

## Memorandum

To: Chris Gensic  
Charlottesville Parks & Recreation

From: Peter Krebs  
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Date: April 8, 2016

Re: Land Use at Comparable Reservoirs

In response to the question “What are other cities doing with use around their reservoirs?” I surveyed a dozen Virginia localities for comparable situations. I did not look at the most populous areas (Richmond, Hampton Roads, Fairfax) because they tend to draw either directly from rivers and/or from the ground.

I looked at the following: Roanoke City / County; Lynchburg; Fredericksburg / Spottsylvania; Charlottesville / Albemarle; Stafford County; Harrisonburg / Rockingham; Danville; Montgomery County (Blacksburg); Martinville; Culpeper; Manasas; Winchester and Staunton and I did find some analogous situations, though nothing exactly like Ragged Mountain, which (like all of them) is a unique property.

Those areas that have reservoirs with adjacent public lands tend to manage them in a way that is quite like the Forest Service’s approach. Indeed, several of them (Lynchburg, Harrisonburg and Roanoke) are located in National Forests.

In terms of Land Use, that means hiking, jogging and leashed dogs are allowed (though not in the water). No large area I’ve found outside of the Charlottesville MSA even mentions jogging in its rules. Bicycles are prohibited in two of the areas (Lynchburg and Harrisonburg) and permitted in four of them (Roanoke, Spottsylvania, Martinsville and Staunton). The others are private land or rivers, which are not really controllable. Those areas that allow bikes have certain trails where they are allowed and others where they are not.

Most of the reservoirs (not Manasas<sup>1</sup> or Staunton) allow boats, with regulation. Those that allow motors must be electric. Besides toxic pollutants water authorities are also very wary of Zebra Mussels. This aquatic invasive spreads easily but appears to be controllable by only permitting boats that are permanently on site or private ones that are cleaned of vegetation and allowed to dry for a week prior to launch. I have included a National Parks Service document about that.

Two of the areas (Roanoke and Staunton) allow horses, with restrictions. None permits swimming.

I was asked by a citizen at the February 29 presentation to be sure to look at off-stream reservoirs. Whether the reservoir water comes from its own watershed or is piped in does not appear to have any impact on surrounding land use decisions. That is not a surprise because off-stream reservoirs often get their water from unprotected watersheds.

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<sup>1</sup> In the case of Lake Manasas, there is controversy about whether this prohibition is related to Homeland Security or protecting exclusive private property that surrounds it.

For the sake of curiosity, I looked at some college towns around the country for out-of-state analogues, and that proved surprisingly difficult. Most towns of our size either pull water directly from rivers or from wells. In the interest of time, I curtailed the search after five: Asheville, Athens, Boulder, Durham and State College. They vary from being completely closed to the public (Asheville) to partially surrounded by homes (Boulder) with land use only controlled by zoning. In any case there are not enough analogues in my quick search to conclude that Virginia is particularly unique.

I have not bothered to investigate lakes that are not reservoirs because they will almost certainly be less restrictive than the most permissive regime that one could envision at Ragged Mountain.

The most germane models seem to be Carvins Cove (Roanoke) and Pedlar Reservoir (Lynchburg).

**Carvins Cove** is explicitly intended as an accessible (though natural) amenity. All of the uses contemplated at Ragged Mountain are permitted, even actively promoted there. Roanoke's approach to protecting its water supply is much more focused on protecting its watershed than about prohibiting access the reservoir. They have a detailed Natural Area Management plan and a Trail Management plan, which I have requested for you. I've attached their rules and trail map. Those and much more info available at: <http://www.playroanoke.com/carvins-cove/>

**Pedlar Reservoir** is a beautiful site and is considered quite pristine. It is very secluded, accessible only by Forest Service road and the Appalachian Trail. That is why bikes are not allowed—because there's no place for them to go—not because they're forbidden from the land (remember: it's Forest Service). Pedlar has its own set of boats that anglers may use but the area is not specifically designated for human use and although not closed it is not particularly accessible or close to town. Rules and regulations here: <http://www.lyncburgva.gov/pedlar-reservoir-fishing-permit-information>

All twelve of the Virginia water sources and the five out-of-state are summarized on the below grid.

It is important to note that the reservoirs on this grid represent reservoirs that “are”—full stop. We do not know whether they were wise choices or whether the particulars of each city and site are translatable to Charlottesville's situation. It is a basic maxim of land use that every plot is unique and while we can learn some things from the experiences of others, Charlottesville will need to decide what is best for *this* piece of land.

