



United States Department of the Interior

NATIONAL PARK SERVICE

Northeast Region Office
15 State Street
Boston, Massachusetts 02109-3572

IN REPLY REFER TO:

October 20, 2009

Ian Bowles, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114
Attn: Anne Canaday, MEPA

Re: EOEEA No. 14197, Birch Road Well Field Redevelopment and Water Treatment Plant

Dear Secretary Bowles:

Thank you for the opportunity to comment on the Final Environmental Impact Report for the Birch Road Wells Redevelopment Project in Framingham, EOEA # 14197. The National Park Service is reviewing this project because of its proximity to the Sudbury River, a federally designated Wild and Scenic River.

Twenty-nine miles of the Sudbury, Assabet and Concord Rivers have been nationally recognized by Congress as Wild and Scenic Rivers due to their "outstandingly remarkable resource values," including scenery, history, literature, recreation and ecology. The NPS is responsible for the long term protection of the River and administering the Wild and Scenic Rivers Act. In particular, Section 7 of the Act protects the outstanding resource values of a Wild and Scenic River from any direct and adverse impacts caused by water resource projects that have federal permits and/or federal financial support. Because this project will be using federal SRF funding it come under the auspices of Section 7 of the Act.

The NPS works closely with the River Stewardship Council, which was created by Congress to advise the NPS on management issues related to the designated rivers. The RSC is comprised of local, state and federal governments, as well as Sudbury Valley Trustees, Organization for the Assabet River and the SUASCO Watershed Community Council. In consultation and coordination with the RSC, the NPS has reviewed this project.

The Certificate issued in response to the DEIR reflects many of the areas of concern which we raised in our earlier comments (sent to the EPA). Most importantly, it required the applicant to provide more modeling and analysis of mitigation measures to allow for a clearer understanding of the impacts to the river (as well as other) resources. This has not been accomplished in the FEIR. In fact, there has been no attempt to increase the level of understanding of the geology or hydrology of the site and no better estimate of the 'lag time' between pumping wells and responses in the river. While this information is not easy to obtain, and will take both time and money, we believe that this information is critical to being able to best determine the impact of the wells on the river. Without this data, it will be very difficult to conclude that

groundwater withdrawals from this location will not have a direct and adverse impact on the resources of the Sudbury Wild and Scenic River.

Specifically, the Certificate required the applicant to respond to the following issues, a majority of which have not been addressed in the FEIR.

1. Regarding applicability of the Interbasin Transfer Act, the applicant has reduced its withdrawal rate so that an ITA permit will not be required at this time. The applicant may return to the Water Resources Commission in the future for variances from the 3.17 MGD proposed pumping rate.
2. Analysis of impacts on surrounding resources has not been addressed in FEIR.
3. A re-run of the water budget model using Birch Road wells pump test data was not done.
4. Use of revised groundwater modeling without the complication of recirculation of pump test water was not done.
5. Use of a ground water model to assess impacts on Lake Cochituate and Sudbury River while also evaluating time delays of pumping alterations was not done.
6. A Discussion of how impacts would be monitored and mitigated was not included in the FEIR.
7. Mitigation alternatives related to drawdown in Lake were not discussed.
8. Details, including numbers and locations of targeted catch basins as well as a plan for O&M including a schedule for improvements were to be included. This was not completed.
9. The FEIR was to identify where runoff from the building site would be directed. This was not done.
10. The FEIR was to explain how the facility would be heated and this was not included.
11. More information on the wastewater that would be generated by the project was to be included . This was not done.
12. A separate chapter on Sec 61 mitigation, including updates and summarizing proposed mitigation was included. The costs of mitigation alternatives including a schedule for implementation was not part of the chapter.

The NPS believes that the requirements of the Certificate are well reasoned and essential for the adequate evaluation of the proposed withdrawal. As noted above, numerous significant requirements of the Certificate have not been met, and without this data and analysis the application should be deemed incomplete and inadequate under MEPA.

In lieu of the Certificate's substantive requirements noted above the applicant has proposed an operation plan which they characterize as sufficiently protective of river resources to allow the project to move forward now, coupled with a promise to develop the scientific basis for a long-term operating plan through 3 years of data collection and modeling once the plant is operational.

We have significant concerns with this scenario as follows:

1. First and foremost, the operating plan is based on trigger dates and pumping reductions derived from hydrograph and calendar triggers, rather than target flows designed to protect aquatic resources, whether that is the aquatic base flow (ABF), 7Q10 or another flow. The Q 25, Q75 and Q90 flows are not based on the protection of any resource values. In fact,

except for one graphic, there is no discussion of what the actual flows are at these various percentiles. Nor is there any discussion of stream flow levels targeted for protection.

