

**South Fork Rivanna Reservoir Stewardship Task Force
DRAFT Minutes of Task Force Members Meeting
September 29, 2008**

A meeting of the members of the South Fork Rivanna Reservoir (SFRR) Stewardship Task Force was held on Monday, September 29, 2008, at 6:00 p.m. in Conference Room 241 at the Albemarle County Office Building, 401 McIntire Road, Charlottesville, VA.

SFRR Stewardship Task Force Members Present: Ms. Holly Edwards ó Charlottesville City Council, Mr. Mark Fletcher ó citizen from University of Virginia (UVA) representing recreational interests on the SFRR, Mr. Michael Gaffney ó Rivanna Water & Sewer Authority Board of Directors, Mr. Thomas Jones ó citizen representing property owners along SFRR, Ms. Karen Joyner ó Ivy Creek Foundation, Mr. Chris Lee ó Charlottesville Regional Chamber of Commerce, Mr. John Martin ó Rivanna River Basin Commission, Ms. Wren Olivier ó Sierra Club, Dr. Liz Palmer ó Albemarle County Service Authority Board of Directors, Mr. Dennis Rooker ó Albemarle County Board of Supervisors, Mr. Ridge Schuyler ó The Nature Conservancy, Ms. Dede Smith ó Citizens for Sustainable Water Supply, and Ms. Sally Thomas ó Chair, member of the Albemarle County Board of Supervisors and representing the League of Women Voters.

SFRR Stewardship Task Force Members Absent: None

Also Present: Ms. Tamara Ambler ó RWSA Water Resources Manager, Mr. Stephen Bowler ó Fish Biologist and Team Leader for Wave and Hydrokinetic Energy ó Division of Hydropower Licensing ó Federal Regulatory Agency, Mr. Tom Frederick ó RWSA Executive Director, Ms. Lee Catlin ó Albemarle County Community Relations Director, Ms. Mary Knowles ó Recording Secretary, Dr. Robert Wichser ó RWSA Water & Wastewater Director, members of the public, and media representatives.

1.0 Call to Order

The meeting of the SFRR Stewardship Task Force was called to order by Ms. Thomas on Monday, September 8, 2008 at 6:04 p.m.

She asked Task Force members if they were comfortable adopting the minutes presented. Several members indicated that they had not had sufficient time to review them.

Ms. Thomas said that Steven Bowler has been the watershed manager for Albemarle County five years and wrote the report provided last meeting, and now he is with the Federal Energy Regulatory Agency ó working in part to find alternative energy sources from water.

Mr. Bowler thanked Ms. Thomas and indicated he hoped to help the task force find solutions to the reservoir issues. He said that he has examples of similar situations and technical options that offer a range of possibilities at various costs. Mr. Bowler said that he has experience in water resource management and modeling, including with RWSA and other agencies such as the Nature Conservancy. He said that he is here independently and is not representing the Federal Energy Regulatory Agency, and RWSA has the ability to operate hydroelectric power and a dam ó and he would not be able to consult on that professionally, only independently.

He also added that there are aspects of the water supply plan that he is not up to speed on, but he can address the sediment and dredging issues. Mr. Bowler said that similar projects have had a higher degree of problems and complexity, including one project where the power company was

the project advocate and hired experts to attack one hydraulic model presented by another entity, and the process became tangled and stalled at this point. He also mentioned another large project that involves ten dams and a more conventional power plant, with 70 parties involved in negotiations; they achieved a settlement with almost all involved. Mr. Bowler said that there was significant compromise on that project, and they got some added agreements beyond what was originally hoped.

Mr. Bowler said that if various interests are at the table when a hydraulic/sediment transport and deposition model is created, it probably saves a lot of time and money as there was a shared set of facts. He added that it's important to have a solid baseline against which to compare alternatives.

Mr. Bowler asked task force members to introduce themselves and the agency or group they represent. He also presented them with a list of possible reasons why their organization is involved.

Ms. Thomas said that she is representing the League of Women Voters, which has been interested in the quality of the South Fork Rivanna Reservoir for a long time with a goal of reliable water access.

