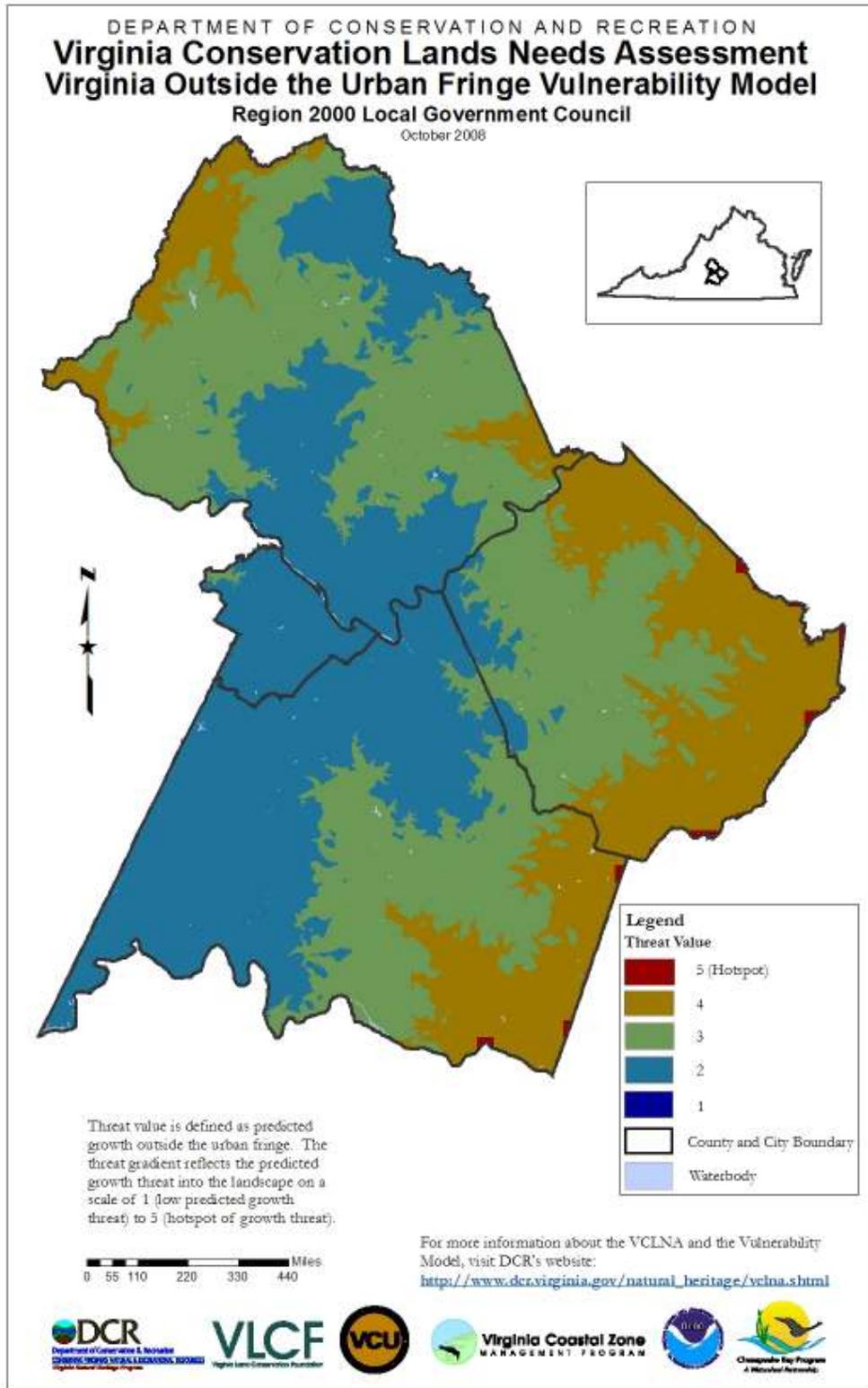


Figure 45. PDC 12 West Piedmont Planning District Commission Vulnerability Model.

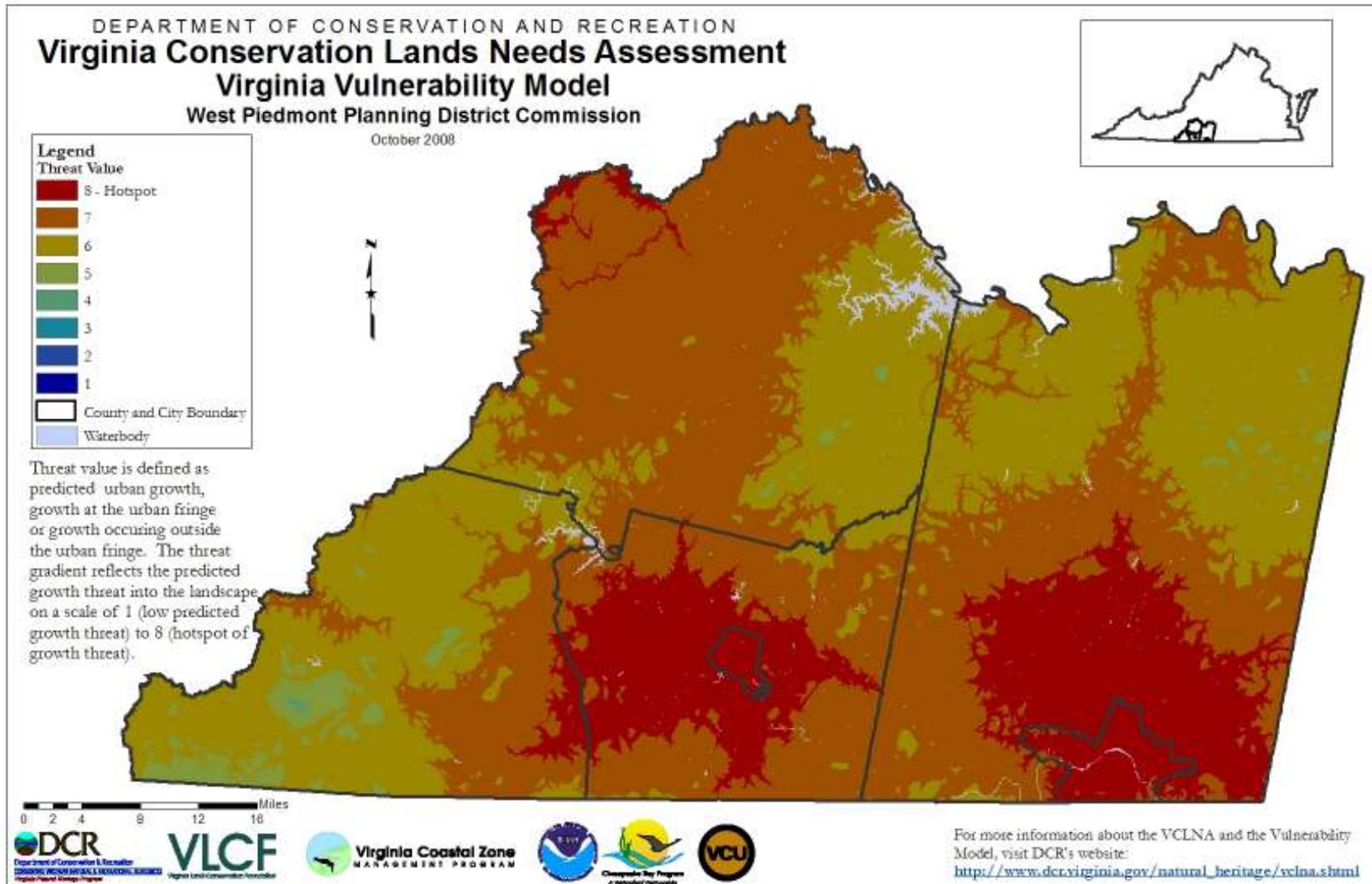


Figure 46. PDC 12 West Piedmont Planning District Commission Urban Vulnerability Model.

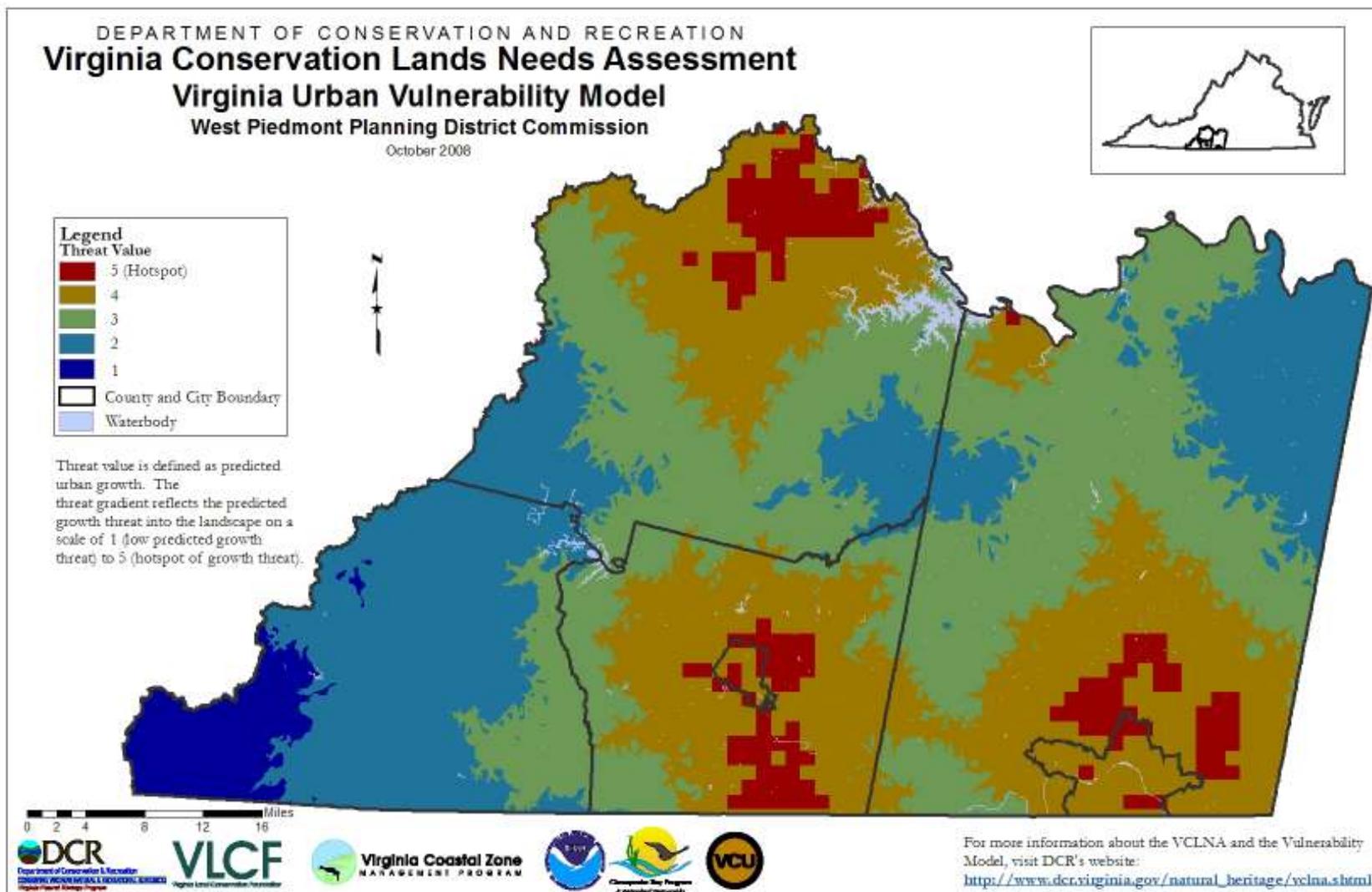


Figure 47. PDC 12 West Piedmont Planning District Commission Urban Fringe Vulnerability Model.

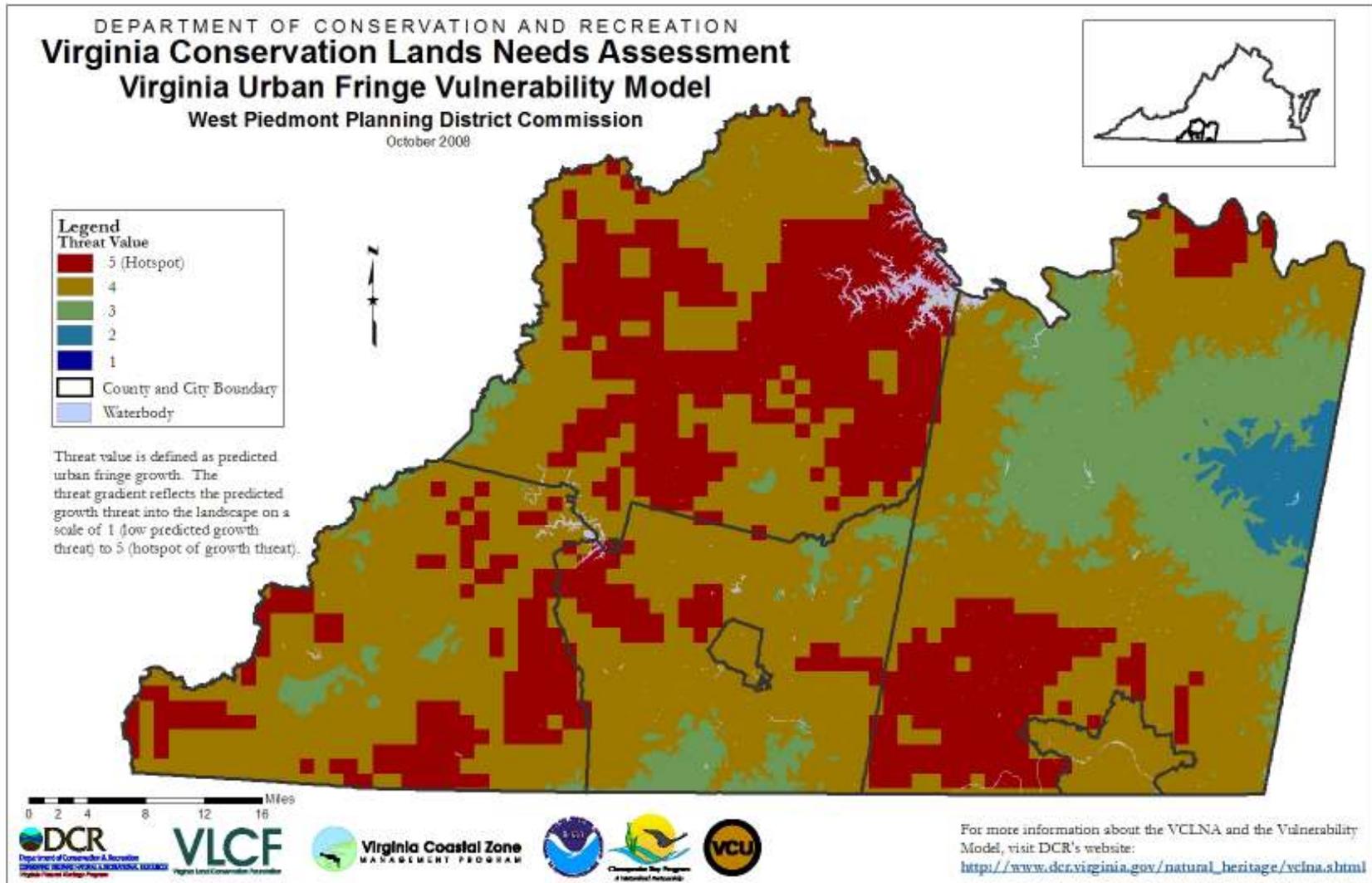


Figure 48. PDC 12 West Piedmont Planning District Commission Outside the Urban Fringe Vulnerability Model.

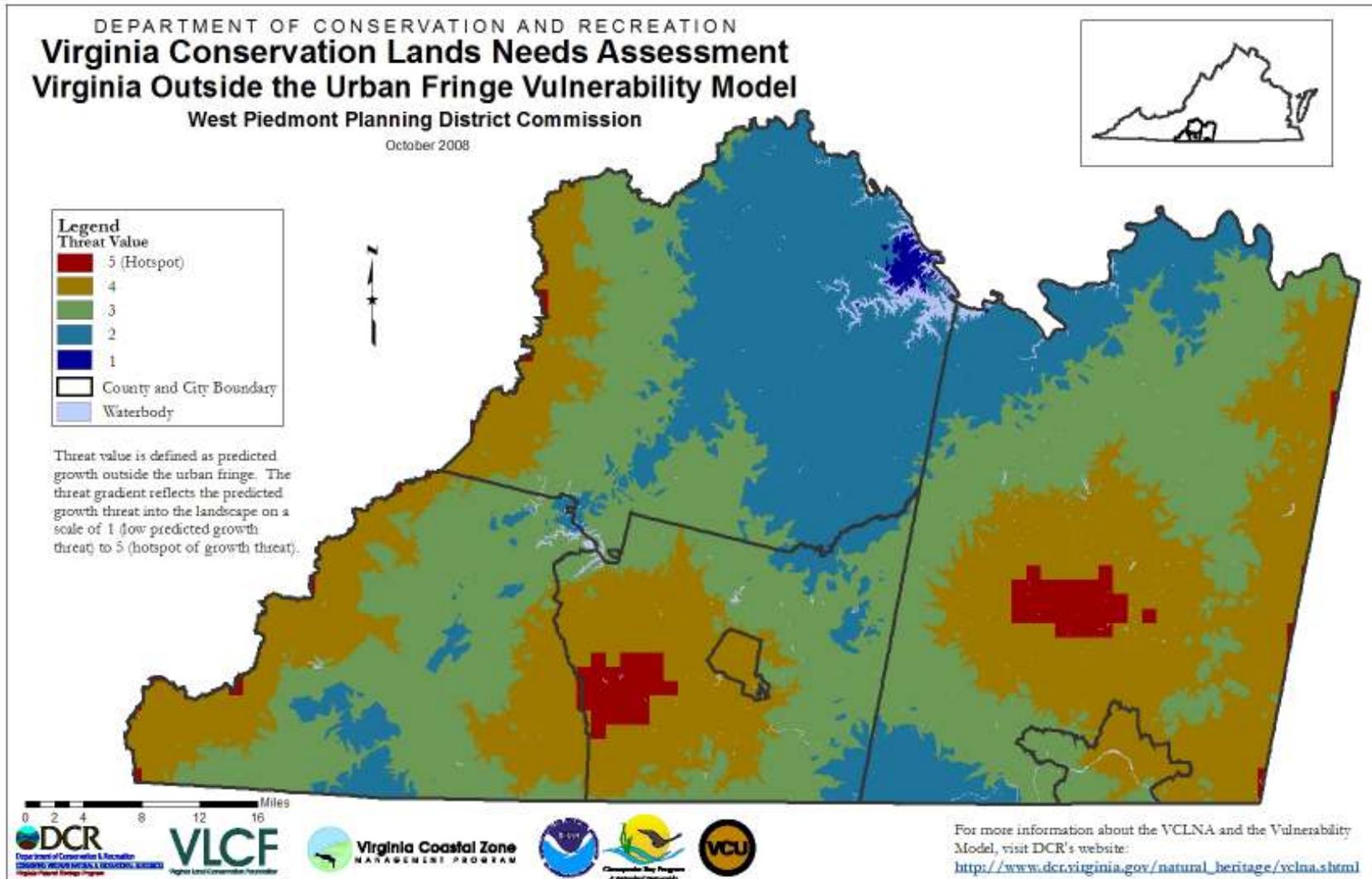


Figure 49. PDC 13 Southside Planning District Commission Vulnerability Model.

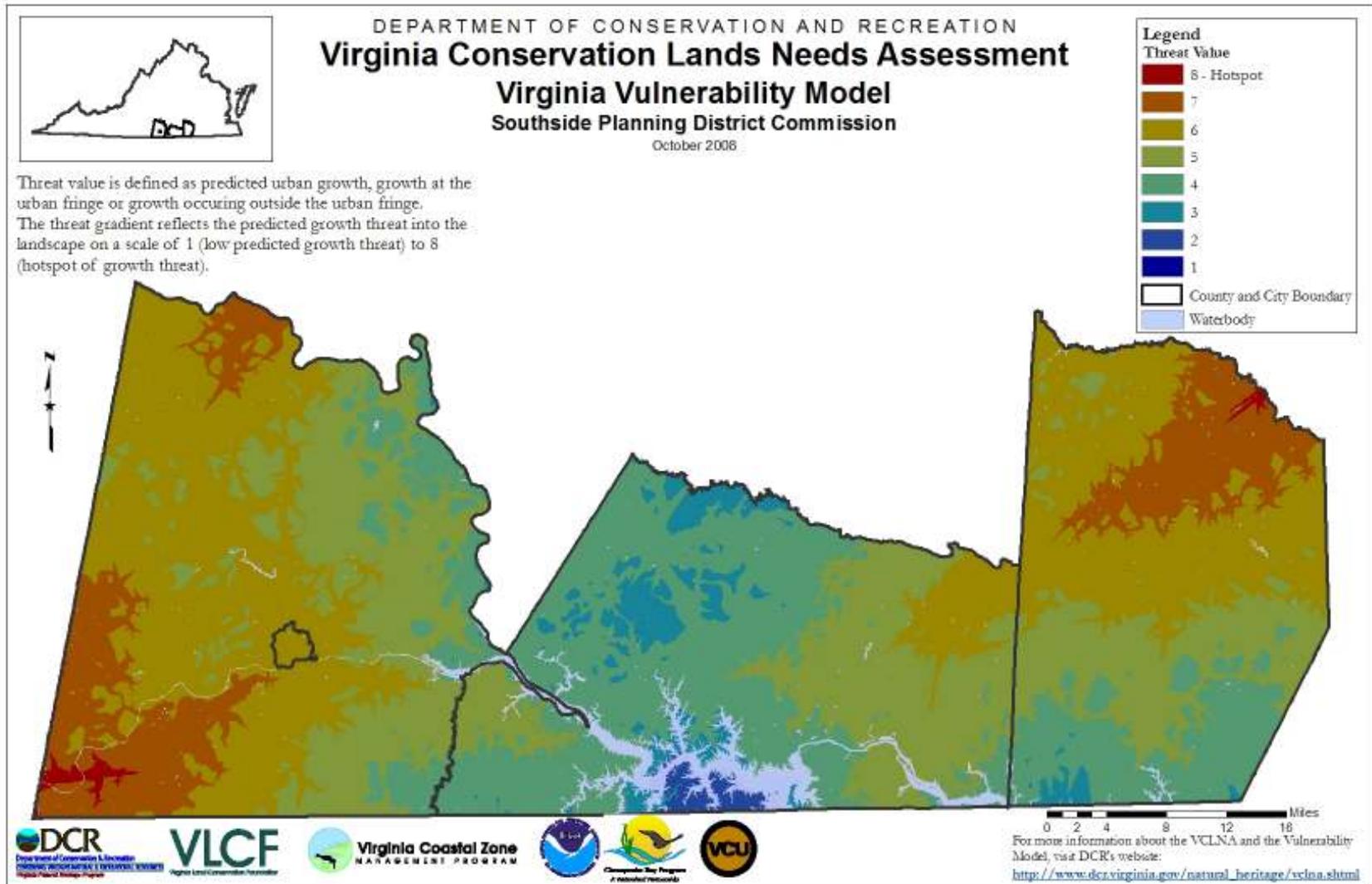


Figure 50. PDC 13 Southside Planning District Commission Urban Vulnerability Model.

