

## **A Concept for Managing Deep Creek Lake (by Pete versteegen)**

The purpose of this white paper is to examine concepts to manage the lake and its resources in a more friendly, sensitive, and balanced way.

The current management practices, under the Maryland Department of the Environment (MDE), do not specifically acknowledge property owners around the lake as “users of the waters” or stakeholders and as such this group of people have no say in how lake level issues are managed. There is no mention that the lake is for recreational use. The white water releases are specified for recreational use. Four of the twelve pages of the permit address the white water recreational use.

There is nothing in the permit about users of the lake itself. More or less implicitly, the “rule bands” that have been established is supposed to take of the lake property owners, but there is no enforcement mechanism in place to deal with the situations when the water level is below the lower rule band or is threatening to go below the rule band. This has the effect that lake levels can become sufficiently low during the high point of the summer season that boats may have to be taken out of the water or moved to avoid becoming stranded. If this is an oft repeated situation this can cause a significant economic impact on the lake.

I believe that the problem is the MDE permit, which specifies when Brookfield Power, Inc. can release the waters from the lake through their turbines. For reference a copy of this permit can be found on [deepcreekanswers.com](http://deepcreekanswers.com), and will be referenced in this white paper as “the permit”.

The basic problem lies in the manner that this permit describes how the water from Deep Creek Lake is supposed to be used.

The following is quoted directly from the permit:

"2. USE - THE WATER IS TO BE USED FOR HYDROELECTRIC GENERATION, TEMPERATURE ENHANCEMENT, WHITEWATER BOATING ENHANCEMENT, AND MAINTENANCE OF MINIMUM FLOWS IN THE YOUGHIOGHENY RIVER."

Here is how I interpret the above stated USE of the water:

- a) Hydroelectric Generation - Controlling the outflow of water from the lake is necessary to maintain lake level, the dam, and flooding potential. Brookfield owns the dam and the generator and hence needs to be compensated for their maintenance. Hence I **do** want Brookfield to make money, and hence I **do** want them to continue to operate the turbines and maintain the dam.
- b) Temperature Enhancement - Releasing water from the lake provides a cold stream that is mixed with the regular flow of the Youghiogheny River. This allows fish to stay in a more comfortable environment. It's my understanding, however, that these fish are not entirely natural for that down-stream stretch of the Youghiogheny River and are stocked every year. It's artificial, just like the lake. People should be of primary concern, not fish. Also, in the natural state, in the absence of a dam, induced by the natural weather patterns, the rivers will run warmer and at reduced flow. Fish will naturally retreat but reestablish themselves, albeit at a lower rate.

- c) Whitewater Boating Enhancement - If whitewater enthusiasts want to take advantage of the white water, they can do so when the turbines are running. If there is plenty of water in the lake, then additional releases can be scheduled. With an appropriate model of the lake such possible releases can be scheduled a month in advance. In addition, those using the whitewater releases from the lake should pay their share of money for the management and maintenance of the lake and the river, which, as I understand it, they currently do not..
- d) Maintaining Minimum Flows - I don't see the need for that. When it's dry it's dry, just like during the times when the lake and dam weren't there. That's nature's way. Isn't that the mantra of environmentalists? Actually there is always water flowing into Deep Creek because of the presence of the dam. The dam leaks, even if the input, Deep Creek, dries up. The Deep Creek stream always has flow. Deep Creek flows into the Youghiogheny River.

The permit says nothing about those STAKEHOLDERS that are the largest contributors of taxes or license fees paid to Federal, State and County, and those to cause the realization of large economic benefits to the economy:

1. A significant portion of the funds to purchase the lake from Penelec, the previous owner of the lake, was raised via selling buy-down properties to lake property owners
2. The lake has created a recreational environment, which in turn has caused people to purchase property from which the County and State benefit by collecting property taxes every year. Because much of the housing is vacation related property, there is a regular turnover of ownership at which time the State and County collect significant transfer taxes.
3. The influx of vacationers provide the State with income via the accommodation tax levy.
4. Property owners continue to pay annual taxes on the above mentioned buy-down properties with very limited rights for placing any improvements.
5. The State collects moneys from dock fees.
6. The State collects moneys from boat permits and taxes on boat purchases.
7. Via the Deep Creek Lake State Park, the State collects boat launching fees, camping fees, and special event fees.
8. The State collects fees from fishing licenses
9. The State collects moneys from issuing tickets to boaters
10. The State collects money from water drawn from the lake for use in irrigation (Thousand Acres).
11. The lake attracts a lot of visitors and vacationers who spend money and therefore add to the state coffers through taxes paid. [A WVU Study provides details.](#)

Fishermen pay for licenses to fish the waters of the state, with no additional fees for fishing the middle region of the Youghiogheny River, downstream of the Deep Creek Lake dam. Possession of a license is heavily enforced on the lake with income generated by fines. Not being a fisherman, I don't know the enforcement practices on the river, but, from what I hear through the grapevine, they are minimal.

It's my understanding that the whitewater rafters do not pay permit fees for the use of the river, and more importantly, for the use of the the waters released from Deep Creek Lake into

the river, when so much of the county's recreational and economic depend on the waters of the lake being contained within the lake throughout the June-September season.

