

John R. Coon, JD, PhD
Natural Resources Law | Policy Science | Governance
102 Raymond Road
Brunswick, Maine 04011

(603) 978-2222

jrcoonlaw@gmail.com

johncoonlaw.com

Licensed to practice law in:
Maine
Michigan (inactive)
U.S. Virgin Islands (inactive)

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Town of Nantucket Zoning Board of Appeals
2 Fairgrounds Road
Nantucket, MA 02554

Re: Surfside Crossing

Dear Sir/Madam:

In early June, 2018, I was contacted by Meghan Perry, a former student and lifelong resident of Nantucket. Meghan talked with me about concerns related to an application filed by the owners of Surfside Crossing, LLC for a comprehensive Permit Application with the Town of Nantucket Zoning Boards of Appeals. The concerns were essentially based on the size and magnitude of the project as proposed by the applicant who seeks approval for the construction of 156 dwelling units (60 stand-alone single-family cottages and 96 condominium units) with a total of 389 bedrooms on property consisting of 13.5 ± acres. The fear, of course, was that a project of this size could pose unsustainable risks Nantucket's natural resource base and overload the infrastructure of the town, including *inter alia* its roads, water, sewer, fire, police, education, and health systems.

I have a law degree and have practiced environmental and natural resources law for over 30 years. I am NOT licensed to practice law in the Commonwealth of Massachusetts and nothing herein should be construed as legal advice. In my practice, however, I routinely consult with lawyers, experts, and parties involved in major class action and multi-district litigation over groundwater contamination issues. In addition to a JD I have a PhD in Natural Resources and Environmental Studies from the University of New Hampshire's Department of Natural Resources and the Environment, where I remain as affiliated faculty. My academic research focuses on governance and institutions in the Gulf of Maine watershed and in the binational fresh water Great Lakes Basin. My research interests rely upon case study and qualitative methods to examine the very real need for more holistic and ecosystem-based governance regarding human activities that impact the environment. This research buttresses the growing understanding that outdated and fragmented regulation revolving around selective intervention by government is based on a strategy of bureaucratic control. My research, and many studies shows these methods are becoming increasingly ineffective and are proving remarkably resistant to fundamental change and innovation. Ever-changing environmental stresses, the element of "surprise" as ecosystems respond to stress in unexpected ways, and the driving and disparate forces unleashed by climate change are causing environmental baselines to shift so quickly that existing laws and environmental governance regimes are unable to keep pace.

My publications and presentations highlight the need for change in the ways in which government and institutions govern the behaviors that harm our environment and threaten our health. In recent years I have been invited to speak on the topic of governance, sustainability, including our clean drinking water legal regimes, and the relationship between institutional behavior and ecosystem resilience – most recently at the International Congress of Conservation Biologists in August, 2015 in Montpellier, France, the Institute of Policy Sciences at the World Bank in November, 2015, and The Coastal Society in New Orleans in 2016. My law practice attempts whenever possible to bring sustainability and resilience concepts to bear on real world legal issues. I am rated *AV Preeminent* by Martindale-Hubbell – the highest rating possible. My *Curriculum Vitae* is attached.

I have been asked by Ms. Perry to review the proposed Surfside Crossing development in an attempt to determine whether, based on the record, there are sufficient local concerns to outweigh approval by the Nantucket Zoning Board of Appeals (the “Board”) of the application for comprehensive permit. I have reviewed the Massachusetts law related to Chapter 40B affordable housing developments, the statute and regulations underpinning the Massachusetts Water Management Act, the documents produced by the Town of Nantucket in response to a public records request, and many of the documents and records that have been submitted to the Board related to water quantity/quality in support/opposition of the proposed project.

Surfside Crossing

This project seeks approval under the authority of M.G.L. 40B of the Massachusetts Comprehensive Permit Act G.L. c. 40B §§20-23(act). Chapter 40B places all communities throughout Massachusetts on equal standing when it comes to regulating housing for low- or moderate-income people. The need for moderate- and low-income affordable housing¹ in the state is the focus of the statute. The objective is accomplished with a consolidated permitting process that gives a town Zoning Board of Appeals the authority to waive zoning and other local requirements that would impede the creation of low- and moderate-income housing. Chapter 40B promotes regional distribution of low- or moderate-income housing by preventing individual cities and towns from blocking it with exclusionary zoning [citation omitted].