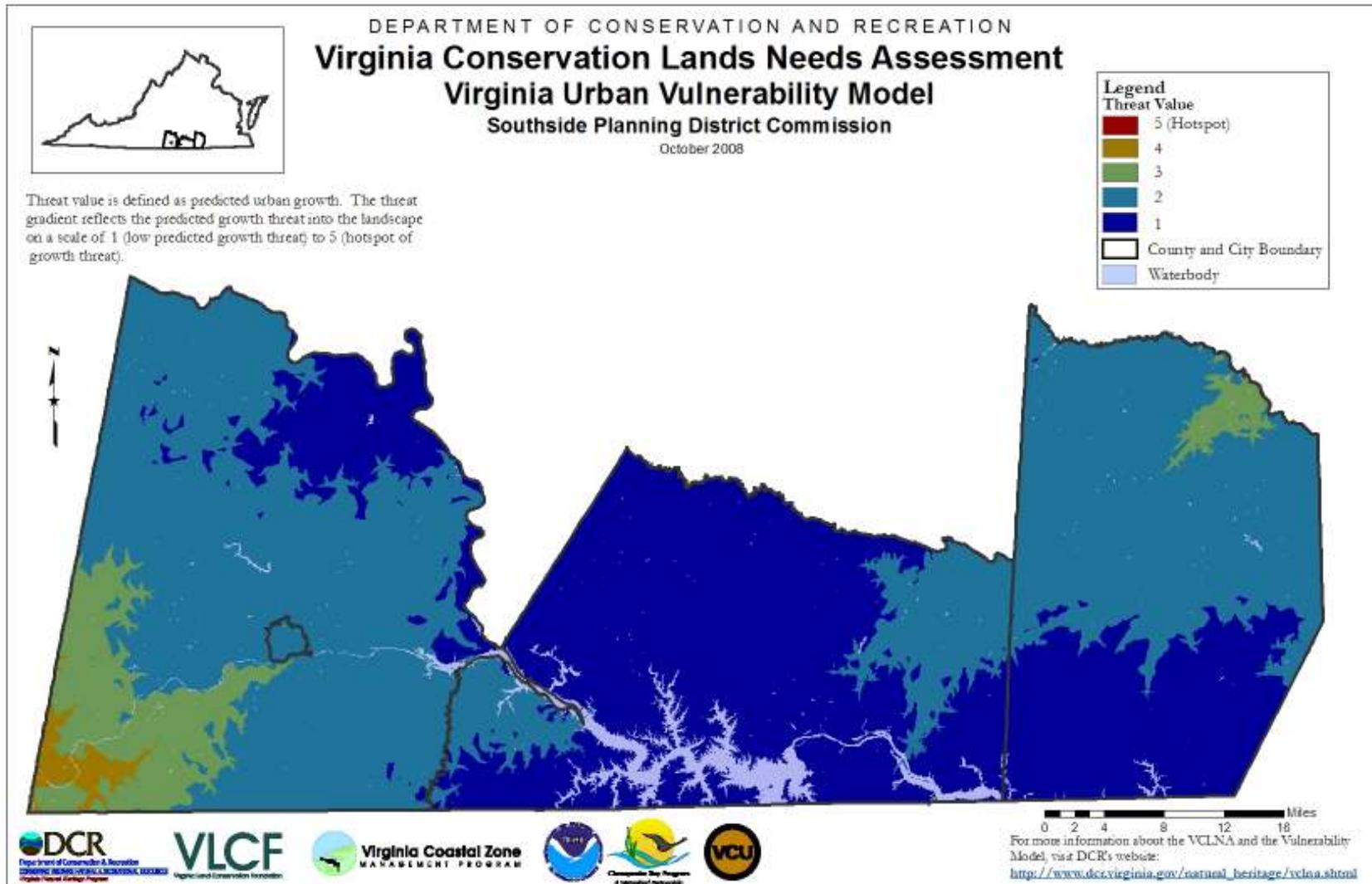


Figure 51. PDC 13 Southside Planning District Commission Urban Fringe Vulnerability Model.

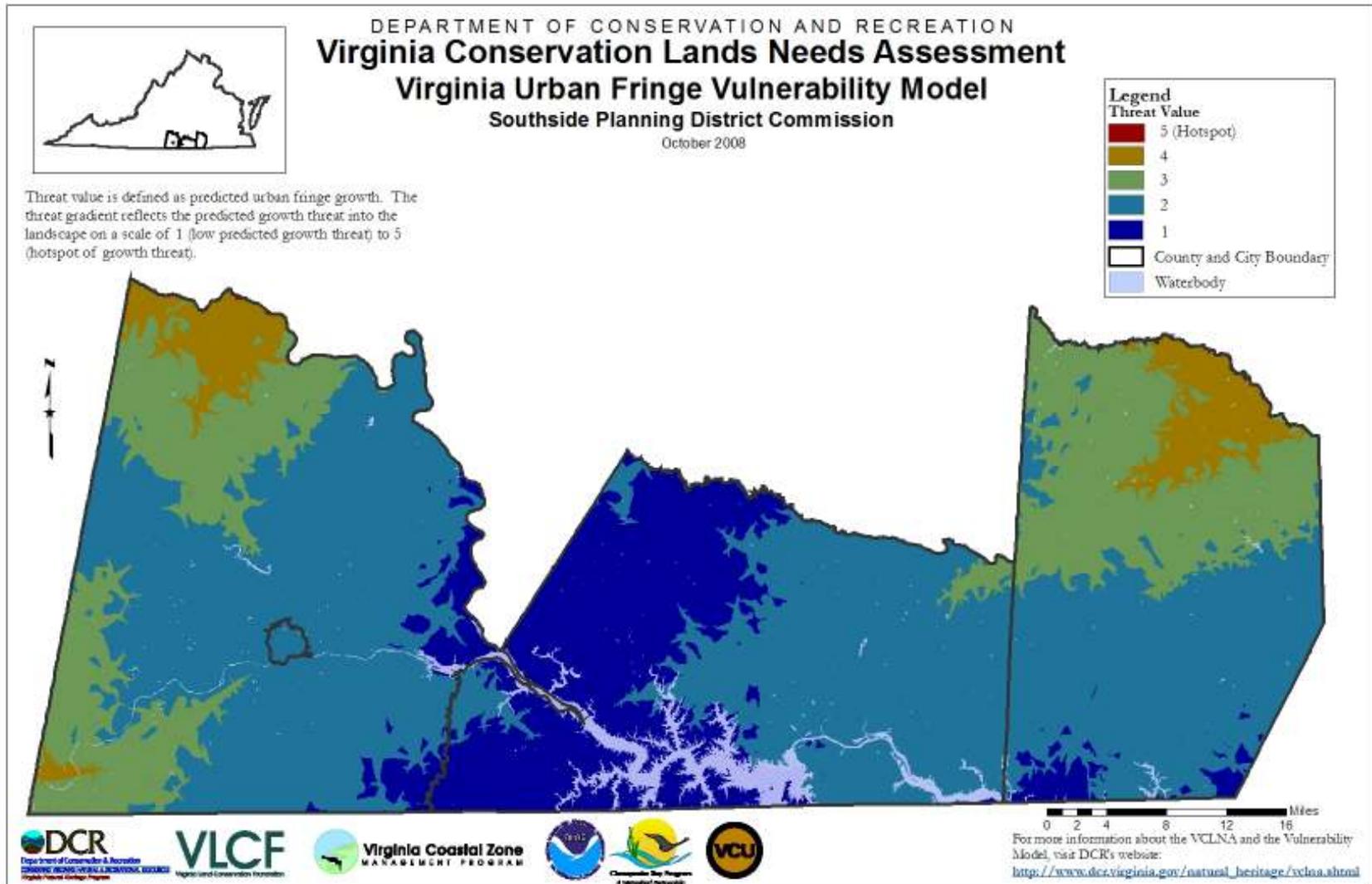


Figure 52. PDC 13 Southside Planning District Commission Outside the Urban Fringe Vulnerability Model.

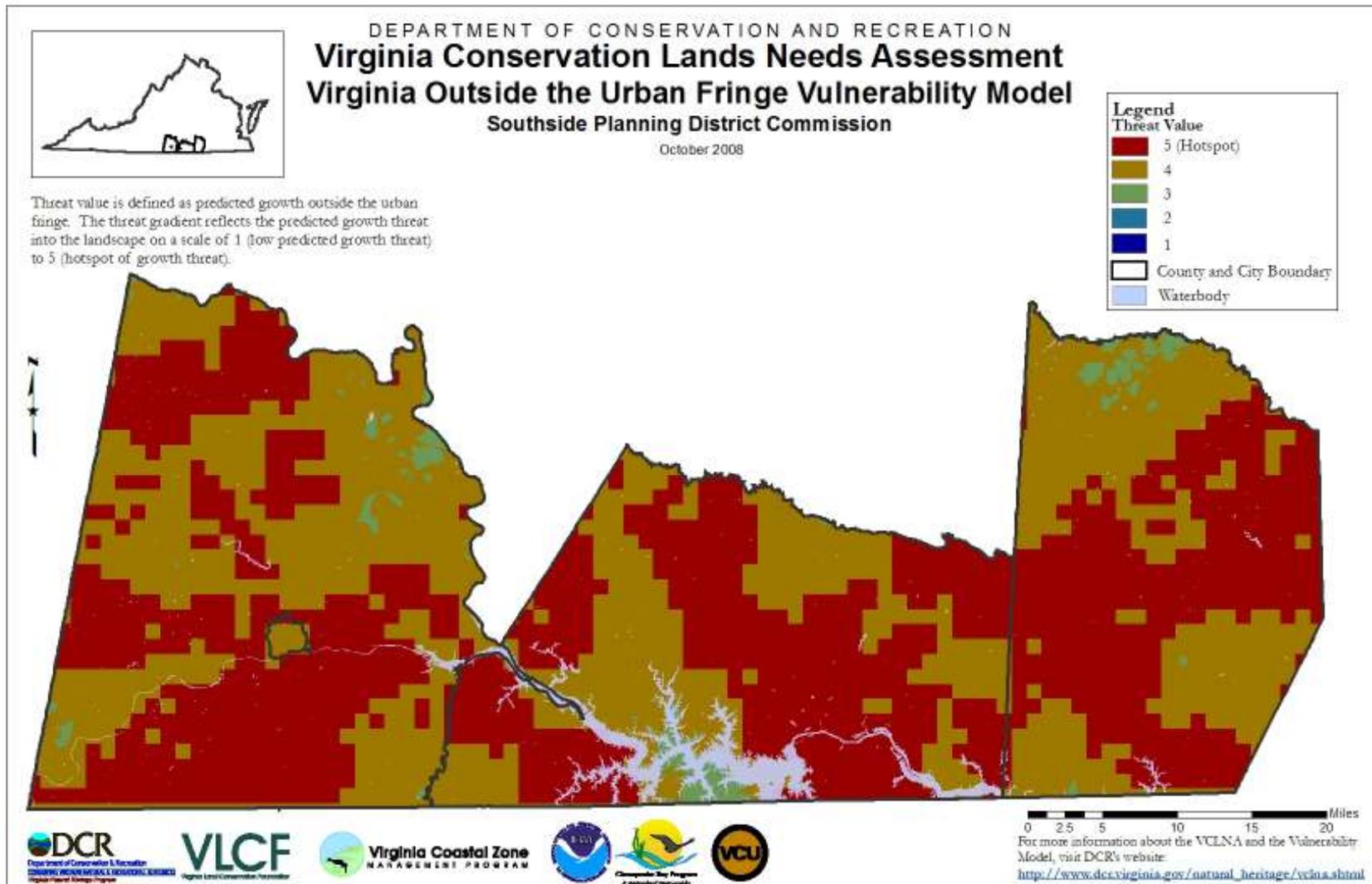


Figure 53. PDC 14 Commonwealth Regional Council Vulnerability Model.

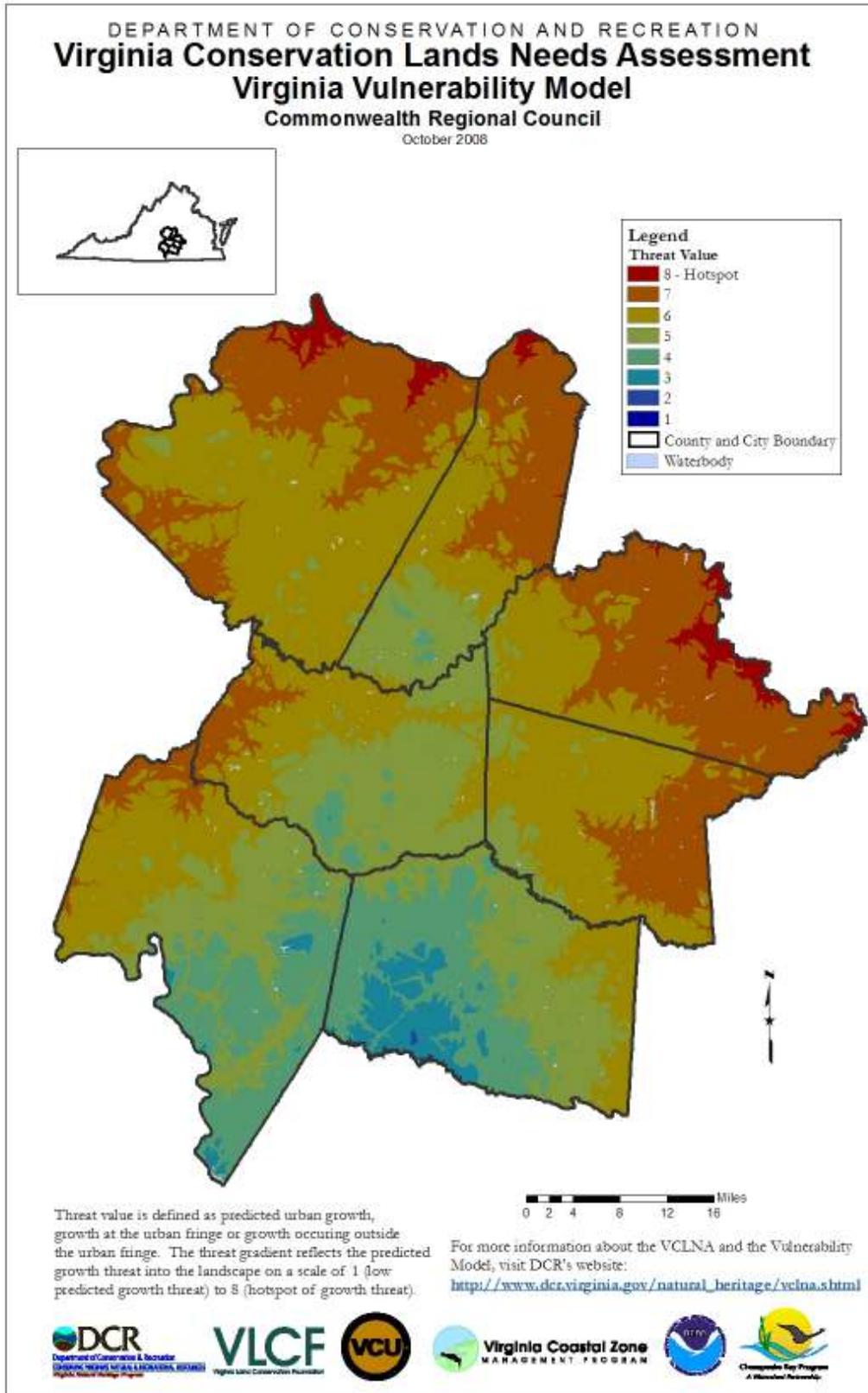


Figure 54. DC 14 Commonwealth Regional Council Urban Vulnerability Model.

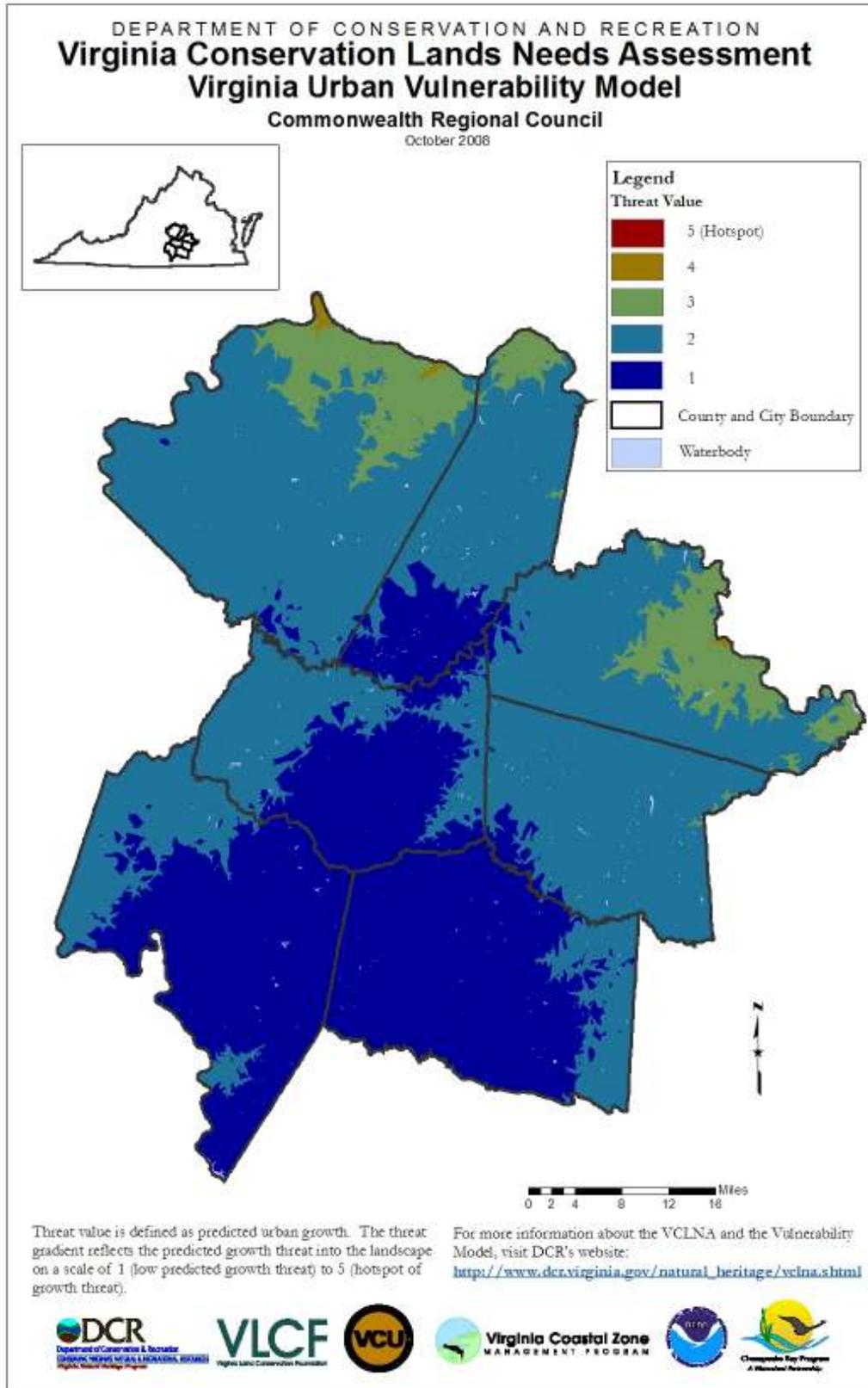


Figure 55. PDC 14 Commonwealth Regional Council Urban Fringe Vulnerability Model.

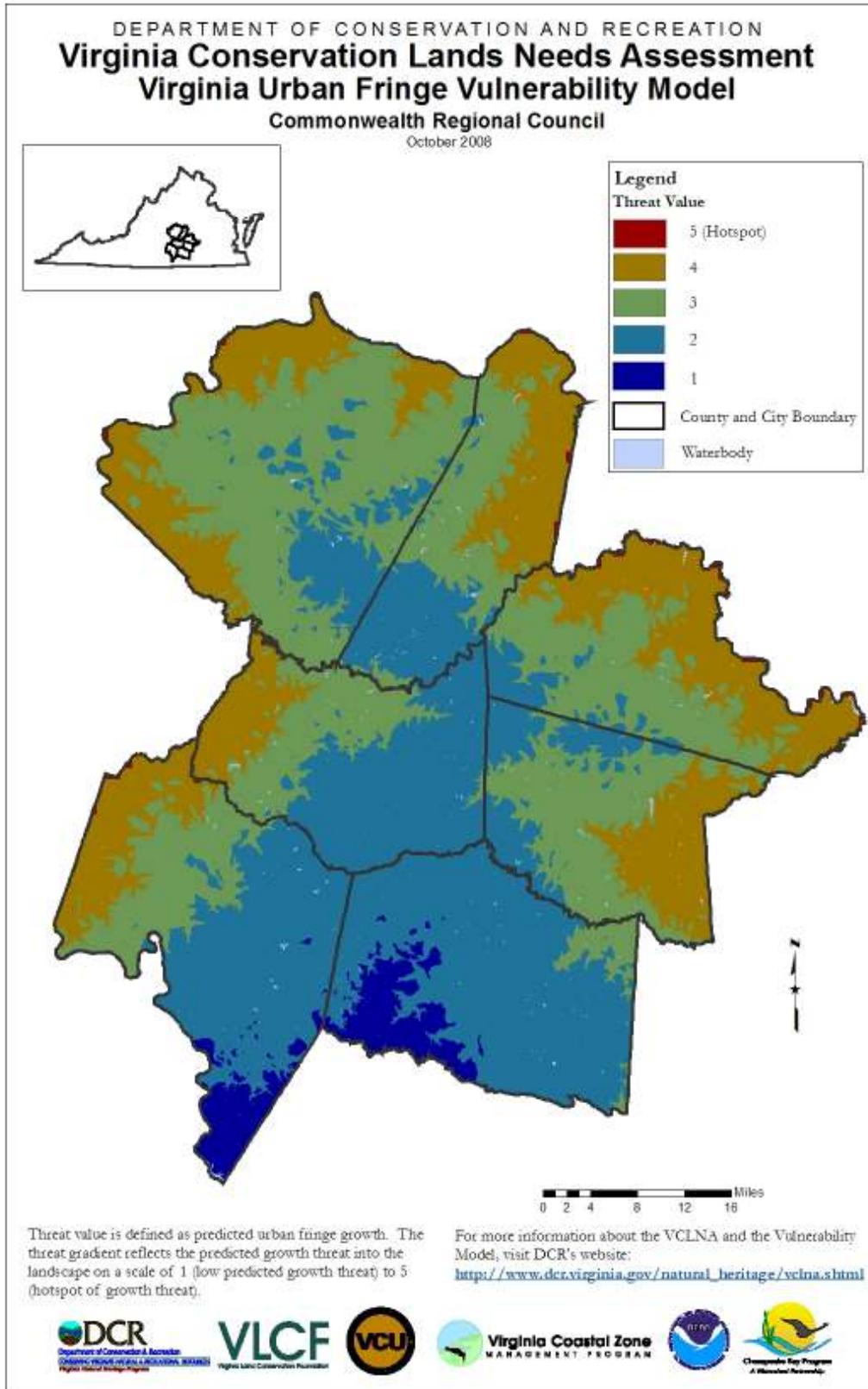


Figure 56. PDC 14 Commonwealth Regional Council Growth Outside the Urban Fringe Vulnerability Model.

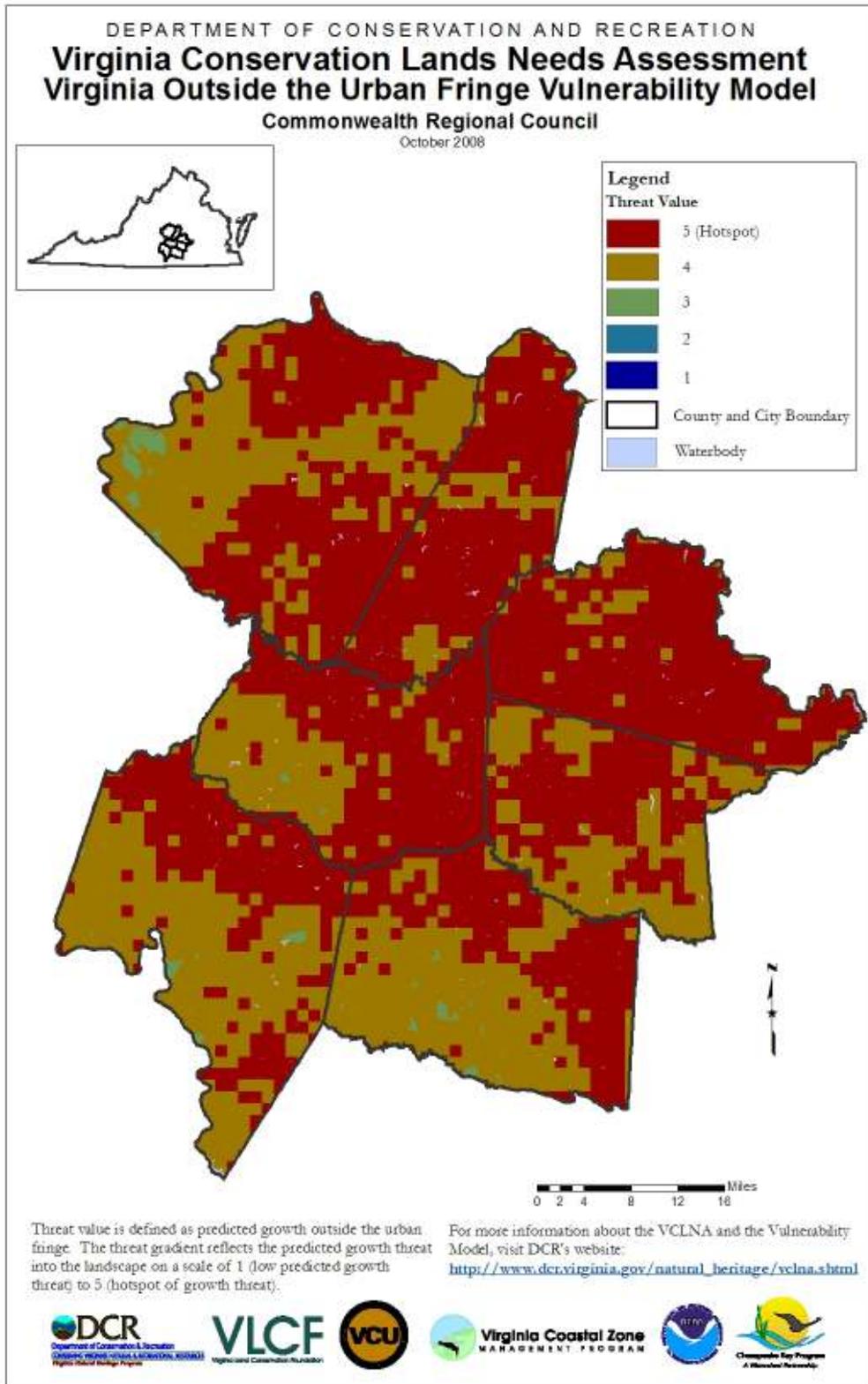


Figure 57. PDC 15 Richmond Regional Vulnerability Model.