MDE stands in the way of many things dealing with the preservation of the lake, such as appropriate and sensible lakeshore erosion solutions. Furthermore, there are many other issues that DNR is better suited for to deal with, such as nutrients, fisheries, plant growth, and water levels, primarily because of their constant presence at the lake. MDE has no daily presence.

DNR manages most of the operations of Deep Creek Lake. It makes no sense for the levels to be dictated by MDE. A set of standard permits, issued by MDE for erosion-sediment control practices around Deep Creek Lake, can easily be developed. These standard permits could easily be managed by DNR.

I personally believe that the MDE permit should be split in 2 parts: 1) a standard MDE water appropriations permit, and 2) a DNR resource management permit. The appropriation permit should only address the amounts of water that can be converted to private use. The notion of a rule band applied to maintaining lake levels is appropriate. The DNR should be allowed to control the settings of the rule band to regulate whitewater and temperature enhancement releases to better accommodate the whole lake community.

I believe that in order to make a change, some kind of a **“serious convincing”** may have to take place. I'm not sure yet as to what form this should take.

Below, I'm babbling about possible approaches that I can see dealing with the issue. The issue can be framed in two ways:

- a) Get the MDE to reflect, in the permit, the role of the lake property owners and enforcing mechanisms.
- b) Split the permit in two, with MDE controlling the water appropriation aspect, hence the total waters, and DNR the day-to-day management of the waters.

I'm in favor of the second option, but both ways will probably require the same approach.

1. Up The Chain of Command - The most rational way would be to discuss the issue with those who are directly in charge, the MDE, and I believe John Grace. I believe that this was tried last year with the information we had at hand then, with no real success for the lake property owners. The question is, with the information we currently have would there be more consideration given to the property owners? What information do we currently have that we did not have last year? This should perhaps be done via the PRB.
2. Petition by the Lake Property Owners - One could submit a petition, that lists all of the lake property owners, to the head of MDE and the Governor with what we want with all of the relevant information. Do we have enough information to make an airtight case? If not, what do we need to do? The POA is the most logical organization to spearhead this effort.
3. Greater Role for the PRB - As I understand it, the PRB is a governor appointed board that advises the DNR. DNR in turn advises the MDE. Clearly, the linkage PRB->DNR->MDE is not working. This needs to be investigated. Perhaps the PRB should be amended to advise the MDE also, which means that it should have at least one representative on the Board.
4. Go to the Press - This is the Barbara Beelar way, quite successful I might say. Let the press handle it! As under (2), the questions are: Do we have enough information to make an airtight case? If not, what do we need to do? If we go this route we need to think about which newspaper to go with and find a willing and suitable reporter that can work with us.

No matter which approach, or combination of approaches, we choose, we probably need to do the following:

1. Get all of the data in order. In other words, the whole message must be truthful, convincing and based on data that anyone can unearth.
2. Get the lake property owners behind the idea. Perhaps via the petition signers of savedeepcreek.com and any other mail/email addresses that I can get a hold of.
3. Hire a point man/negotiator in Annapolis or Baltimore to manage our case.
4. Prepare to negotiate with MDE

### **Other Options**

There are other options that can possibly provide the additional water level that lake property owners need.

#### Revise the Rule Band

Brookfield is NOT motivated to maintain the lake level any higher than they have too. Which means that they will try to hugh the lower rule band. It's readily calculated that a foot of lake level is worth at least around \$60,000 to Brookfield (See Appendix A). So why would they keep the lake level higher? If we want an extra foot during the summer than one way to do this is to change the rule band.

#### 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 these fees could be attached to the dock fees.

#### Form an Association

Just like the whitewater and fishermen people have associations to lobby for their interests, so could the Deep Creek Lake property owners form an association and lobby the lawmakers in Annapolis. 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 the change(s) that we want.

PLV

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## Appendix A

### **What is one ft of water worth the Brookfield?**

1. Volume of 1 ft of lake water:

3900 acres (lake surface area)  $\times$  43560 ft<sup>2</sup>/acre  $\times$  1 ft =  $1.7 \times 10^8$  ft<sup>3</sup>

2. The capabilities of the turbines:

600 ft<sup>3</sup>/sec produces 18 MW (specifications for the turbines; I found somewhere a suggestion that they may be operating at 310 cfs per turbine rather than the nominal design value of 300 cfs)

3. The number of hours the turbines operate to consume one foot of water:

1 ft implies  $\rightarrow 1.7 \times 10^8$  ft<sup>3</sup>/600 ft<sup>3</sup>/sec  $\times$  1 hr/3600 sec  $\rightarrow$  78.7 hrs of operation

4. The total amount of energy produced by one foot of water:

78.7 hrs  $\times$  18 Mw  $\rightarrow$  1,416 MWhrs

5. The annual production of energy by the facility:

Average generation per year is 28,500 MWhrs (from a Stone & Webster report commissioned by Reliant, the predecessor to Brookfield, and mentioned elsewhere)  $\rightarrow 28,500 / 1,416 = 20$  ft of water.

6. The average income per unit of energy:

From PJM data (PJM is the broker company, coverage includes Maryland and Pennsylvania, that sets all the rates for generation, transmission, and distribution, a complicated process), revenues are around \$40 MWhr (can't get a real number; changes every 5 minutes; took an average between low and high)

7. The estimated annual income from the Deep Creek Lake facility:

(4)  $\times$  (6)  $\rightarrow$  1,420 MWhr  $\times$  \$40/MWhr = \$57K!!!!