Ideas for the POA to Debate

1. Organize a "Stake in the Lake Day"

Designate one day during the summer, when there are plenty of visitors around, as Deep Creek Lake Stakeholder Day. All stakeholder organizations would have some kind of exhibit of their area of interest. Perhaps coordinated in the fairground building or a location of their choice. Schools can participate. Individuals can participate. Companies can participate. Governments can participate. Can be any subject matter. Last from say 9am to 5pm or 8 to 6. Have visitors vote on a best exhibit(s). Similar to what a general conference, that was talked about at workshop #1, intended to do, a venue for everyone who wants to say something about their interest in Deep Creek Lake.

2. Moving Lake Level Regulation from MDE to DNR

Find a way to make this happen. Get MDE out of daily operations affecting Deep Creek Lake. This would require a totally different methodology to define water releases. This could be anchored by a predictive model of the lake level in the absence of rain. Predictions can be made 2 to 4 weeks in advance so that whitewater people can make plans. These predictions would be made by DNR who polices the lake level.

3. Compensate Brookfield for Keeping Lake Levels Higher

Based on published information one can calculate that 1 ft of water in the lake is worth about $ 60K/ year for Brookfield. With about 2,000 lake property owners this amounts to $30/year to keep the lake one ft higher than the lower rule band. This can certainly be refined by considering only the critical months. Perhaps attached to dock fees.

4. Deep Creek Lake Information Center at the College

The keep the lake healthy requires a program that constantly monitors various properties of the lake and models its behavior so that corrective actions can be taken early before they become runaway problems.

While the lake is healthy at this time, we must take proactive measures to make sure that it remains that way for future generations. If left to nature's own ways, the lake will eventually be a swamp, becoming filled with sedimentation and overtaken by aggressive aquatic vegetation and algae growth, in a process called "eutrification." Such processes could severely impair the use for recreational activities.

There should be higher education component that organizes the data and is the center of scientific information for Deep Creek Lake. There should be a public component that raises money to operate the higher education component, mostly via acquiring grants and sponsorships and suggested areas and topics of research.

5. Aging Facility

The hydroelectric station is aging. When Reliant Energy purchased the facility, Stone & Webster rated the facility's end-of-life to occur in 2029. What are the options after that? Is it time to start a dialog with MDE and Brookfield? Given the variety of maintenance issues, could it become cost-prohibitive to repair the facility much sooner than 2029?

6. Lobbyist in Annapolis

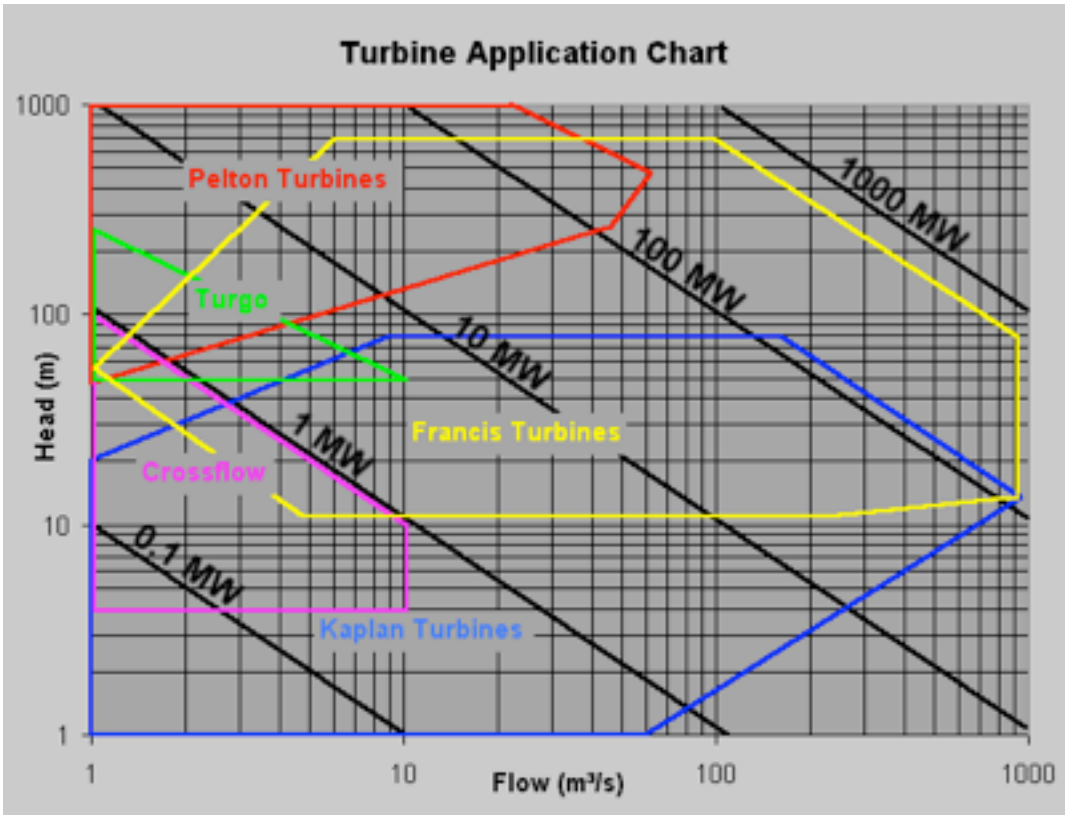
We, the lake property owners, are repeatedly defeated by the whitewater and fishery organizations. These organizations have full-time/part-time lobbyists in Annapolis constantly influencing the thinkings of our legislative representatives. It's very clear that we must do the same in order to promote our