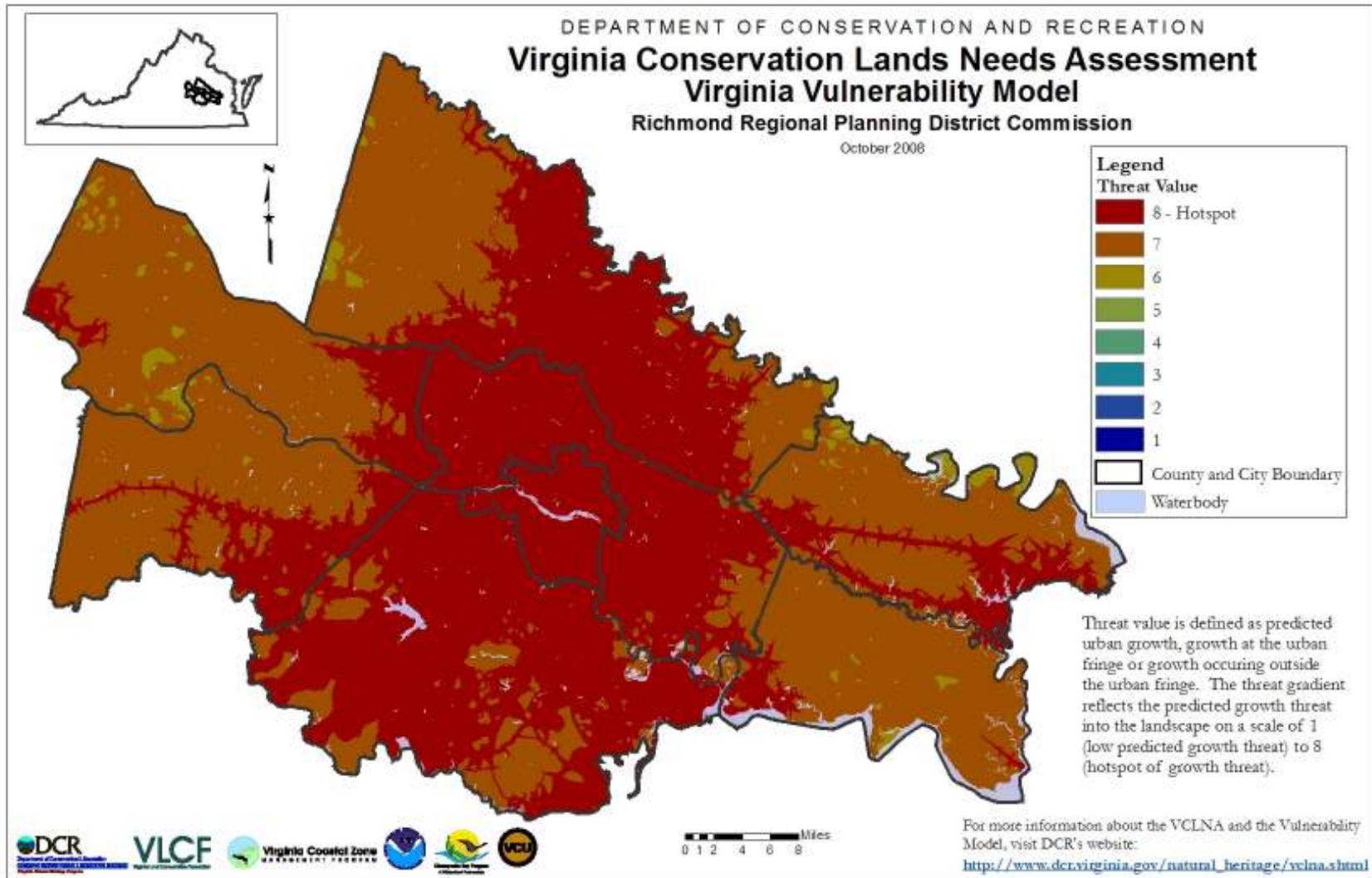


Figure 58. PDC 15 Richmond Regional Urban Vulnerability Model.

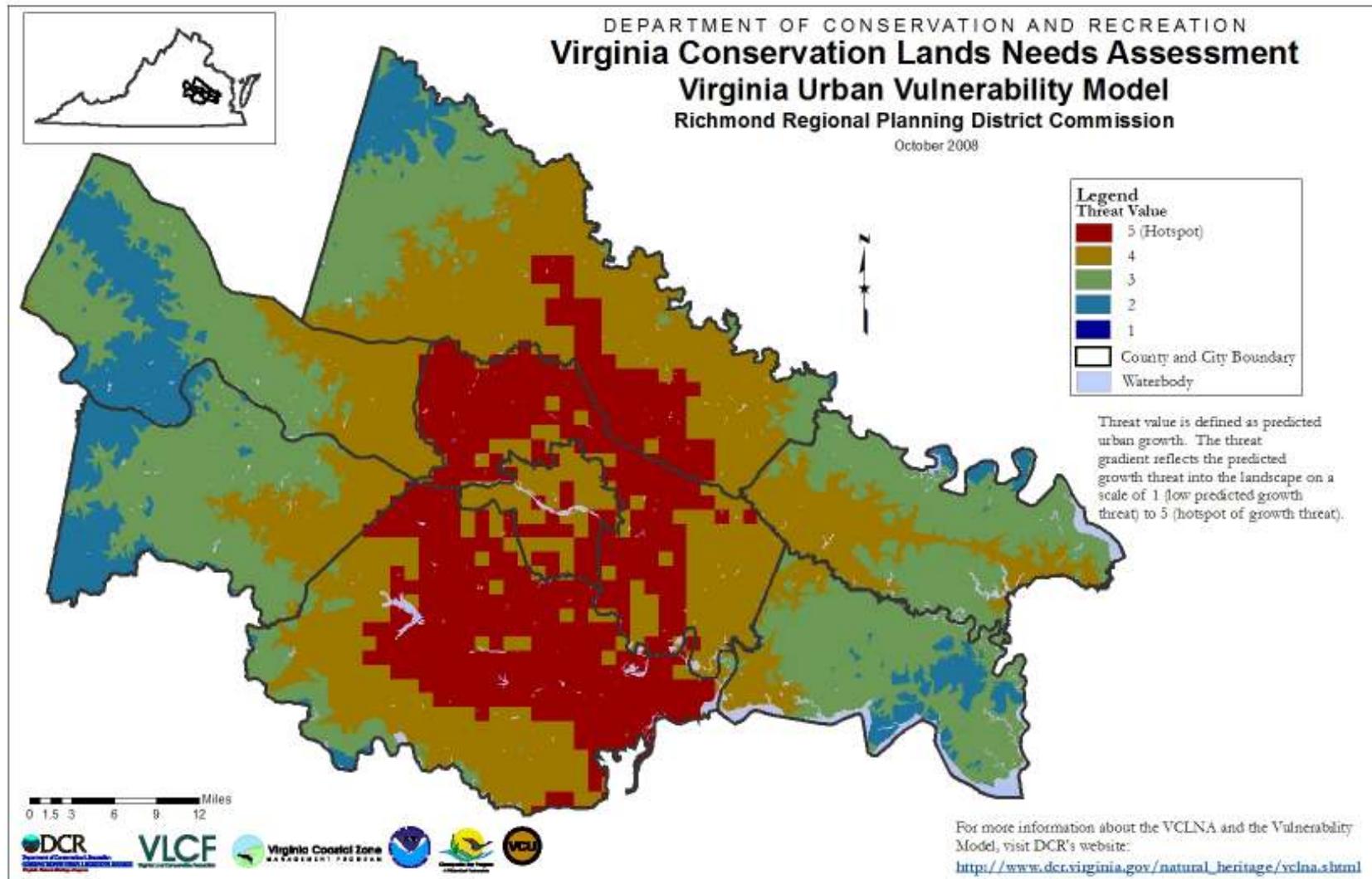


Figure 59. PDC 15 Richmond Regional Urban Fringe Vulnerability Model.

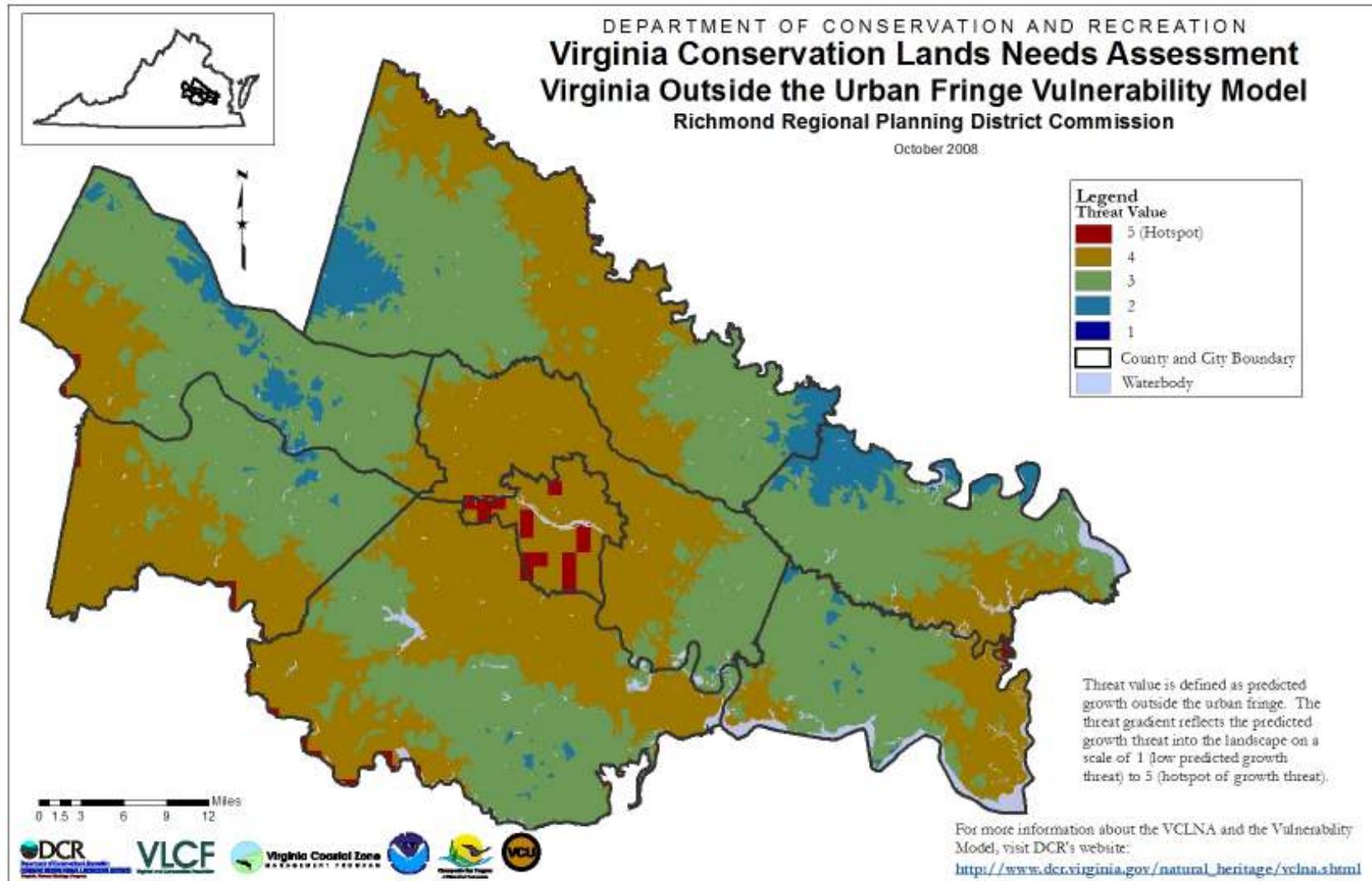


Figure 60. PDC 15 Richmond Regional Outside the Urban Fringe Vulnerability Model.

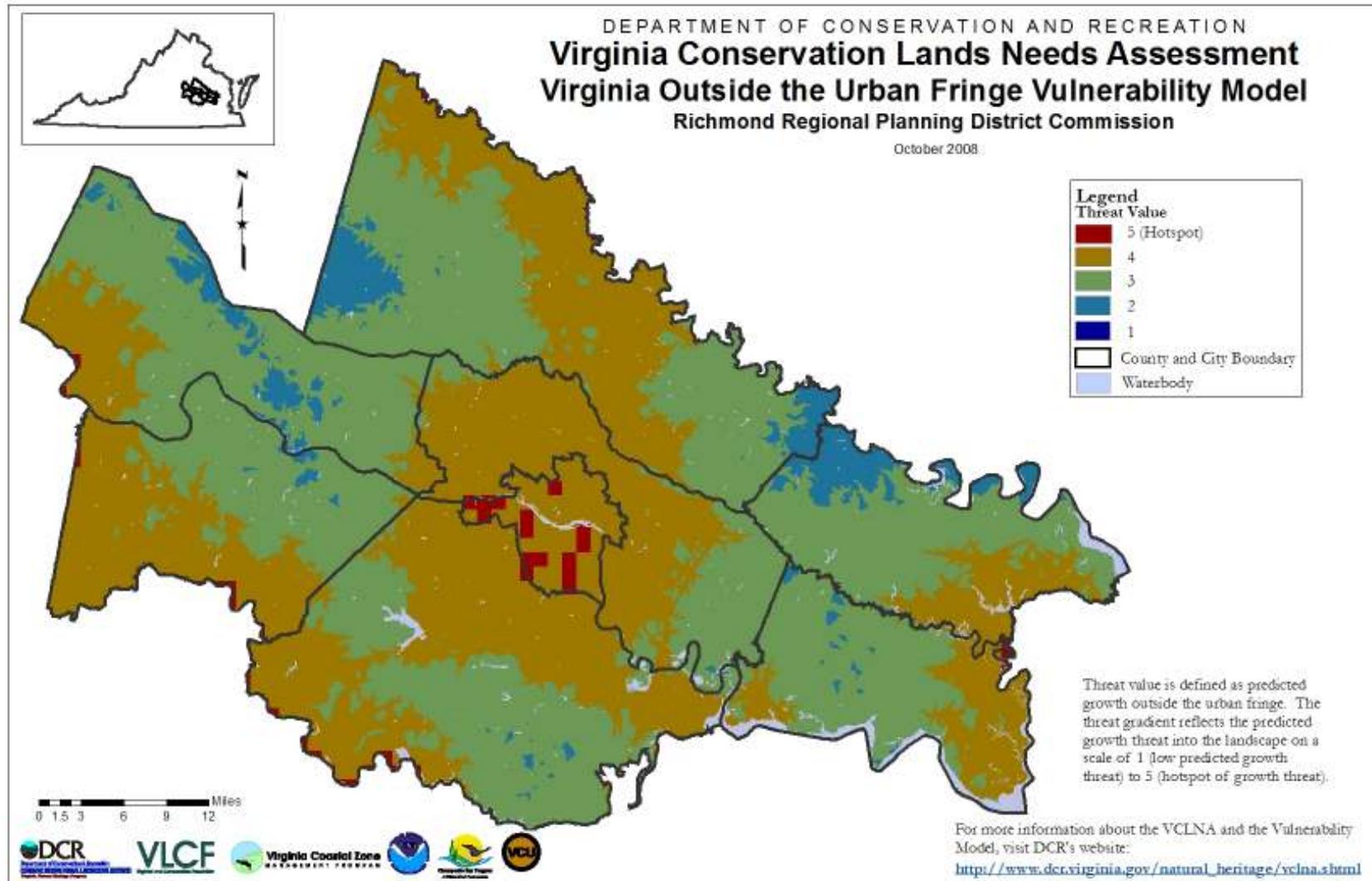


Figure 61. PDC 16 George Washington Regional Commission Vulnerability Model.

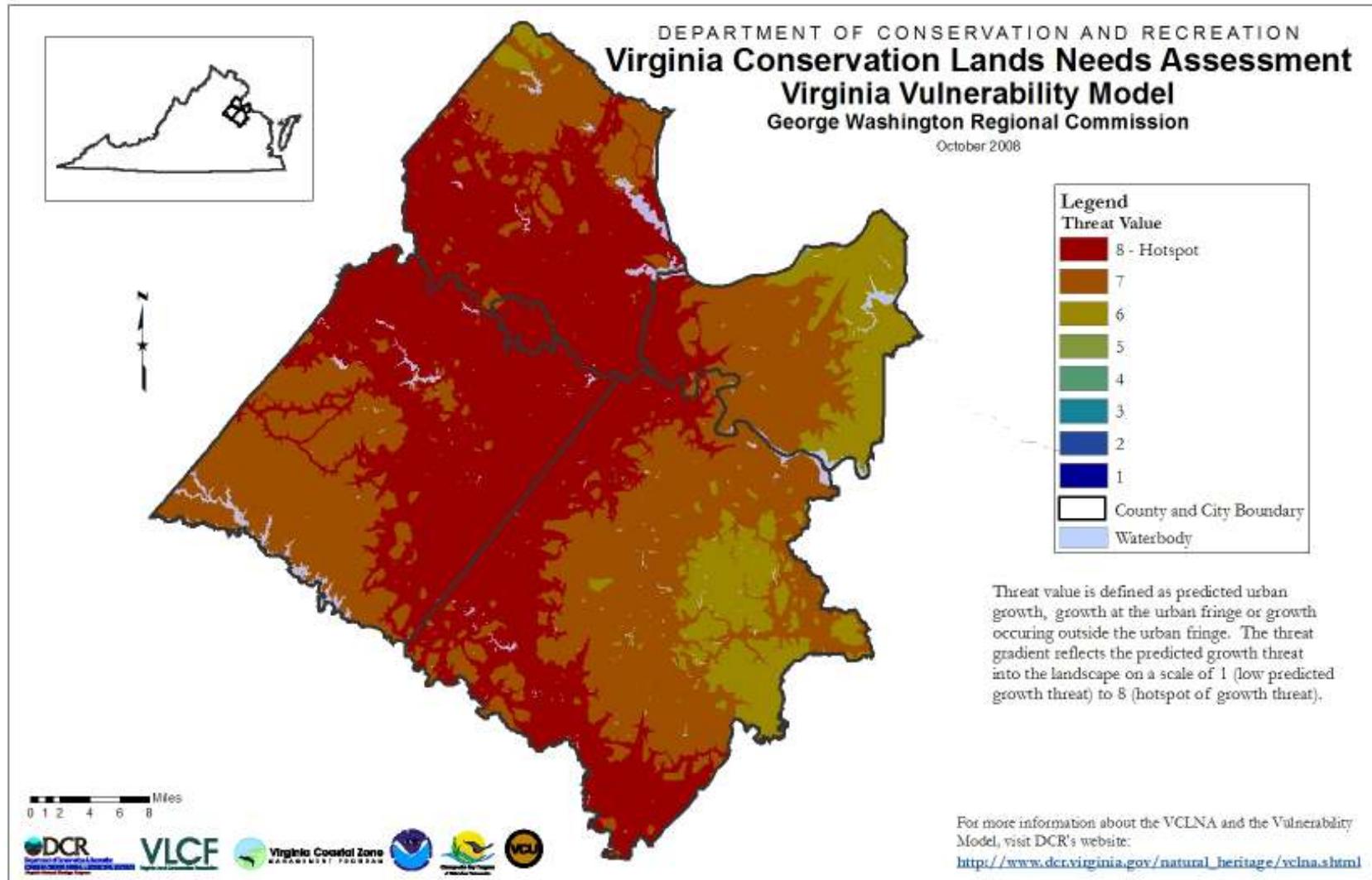


Figure 62. PDC 16 George Washington Regional Commission Urban Vulnerability Model.

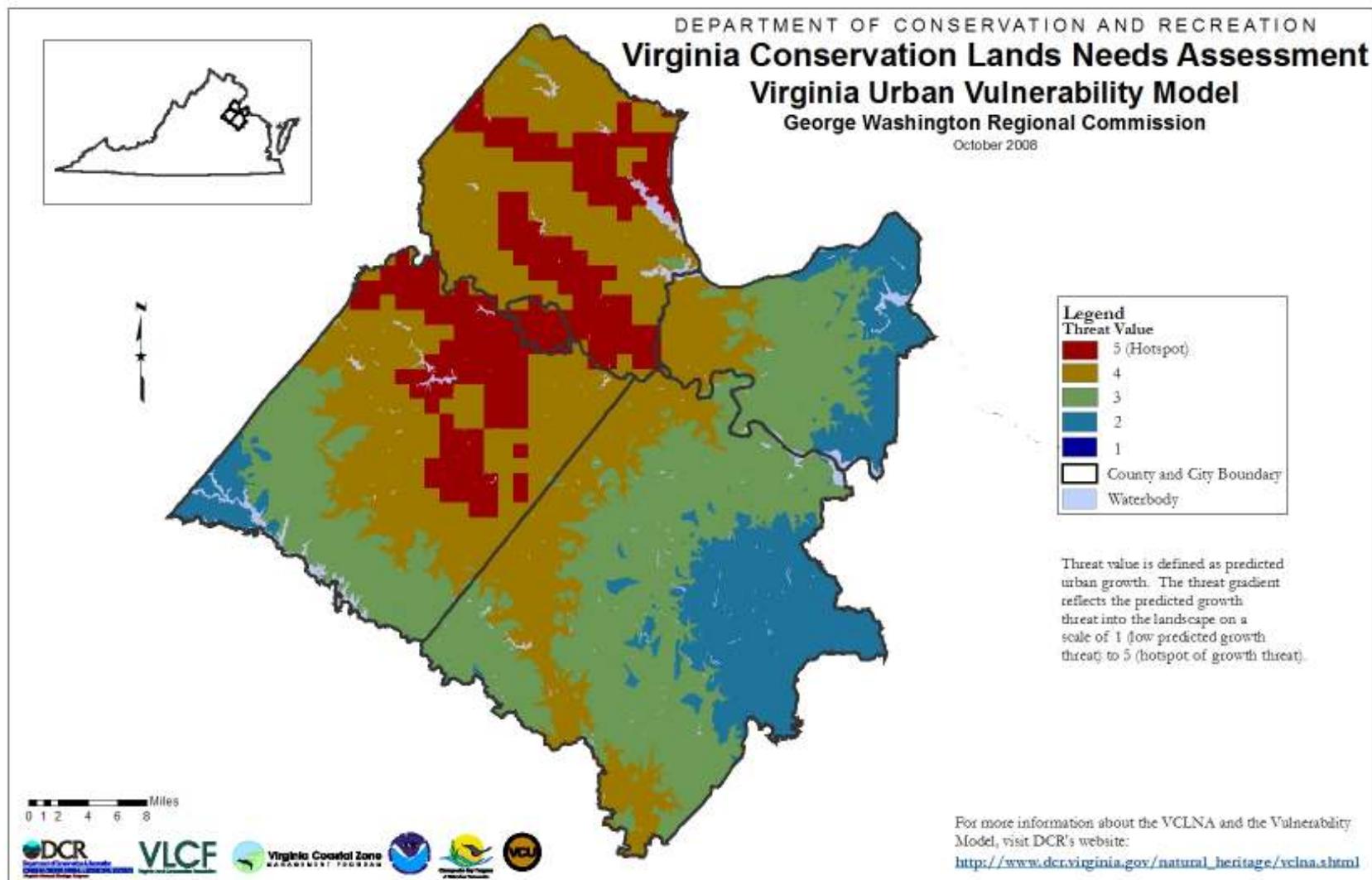


Figure 63. PDC 16 George Washington Regional Commission Urban Fringe Vulnerability Model.

