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January 8, 2016

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Re: Comments on Water Management Act Permit Application by Town of Ashland

Dick Lawrence
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Dear Ms. McCann,

Don Burn
Westborough

Thank you for the opportunity to comment on the application by the Town of Ashland for a permit under the Water Management Act. OARS is the watershed organization for the Concord basin, comprising the Sudbury, Assabet and Concord Rivers in a 400-square mile area west of Boston. A non-profit organization founded in 1986, OARS works primarily through science-based advocacy and education to develop a scientific understanding of the causes of river degradation and works with communities to seek effective solutions. OARS conducts water quality and flow monitoring of all three rivers and several tributaries.

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The Sudbury, Assabet and Concord Rivers are federally-designated Wild & Scenic Rivers and abut two national wildlife refuges. These rivers are popular destinations for boaters and anglers, yet suffer from very low seasonal flows. Low base flows also result in inadequate dilution of effluent from wastewater treatment plants and pollution from stormwater. Several tributaries to these rivers regularly run dry. Segments of the upper Sudbury River itself has run dry in Hopkinton and Ashland in past droughts.

Brian Kilcoyne
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We have one overall comment on the comment process, and others specific to the town of Ashland's application. Overall, it is very difficult to make meaningful comments on the applications within the Concord Basin because they contain discrete metrics but no overall narrative that describes the water supply system, proposed or actual pumping regimens, system constraints or alternatives. We are more familiar with a few municipal systems due to having worked on them through SWMI grants, so we are fully aware of the complexity of most municipal systems. With at least 18 applications to review in 30 days, unless this contextual information is included with the application it is very difficult to make meaningful comments. As a result, we are only able to comment on a few applications, which should not be interpreted to mean that all the others could not benefit from review and comment. We are simply constrained by time and resources.

Lisa Vernegaard
Maynard

Below are our specific comments on Ashland's application:

1. **Request far exceeds current authorization, baseline and Water Needs Forecast (WNF):** In our view, there is no question that the upper Sudbury watershed cannot withstand additional water withdrawals. The subbasin containing the permitted Howe St. sources (#12029), is already at the maximum groundwater depletion level—Category 5, with an extremely high August Net Groundwater Depletion of 235.8%. The three registered High St. wells in subbasin #12030 are right along the Sudbury River; it is not clear to what degree these wells are used. Although they are all Registered sources, this subbasin is also Category 5 and efforts should be made to minimize the withdrawals in this subbasin as well. The use of these three wells may have a direct and deleterious impact on the base flow of the Sudbury River. The repeated very low flows in the Ashland and Hopkinton segments of the river are clear evidence of the groundwater depletion in these two subbasins, particularly in the summer/fall. Since, according to the application, 85% of Ashland's withdrawal will be discharged via the MWRA wastewater system, this is a significant interbasin transfer of water. An increase in this transfer out of the Concord basin would further damage the water balance in the headwaters of the Sudbury River. The town's application shows a remarkable jump in water withdrawals from 1.9 MGD in 2014 to an anticipated 2.77 MGD in 2016. An explanation is needed. If Ashland can prove that they need water volumes in excess of their baseline or WNF, we strongly recommend that the alternative of connecting to the MWRA water supply be selected. This would be the only course of action that would adequately protect the water resources. We note that the UAW in 2014 was high, at 16%.
2. **Seasonal water use:** Based on available information, there is a very high winter: summer water use ratio. According to the town's 2014 ASR it was 1.56, in winter (Jan.-Mar.) over summer (July-Aug.) use. The state's target ratio is 1.2. Since the peak use is during the summer when streamflow is most stressed, the town should take concrete steps to significantly reduce summer water use. We recognize that the town has made some efforts to address this, but results are needed.
3. **Non-essential outdoor water use restrictions trigger:** Ashland's non-essential outdoor water use restrictions (that are in addition to the Permanent Outdoor Water Use Restrictions) are triggered by a fall in the Hopkinton Reservoir surface water level between June 1 and August 31. This triggers a reduction in the use of two wells. We ask that this trigger be assessed for its adequacy in maintaining the flow in Indian Brook, a tributary to the Sudbury River. It could be compared with a streamflow trigger based on the USGS Saxonville gage or other comparable flow gage to determine which is the better predictor of low flow conditions in local streams and the Sudbury River. The lag time between ceasing well pumping and the rebound of reservoir level and river and stream flows, as well as the impact of demand management on pumping volumes, should be presented. Since September can also be a low flow month, this trigger should include the month of September as is customary in calendar-based restrictions.
4. **Interconnection to Hopkinton:** Currently 0.5 MGD of Ashland's water withdrawals are supplied to Hopkinton. There is no narrative or documentation regarding this intermunicipal arrangement. It is not clear how much of the requested volumes are anticipated to be supplied to Hopkinton. Our concerns regarding justification of increased withdrawals are the same for this use.
5. **Demand management:** Ashland states that it uses odd/even watering dates for its permanent outdoor irrigation restriction, although the recent amendment to the town's bylaw (Attachment 6) appears to change that to permitting only 2x per week watering. We support the town's efforts to put in place a year-round restriction, limit watering to twice per week, and the restricted hours of watering. The RPGCD at 55 gallons is to be commended. However the seasonality of water use, as noted in #2 above, remains a concern. Using pricing to manage demand is an important tool. The residential rate structure used by the town does not encourage seasonal conservation as it charges the same rate year-round. We would like to see an analysis of the effectiveness of the current restrictions, since seasonal water use is still high. We suggest the town reexamine the pricing and add increasing seasonal-based rates (e.g., May-September) to help reduce non-essential water use in

the summer. This should be paired with additional regulation of private wells to avoid freeriders on the groundwater resources.

6. **Public Education:** The public education materials provided in the application, while quite thorough in general, appear to be from around 2007; these should be updated. We could find little educational material on the town's website. It would be useful to provide current and complete educational materials on the website for public access. Also, a conservation outreach program to the owners of private irrigation wells should be added, including the reasons why private well owners should observe the public use restrictions on outdoor use.

7. **Private wells/mitigation:** We are aware of a growing number of private wells being used for lawn irrigation throughout the Concord basin. We do not have any data for the town of Ashland in this regard, but it would be very useful to know to what degree the public water supply is used for non-farm irrigation, and what the trends for new private wells is. The town has clearly made some efforts to promote responsible irrigation use. While the addition of private wells may reduce stress on the municipal system, it results in more unregulated irrigation and consumptive water withdrawals from the watershed, as well as contradicting the conservation message. Although this may have the advantage of dispersing withdrawals both in depth and geographical extent, the overall impact may be to undermine efforts to protect depleted sub-basins, conserve water, educate the public about the value of water conservation, and improve irrigation efficiency. Ashland should evaluate further local regulation to bring private wells into conformity with municipal irrigation rules, especially when seasonal outdoor use restrictions are in effect.

Reliable water supplies and healthy streams are essential for our quality of life and local economy. In addition, the anticipated impacts of climate change on our water resources need to be taken into account in order to protect and build resiliency in these systems. Thank you for the opportunity to comment and please don't hesitate to contact me if you have any questions.

Yours sincerely,



Alison Field-Juma
Executive Director

Cc: David Manugian, Ashland Department of Public Works
Sudbury-Assabet-Concord Wild and Scenic River Stewardship Council