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A Discussion of the Changes Made to the MDE Deep Creek Hydro Permit over the years 1994-2011.

Introduction

Because the MDE permit comes up for renewal in 2019, I thought it would be pertinent to compare how the current permit, version 8 of #GA1992S009, evolved over time. This note tries to do that.

Analysis

Table 1 is a list of the various versions of the permit.

Table 1 - Issue Dates of Versions of MDE Permit GA1992S009

GA1992S00 (01)	January 1, 1994	Pennsylvania Electric Company
GA1992S00 (02)	October 1, 1999	Sythe Maryland Holdings, LLC
GA1992S00 (03)	May 12, 2000	Energy Maryland Holdings, LLC
GA1992S00 (04)	April 19, 2005	Brascan Power Piney and Deep Creek LLC
GA1992S00 (05)	April 22, 2005	Reliant Energy Maryland Holdings, LLC
GA1992S00 (06)	April 27, 2005	Brascan Power Piney and Deep Creek LLC
GA1992S00 (07)	April 1, 2007	Brookfield Power Piney & Deep Creek LLC
GA1992S00 (08)	June 1, 2011	Brookfield Power Piney & Deep Creek LLC

Actually, all I've done so far, is to compare the initial version vs. the latest version, that is, 01 vs. 08.

Because it is very tedious and error prone to compare the various versions manually, the approach I've chosen is to first convert the pdfs to text using OCR software. The result left some errors in the text because some of the pdfs are 'rough' looking. I corrected these errors and formatted the results into something consistent.

I then tried several "diff" applications that compare text in two documents and highlight the differences. That turned out not to be very satisfactory. After some

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trial and error the best way I found was to portion each of the OCRd permits into a couple of independent text sections and then compare the differences in the text for each of those sections.

The Deep Creek Hydro permits start with a little pre-amble and then defines the permit conditions under 25 separate points. These points are titled as shown in Table 2.

Table 2 - Points Titles Described in the Permit

1. ALLOCATION
2. USE
3. SOURCE
4. LOCATION
5. RIGHT OF ENTRY
6. PERMIT REVIEW
7. PERMIT RENEWAL
8. PERMIT SUSPENSION OR REVOCATION
9. CHANGE OF OPERATIONS
10.ADDITIONAL PERMIT CONDITIONS
11.NON-TRANSFERRABLE
12.FLOW MEASUREMENT
13.WITHDRAWAL REPORTS
14.RULE BAND AND OPERATION PROTOCOLS
15.LAKE LEVEL MONITORING AND REPORTING
16.TEMPERATURE ENHANCEMENT IN THE YOUGHIOGHENY RIVER

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17.MINIMUM FLOW RELEASES

18.DISSOLVED OXYGEN MITIGATION

19.RELEASES FOR WHITEWATER RECREATION

20.ANNOUNCEMENT OF EXPECTED RELEASES

21.ZEBRA MUSSEL MONITORING

22.NOTICE OF GENERATION RELEASES

23.ANNUAL REPORT

24.EFFECTIVE DATE

25.PERMIT SUPERSESSION

Points 1-13 I analyzed as one section. The results of that analysis are shown as follows:

Point 1: Unchanged

Point 2: Unchanged

Point 3: the word 'released' was changed to 'taken.'

Point 4: The phrase 'Pennsylvania Electric Company' was removed.

Point 5: The word 'Department' was changed to 'Administration.'

Point 6: Unchanged

Point 7: The word 'Department' was changed to 'Administration.'

Point 8: The word 'Department' was changed to 'Administration.'

Point 9: The word 'Department' was changed to 'Administration.'

Point 10: The word 'Department' was changed to 'Administration;' the phrase 'at the' was removed

Point 11: The word 'Department' was changed to 'Administration.'

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Point 12: The word 'Department' was changed to the phrase 'Administration. The permittee shall maintain a daily log, subject to inspection by an authorized representative of the Administration.'

Point 13: The word 'Department' was changed to 'Administration.'

Point 14: The word 'elevation' was changed to 'elevations.'

Some of the lower rule band values, in Point 14, were changed, as shown in Table 3. NOTE that the rule bands stayed the same through Revision 07.

Table 3 - Changes in Lower Rule Bands Over Time

	Permit (01) - (07)	Permit (08)
JULY	2460.0	2461.0
AUGUST	2459.0	2460.0
SEPTEMBER	2458.5	2459.0
OCTOBER	2457.9	2458.0

Point 15: The word 'reservoir' replaced by 'Deep Creek Lake'

Point 16: Rewording in several places and different spelling, but the essence is the same. Revision 1 was about developing a plan; Revision 08 about going forward with its execution.

Point 17: From Revision 01 to Revision 08 a more extensive discussion on how to maintain bypass flows.

Point 18: All about 'dissolved oxygen, plan versus execution.

Point 20: Change of some words, but not the meaning.

Point 21: 'By July 1, 1994' was removed; 'have in place' replaced by 'implement', 'monitor' replaced by 'monitoring'; 'Department' replaced by 'Administration.'

Point 22: Rephrasing of the sentence. No change in meaning.

Point 23: The word 'Department' was changed to 'Administration;' the word 'monitoring' was added

Points 24 and 25 were added in Version 02. Point 24 was removed in Version 03 and Point 25 became 24 which was retained subsequently through Version 08.

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Point 19: A big change. Instead of a general description of when releases were to be made a very detailed schedule was added for very specific releases. There is no real value in repeating it here. Refer to the permits for what they were.

It's interesting to note that the essence of the permit over time hasn't really changed. It supports the fishing and white water communities. The permit, over time, has seen more specific language, always in favor of the white water community. The fishing community has seen a degradation, so some extent, because no real effort was made in upgrading the TER methodology. A few coefficients were changed here and there, but it's basic inaccuracies were never addressed. There were still days when temperatures exceeded the desirable threshold of 25 °C and there were days when TER releases would not have been needed. Would a better TER methodology provide for better results? To me, clearly yes, but they would probably not change the balance of releases much.

Conclusion

When considering the permits, from the get-go the emphasis was on supporting the fishing and white water communities. When the lake shore was undeveloped this was probably the most sensible way to go. It was thought that economic development was going to be most successful in those industries. They would be providing the tax base for the County.

The times have changed. The tax base of the County relies primarily on property owners around the lake. Hence, it is logical to convert the emphasis of the permit on those that make direct use of the lake.

Because river fishing and white water rafting is also mostly performed by out-of-staters, they should also be burdened with maintaining those capabilities.

I believe that these two aspects should be explored as part of a revised permit.

PLV: 3/28/2017