Dede Smith said that she is representing Citizens for a Sustainable Water Plan, and their interest is restoration of the South Fork to its capacity to contribute to the area's water supply either as a safety net or an ongoing source.

Ridge Schuyler said that he is representing The Nature Conservancy, and water quality and quantity and supporting native river flora and fauna would be the closest description as to his organization's reasons for being involved.

Dennis Rooker addressed the Board, stating that he is representing the Albemarle County Board of Supervisors, and citizens' interests would really include all choices presented, but primarily the first one listed and the one Ms. Smith indicated was important for her group. He added that he also thinks it's important to maintain the capacity of the reservoir.

Liz Palmer, representing the Albemarle County Service Authority, said that she would also pick the first choice, but many of the other choices are also applicable – especially those related to water quality.

Wren Olivier said that she is representing the Piedmont Group of the Sierra Club, and their interest is maintaining a clean water supply.

John Martin stated that he is representing the Rivanna River Basin Commission, which has interests in more than three political districts, with water quality being extremely important to the basin.

Karen Joyner of the Ivy Creek Foundation addressed the Board, stating that the choice pertaining to Ivy Creek is most applicable, with the educational value of the changing watershed being a sub-area of concern.

Chris Lee, representing the Charlottesville Regional Chamber of Commerce, indicated that the

quantity of the water supply is probably their primary focus.

Tom Jones stated that he is representing South Fork landowners, and commented that it seems this is an exercise in parsing out individual values. "All these things should go together." He did indicate that the reservoir as a source of water storage and supply is extremely important, no matter where the water ultimately ends up coming from. He commented that it is a unique riparian environment for recreation, for flora and fauna, and "there is nothing else like it."

Mike Gaffney said that he is representing the Rivanna Water and Sewer Authority, and their primary area of interest is water supply.

Mark Fletcher stated that he is from the University of Virginia, and their focus at this point is from a recreational standpoint ó rowing, canoeing, kayaking, etc.

Tom Jones commented that one could have wonderful access, but the conditions may not be that great, so "convenient" may not be the best adjective for describing the access.

Mr. Rooker agreed.

Holly Edwards of Charlottesville City Council stated that the city's primary areas of concern are capacity and water supply alternatives, and she would also like to encourage diversity and community involvement with this process.

Stephen Bowler said that he would like to present a good conceptual model for the group to work with as a starting point. He presented factors that determines a stream's health in a number of ways and information on the water cycle, with water in the stream coming in part from surface flow but much of it coming from shallow groundwater. Mr. Bowler said that the proportion of groundwater to surface water in a stream is one of the most important characteristics, and streams in this area tend to be "fairly flashy" and driven heavily by rain events. He compared this to streams in areas such as Michigan that remain constant due to sandy soil and absorption.

Mr. Bowler presented information on the Mechums River's water levels and how they vary with storms and runoff. He said that water flowing downhill has lots of power, and a five-gallon bucket of water weighs about 40 pounds. Mr. Bowler said that power in a stream is estimated at 10 times the rate of flow times the slope ó the amount of flow dividing the water moving downstream; steeper slopes and more water yield more power and vice versa. He noted that streams can only carry particles up to a certain size, and larger particles cause "cutting." Mr. Bowler commented that the Moorman's has large banks because of this.

He explained that using conceptual models with a literature review along with data and aerial photographs can help predict the future of a stream. Mr. Bowler also presented information on different type of HEC models, with HEC-6 being DOS-based instead of Windows-based but still the standard for this exercise. He suggested that the task force get bids if they use modeling, as there may be a great range within the estimates.

Mr. Rooker asked if there is data on how accurate these models are, and Mr. Bowler indicated that there some error and it would essentially be a very informed guess.

