

The record, when considered as a whole, does not support the Administration's assertions that mid-river water is comparable in quality to that drawn from the shoreline. The only sampling data in the record was offered by the Authority. More extensive sampling data, particularly from mid-river during basinwide flood events, would have provided a more comprehensive data set to better evaluate the relative benefits of moving the intake to mid-river, and might well provide support for the Administration's contention, but such data was not presented.

The sampling data presented by the Authority supports the ALJ's finding that mid-river water is higher in turbidity than shoreline water only 20% of the time. Proposed Finding of Fact No. 25. The water quality data and analysis contained in the Billman Report (FCWA Exhibit 22), and in FCWA Exhibits 23, 24, and 25 establish that with respect to turbidity levels, fluctuations in turbidity levels and total suspended solids concentrations, mid-river water quality will frequently exceed that of the water at the existing intake, and on a small, but meaningful number of occasions, to a significant extent. In addition, the Authority's data set also indicates that mid-river water has a higher pH and a higher, more stable alkalinity that makes the water easier to treat. FCWA Exhibit 24 at 8-9, graphs 6B-C; Tr. at 361-62, 365-66. To the extent that the Administration contends that additional data might lead to a different conclusion, the burden falls on the Administration to present it.

The Administration offered expert testimony that the Authority's mid-river sampling was flawed because the sampling protocols were not designed to collect water from the bottom of the river where the intake will be located, and where sediment flows are expected to be higher. Testifying in response on behalf of the Authority, Professor Wilcock explained why, in his view, that mid-river water at the site of the proposed intake was well-mixed and why the mid-river sampling protocols captured samples that were representative of the water quality near the bottom of the river.

Tr. at 863-67. As between the two witnesses, the ALJ found the Authority's witness more persuasive and she accepted his testimony as credible. I am unable to find any strong reason to reject her findings on this point. *See Anderson v. Department of Public Safety*, 330 Md. 187, 217 (1993).

The Administration further contends that the water quality data offered by the Authority from sampling at the Leesburg water intake located upriver, upon which the ALJ relied, is not a reliable predictor of conditions at the site of the proposed mid-river intake. Although the Administration has pointed out a number of differences between the Leesburg intake and the site of the proposed intake, it has failed to identify any testimony that explains how these differences diminish, in any significant way, the reliability of the Leesburg data. Professor Wilcock testified that water quality at the site of the proposed intake was probably even better than at Leesburg, where, because the channel is narrower and water velocities are higher, sediment concentrations are probably also slightly higher. Tr. at 872.

The Administration further argues that the Authority will derive no benefit from a mid-river intake because basinwide flood events occur more frequently than tributary flooding, and that during those events, mid-river water quality is, on average, much worse. The Administration points to evidence in the record that during the six-year period from 1985 through 1990, the average annual number of basinwide flood events was slightly higher than the number of instances in which the tributaries flooded (12 as opposed to 11). State's Exhibit 78 at 3997-98. Furthermore, analysis of mid-river and on-shore intake samples collected on three days in May of 1989 during basinwide flood events shows that on two of those three days, mid-river turbidity was, in fact, significantly higher. Joint Exhibit 22 at 6719; Tr. at 661-62, 655. This evidence, however, does not conflict with other evidence that mid-river conditions are only worse approximately 20% of the time. The Administration is asking me to infer from only two out of 66 reported basinwide flood events, that

similar conditions would be present during a majority of the basinwide flood events. More extensive comparative sampling during basinwide flood events might indeed establish that mid-river conditions are, on average, equivalent to or worse than on-shore conditions, but such evidence is not in the record before me. In the absence of more comprehensive data, the record is sufficient to support the ALJ's finding that mid-river conditions are worse only 20% of the time. Whether or not the Authority is able to switch to the on-shore intake under those conditions does not diminish the benefits derived from improved water quality during periods in which tributaries are flooding.