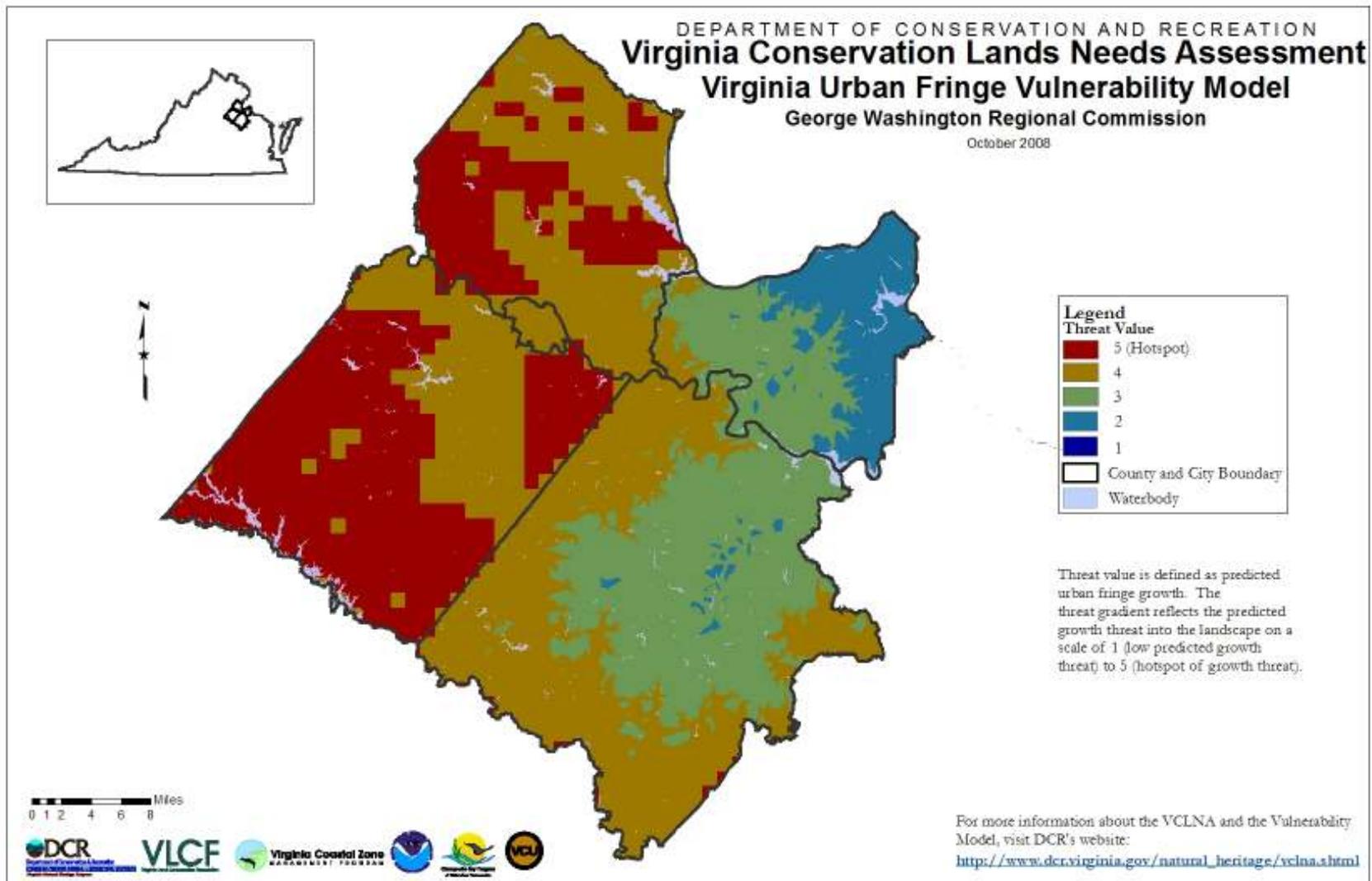


Figure 64. PDC 16 George Washington Regional Commission Outside the Urban Fringe Vulnerability Model.

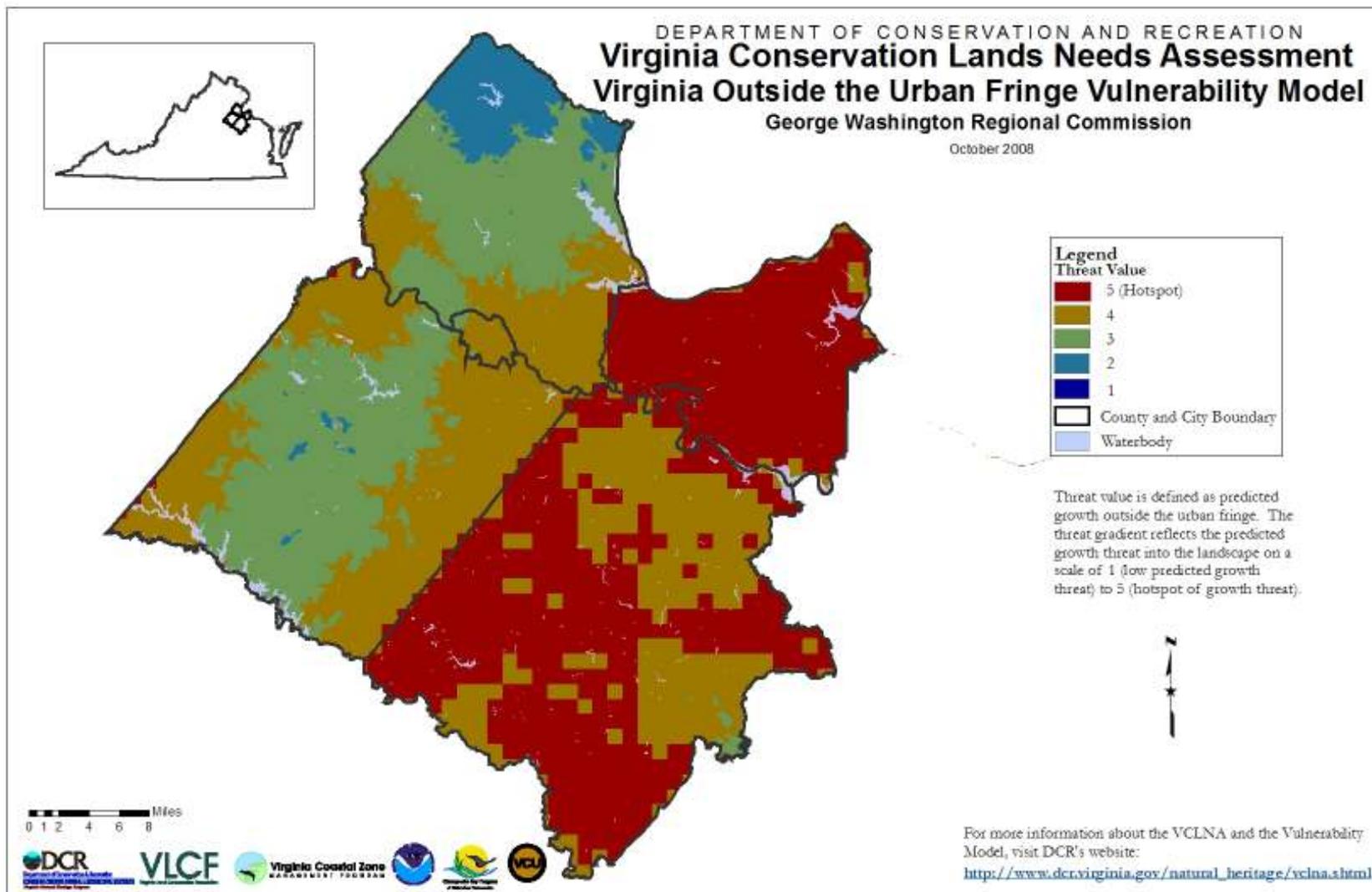


Figure 65. PDC 17 Northern Neck Vulnerability Model.

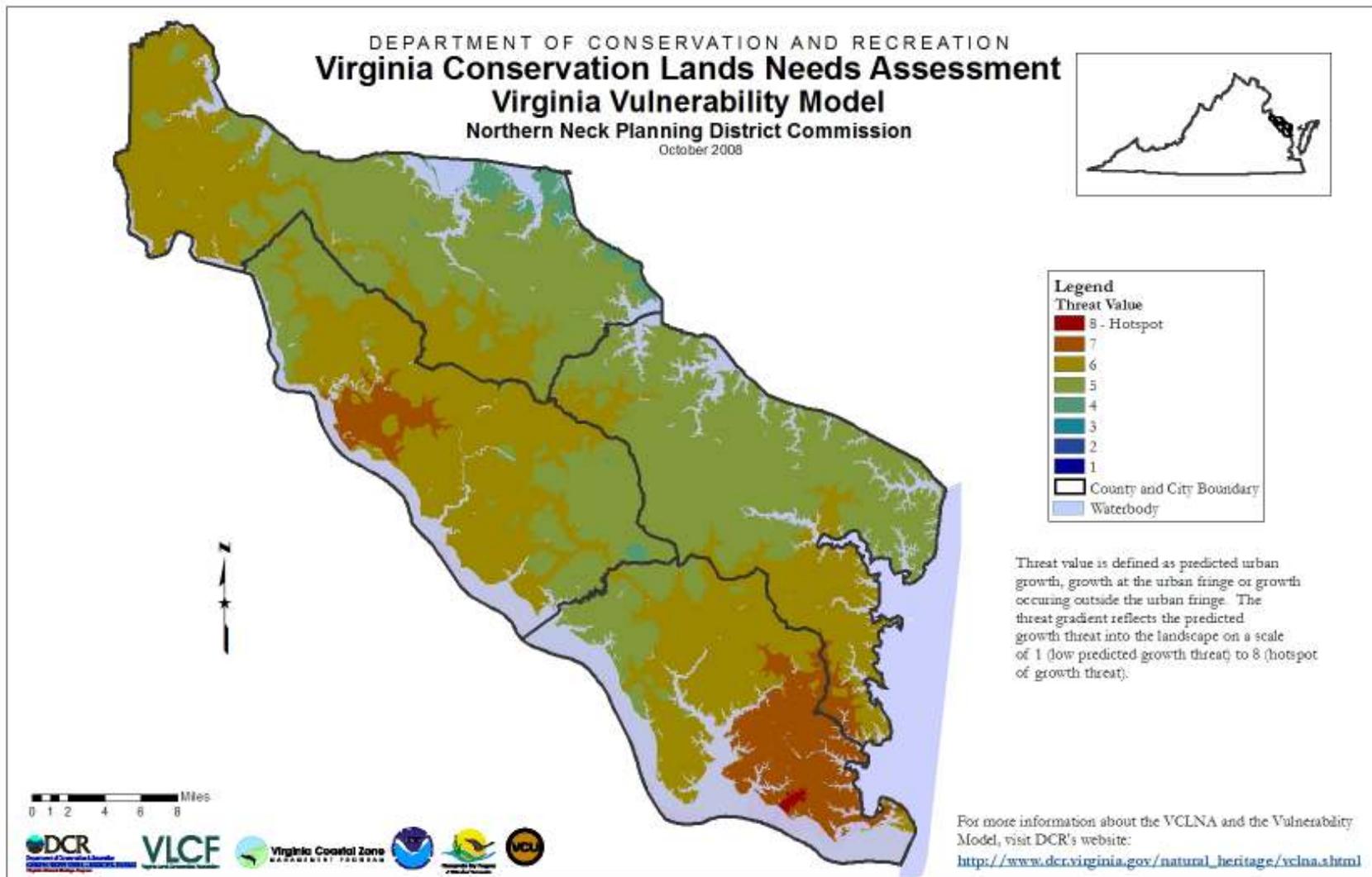


Figure 66. PDC 17 Northern Neck Urban Vulnerability Model.

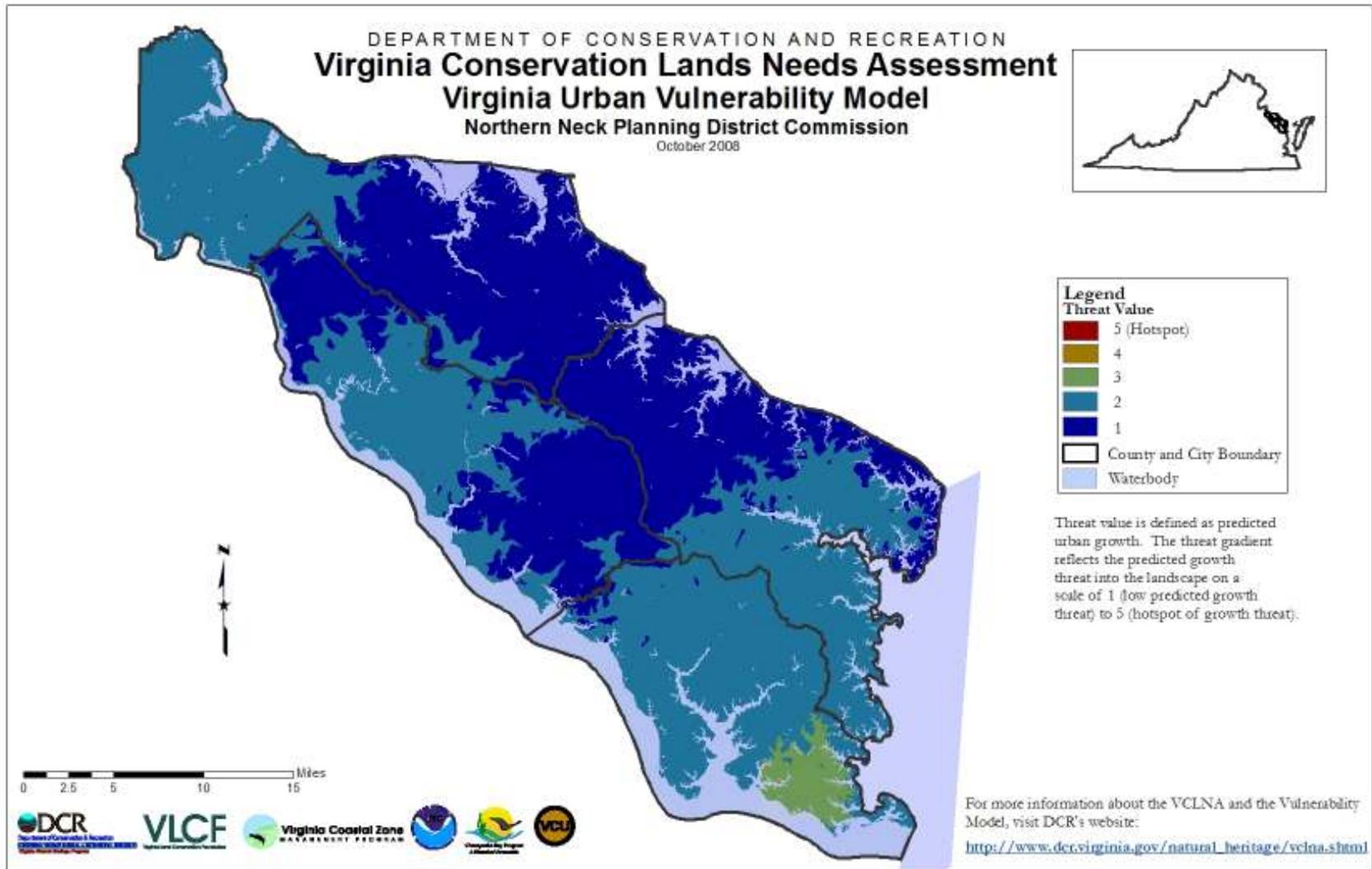


Figure 67. PDC 17 Northern Neck Urban Fringe Vulnerability Model.

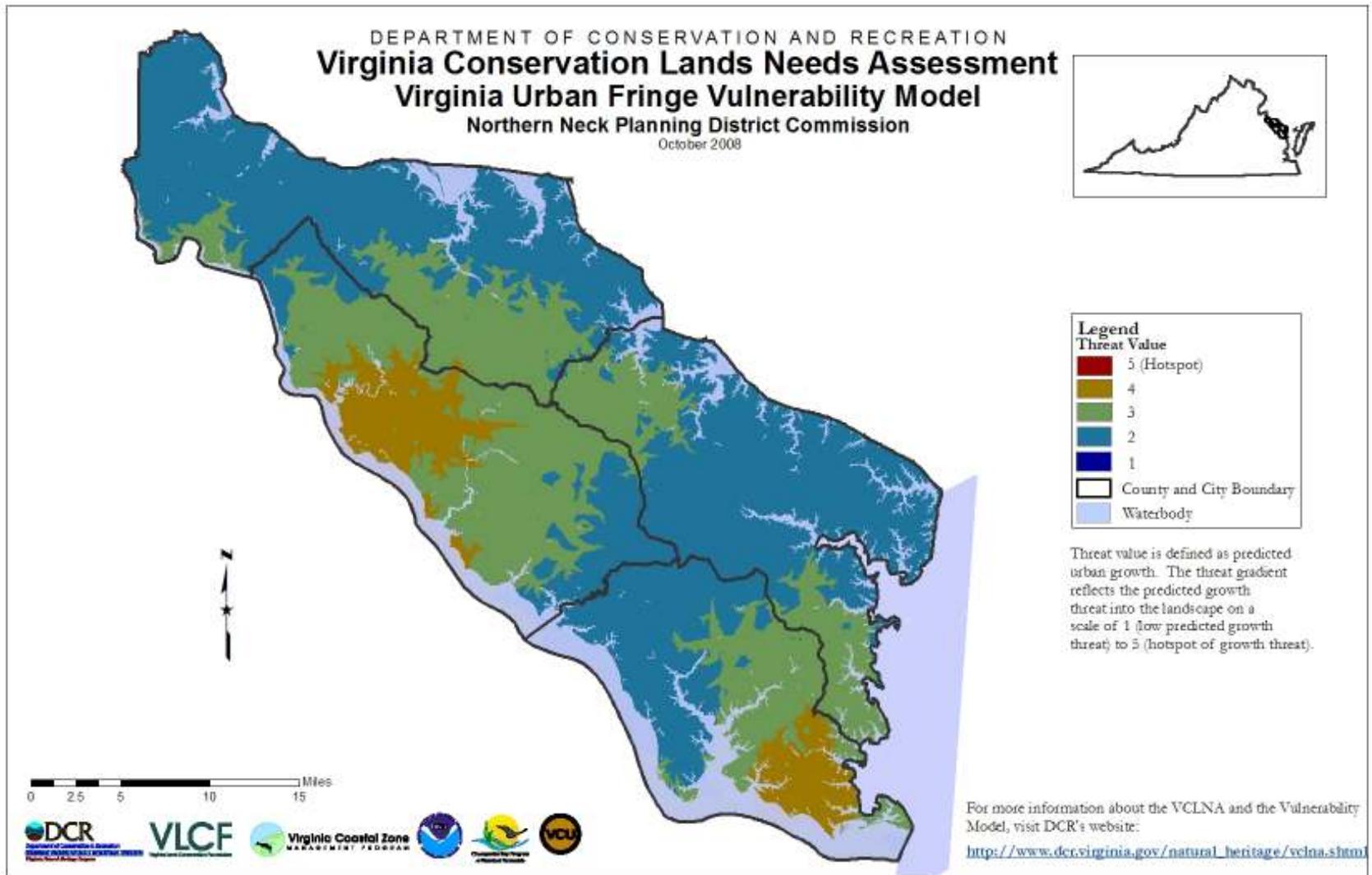


Figure 68. PDC 17 Northern Neck Outside the Urban Fringe Vulnerability Model.

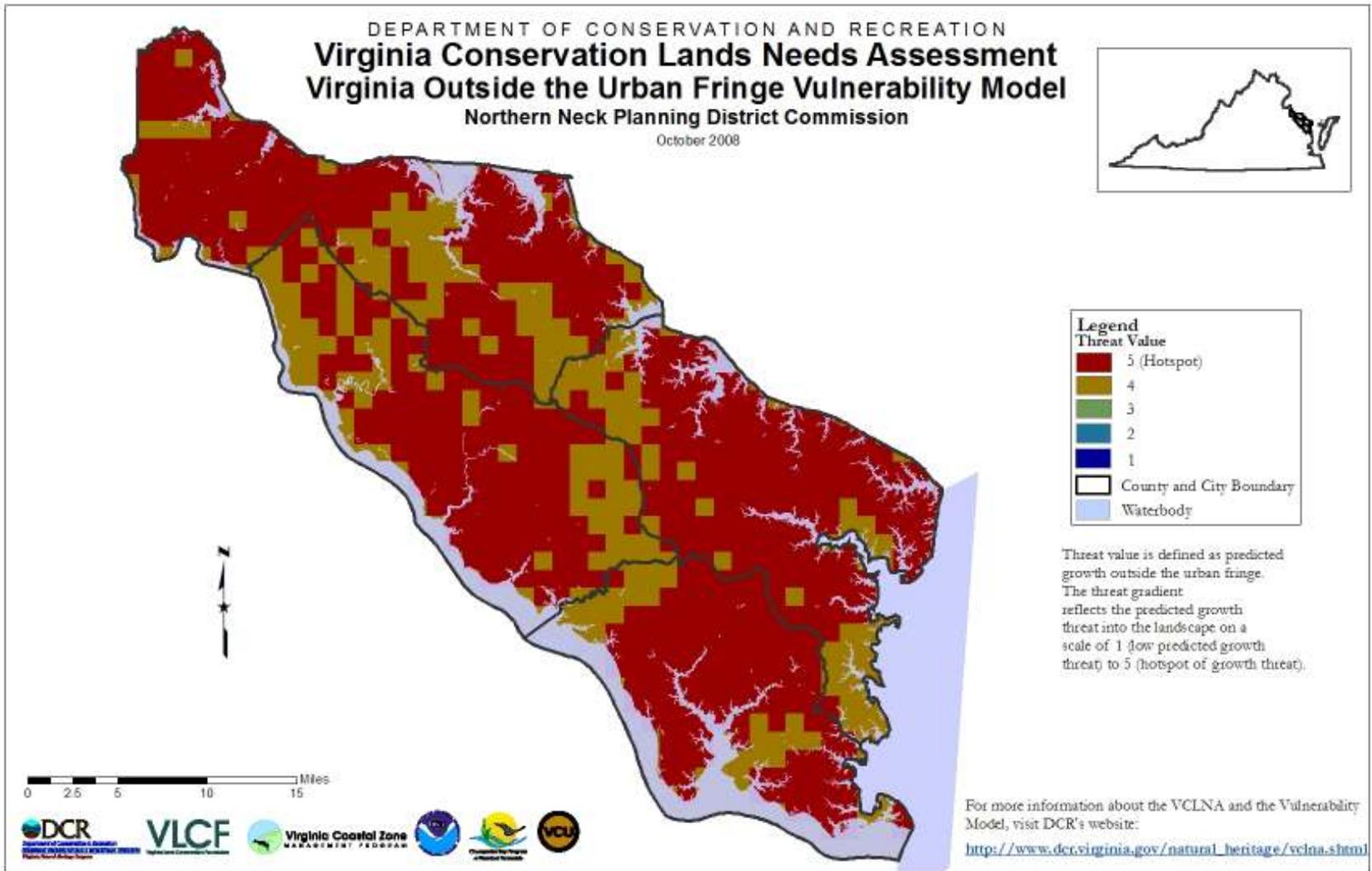


Figure 69. PDC 18 Middle Peninsula Vulnerability Model.

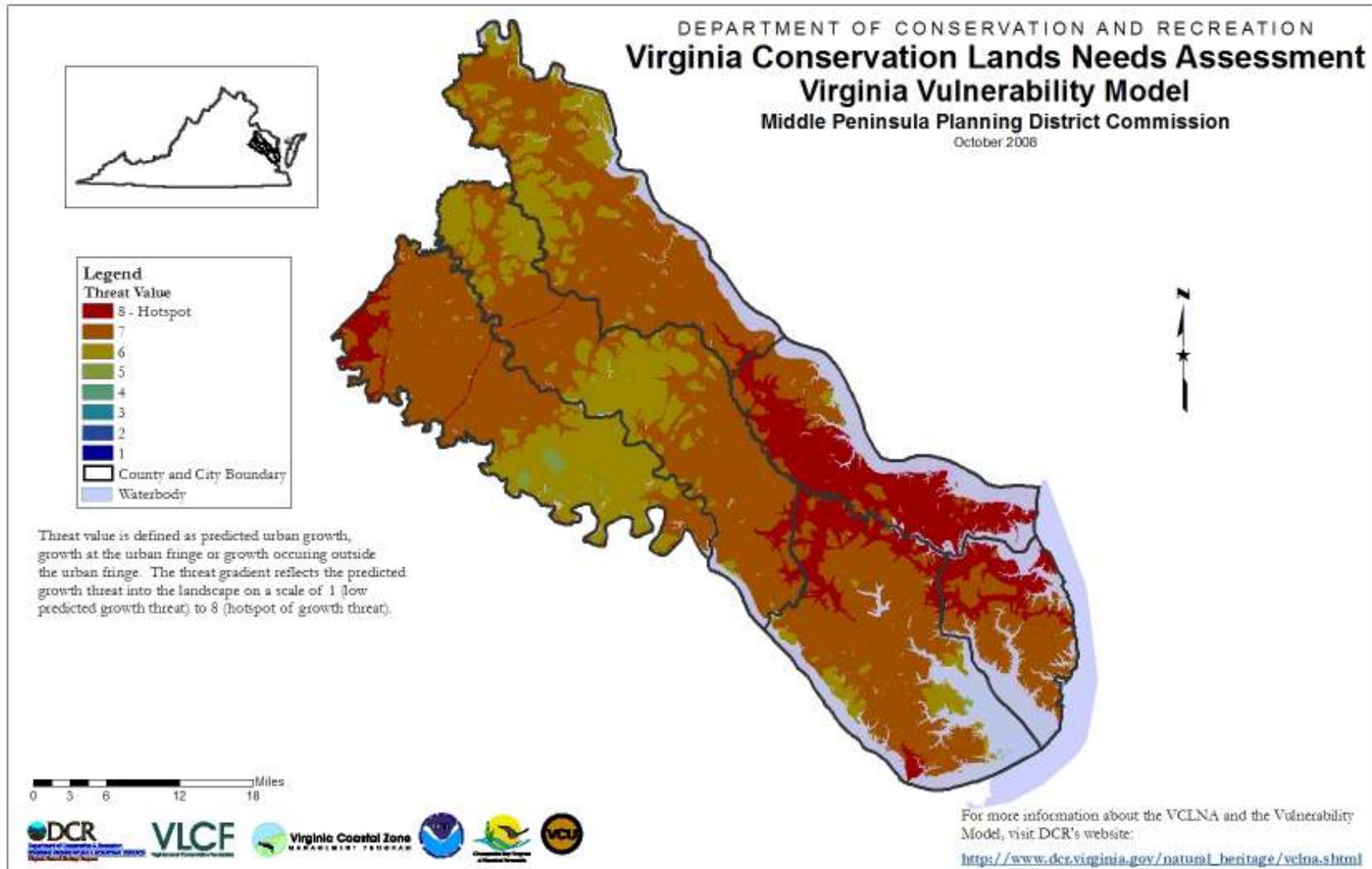


Figure 70. PDC 18 Middle Peninsula Urban Vulnerability Model.