Mr. Bowler presented information on the average annual estimate of sedimentation being 15-16

million gallons per year but said it can be highly variable rate in a particular year depending on storms. He commented that the South Fork is a "microcosm of the rest of the country" and non-point sources will continue to be the focus. Mr. Bowler said that in colonial times, America logged and farmed very intensely to the point that many areas were down to single-digit numbers in terms of percentage of forest cover in many watersheds in the region. "We basically lost all of our topsoil in a very short period of time. It went into the stream valleys and into the streams." He emphasized that if you had a whole bunch of material you get deposition, so the hypothesis is there are ample floodplains here because there is a tremendous amount of deposition. Mr. Bowler said that after the Civil War there was reforestation and sediment loads went down but there was already a lot in the valleys, which continues to be moved downstream in storms. He added that landscaping efforts help with hydrology and help the stream in reaches between confluences with large tributaries with sediment transport.

Mr. Bowler said that within the stream channels is legacy sediment and this sediment will mean that any land use measures above the stream will not be a panacea and would likely only help the minority of sediment going to the reservoir. He said that there may be measures to collect some of that sediment before it gets there, perhaps through other reservoirs. Mr. Bowler mentioned that there are sand-miners that will dredge an area to reduce sediment, and the sand can be used for other things. He also said that changes in the reservoir are likely to be along the lines of what they are now in places such as the mouth of Ivy Creek; a reservoir will allow for more wetlands in a floodplain, which may actually be attractive wetland habitats. Mr. Bowler recommended that if the group does modeling, they would probably want to try to determine how the sediment elevations were going to change and the flood elevations as they can rise with the sediment.

Mr. Bowler discussed different types of dredging that have been used around the country, and inland dredging with disposal is rare as most inland dredging is navigation-channel clearing that is dumped somewhere else in the river or moved into a fill. He mentioned that another common form of dredging is the sand-mine type he discussed earlier.

Mr. Rooker asked Mr. Bowler if he had observed inland dredging, stating that dredgers he has spoken with indicate there is minimal noise unless you actually go to the site.

Mr. Bowler replied that if you are near the site, you can hear the machinery so it's not always well-received by neighboring businesses. "It's a constant noise, and you've got lots of equipment sitting around. There's a fairly industrial component to it."

Mr. Martin asked him what he would have recommended for the county to have built if he had known about the problem of sedimentation.

Mr. Bowler responded that most reservoirs in this region have a surface area to watershed area ratio of 30:60, and the South Rivanna is approximately 400:1, with Ragged Mountain at about 6:1; Occoquan is about 200:1. He explained that a reservoir is often big enough to collect some water, but smaller in terms of yield of sediment. Mr. Bowler said that there are too many variables that have to be balanced, and this is a large watershed. He also commented that different people's interests are going to be more affected than others, so the issue becomes who would be most affected by the dredging, and who would pay for it.

Ms. Smith said that the area is in a "bit of a bind" because previous watershed plans were so conceptual, and expressed her interest in the quantitative estimates. She asked him to clarify the

difference between modeling and onsite observations.

Mr. Bowler explained that in order to make an accurate model you would need to compare a current model from one from 1960 or so. "You calibrate from the past and then you extrapolate based on your best estimate of the laws of physics. It gives you a justification for estimating what's going to happen in the future even though you know a lot of things are changing." He noted that the first question would be what's going to happen and the second question would be how each alternative would affect the baseline. Mr. Bowler that the modeling is done primarily by geomorphologists and hydraulic engineers, with the dredging being done by industrial companies using consulting advice.

Mr. Gaffney asked how long it would take to look for dredging disposal sites.

Mr. Bowler replied that it is often cost-driven, and sites are sought based on whether they are to be used for 50 years, 200 years, etc.

Ms. Edwards asked what the health of the river would be like if the dam were breached.

Mr. Bowler replied that it would be a tricky project because the sediment that's in there would still need to be dealt with, and this particular dam is a size that not a lot of people have dealt with. "It would be a new challenge for the field."

Mr. Schuyler asked if it would be possible to establish a timeline for the next 50 years without doing a quantitative analysis as described.

Mr. Bowler responded that there are a few experts in that field who could answer that question.

Mr. Jones commented that the modeling provides some prediction as to the behavior of the reservoir over time, and asked if it would be possible for a return on the \$150,000 investment for it – perhaps through more efficient dredging.