agenda. However, for him or her to be effective we need to have a well understood comprehensive agenda of change that we want.

7. Hiring a Hydro Consultant

I would follow the following procedure:

1. Have a good understanding of what you want out of the process.
2. Talk to Harlan Bernard. Find out what his opinion is. Perhaps give him a stipend to put it on paper. Perhaps he knows some engineers.
3. Talk to Brookfield to see if they want assistance. My gut feel is that they will say "Mind your own business" But you need to check because without their cooperation there is not much a consultant can do. Each hydro plant is different. They are designed for the location, particularly all of the control and safety systems. You need to have access to "as built" drawings and be familiar with their operating procedures.
4. The PPRP program that Maryland has under DNR looks at all power plants. For Deep Creek they developed the temperature release algorithm. The way I understand it, it's work that is subcontracted out to Versar, Inc [Continental US] It's a global organization and they may well have the expertise and data in hand.
5. Beware that there are low-head and high-head hydroelectric projects. Below is a graph that tells you want designs are workable under different operating conditions. Deep Creek has Francis turbines.



6. I believe one should also have a conversation with John Grace about this.

1. Jennings Randolph has a proposed hydro electric project. The developer for this is Advanced Hydrosolutions of Fairlawn, Ohio. Perhaps they have an engineer on staff..
2. There are five major hydroelectric projects on the Susquehanna River. Check out each one of these. The last one is in Maryland, the others in Pennsylvania.
    1. FERC License Exp. 2014 - Safe Harbor (PPL/Constellation)
    2. FERC License Exp. 2030 - Holtwood (PPL)
    3. FERC License amended to 2030 - Muddy Run Pump/Storage (Exelon)
    4. FERC License Exp. 2014 - Conowingo (Exelon)
3. The figure below shows the locations of all major and minor hydroelectric projects. They may be sources of advice. The most recent one was a 400kW at Brighton, built in 1986.
4. Finding a consultant? I would start making some calls to the major A&E companies:
    1. Stone & webster
    2. Bechtel
    3. Foster Wheeler
    4. Black & Veatch
    5. Babcock & Wilcox
    6. Many others…
5. Perhaps the "American Council of Engineering Companies / Maryland.
6. Or from the following list:
    1. The Top 500 Design Firms | ENR: Engineering News Record | McGraw-Hill Construction
7. Or perhaps check out the following links:
    1. Sunrise Engineering: Hydroelectric Design & Licensing
    2. Hydro Electric Power Companies
    3. National Hydropower Association & Home - National Hydropower Annual Conference
    4. Home - Canadian Hydropower Association
    5. Bureau of Reclamation Hydropower Program
    6. EERE: Water Power Program Home Page
    7. HydroWorld: Hydro Project, Technology, Dam Construction, FERC Regulation & Environmental Impact
    8. Hydro Engineering, Hydropower Engineering, Hydroelectric Design
    9. Microhydro directory
    10. Wenckus Engineering Projects - Generation Consulting
    11. Power from the Landscape | Micro hydro Installers, consultants and manufacturers
    12. Expert Consultants | Find The Expert Consultant You Need
    13. Rehabilitation Feasibility for Hydro Electric Generation Powerhouse - Stanley Consultants
8. People:
    1. Hydropower Expert & Hydraulic Turbines Expert Consultant, Expert Witness
    2. Philip J Sun | LinkedIn
    3. About Wenckus Engineering - Generation Consulting <----------

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Figure 2-9 Locations of Hydroelectric Facilities in Maryland