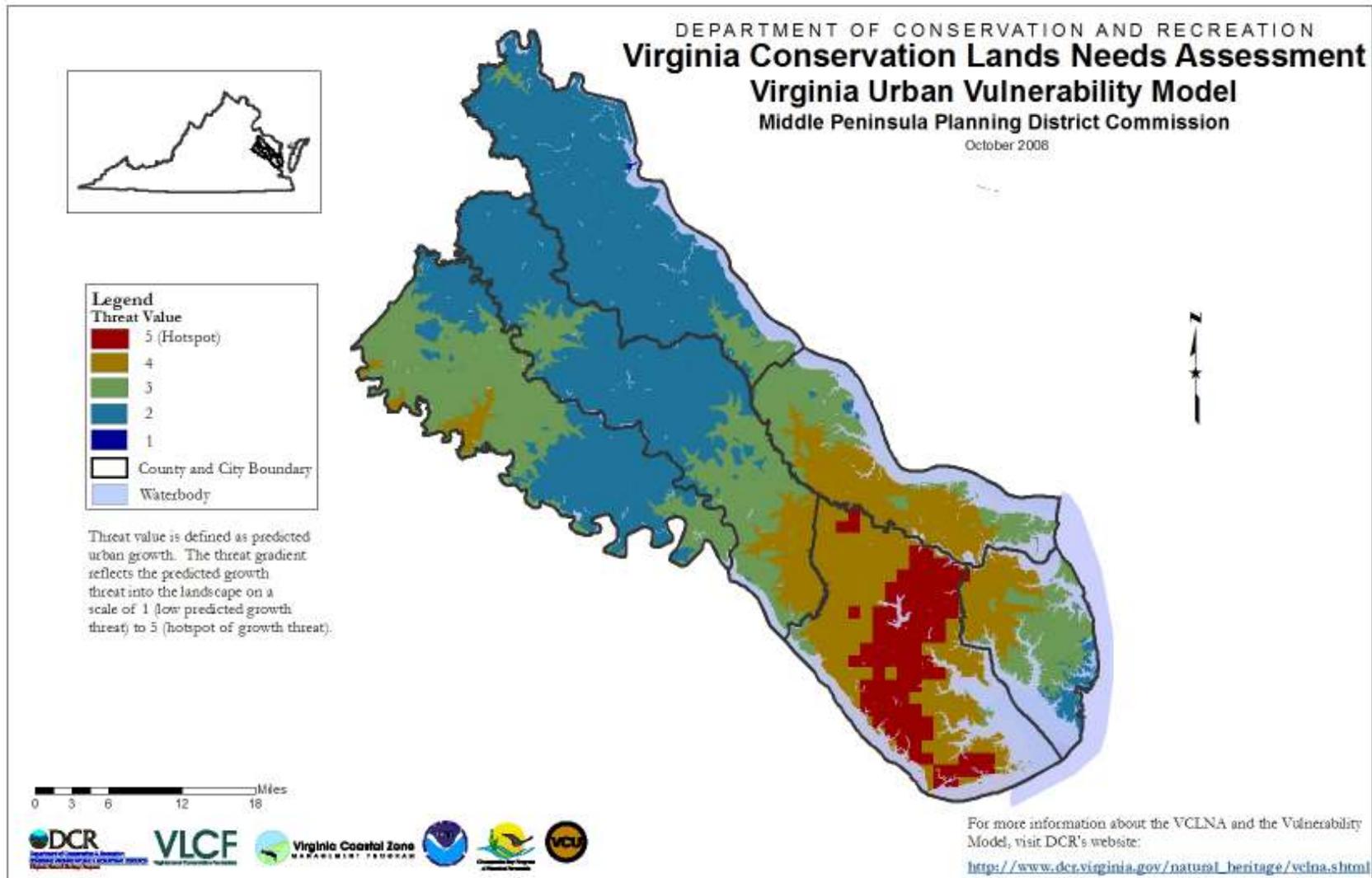


Figure 71. PDC 18 Middle Peninsula Urban Fringe Vulnerability Model.

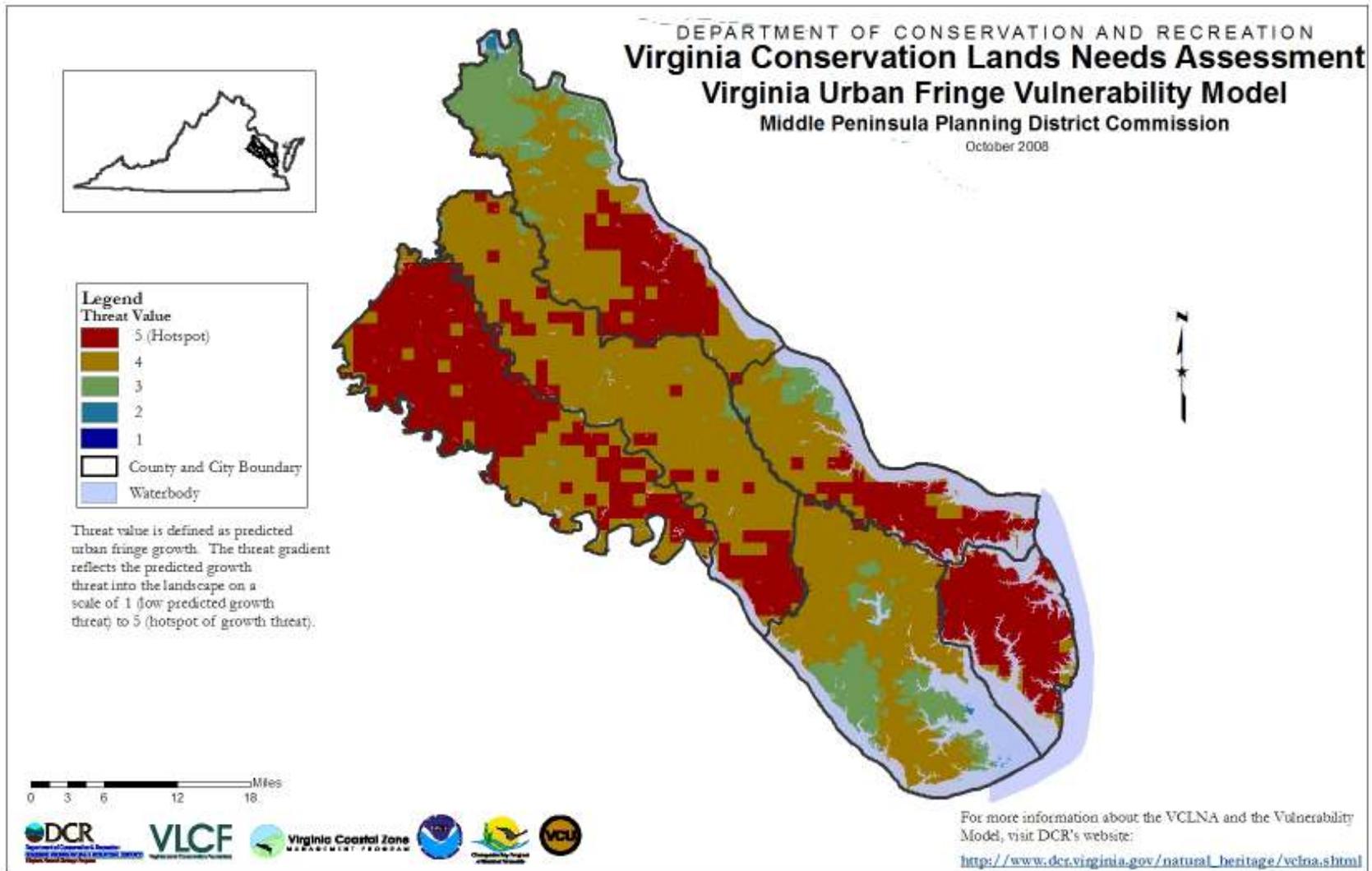


Figure 72. PDC 18 Middle Peninsula Outside the Urban Fringe Vulnerability Model.

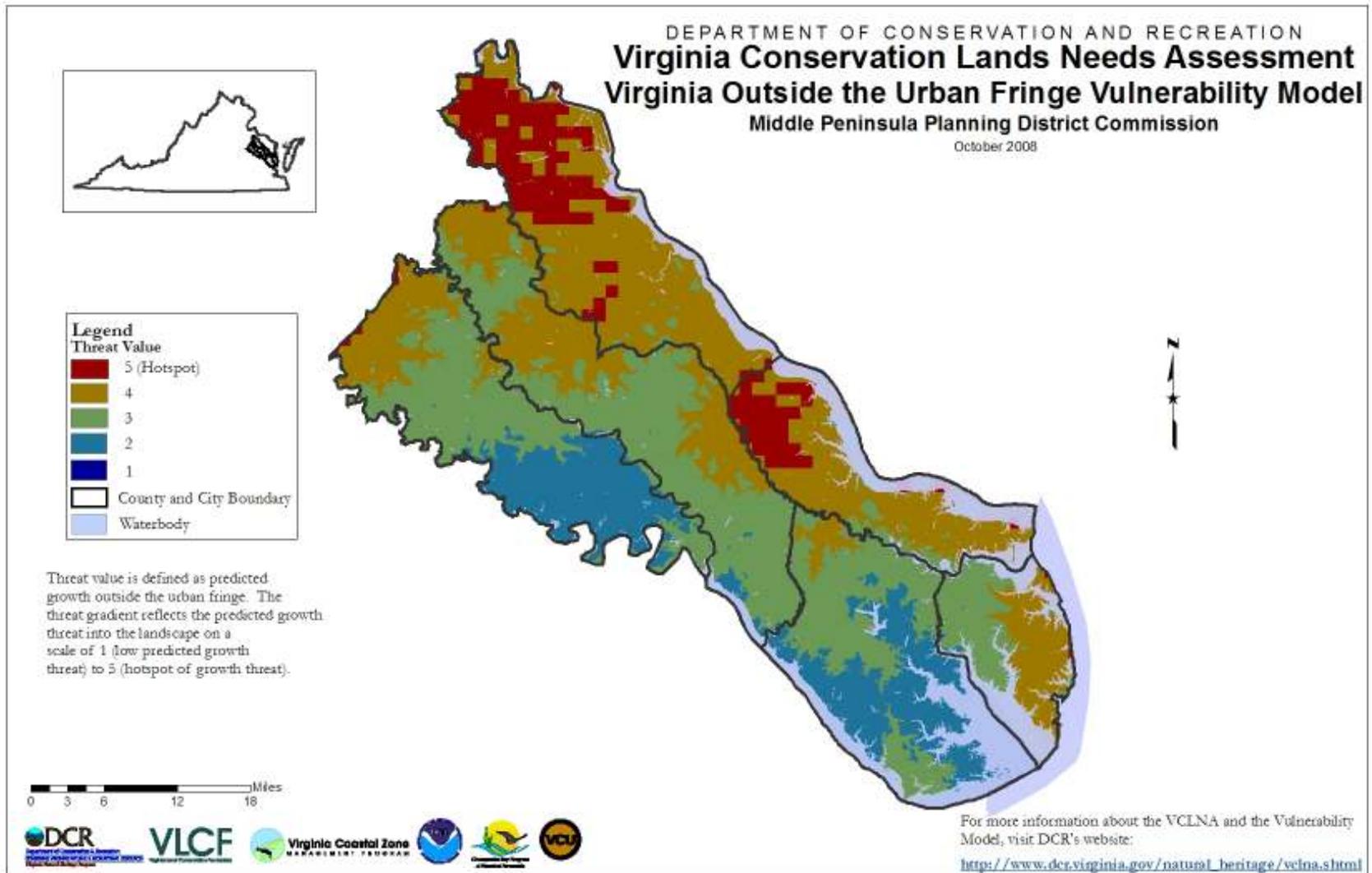


Figure 73. PDC 19 Crater Vulnerability Model.

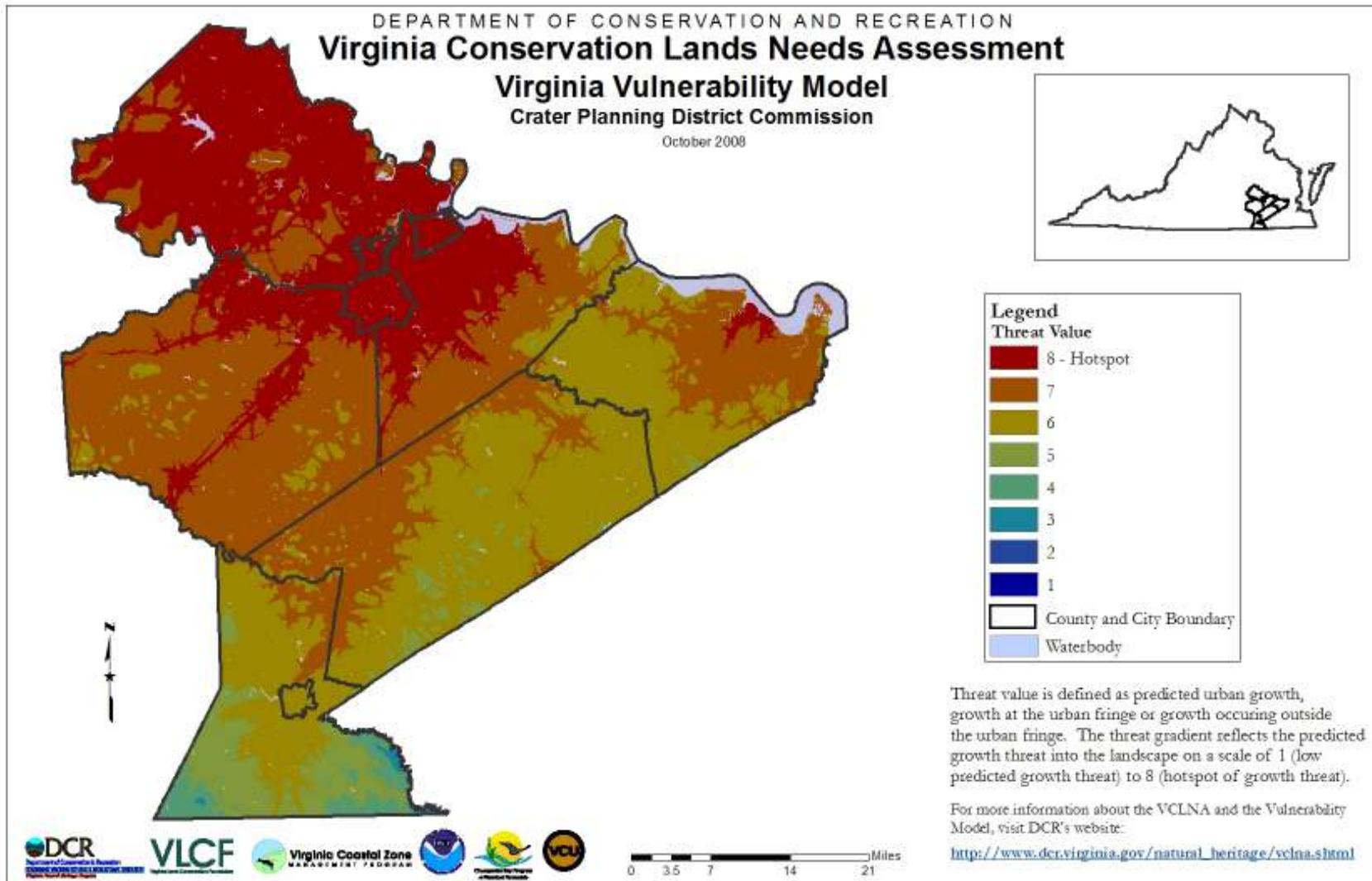


Figure 74. PDC 19 Crater Urban Vulnerability Model.

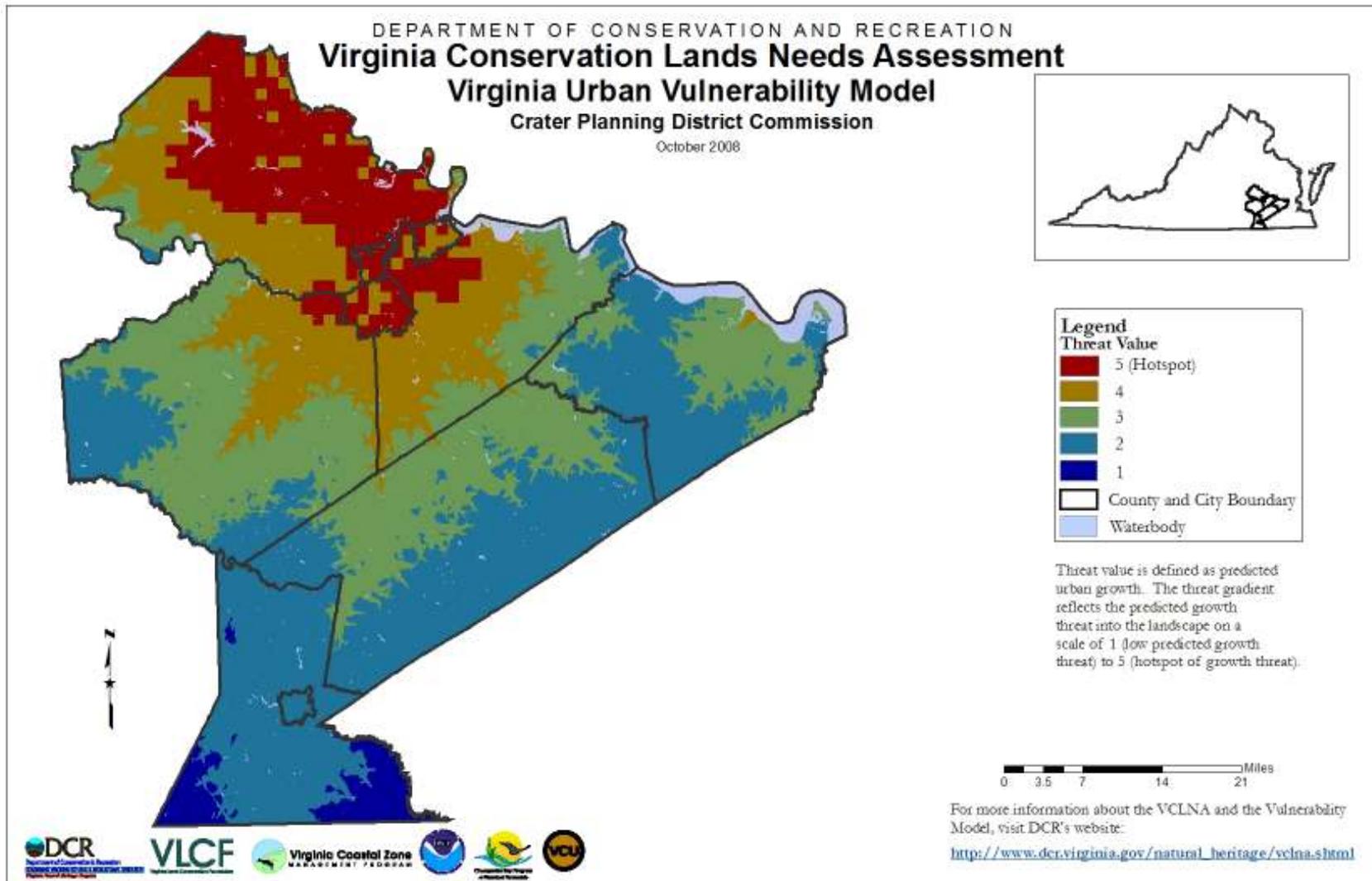


Figure 75. PDC 19 Crater Urban Fringe Vulnerability Model.

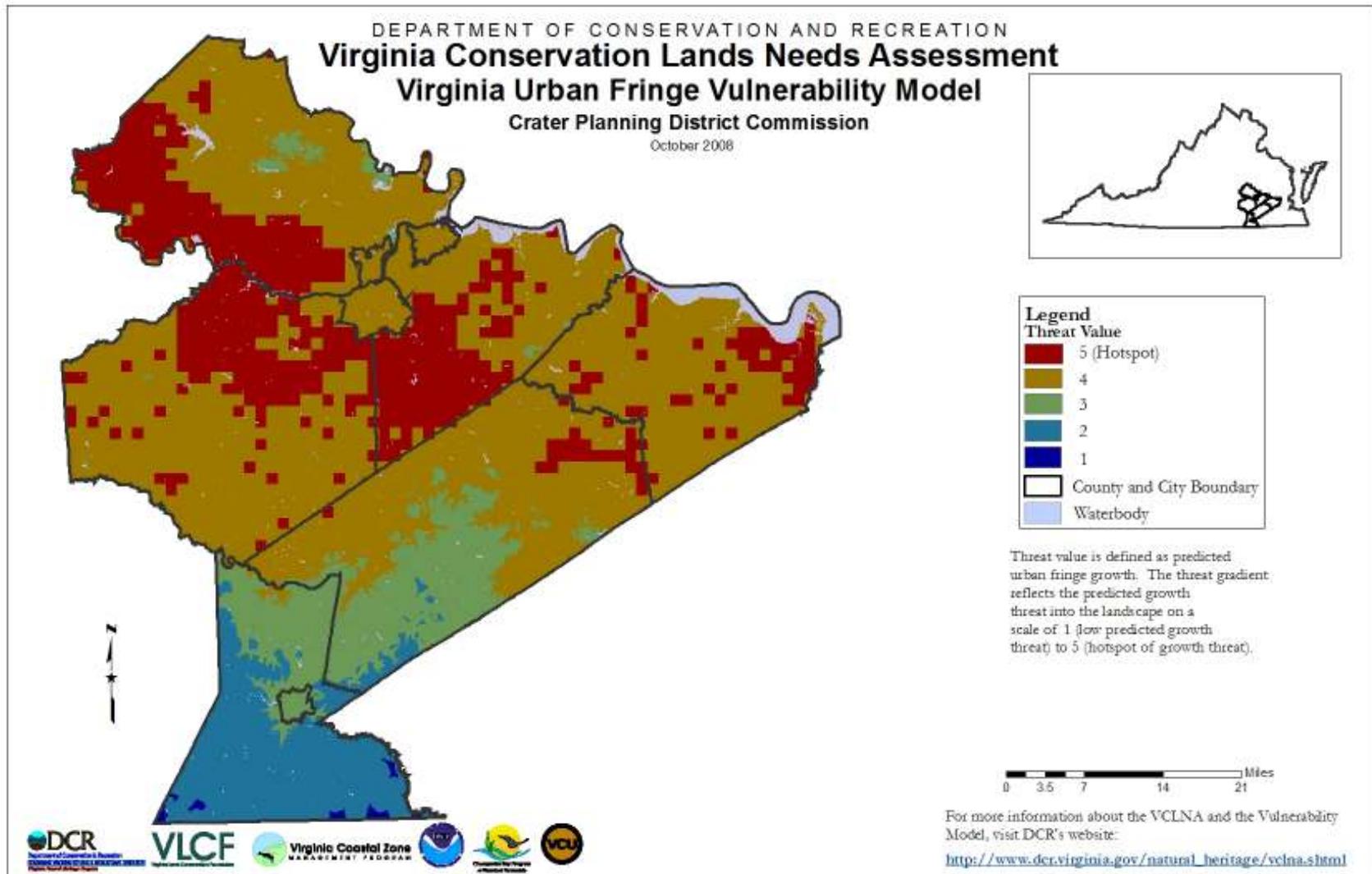


Figure 76. PDC 19 Crater Outside the Urban Fringe Vulnerability Model.

