

Little Calfpasture Water Quality Improvement Plan
Lake Management Working Group Meeting
October 25, 2016

Attendees

John Pancake (landowner)	Drac Peyton (CA Boy Scouts)
Charles Simmons (USDA-NRCS)	Karen Kline (VATech)
Gene Yagow (VATech)	Nesha McRae (VADEQ)
Paul Low (RACC)	Sandra Stuart (RACC)
Jay Gilliam (landowner, NBSWCD)	John Wise (landowner)
Ibrahim Ahmadisharaf (VATech)	Buster Lewis (Rockbridge County BOS)
Mike Jolly (CA Boy Scouts)	Philip Barbash (CA Boy Scouts)

Meeting Summary

Nesha McRae (VADEQ) began the meeting with a review of the meeting summary that was prepared and distributed following the first Lake Management Working Group meeting in September. Updates were provided since that meeting regarding a potential clean up effort at the bluffs site and the agricultural working group meeting also held in September. DEQ staff contacted Rockbridge and Augusta County staff regarding illegal dumping in the watershed. Rockbridge County staff visited the bluffs site and took photos to determine what kind of effort it would take to clean up at the site. There is quite a bit of large debris there. DEQ staff has also contacted VMI to see about a potential project for the cadets, since removing a lot of the material will require ropes and pulleys. It was noted that the last clean up project at the site was in 1995, and that it was a joint project between the county Emergency Coordinator and the Boy Scouts. They could be approached to partner on something in 2017 as well. Augusta County staff has not received any reports of illegal dumping in the area in the past three years, which is how far back they keep their records of such reports. Following the Agricultural Working Group meeting in September, an Agricultural Stewardship Act complaint was filed with VDACS against the Augusta County Correctional Center. VDACS staff has followed up with staff at the prison as well as the complainant and is hoping that a voluntary solution can be identified working in partnership with VA Cooperative Extension.

Gene Yagow (VATech) shared a presentation with the group on potential best management practices and strategies to reduce sediment coming out of the lake. He showed a map highlighting four potential areas around the lake for dredging and discussed prioritization of those sites. Options for revegetating projects were also discussed along with estimates of sediment reductions associated with each potential project area identified on the map. Gene shared dredging cost estimates (per cy of sediment removed) based on the costs of the ACOE funded dredging project that took place at the lake in fall of 2015. Gene noted that when he compared these values with the average dredging project cost reported by the ACOE for 2015, the values for the Lake Merriweather project were extremely high (\$935.48/cy versus \$23.64/cy). Some of this may be due to the scale of the project since equipment mobilization is a fixed cost. The group discussed why the ACOE did not dredge a larger area once they had equipment out at the lake. Several participants thought that this was due to the fact that the ACOE had prepared a plan and designs for the project several years before it was completed and could not deviate from this plan

due to permitting requirements. Nesha offered to follow up with the ACOE regarding the overall project costs and determine why they were so much higher than national averages reported by the agency for 2015.

Gene also presented a series of alternative drawdown scenarios for the lake, showing examples of actual drawdown schedules from previous years along with estimated sediment loads that would come out of the lake under each scenario. Gene explained that these loads were not simulated using the TMDL model. They were based on estimates of sediment loads for different land uses including the exposed mudflats that appear when the lake is drawn down.

Gene shared a map of the watershed just below the dam with aerial imagery showing a disturbed area where soil erosion appeared to be occurring. Gene explained that this area was the site of the emergency spillway project recently completed for the dam, and that it could benefit from some vegetative controls to prevent further erosion. He provided estimates of the sediment load coming from this area using an average sediment loading rate for the disturbed area. Gene noted that there are a few opportunities for sediment to enter the water downstream of the dam including: resuspension of sediment in the plunge pool just below the dam, drainage from the emergency spillway which needs additional stabilization practices put in place, and a couple of stream crossings that are heavily rilled and thus actively eroding.

Gene noted that the upstream diversion project that the Boy Scout had considered previously would be another option to include in the plan. Another participant added that options for filtering out debris before it gets into the lake should also be explored. The costs and associated engineering to design something to keep large material out of the lake should be considered since this would allow the Boy Scouts to adjust their drawdown schedule when they go in each winter to remove debris. Mike Jolly noted that the four areas Gene identified for dredging would be very easy to get to with basic equipment. The primary challenge/expense would be appropriate disposal of the material. Gene suggested exploring marketing options for the material since it would be very good soil. One participant suggested looking at the Rockbridge County 100 year flood database to identify any locations on the Boy Scout property where the material could be disposed of. The group agreed that the permitting requirements for disposal of dredged materials need to be explored. One participant asked whether the Boy Scouts thought that their bridge at the top of the lake was in danger of damage from large debris coming downstream during flood events. Mike Jolly responded that he didn't think that was a concern for them.

One participant suggested exploring the cost of all of the sediment making its way downstream to the Maury River (47 miles of river) in terms of impacts to the fishery and other forms of recreation. He suggested looking at DGIF creel surveys and contacting the Rockbridge County Service Authority to get an estimate of any additional treatment costs they typically incur.

The group discussed the example of College Lake in Lynchburg that was mentioned at the last meeting and the management strategies that were being explored. This lake is filling in slowly and reverting back to a wetland. Currently, a proposal to take out the dam is being considered in order to let the lake

revert back to a wetland. It was determined that the situation at this site is not comparable enough to Lake Merriweather to draw ideas from.

One participant shared concerns about the Maury River backing up into the Little Calfpasture as a result of high flows from the Calfpasuture. Another participant asked the Boy Scouts about the intended use of the emergency spillway. They explained that the spillway is only to be used in cases of emergency, and will kick in once the lake reaches 50 feet. Another participant asked the Boy Scouts about the ACOE's role in managing the lake. It was explained that they have limited staff available to assist with overall management but that they have expressed an interest in assisting with projects over the years to ensure the safety and viability of the dam. Mike Jolly noted that they really rely on DCR Division of Dam Safety to answer questions about day to day operation of the dam. DCR is also charged with completing regular dam inspections (the Scouts have one coming up soon). Overall, they have a very good relationship with DCR, but not very regular interactions with ACOE staff.

DEQ staff reviewed next steps for the project. There will be one more lake management working group meeting in the early spring once Nesha returns from maternity leave. During this meeting, a final implementation scenario will be selected, costs will be shared and a timeline will be agreed upon. This meeting will be followed by a steering committee meeting to review the draft plan, and a final public meeting will be held in the summer. The meeting was adjourned at 3:30.