Finally, I agree with the Administration that a proliferation of intake structures in the pursuit of only marginally improved water quality benefits is not in the public's best interest. However, in this case, the record supports the ALJ's findings that construction of the mid-river intake will maximize the efficiency and reduce the potential for human error in the treatment process, reduce the risk of waterborne disease, the frequency of blockages from leaves, grass and ice, and significantly reduce the costs of treatment<sup>4</sup>. Pursuit of these goals is in the public's interest. The fact that the Authority has been able to meet federal and state water quality standards using raw water from the existing intake does not diminish the significance of these benefits. Nor does it follow from the Department's determination to grant this permit that every future application must be granted, regardless of how slight the incremental benefits may be. Each permit application must be considered on its own merits. Consequently, for the reasons discussed above, this exception must be denied.

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<sup>4</sup> In her second Proposed Decision, the ALJ made 126 separate findings of fact. I do not find it necessary to recite each of the relevant findings or the basis in the record for each one.

## **Exception No. 2: The Cryptosporidium Risk**

The Administration contends that the ALJ committed error by concluding that drawing water from an offshore intake will reduce the risk of waterborne disease, in particular the numbers of cryptosporidium parvum (“c. parvum”) oocysts drawn into plant. Cryptosporidium is a microscopic parasite which can cause the diarrheal illness, cryptosporidiosis. It is found in the feces of infected humans and animals. The Administration argues that the ALJ’s finding is based on a theoretical association between elevated turbidity and the presence of c. parvum, which it asserts, is not generally applicable to all watersheds and has not been established to exist in this particular watershed. The Administration further argues that c. parvum may actually be present at higher levels in mid-river water due to discharges from upstream sewage treatment plants.

The Authority presented expert testimony from John Gaston and other evidence that increased levels of waterborne pathogens, including c. parvum, are likely to correlate with increased turbidity. The Authority’s experts acknowledged, however, that the strength of the correlation between turbidity and c. parvum depends on the extent to which sources of c. parvum are present in the watershed of concern. Discharges from sewage treatment plants present a continuous risk of c. parvum. Droppings from deer and other wild and domestic animals also carry the parasite. While there are no sewage treatment plants discharging into either Sugarland or Broad Runs, the record contains evidence that deer and other wildlife inhabit the Sugarland Run watershed, and that area residents walk their pets along Sugarland Run, leaving animal droppings. The record establishes some degree of risk associated with the presence of sources of c. parvum in the Sugarland and Broad Run watersheds, although the magnitude of the risk is not at all clear.

The Administration argues, persuasively, that the comparative risk between shoreline and mid-river water is unknown because there was no sampling of mid-river water for the presence of

c. parvum oocysts and that the cryptosporidium risk at mid-river is likely to be higher because of wastewater discharges from numerous sewage treatment plants located upstream in the Potomac River basin. There was unchallenged testimony from the Authority's expert, however, that any c. parvum oocysts present in the discharge from upriver sewage treatment plants probably would be well mixed and evenly distributed throughout the river water by the time they reached the Authority's mid-river water intake, and therefore, present the same risk at mid-river as along the shoreline. Tr. at 960-61. Although the reduced risk of cryptosporidium may not be as great as the Authority argues, and additional evidence may have supported the Administration's contention that there is no risk reduction at all, I find that the record supports the ALJ's findings that a mid-river intake would reduce, however slightly, the risk of cryptosporidium in the raw water. Even a small reduction of risk is in the public interest because cryptosporidiosis can be fatal to individuals with AIDS or other diseases which have compromised their immunity systems. This exception is denied.

### **Exception No. 3: The Sediment and Erosion Control Alternative**

The Administration takes exception to the ALJ's conclusion that pursuit of improved sediment and erosion controls on construction sites to address the turbidity problem is not a viable alternative to a mid-river intake. The Administration acknowledges that the Authority lacks the legal power to enact and enforce sediment and erosion controls, but argues that there are no legal obstacles preventing the Authority from contributing financially to support enhanced enforcement of existing controls, as it has done on at least one prior occasion. The Administration further argues that even if enhanced enforcement of sediment and erosion controls would not result in equivalent reductions in sediment loading, the law does not require that an alternative be fully equivalent in order to be considered viable.