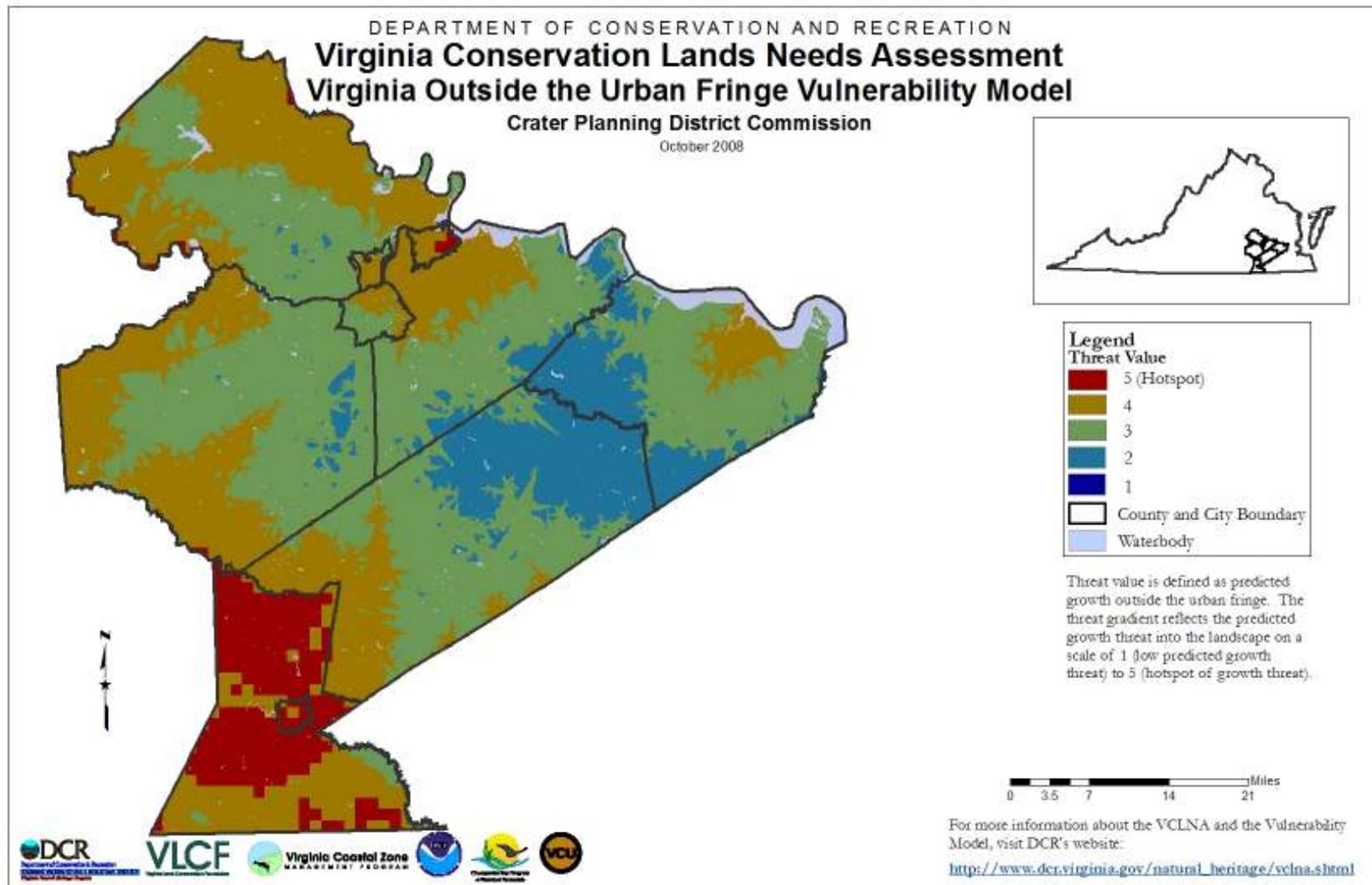


Figure 77. PDC 22 Accomack-Northampton Planning District Commission Vulnerability Model.

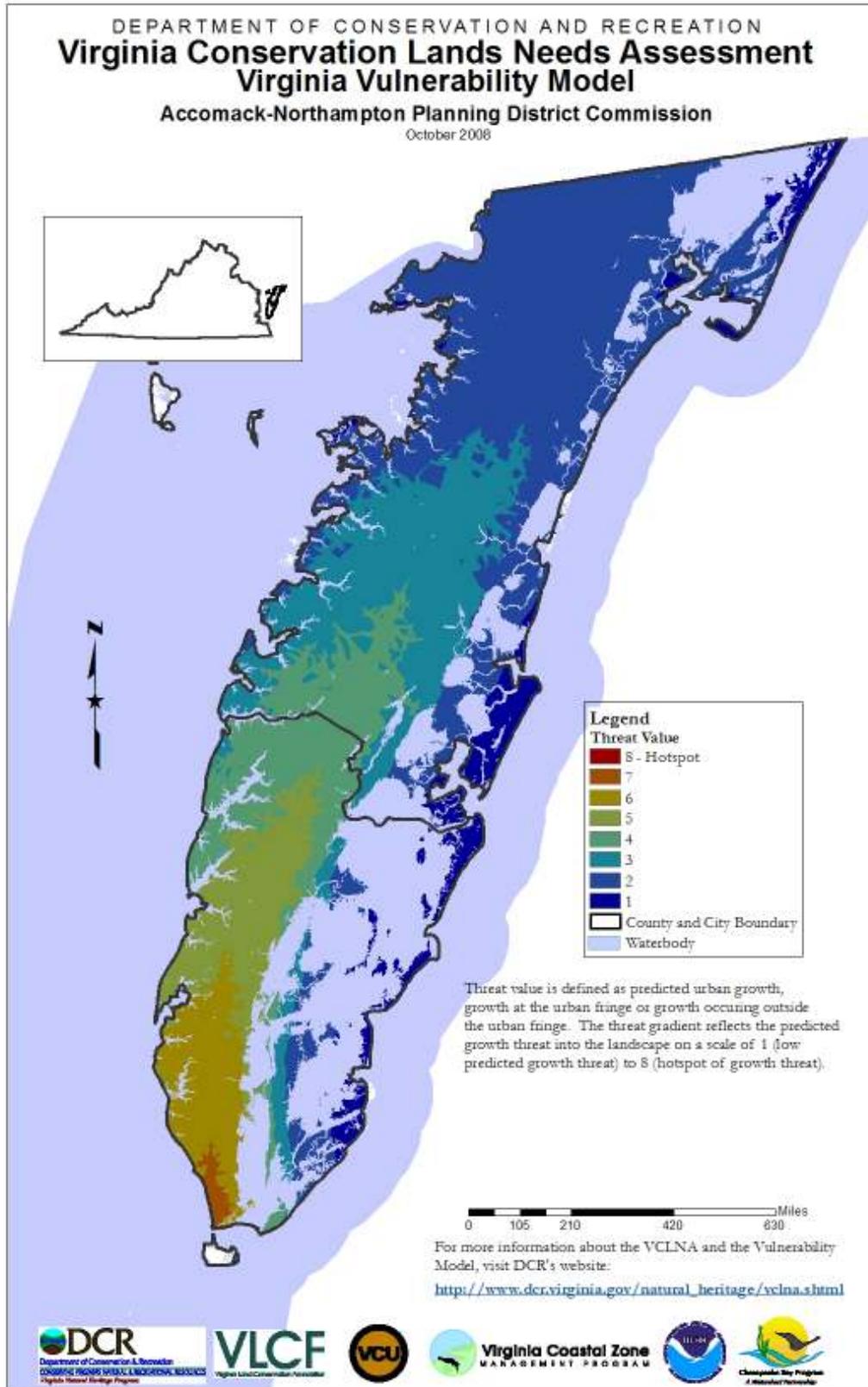


Figure 78. PDC 22 Accomack-Northampton Planning District Commission Urban Vulnerability Model.

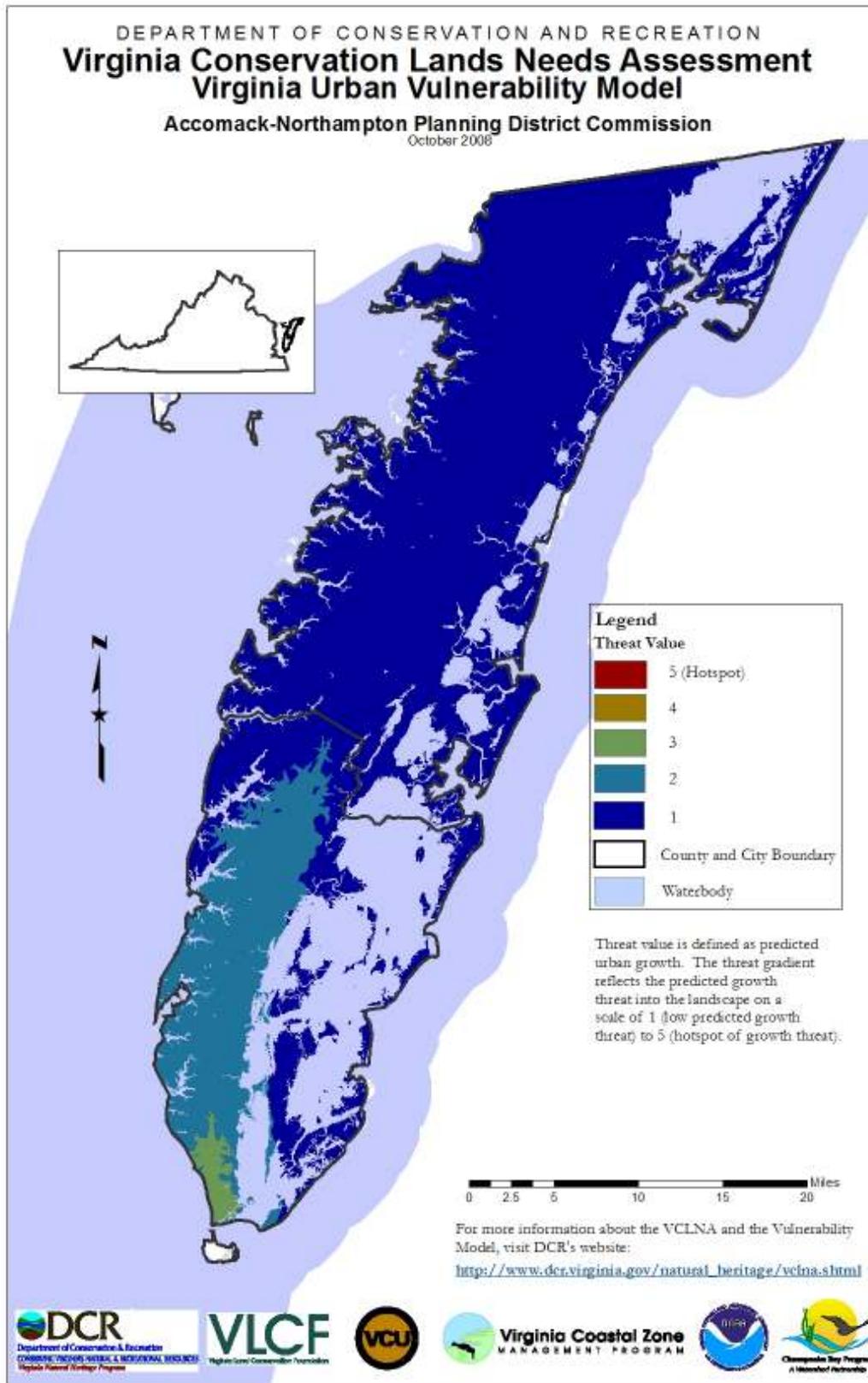


Figure 79. PDC 22 Accomack-Northampton Planning District Commission Urban Fringe Vulnerability Model.

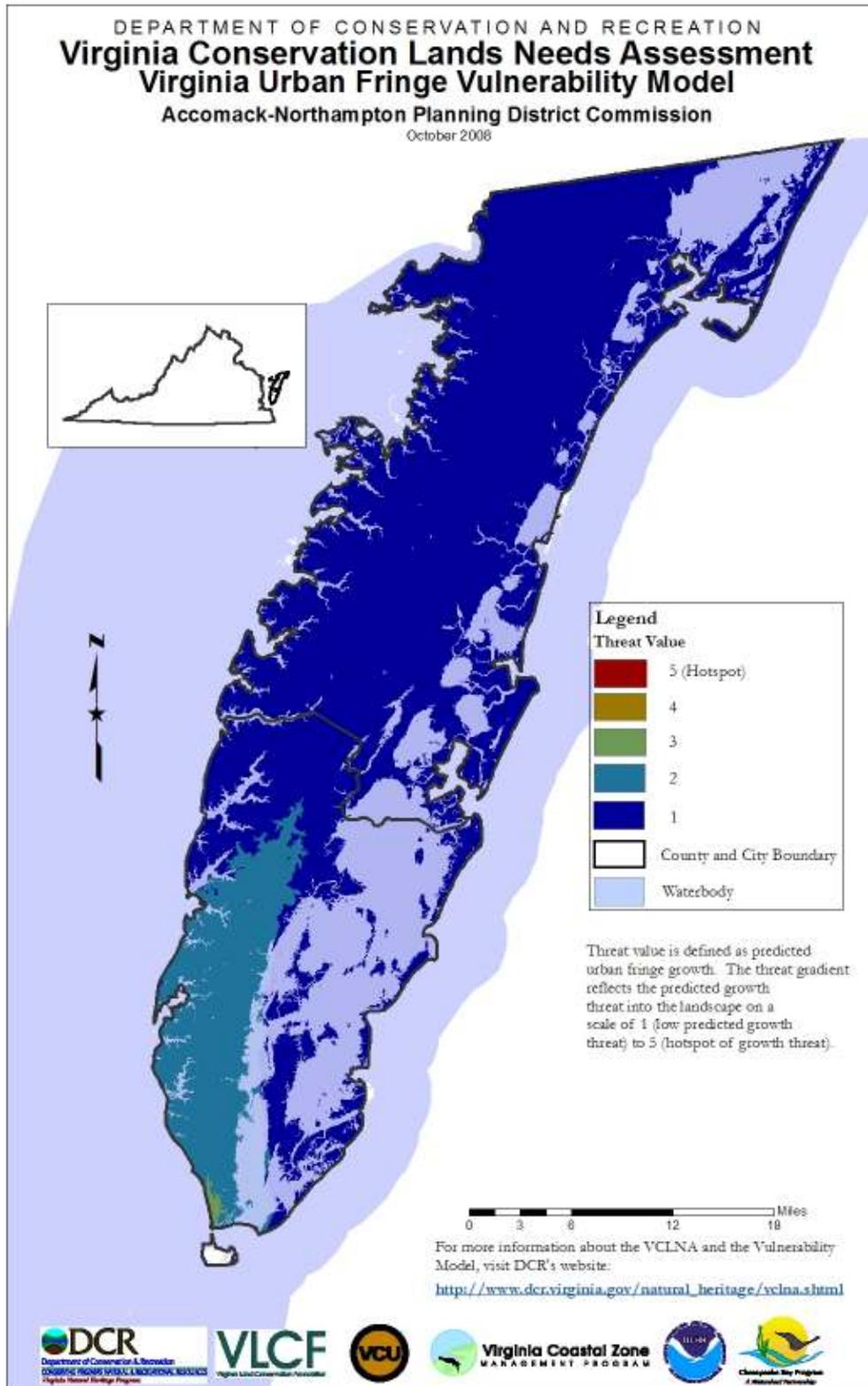


Figure 80. PDC 22 Accomack-Northampton Planning District Commission Outside the Urban Fringe Vulnerability Model

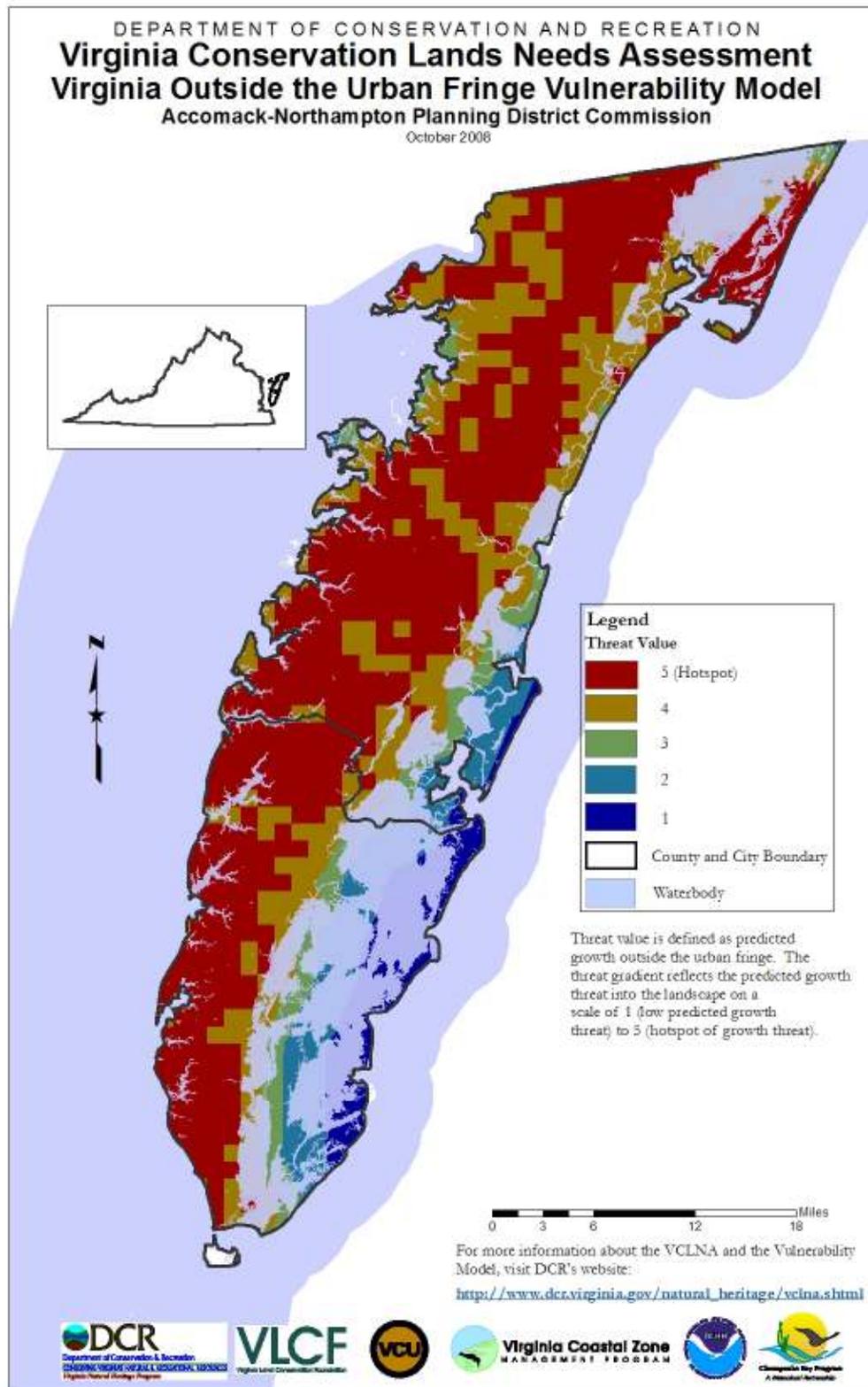


Figure 81. PDC 23 Hampton Roads Planning District Commission Vulnerability Model

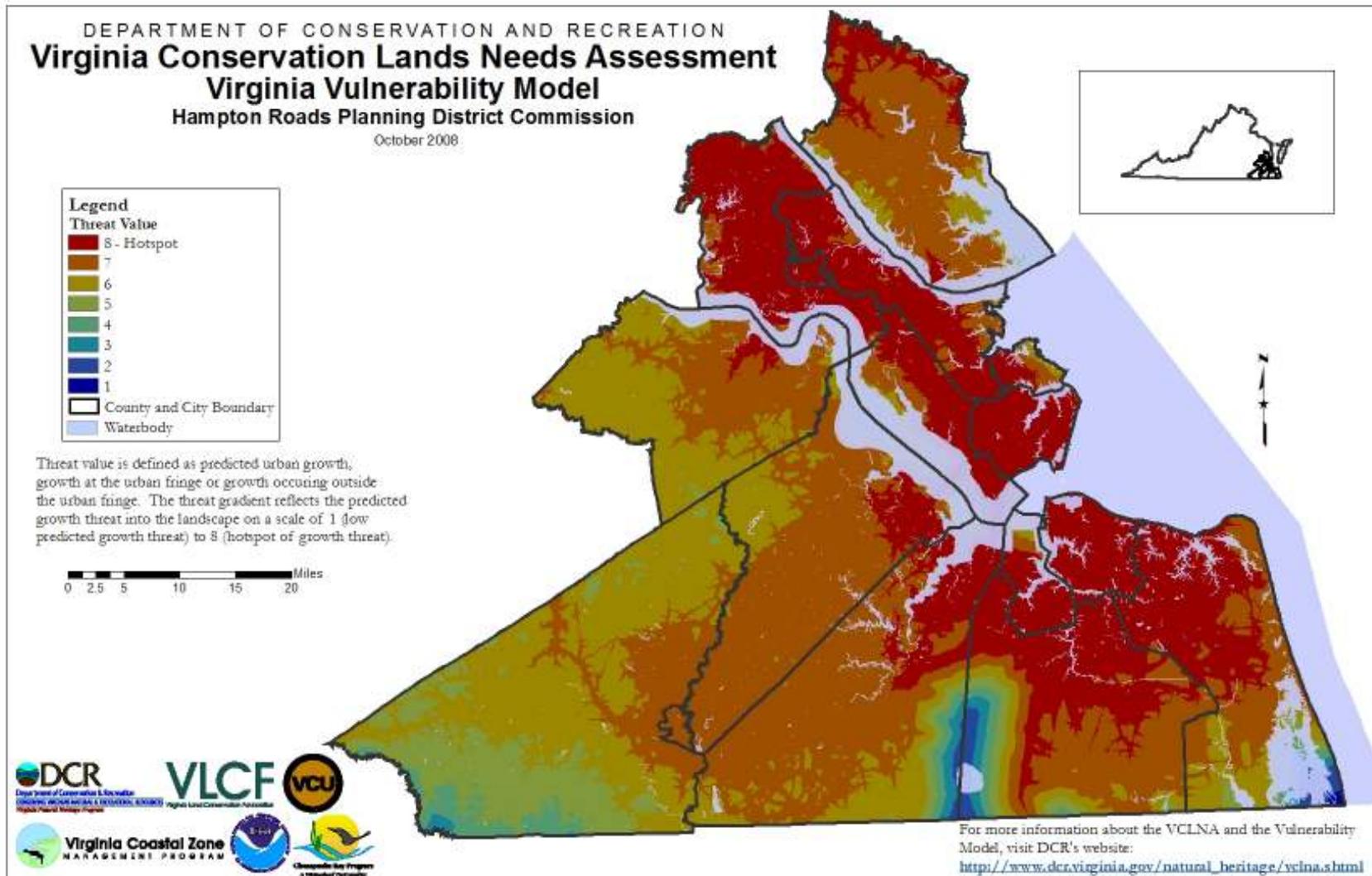


Figure 82. PDC 23 Hampton Roads Planning District Commission Urban Vulnerability Model