Mr. Bowler replied that the model would need to be specified to answer that question, for example eliminating dredging areas because of distance to an access point.

Ms. Thomas thanked Mr. Bowler for his presentation, and group members applauded in appreciation.

Mr. Rooker noted that the rate of sedimentation has been about 15.6 million gallons per year, but has varied over time based on storm events. "Is there any reason not to just expect that it's going to silt in at about 15-16 million gallons per year of lost capacity?"

Mr. Bowler answered that over time things will shift due to storms that affect flow in contained channels and other variables.

Mr. Rooker said that he wondered if there would be a way to determine some of those things without spending \$100,000.

Mr. Schuyler commented that the question is capacity, and the task force was asked to focus on the disposition of the reservoir as it relates to the expectations people have for it over time.

Capacity is just one of the many things that we should assess.

Mr. Rooker said that a quantitative analysis will yield a quantitative answer, and would likely not address all of the questions posed by Mr. Bowler.

Ms. Thomas commented that it's within the task force's purview to determine what those questions are as they move forward.

Mr. Bowler said that it's possible to get information on how the shape of the reservoir might change, but you wouldn't be able to get a number on the total amount of storage loss.

Mr. Schuyler stated that the analysis should be able to show the shape of the reservoir, not just storage capacity which would impact the habitat of fish and potential uses for the reservoir. He said that the reservoir would be essentially trying to get back to a natural river, and the question is how long will that take and what will it look like.

Dr. Palmer said that that's why it's important to have involvement in shaping what that analysis will include.

Ms. Thomas then closed the discussion on Mr. Bowler's presentation and proceeded to the next item on the agenda. She explained that the task force is seeking public input, and a questionnaire has been designed to elicit community participation. She said that decisions need to be made on the final content of the questionnaire and how to distribute it, as well as the timeline for receiving input.

Ms. Smith said that it might be interesting to get people's zip codes as they respond, and whether or not they pay a water bill, noting that many citizens may not be aware of their water source.

Mr. Gaffney added that most people would know if they were on a well or not.

Ms. Thomas said zip codes don't necessarily clarify where residences are, but agreed that perhaps other measures could be used to establish where people reside. The group agreed to use zip code plus whether or not residents are on a well.

Mr. Lee asked if residential versus commercial locations could be differentiated.

Ms. Thomas noted that most businesses are on public water.

Mr. Schuyler asked if the survey was trying to measure public perception of water source.

Mr. Gaffney commented that if the responses are not useful and meaningful in some way, the questions should be tabled.

Ms. Catlin said that the focus was originally drinking water and the use of the reservoir, and the survey is not really going to provide statistical data.

Ms. Smith asked who would compile the responses.

Mr. Rooker stated that perhaps the questions should be limited to just a few of the ones on the

bottom of the proposed survey, #4 and #5.

Ms. Thomas said that when she asked her neighbors at West Leigh how they use the reservoir, they weren't thinking of drinking water and the majority had walked at Ivy Creek Natural Area, with a couple having rowed the reservoir.

Mr. Rooker noted that depending on how the survey is distributed and to whom, responses may not necessarily be reflective of the population as a whole.

Ms. Catlin commented that as a starting point for public involvement, it might be valuable to learn how people use the reservoir.

Mr. Lee said that diversity of responses may make it difficult to define outcomes, and perhaps the public should be given more information about "what doing nothing means." He asked, "Is this public input premature?"

Mr. Schuyler noted that his vision of this is finding out what uses people have and what they expect out of the reservoir, then trying to figure out how those uses are going to be affected by different scenarios - including doing nothing.

Mr. Rooker responded that if that is the conclusion to be drawn, the survey needs to be distributed in a very broad way so that specific subsets of reservoir users don't skew the results.

Ms. Catlin said that multiple choices could be given with an "other" category included.

Task force members discussed the semantics of proposed question #5, and considered the wording "what do you want out of the reservoir."

Ms. Thomas mentioned that question #2 is "How are you currently using the reservoir?"