The purpose of the Act has long been held to be ‘to provide relief from exclusionary zoning practices which prevented the construction of badly needed low- and moderate-income housing’ in the Commonwealth.” Standerwick v. Zoning Bd. of Appeals of Andover, 447 Mass. 20, 28–29, 849 N.E.2d 197 (2006), quoting Board of Appeals of Hanover v. Housing Appeals Comm., 363 Mass. 339, 354, 294 N.E.2d 393 (1973). “The structure of the act itself reflects a ‘careful balance between leaving to local authorities their well-recognized autonomy generally to establish local zoning requirements ... while foreclosing municipalities from obstructing the building of a minimum level of housing affordable to persons of low income.’” Zoning Bd. of Appeals of Amesbury v. Housing Appeals Comm., 457 Mass. 748, 763–764, 933 N.E.2d 74 (2010), quoting Board of Appeals of Woburn v. Housing Appeals Comm., 451 Mass. 581, 584, 887 N.E.2d 1051 (2008).

¹ “Affordable” means that the units will be affordable for households earning no more than eighty percent (80%) of the Area Median Income, as provided by applicable state law and regulation [citations omitted]. It follows, then, that One hundred and seventeen (117) units, or 75% of the development, will be units not considered “affordable” as defined by statute.

In essence, a comprehensive permit submission under Chapter 40B simply means that the proponent of an affordable housing development need only submit one application to the town zoning board of appeals instead of submitting separate applications to all local boards with possible jurisdiction over the project. As cited above, the zoning board has “the same power to issue permits or approvals as any local board or official who would otherwise act with respect to such application.”

Thus, and apparently contrary to assertions made in the applicant’s filings, Nantucket’s Zoning Board of Appeals (“Board”) has a significant role to play in the development review process. While the Massachusetts Housing Finance Agency (“Masshousing”) has initially approved this project, their determination is not necessarily determinative. Local zoning ordinances and regulations are not necessarily superseded by 40B projects. The Board of Zoning Appeals must weigh the regional need for affordable housing against the “local needs” of the community. Local needs may take a variety of forms, including

- a) the need to protect the health or safety of the occupants of the proposed housing, or of the city or town;
- b) to promote better site and building design in relation to the surroundings, *or*
- c) to preserve open space.

Local Concerns: Water

“Local concerns/needs” may take a variety of forms and what may pose a significant threat in one Massachusetts region may be but an irritant in another. It is up to the Board to understand and investigate the adverse impacts of a proposed project and determine whether the benefits to community’s housing needs are outweighed by local concerns.² A review of the administrative record in this matter reveals that here are a variety of adverse impacts and infrastructure concerns raised by this project, including roads, endangered species, sewer, education, health care, fire safety, storm water disposal, etc. My comments will be confined to issues surrounding the continued supply of fresh, safe drinking water.

Clean drinking water is essential to life. Nantucket residents, businesses, and visitors rely upon an isolated sole source aquifer for all of their drinking water needs.³ The Wannacomet Water Company has the responsibility of safeguarding and supplying clean water to meet Nantucket’s needs. Water is pumped from the ground via 5 public water supply wells located in the center of the island between the harbor and the airport. Wannacomet’s wells are not the only wells to be concerned with as there are a variety of private wells serving others in the area of the project. The quantity of water that may legally be pumped by Wannacomet is governed exclusively by the Massachusetts Department of Environmental Protection (“MADEP”) pursuant to the Massachusetts Water Protection Act, M.G.L.A. c. 21G

It is axiomatic that reliance upon one and only one source of clean water is precarious. There needs to be enough water for now and in the future, and the water has to be kept clean enough to

² Town of Nantucket Zoning Board of Appeals Amended Comprehensive Permit Rules and Regulations: §5.03.

³ The EPA issued a Final Determination pursuant to Section 1424 (e) of the Safe Drinking Water Act (42 U.S.C. 300f, 300h-3(e), Pub. L. 93-523) designating the Nantucket Island aquifer as the sole source of drinking water for Nantucket, Massachusetts which, if contaminated, would create a significant hazard to public health.

drink without causing health issues. According to the consultants for Wannacomet, Surfside Crossing is predicted to require some 40,000 gallons per day, or approximately 14,600,000 per year.⁴ In addition to this project, the Town of Nantucket has apparently approved numerous new developments on the island that, including Surfside Crossing, will require the withdrawal of approximately 150,000 gallons per day from the island's only aquifer, or 54,500,000 gallons per year.⁵

Surfside Crossing, on its own, will be a significant part of a meaningful increase in water withdrawals from the sole source aquifer, giving rise to very real local concerns. To put it simply, the town is being asked to approve a project that will increase water demand at a time when there are many questions, concerns and uncertainties about the future quantity and quality of the sole source aquifer that supplies water to Nantucket. The reasons for these local concerns are as follows:

1. The Wannacomet Water Company's water withdrawal permit last amended in 2012 has expired. While the company insists that it applied for an extension in 2016, I have been unable to find a copy of either a recent extension application or any new permits issued pursuant thereto in the administrative record or in the documents produced by the town in response to a public records request. I have reviewed correspondence to WWC from Duane LeVangie, Chief, Water Management Program of MADEP that advises WWC that its 2016 permit application was incomplete and more information was required before a decision on the Nantucket permit could be made. Although I have read statements to the effect that such information had been supplied by WWC to MADEP, no such information has been produced to the Board or the public and the town of Nantucket alleges it has produced all of its documents.