The Administration and the Authority disagree about the projected benefits of enhanced enforcement. The Administration finds evidence in the record that the Authority's consultant initially projected a 10%--20% reduction in sediment loading as a result of enhanced enforcement, but later downwardly revised the projection when the Administration expressed concerns about the application. The Authority argues that the reduction will be less than 10% and is within the range initially projected (less than 10%--20%). Both projections are based on assumptions about the underlying effectiveness of erosion controls and enhanced enforcement that may or may not prove to be valid. Regardless of whether the reduction in sediment from construction sites is 20% or less than 10%, the record supports the ALJ's finding that the mid-river intake would result in a significantly higher reduction in solids loading of nearly 50%. This is partly because of undisputed evidence that runoff from construction sites is not the only source of sediment in the raw water. Moreover, improved sediment and erosion controls do not address the documented intake blockage problems the Authority has experienced from leaves, grass and ice along the shoreline, or the occasional contamination from oil spills and other contaminants.

It is further undisputed that the Authority does not have the legal power to enforce sediment and erosion control requirements adopted under local or state authority. While exercising its influence and funding discretion toward the ultimate goal of enhanced sediment and erosion controls is clearly in the Authority's interest, it lacks the legal control necessary to ensure implementation of more aggressive enforcement measures. The ALJ's conclusion that enhanced enforcement of sediment and erosion controls is an inferior alternative to the mid-river intake is sufficiently supported by the record. Consequently, this exception must be denied.

#### **Exception No. 4: Evidence the Intake will Impede the Flow of the River**

The Administration argues that the ALJ erred in her finding that there was no evidence in the record that the mid-river intake will impede the flow of a wild and scenic river. Whether a structure impedes the natural flow of a wild or scenic river is one of the criteria listed for consideration in determining whether to grant a waterway construction permit. COMAR 26.17.04.11B(2). The authority for this regulation derives from § 8-406 of the Natural Resources Article, which prohibits, without the specific approval of the Secretary of Natural Resources, construction of any structure that will impede the flow of a wild and scenic river. The regulation appears to contain a delegation of DNR's approval authority to the Director of MDE's Water Management Administration, but it requires the Administration to consider DNR's comments.

In support of its exception, the Administration points to a single letter from John Wilson, the Coordinator for the Scenic and Wild River Program within the Department of Natural Resources. State's Exhibit 12. The letter does not affirmatively state that the mid-river intake would impede the flow of the river. Rather, it states that the Authority's application failed to provide sufficient information to evaluate the effects of the project on that stretch of the river. In addition, the letter states, without further elaboration, that the delegation of approval authority to the Director of the MDE's Water Management Administration was rescinded when the [waterway construction permitting program] was transferred from DNR to MDE in 1995.

The Administration asserts, based on the Wilson letter, that the delegation of approval authority was rescinded by the Secretary of Natural resources, and that since DNR was not a party to this case, the issue was not even before the ALJ. If that were so, then this issue would have no bearing on the outcome of this proceeding.

This exception is denied. The Wilson letter is admittedly ambiguous, but the ALJ obviously concluded from her reading that DNR felt it lacked sufficient information to determine whether the intake would impede the flow of the river. Her apparent interpretation of the letter is not unreasonable. Moreover, there was no testimony that the project would impede the flow of the river. Assuming the delegation of authority was validly rescinded, as the Administration contends, I agree that it is the Authority's responsibility to secure any approvals required under DNR's independent jurisdiction.

**Exception No. 5: Consideration of Operational Environmental Impacts**

The Administration takes exception to the ALJ's conclusion in her January 1999 Proposed Decision, that the Administration could not consider the environmental impacts of operating the proposed intake in determining whether to grant the permit. The Authority responds that the ALJ was simply rejecting the Administration's contention that the reduced withdrawal of sediment from the river as a result of operating the mid-river intake is an environmental impact that weighs against issuance of the permit. That may have been her intention, but her stated conclusion was much broader in scope. In her Proposed Decision, the ALJ stated that ". . . MDE failed to cite to any authority supporting its view that the operation of a water intake . . . is an appropriate consideration under this regulation or under § 5-507, which pertains to *construction* of waterway obstructions, not *operation* of water treatment facilities." (emphasis in original). I find that the Administration may consider operational impacts when making permit determinations. Nothing in the statute limits the Department's consideration to disadvantages related only to construction.

Consequently, to the extent that the ALJ asserts the general proposition that the Administration may not consider the adverse impacts of the operation, as opposed to the construction, of an intake structure, the Administration's exception is granted. In this particular case,