Mr. Jones noted that most people have concerns about the water supply, and the question asking about how use of the reservoir had been affected by changes over the last 5-7 years might yield public comments related to water restrictions during recent droughts.

Ms. Thomas said, "Well it seems to me that's relevant."

Mr. Rooker emphasized that the purpose of the survey is to get comments from members of the public who might not come to meetings.

Mr. Schuyler said that there may be a difference in what people expect from the reservoir versus what the government is going to do about it.

Mr. Jones suggested that perhaps a question posed to the public should be what type of actions they would like to see taken.

Mr. Rooker said that it's important to ask opinion on what should be done to the reservoir with respect to future uses. "What is your opinion about what should be done to maintain the future uses of the reservoir?"

Ms. Olivier said, "It's a good way to say it."

Mr. Schuyler commented that what's trying to be established is what people want out of the reservoir and what actions are needed in order to make that happen.

Ms. Catlin said that they are looking to get opinions in a variety of ways – direct email, free-form opinion, structured survey, and public meetings. She commented that the survey may be the start of conversation, which would lead to increased public feedback and interest in seeking more information.

Mr. Jones asked if the question should be posed as to what actions are expected to ensure future use of the reservoir.

Ms. Thomas said that one question is what are future expectations for the reservoir, and a second is what should be done so that those hopes can be realized.

Ms. Edwards commented that the survey should be as expanded as possible so that it doesn't appeal just to a small group of reservoir uses. She also wondered if another question should relate to knowledge of existence of the reservoir and the task force. "It's important to have a holistic approach to the public input process."

Ms. Thomas asked the group to think about how those general questions should be worded, and how to distribute the survey for broad-based input.

Ms. Catlin suggested wording of "have you ever been to the reservoir and if so how have you used it." She added that the question could say "have you ever been or used the reservoir."

Ms. Catlin said that other questions would include "have you found public access to be adequate," "has your use been affected by changes," "if yes, how has it been impacted," and "what are your expectations or desires for the future of the reservoir." She also stated that a question soliciting other comments could be included.

Ms. Smith stated that it would be helpful to include information on resources available for the public to access.

Ms. Catlin noted that instead of having the survey sent around, it would be available on a website and the link would be sent around, with actual results compiled online. She added that for paper surveys, drop-off locations can be established.

Ms. Thomas commented that this can be distributed in a number of different ways.

Task force members noted that they only have four meetings left, including one for public input.

Dr. Palmer expressed concern about not leaving enough time to solicit and process public input.

Ms. Thomas suggested that everyone look at the six bullets and focus on how they would respond to each, then have a public hearing on October 27th.

Ms. Smith noted that City Council limits public comment.

Ms. Thomas said that she didn't think it would be overwhelming.

Ms. Edwards stated that perhaps a standard for receiving public comment on the task force level should be established. She added that it's possible that something said in that comment period might change the way the task force considers an issue.

Ms. Thomas suggested starting off with 30 minutes of public comment.

Ms. Joyner said that if a half-hour of public comment is allowed, that will be the expectation for all future meetings.

Ms. Thomas stated that it's up to the group how to proceed.

Ms. Joyner commented that it should be made clear that having public comment at every meeting is not the expectation until it's determined how much work the task force has left to do. "I think we have a lot of work left to do."

Mr. Jones said that there would be one big public meeting that would serve to get input, as there must be time given for the task force to deal with the issues.

Mr. Rooker stated that the next meeting could provide a half-hour, with the public hearing following two weeks later.

Ms. Catlin clarified that the task force had agreed to the survey questions, and the distribution means being the responsibility of the county and all task force members.

Task force members agreed that the survey responses should be collected by the end of the month.

Ms. Thomas asked for any public comment at this meeting.

Ms. Collette Hall, a Charlottesville City resident, encouraged the group to allow for ample time for public comment as many people can't get to the meeting as it starts. She said that city residents must use public water and would be most affected by what this group recommends.

Mr. Rooker emphasized that there needs to be a cap on how long people can speak.

Ms. Thomas indicated that three minutes is used at Board meetings, and task force members agreed.