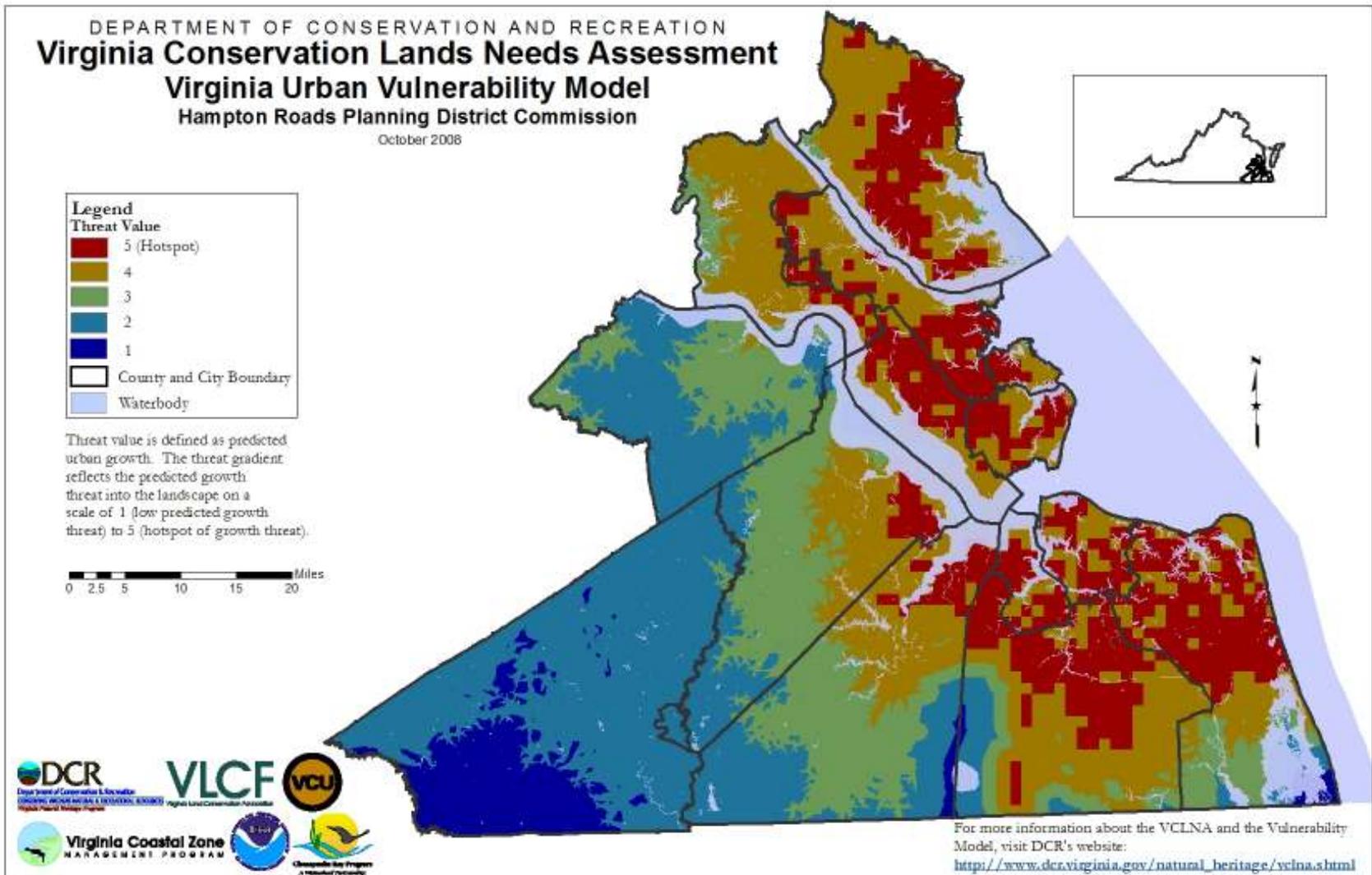


Figure 83. PDC 23 Hampton Roads Planning District Commission Urban Fringe Vulnerability Model

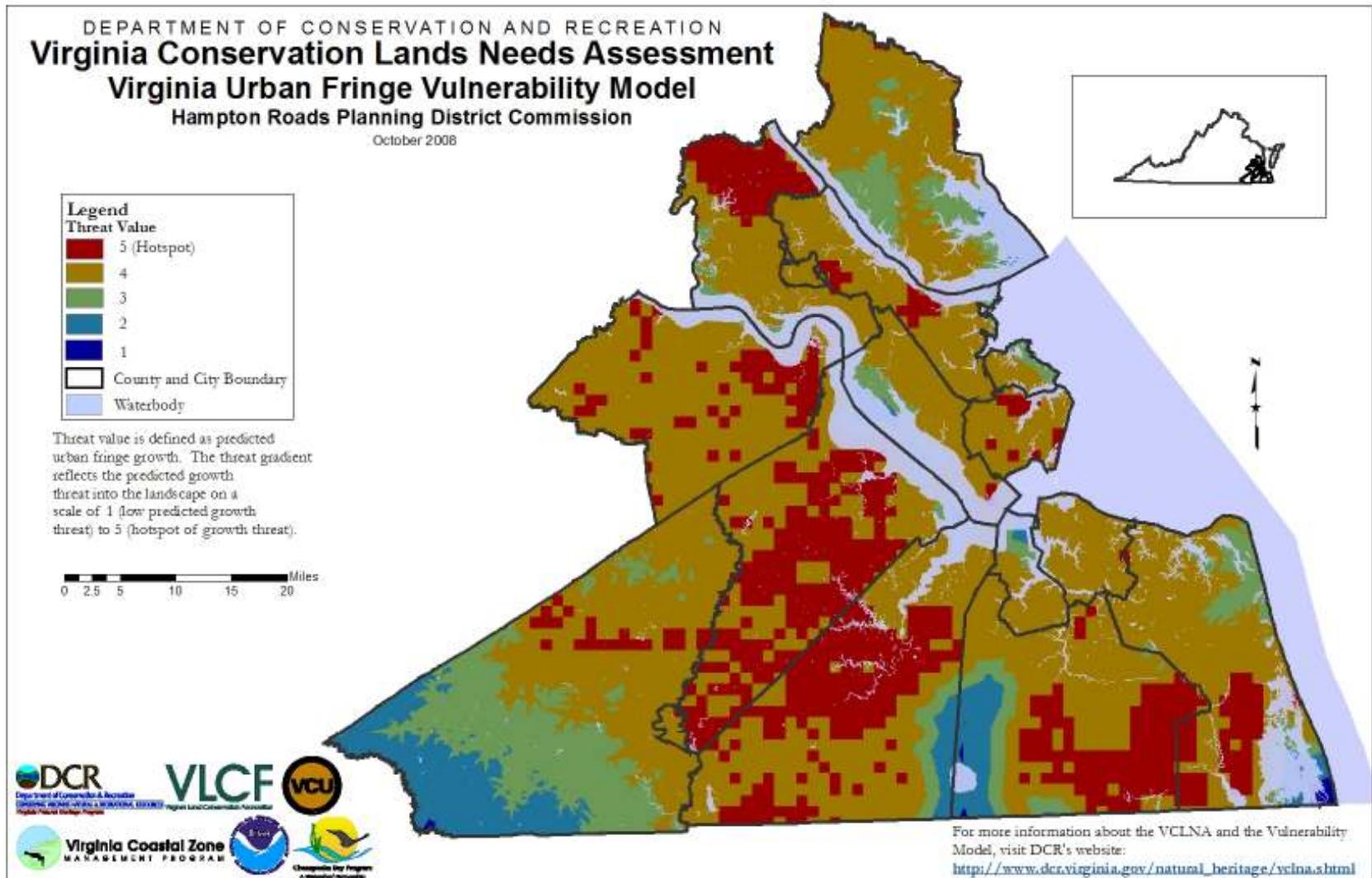


Figure 84. PDC 23 Hampton Roads Planning District Commission Outside the Urban Fringe Vulnerability Model

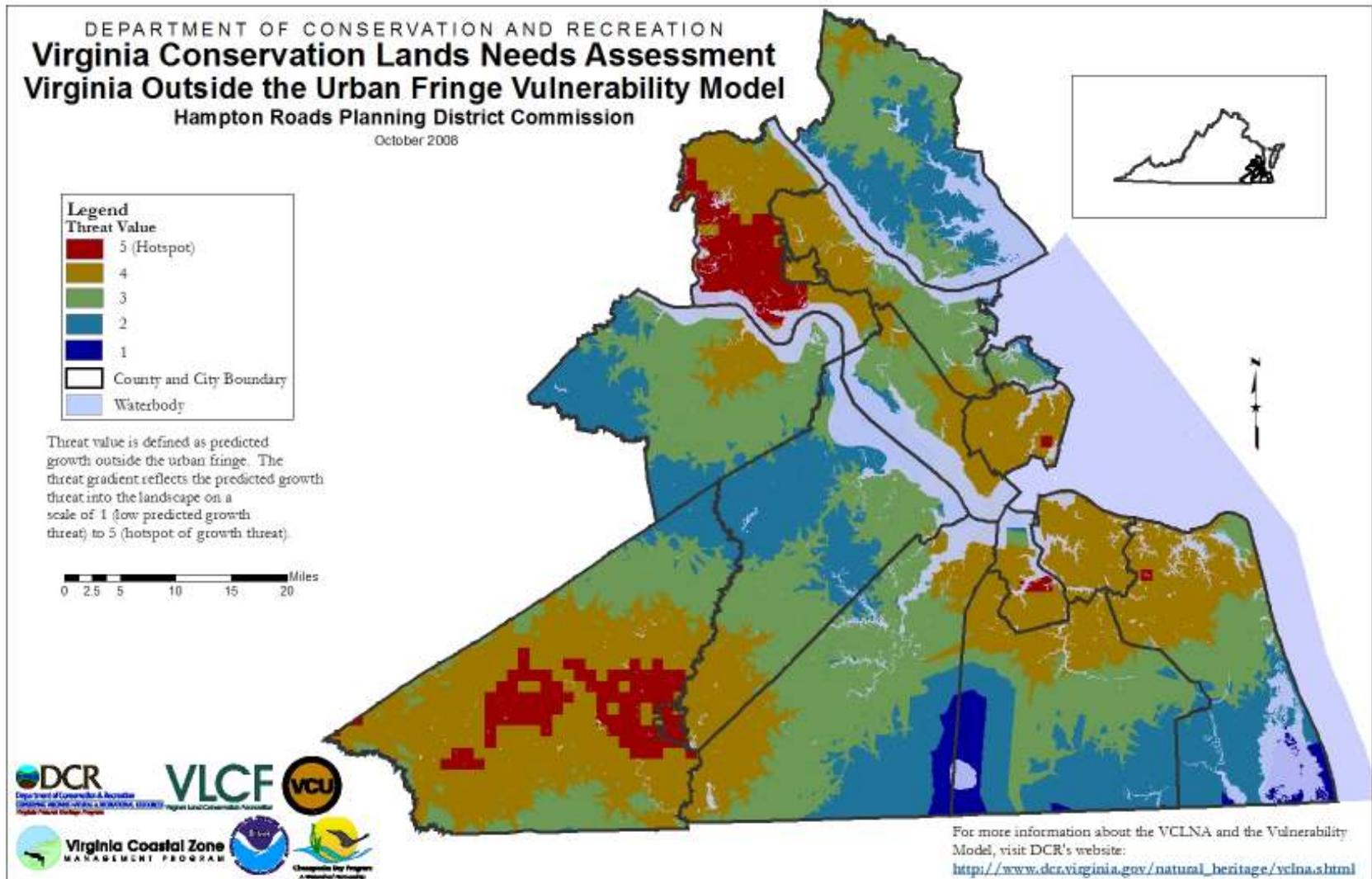


Figure 85. Coastal Zone Vulnerability Model.

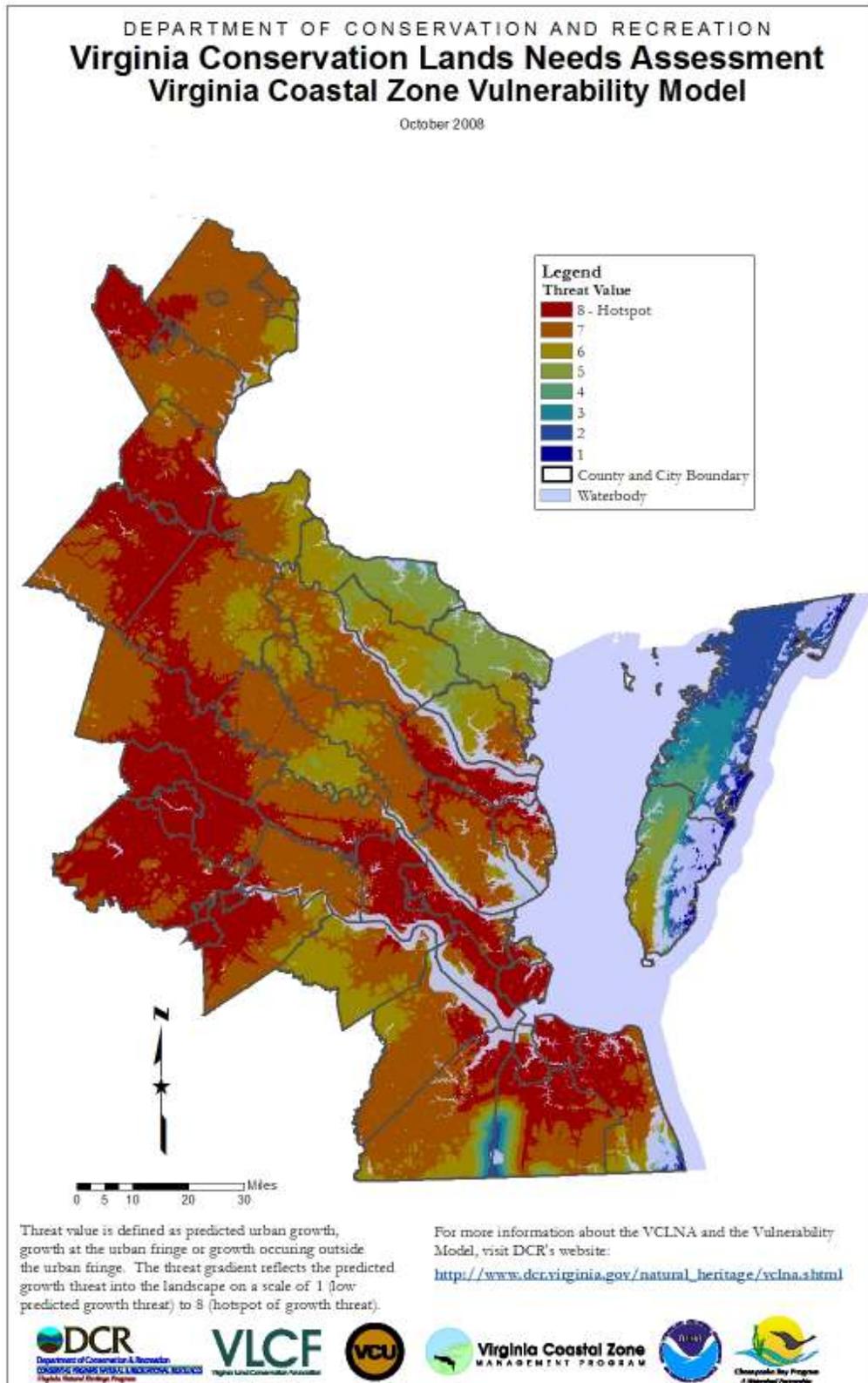


Figure 86. Coastal Zone Urban Vulnerability Model.

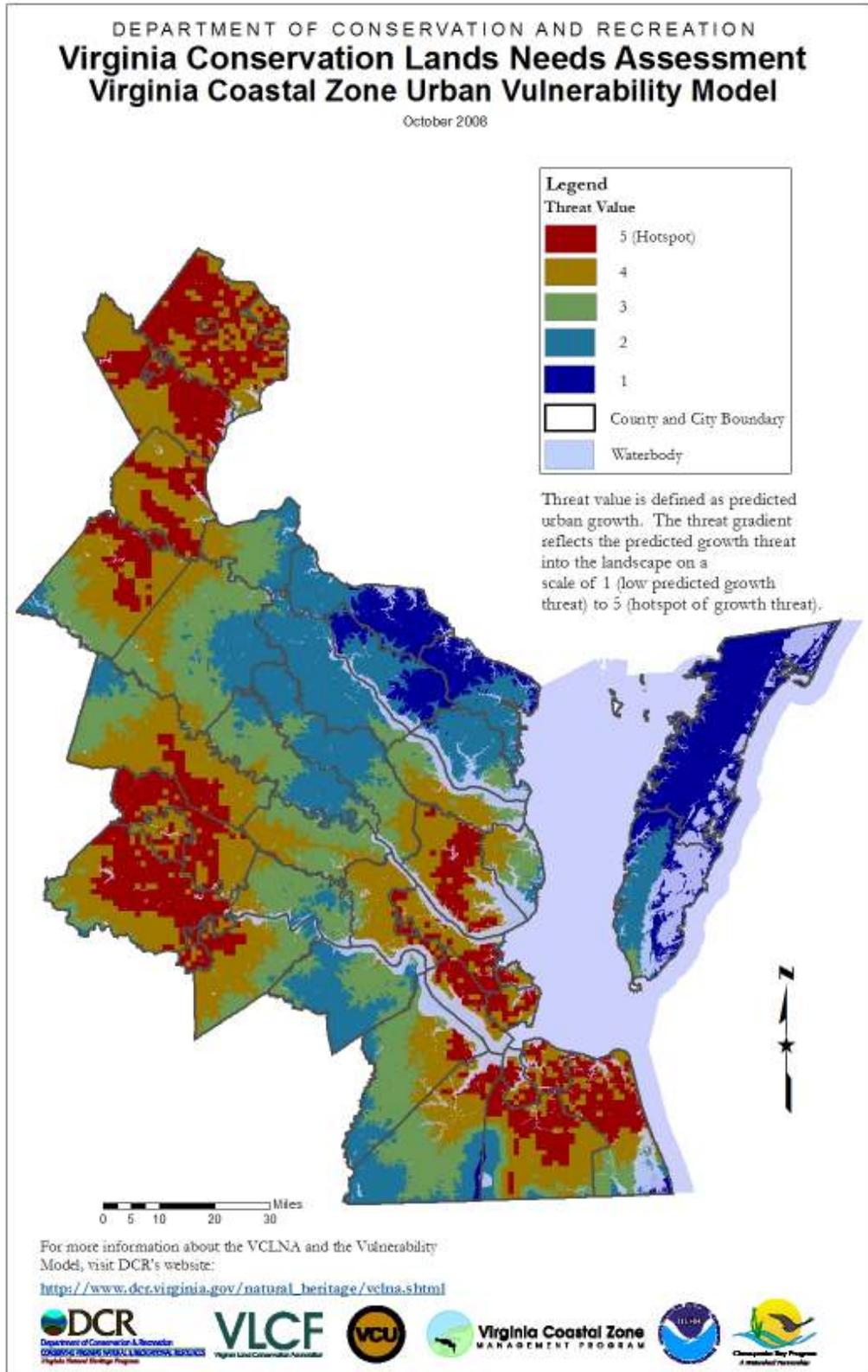


Figure 87. Coastal Zone Urban Fringe Vulnerability Model.

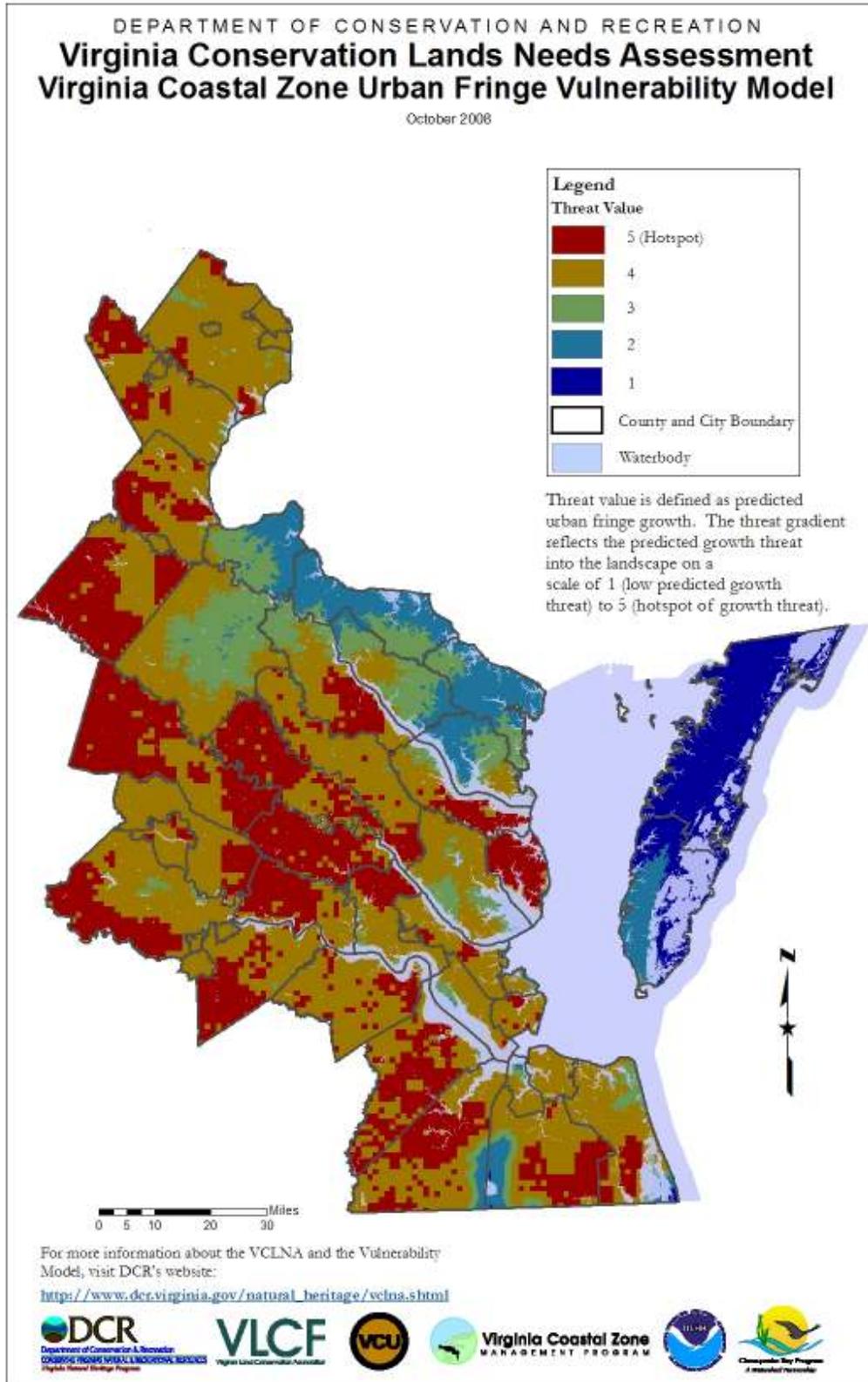


Figure 88. Coastal Zone Outside the Urban Fringe Vulnerability Model.

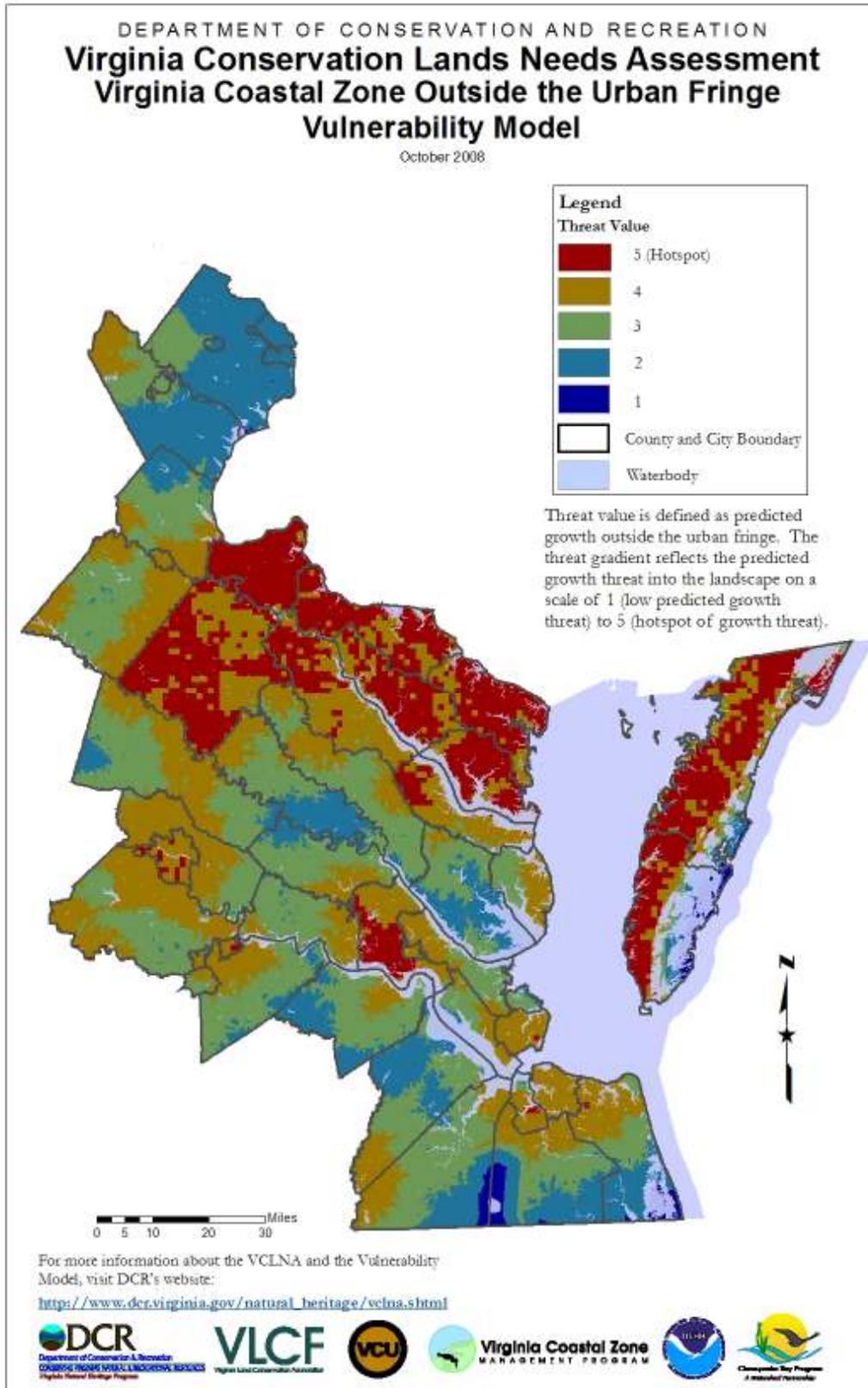


Figure 89. Virginia Vulnerability Model.