I could imagine a few areas of further investigation if it is deemed necessary and if my other responsibilities permit:

1. Survey more towns outside of Virginia, though I deem it unlikely that a unifying pattern will emerge that is different than Virginia.
2. Survey areas specifically designated as “natural areas” that may or may not have water bodies. If the RMNA is deemed to be entirely sensitive, then less intensive models will be necessary.
3. Follow up with Lynchburg and Roanoke and dig deeper into their original plans and subsequent evaluations.
4. If a certain mix of uses is approved, we can look at the *tactically* best practices of implementation.

<b>Virginia Cities</b>	<b>Pop. (2010)</b>	<b>Water Source Type</b>	<b>Location</b>	<b>On/Off Stream</b>	<b>Protected acreage</b>	<b>Fishing?</b>	<b>Boats</b>	<b>Bikes?</b>	<b>Hikers?</b>	<b>Dogs?</b>	<b>Horses</b>	<b>Notes</b>
Roanoke City/ County	309,000	Reservoir	Carvins Cove	On	12,463	Yes	Electric	Yes	Yes	Leashed, not in water	w restrictions	Linked to AT and other trail networks, but no camping. Citizen suggestion
Lynchburg MSA	253,000	Reservoir	Pedlar Reservoir	On	GWNF	Restricted	City owned	No	Yes	Not in water	No	Secluded + Not heavily used
Fredericksburg/ Spottsylvania	146,000	River via Reservoir	Motts Run	Off	860	Yes	Electric	Yes (2015)	Yes	Leashed, not in water	No	Citizen suggestion
<b>Charlottesville/ Albemarle</b>	<b>132,000</b>	<b>Reservoir + river</b>	<b>Ragged Mountain</b>	<b>Off</b>	<b>980</b>	<b>TBD</b>	<b>Carried</b>	<b>TBD</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	
Stafford County	129,000	Reservoir	Lake Mooney	Off	No	Yes	Electric	Private land	Private land	Private land	Private land	Citizen suggestion
Harrisonburg/ Rockingham	124,000	Reservoir + 2 rivers	Switzer Lake/ Skidmore Reservoir	On	GWNF	Yes	Yes	No	Yes	Leashed	No	Camping
Danville MSA	107,000	River	Dan River									
Montgomery County (Blacksburg)	94,000	River/ Ground	New River									
Martinville MSA	68,000	Reservoir	Beaver Creek Reservoir	On	20	Yes	1 week dry	Yes	Yes	Leashed, not in water	No	
Culpeper	47,000	Reservoir	Lake Pelham	On	no	Yes	Yes	private land	private land	NA	private land	Urban setting.
Manassas	37,000	Reservoir	Lake Manassas	On	no	private land	No	private land	private land	NA	private land	
Winchester	26,000	River	N Fork Shenandoah									
Staunton	24,000	Reservoir	North River Reservoir	On	GWNF	Banks	No	Yes	Yes	Leashed, not in water	w restrictions	

<b>National College Towns</b>	<b>Pop. (2010)</b>	<b>Water Source Type</b>	<b>Location</b>	<b>On/Off Stream</b>	<b>Protected acreage</b>	<b>Fishing?</b>	<b>Boats</b>	<b>Bikes?</b>	<b>Hikers?</b>	<b>Dogs?</b>	<b>Horses</b>	<b>Notes</b>
Durham, NC	229,000	2 reservoirs	Lake Michie	On	Some private	Yes	Yes	??	Yes	??	??	Camping
Athens, GA (MSA)	121,000	Reservoir + 2 rivers	Bear Creek Reservoir	On	Some private	yes	Yes	Yes	Yes	no	??	Camping
Boulder, CO	99,000	Reservoirs + CO River	Barker Reservoir	On	Mostly private	yes	no	yes	yes	yes	??	Residential/ Resort Area
Asheville, NC	84,000	Reservoir	Burnett Reservoir	On	Private, under easement	No	No	No	No	no	no	Off-limits to public, Secluded to degree similar to Pedlar (Lynchburg)
State College, PA	42,000	Wells + Reservoir	Shingletown Gap	On	State Park	no	no	yes	yes	yes	??	Reservoir itself off limits. Now on filtration due to giardia