Ms. Betty Mooney, a Charlottesville City resident, encouraged task force members to use actual dredging experts and view the presentation done by Gahagan & Bryant, as they are experts on the subject and have done inland dredging.

Mr. Richard Lloyd, an Albemarle County resident, said that he went to the reservoir with representatives of that firm and attended about six meetings with them. "Nobody at this table was mentioned. They were here to tell us whether the price, the estimate that was made for dredging the reservoir was rational or irrational." He added that they also wanted to know

whether dredging was to be done all at once or over time, emphasizing that addressing the issues presented here was not part of the charge of the firm.

Mr. Tom Olivier of the Piedmont Group of the Sierra Club said that that group recommends careful consideration of restoration of reservoir capacity.

Ms. Thomas said that when she asked Gahagan & Bryant about the steps for dredging the reservoir, they said "first you have to decide why," and that's the basis upon which she started the first meeting even if it's not in the task force's charge.

Mr. Jones noted that the charge of the group doesn't say not to consider the 50-year water supply plan, and dredging could be an enhancement or alternative in that plan.

Ms. Thomas stated that determining the overall water source is not the charge of this group.

Mr. Rooker emphasized that it can't be ignored that dredging adds capacity to this system, and the issue with the highest "value" is water quality and quantity. He said that the quality issue would likely be addressed by dredging, as it's been purported that that's the only way to control hydrilla.

Dr. Palmer said that there is a water supply plan now, and the issue of how and where to dredge is a big issue especially as it relates to costs that the public will be assuming. "We need to be very specific about why we want to dredge and when" -

Mr. Rooker commented that it's difficult for the task force to make recommendations on dredging within cost parameters because they have no idea what they are at this point.

Ms. Smith responded that that's why the city and county called for a study on dredging.

Mr. Rooker said that the cost figures provided have been very broad, depending on a number of different variables. "Some people might have a competitive advantage because they've got a spot to put the silt. There aren't many places around that reservoir where you could set aside several acres that are not interfering."

Mr. Schuyler said that he recalls the City Council meeting as having fixed one of the variables of what's going to be done for the 50-year water supply and a proposed solution of building the Ragged Mountain Reservoir and pipe it and connect it to South Fork. He stated that the council then acknowledged the community benefits of the South Fork beyond the water supply, so they recommended creating the task force to look at the "viability and merits" of maintenance dredging, not the cost.

Mr. Rooker emphasized that the cost of doing that dredging is extremely important in this group recommending that it be done.

Dr. Palmer commented, "That defines the scope and then you figure out what the process is."

Mr. Rooker said that you can't ignore that whatever level of dredging is done will increase capacity, but it doesn't mean it replaces the water supply plan. He added that reasonable estimates of costs were attempted with that plan based upon information available to work with.

“If the costs exploded, would it be wise to have an alternative?”

Mr. Martin commented that alternative dredging would produce a smaller water supply than what is available now under the water supply plan. “That’s what the proponents of dredging want ó they don’t want a better water supply, they want a smaller water supply.”

Ms. Olivier disagreed.

Mr. Martin said that dredging the South Fork instead of expanding Ragged Mountain yields a smaller water supply, “and that is not acceptable.”

Ms. Olivier responded that that is not known yet.

Mr. Fletcher said that if one of the questions is cost, why wouldn’t an RFP be done to establish costs. A contract doesn’t have to be awarded.

Mr. Schuyler emphasized that the scope of work would have to be defined. “What is it that the residents want out of this reservoir so we can now develop a scope of work to find out what the cost is and a decision can be made about how to go do it.”

Mr. Fletcher agreed that developing the RFP is very important. “You can do it in steps.”

Mr. Rooker said that gradual dredging over a ten-year period of time is a whole lot more costly than doing it one time.

Ms. Thomas stated that costs vary depending on when the dredging is done ó what time of day, etc.

Mr. Fletcher said that that’s the benefit of issuing an RFP.

2.0 Adjournment

The SFRR Stewardship Task Force meeting was adjourned by Ms. Thomas at 8:40 p.m.

Respectfully submitted,

Ms. Sally H. Thomas
Chair