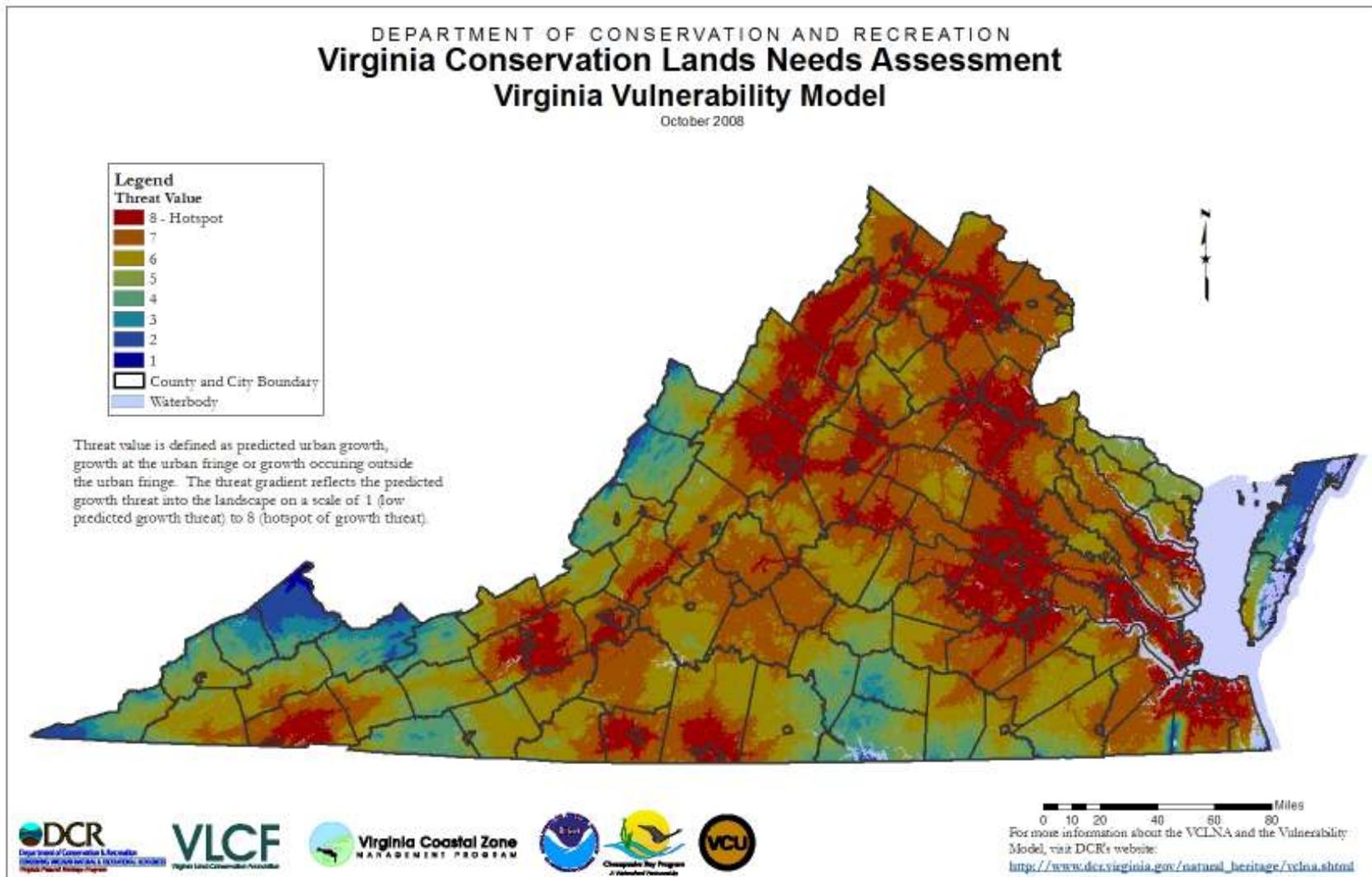


Figure 90. Virginia Urban Vulnerability Model.

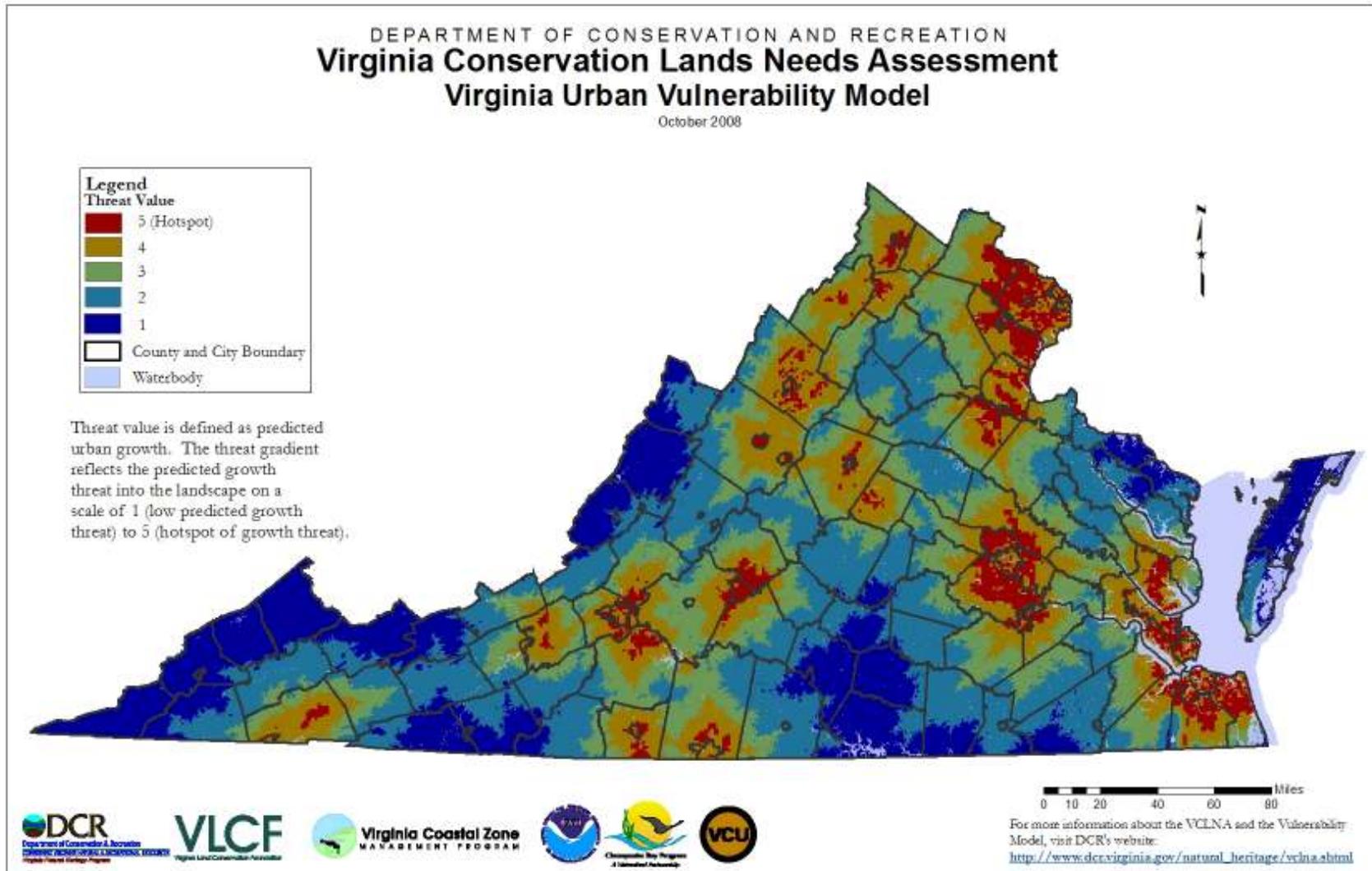


Figure 91. Virginia Urban Fringe Vulnerability Model.

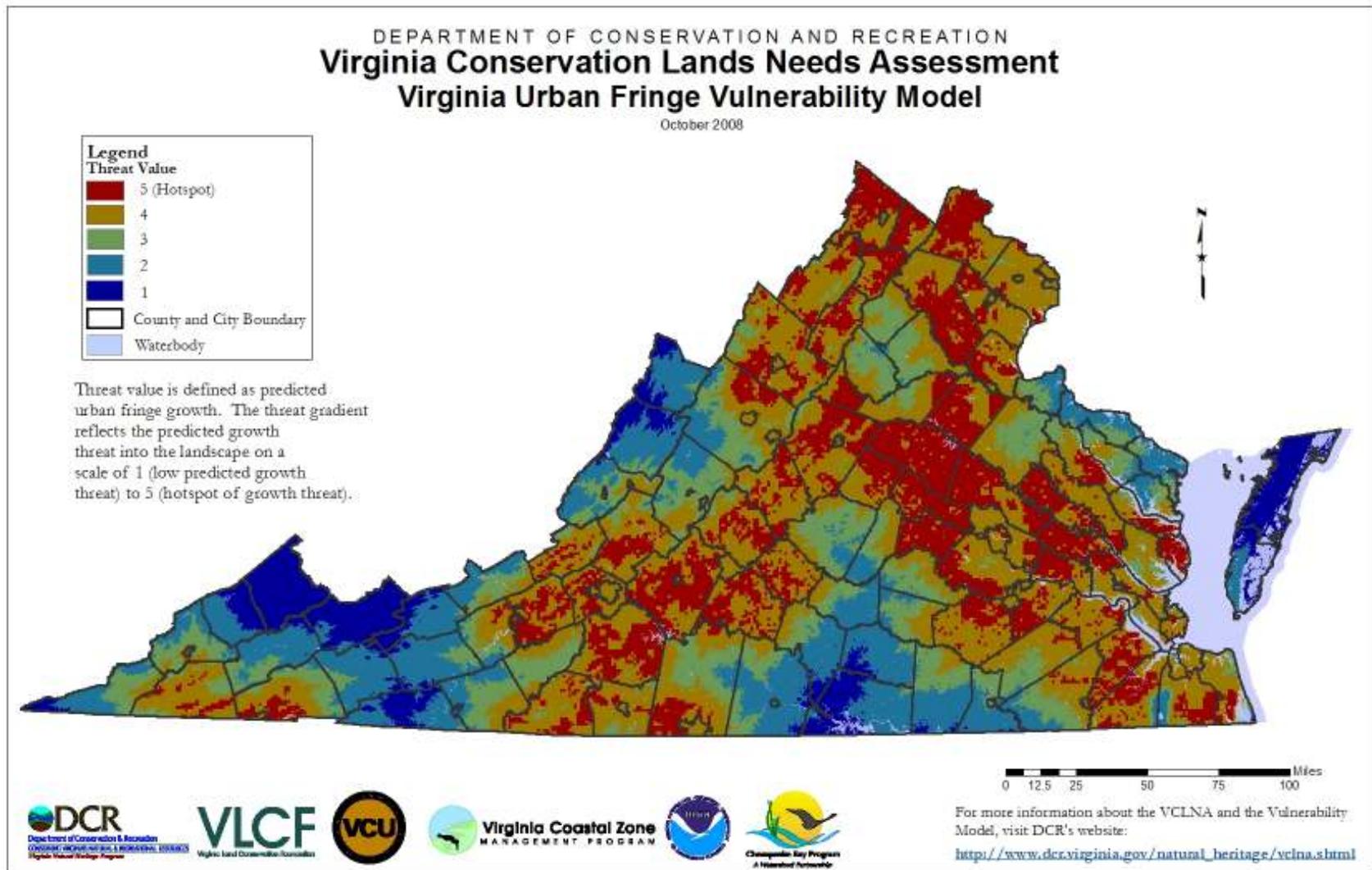
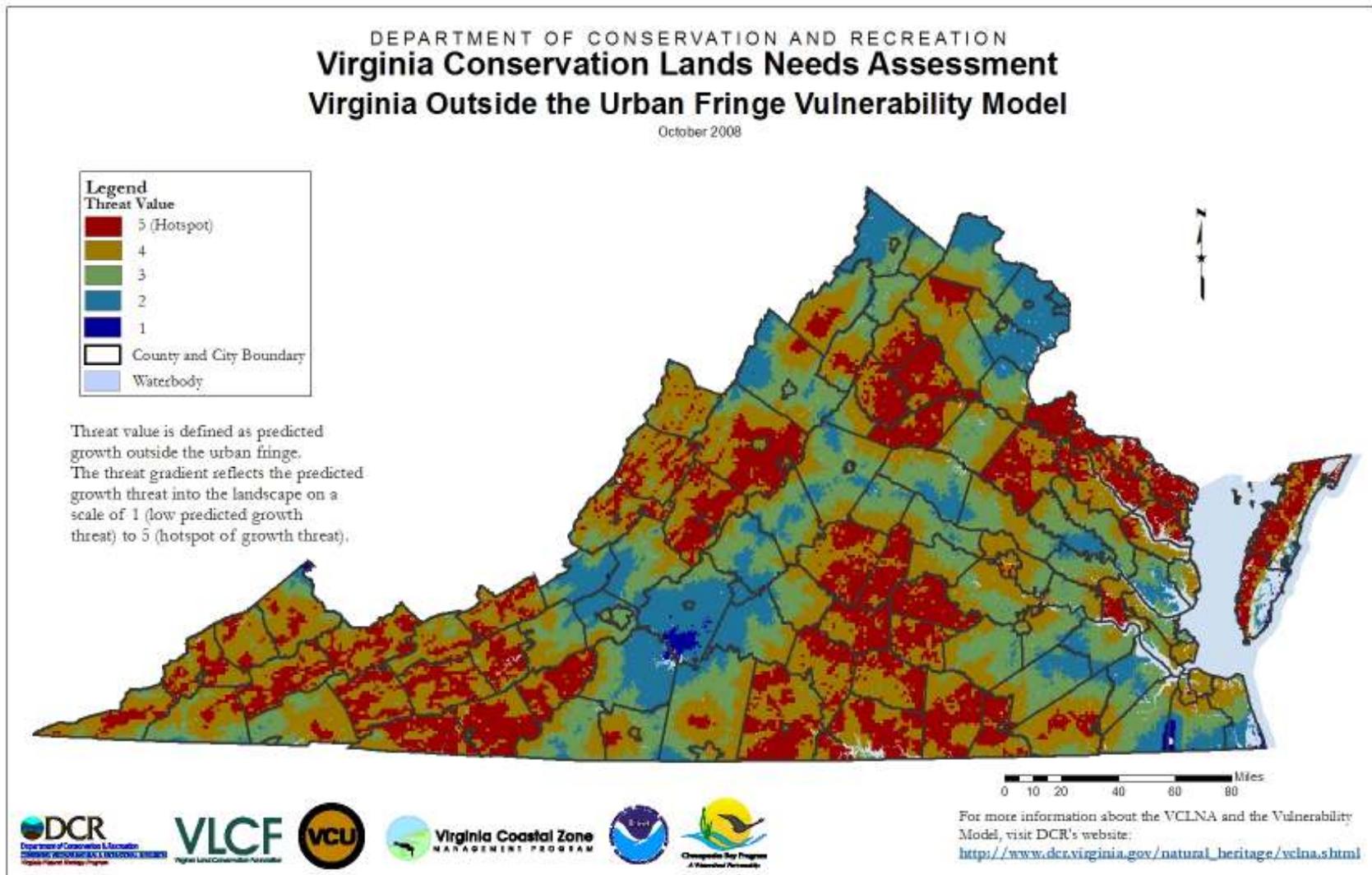


Figure 92. Virginia Outside the Urban Fringe Vulnerability Model.



Appendix # 2

Participating Entity Information

Clarke County, Commonwealth Of Virginia

Information submitted as part of FRPP application.

Background:

The Clarke County Conservation Easement Authority (CEA) was established in 2002 for the purpose of acquiring and/or receiving conservation easements, by purchase, gift, or other conveyance; to hold and enforce conservation easements conveyed to it; to administer the Clarke County Conservation Easement Purchase Program pursuant to Chapter 12 & 72 of the Clarke County Code; and to exercise any powers authorized by the Public Recreation Facilities Authorities Act. Clarke County is a local government entity. The FRPP application for FY 10, attachment A, details the CEA history, objectives, and accomplishments.

Criteria for setting acquisition priorities A ranking evaluation system was created to award points for a number of different values including: 1) agricultural value as determined by a Land Evaluation and Site Assessment (LESA) score; 2) natural resources (such as size of parcel, whether it joins a river, watershed, other permanently protected area or scenic area, etc.); and; 3) cultural or historic resources. Properties in the applicant pool with the highest point total have the highest priority. More detail on the Easement Purchase Program and scoring is in the FY10 FRPP application, attachment B.

Easement Management Experience

The “Five Year Summary of Accomplishments” report included in the FY10 FRPP application, attachment A describes the experience, management and enforcement strategies employed by the CEA. Since its inception in 2002, the CEA has accepted a total of 51 easements, 42 donated and 13 purchased, totaling 3,485 acres. A list of easements acquired in the last two years is included in Attachment A.

Staffing

The Planning Department Natural Resource Planner is responsible for administering the easement program. Additional resources include the 7 members of the CEA, the County Planning Director, and several volunteers. A handbook detailing the processes for administering the program, accepting applications, and managing and enforcing easements provides management direction for the program is on file with FY10 application, attachment B. The County works closely with the Virginia Outdoors Foundation, a state funded agency charged with promoting the preservation of open space lands, and works towards co holding easements to further strengthen their permanent nature.

Conservation Plan

County staff has worked with Mike Liskey, District Conservationist, for many years and has a good working relationship. Mr. Liskey has worked with the farming community of Clarke County and knows

many landowners personally. The Moore and Dorsey farm does not currently have a conservation plan as the land is used for nursery production. In addition, those soils classified as highly erodible, approximately 13 acres, are on gradual slopes.

Piedmont Environmental Council

Information submitted as part of FRPP application.

The Piedmont Environmental Council is a land trust and conservation organization founded in 1972 to promote and protect the Piedmont's rural economy, natural resources, history and beauty. The organization now employs 30 full-time staff members focusing on a nine-county region stretching from Loudoun to Albemarle. We also provide support to similar organizations throughout the state of Virginia.

Since its inception, PEC has been helping landowners with conservation easements by providing technical assistance and managing easement projects. To date, PEC has helped permanently protect over 307,500 acres of land in the Piedmont region. Throughout this time, PEC has worked closely with the Virginia Outdoors Foundation helping prepare landowners for donations to this state body. In 1998, PEC acquired its first easement in partnership with Virginia Outdoors Foundation and since then has managed a robust stewardship and enforcement program.

PEC is also the fiscal agent for Virginia United Land Trust (VaULT), a coalition of 40+ nonprofits and state agencies dedicated to preservation and enhancement of working lands across the Commonwealth. Organized in 2000, VaULT's mission is to increase the effectiveness of the land conservation community in Virginia. Its purpose is to promote land conservation efforts statewide, build or create land trust capacity, coordinate statewide conservation planning, and promote high professional standards for land trusts in Virginia.

The group has adopted a Statement of Principles setting out voluntary standards for its members. Heather Richards, PEC's director of land conservation, until recently chaired VaULT's Executive Committee.

Easement Management Experience

To set land conservation priorities, PEC policy requires an environmental assessment on every tract of land or easement proposed for acquisition. Each assessment includes a physical inspection of the property, an appropriate inquiry into its historic uses, and interviews with appropriate community

leaders. Surrounding areas that could have an impact on the property are also considered. PEC's Environmental Site Assessment Form is attached as Appendix A.

PEC currently holds or co-holds 33 easements encompassing nearly 5,000 acres. These easements are held as follows:

- 10 easements held solely by PEC comprising 1,112.35 acres
- 19 easements co-held with Virginia Outdoors Foundation comprising 3,075.24 acres
- 3 easements co-held with Fauquier County comprising 740.38 acres
- 1 easement co-held with Rappahannock County comprising 55.69 acres

Potomac Conservancy

From <http://www.potomac.org/site/land-protection/index.php/#landprotection> on 6/22/11. Potomac Conservancy's Land Program contains two components: Land Protection and Land Restoration. Land Protection conserves lands important to water quality with permanent conservation easements. These easements restrict the use of property in order to protect conservation values, including water resources, forestland, wildlife habitat, and prime farm soils. Where possible, Potomac Conservancy strives to link protected lands into hubs and corridors to further enhance the benefits to wildlife, water quality, forest and farm sustainability, and so on.

Land Restoration focuses on ecological improvements to land, including planting trees and shrubs along streams, removing dams to improve fish passage, and constructing rain gardens to absorb and filter run-off from streets and roof-tops.

In 2010, Potomac Conservancy was officially accredited by The Land Trust Accreditation Commission, an independent program of the Land Trust Alliance. Accreditation publicly validates the high caliber of the Conservancy's land protection work and demonstrates that it meets the industry's best practices related to governance and management. The Conservancy is one of just 130 of the more than 1,700 land trusts nationwide to be approved since 2008.

Virginia Outdoors Foundation

From http://www.virginiaoutdoorsfoundation.org/VOF_about-mission.php on 6/22/11. The Virginia Outdoors Foundation (VOF) is Virginia's leader in land conservation, protecting more than 600,000 acres in 105 counties and independent cities. Since 2000, VOF has preserved open space in Virginia at a rate of about 5 acres every hour, primarily through the use of open-space conservation easements.

VOF was created by the General Assembly in 1966. It was established in the Code of Virginia under § 10.1-1800, which states: " The Virginia Outdoors Foundation is established to promote the preservation of open-space lands and to encourage private gifts of money, securities, land or other property to

preserve the natural, scenic, historic, scientific, open-space and recreational areas of the Commonwealth. The Virginia Outdoors Foundation is a body politic and shall be governed and administered by a board of trustees composed of seven trustees from the Commonwealth at large to be appointed by the Governor for four-year terms."

The creation of VOF was among the recommendations of the 1964 Virginia Outdoor Recreation Study Commission, which also suggested the creation of a Historic Landmarks Commission, a system of scenic byways, and an enlarged state park system. On June 13, 1968 the first VOF easement was recorded – 102 acres in Goochland County.

Although VOF has been in existence for nearly five decades, more than 75 percent of the current acreage protected by VOF easements has been achieved since 2000. VOF's biggest year ever was in 2006, when we protected approximately 70,000 acres. Our largest easement project to date—more than 11,000 acres on Carvins Cove in Roanoke and Botetourt counties—was recorded in 2008 and 2009. VOF's portfolio of 600,000-plus protected acres represents an area three times larger than Shenandoah National Park and more than half the size of Rhode Island.

Demand for easement in Virginia remains strong. To guide our work, the VOF Board of Trustees adopted a strategic plan in 2009. The plan seeks to balance our mission of preserving new lands with our obligation to steward the easements already under our protection. Thanks to the generosity of landowners, the strength of our partnerships, and the support of legislators, VOF will continue to fulfill its mission of preserving our shared natural and cultural resources for future generations.

VOF-Owned Lands

In 1981, the Virginia Outdoors Foundation was given the Aldie Mill Historic Site in Loudoun County. Private funds were raised and the mill was restored as an example of 19th century manufacturing. In 2006 the mill was given to the Northern Virginia Regional Park Authority, who continues to keep the mill open to the public.

On May 1, 2002, the VOF-owned Bull Run Mountains land was formally dedicated as the 34th State Natural Area Preserve. In this highly developed area, the Bull Run Mountain 2,500 acres is one of the largest, relatively intact and unfragmented natural landscapes east of the Blue Ridge in Northern Virginia.

For information about other properties owned by VOF, visit our owned-land page.

Open Space Lands Preservation Trust Fund

In 1997, the General Assembly created the Open Space Lands Preservation Trust Fund to assist landowners with the costs of conveying conservation easements. The fund has helped protect land by providing grants to reimburse a portion of the landowner's costs of donation, as well as grants which purchase a portion of the value of the landowner's easement.

VIRGINIA 2012 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 eligible¹: 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 \geq \$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:

\leq 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 _____ **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.

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.)	<u>Points</u>		<u>Acres</u>
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)

- 1. 30 or > ac. 20 pts.
- 2. 20-29 ac. 14 pts.
- 3. 15-19 ac. 10 pts.
- 4. 10-14 ac. 8 pts.
- 5. 5-9 ac. 6 pts.
- 6. < 5 ac. 2 pts.

Western Counties (W. of Blue Ridge)

- 1. > 5 ac. 20pts.
- 2. 4.1-5 ac. 14pts.
- 3. 3.1-4 ac. 10pts.
- 4. 2.1-3 ac. 8pts.
- 5. 1.1-2 ac. 6pts.
- 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