2. Because the pumping scheme is not scientifically based, it must be conservative enough to guarantee that it will not impact the river. The current proposal does not do this. There is only one situation when the pumps will be turned off and this is when the river flow is below Q90 between August 24 and October 13. Knowing that low flows occur most often from June through October, the applicant must demonstrate how the pumping scheme can guarantee the protection of flows at all of these times of the year.
3. It appears that the membrane technology, which is required to be kept wet at all times is inappropriately driving the pumping scheme. A minimum withdrawal of 0.7 CFS or 0.45 MGD is still significant at times of low flow (June –October) and should not be allowed to compromise the resource needs of the river. Other technologies should be considered to allow the pumps to turn off completely when necessary, or other management strategies should be evaluated.
4. The pumping scheme does not accommodate a time lag between pumping groundwater and a response in the river. As discussed by many of the commenters to the DEIR, the pump test of the wells was flawed, in part because it rained during the test and also because the pumped water was recirculated into the Lake. Another pump test should be done, of sufficient duration and rate to create a cone of depression that approximates real conditions, and the wells should be monitored until they are fully recovered in order to understand the time lag. However, even with these problems which would underestimate the time of recovery of the wells, data suggests that the time lag at a minimum might approximate two weeks for a 90 % recovery (full recovery could be significantly longer). If the actual stream flow data is considered, it is clear that the stream flow can fluctuate dramatically in a two week period. For example on July 27 2005 stream flow at Saxonville was 138 CFS, while the next day it dropped more than 50% to 62 CFS. Within 4 days it was at 17 CFS and within 12 days it was at 10 CFS. Knowing this, it is extremely difficult to imagine an effective pumping scheme without understanding the time lag of groundwater movement.
5. Hydrogeologic data that explains the relationship between Lake Cochituate, the wells and the Sudbury River is not adequate to explain the source of water to the pumping wells. Without this information it is impossible to realistically determine the impacts on these resources.
6. In order to protect water quality of the Wild and Scenic River, the NPS closely reviews NPDES permits for wastewater treatment discharges. The effluent limits in these permits, designed to protect water quality, are based on the 7Q10 flows of the river at the point of discharge. If these wells affect the 7Q10 flow upstream of these plants, then the integrity of the effluent limits is challenged and water quality is compromised. Without knowing the 'lag time' there is no data available to suggest how these low flows will be protected.
7. The applicant has committed to gathering data during the first three years of the project to be used to develop a ground water model which will provide the data needed to refine a pumping scheme while still protecting the river resources. In reality, after gathering data, developing a groundwater model, analyzing results and applying for new permits, it will be many more years before a pumping scenario based on good field data will be in place. The

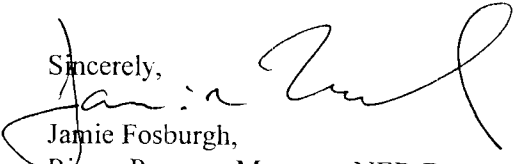
proposed operating scheme then is not a quick fix, but one that will be in use for a good number of years. It therefore needs to be guaranteed to be protective.

8. The applicant has failed to provide detail necessary to evaluate the promised scientific assessment of potential future well operations. To be meaningful, this assessment will need to be thorough and technically sound. A credible third party with expert qualifications and peer review standards, such as the US Geologic Survey, should be engaged to design and conduct the evaluation.

In conclusion, it is clear that the conditions of the Certificate have not been met in numerous substantive instances. The missing data and analysis are significant and appear to preclude an accurate assessment of the project's environmental impacts (as well as any meaningful public cost/benefit analysis). It is conceivable to imagine a project that would serve the applicant's water supply interest while protecting flows in the Sudbury River (as well as other ground and surface water resources) through a scientifically-based pumping scheme that utilizes local water when it is plentiful and MWRA (Quabbin) water when the local sources are stressed. However, there is no way to know whether such a project is feasible or practical until the science has been conducted. To reverse the order (build the project first, conduct the science later), as the applicant proposes, introduces enormous elements of uncertainty and risk. As currently proposed, much of this risk is placed unacceptably upon the resource in the form of likely negative impacts to already stressed surface water resources (including the Sudbury River) during the critical June through October period.

Thank you for the opportunity to comment. By separate cover NPS is providing a copy of these comments to the US EPA, together with our written advisory that, as currently defined, the proposed project poses an unacceptable risk of direct and adverse impact to the Sudbury Wild and Scenic River.

Sincerely,


Jamie Fosburgh,

Rivers Program Manager, NER-Boston

cc:

Town of Framingham, Peter Sellers, Director DPW
Susan Crane, Chair SuAsCo RSC