This is not insignificant. The Massachusetts Water Act requires all entities that withdraw more than 100,000 gallons per day of water to obtain a WMA permit. The last amendment to the permit held by WWC appears to be from 2012. While the WWC permit was extended for two years or so by legislation to February 28, 2015, the fact is that the only watchdog overseeing the use of Nantucket's aquifer appears to be in the dark about WWC's current and future activities.

Further, under the expired permit, WWC had the ability to pump 1.68 Million Gallons Per Day (MGD). WGD exceeded that amount in 2015 (1.81 MGD average), 2016 (1.75 MGD average), 2017 1.69 GPD average, and appears to be on track to exceed the old permit levels again in 2018.⁶ As noted above Nantucket has approved additional hook-ups that will add 150,000 GPD to this number. MADEP is the only regulatory body that has the authority and jurisdiction to regulate WWC's withdrawals from the Nantucket aquifer. While there is apparently some document or information submitted to MADEP by WWC to support its permit application, it is not been made available to the public despite the fact that the regulatory process includes requirements for public notice. Without an understanding of why WWC is seeking permits for additional quantities, and without the opportunity to review the data relied upon by WWC (all as required by the WMA), there is no way the residents and customers of WWC and the Board of Appeals

⁴ See P. Newton. Hydrogeologic Review Surfside Crossing. September 19, 2018

⁵ M. Willett. Memo to: E. Antonietti re: Wannacomet Water Permits. October 31, 2018

⁶ M. Willett. Email: Follow up on above and according to Willett, p. 97 of Nov. 27, 2018 ZBA Packet

can be assured that their actions are based on sound, current science. The fact that the Board and WWC are proceeding with the Surfside Crossing comprehensive permit process without a current water withdrawal permit, and without the public being fully informed as to the contents of any application for extension or renewal of the expired permit, is a serious local concern.

2. There is another solid basis for local concern over fresh water capacity and usage on Nantucket. The possibility of increased pumping causing salt water intrusion into the sole source aquifer in Nantucket has been predicted in the scientific literature since at least 2005, with one study suggesting that salt water would begin to intrude into Nantucket wellfields by the year 2014 (Person, et al. 2005). Perhaps more significantly is the realization that there remains a great deal of uncertainty about the structure and capacity of the Nantucket sole source aquifer: "The most important conclusion from this study is that additional geologic, geophysical, and water quality data should be collected to better establish the stratigraphic architecture of Nantucket Island's sole source aquifer and to better define the current and future position of the fresh water/salt water interface below the wellfields. (Person et al. 2015, 741) Given the need for additional data to better understand the impacts of increased pumping from the aquifer on salt water intrusion, the record before the Board seems to indicate that the applicants and the WWC continue to rely on the same aquifer data that it used for its 2004 Amended Permit. To permit additional withdrawals by Surfside Crossing without knowing more about the threats to the aquifer is a clear matter of public concern.
3. Climate change has emerged as one of the greatest challenges facing water utilities in their efforts to plan for the future (Stratus Consulting and Denver Water 2015). The newly released U.S. Global Change Research Program (USGCRP) Fourth National Climate Assessment Report makes it abundantly clear that groundwater in the United States is being depleted due to increased pumping largely attributable to drought and increasing demand. Increasing air temperatures, reduced precipitation, and associated increases in irrigation requirements will put further pressure on groundwater supplies (USGCRP 2018). Climate change is likely to turn our understanding of coastal ocean aquifers on its ear. Increasing temperatures and more severe "heat waves" are predicted to pose additional threats to coastal fresh water supplies where there is the potential for salt water infiltration associated with sea level rise and storm surges. (Priyanka and Mahesha 2015; USGRP 2018). The relationship between climate change and the change in water availability is not linear; there is a need for planning methods and tools to allow for utilities to plan for more than one future. Traditional planning methods, as illustrated by the Nantucket and WWC water withdrawal permitting process and increasing permits that allow for significant withdrawals are based on historical, recorded data. The assumption seems to be that if the plan performed well and under historical climate conditions it will perform fine in the future. (Stratus Consulting and Denver Water 2015). This is simply untrue and is a matter of serious public concern for the residents of Nantucket.
4. Finally, it is of local concern that water quality of the sole source aquifer may be impacted as increased pumping put on line by increasing demand by Surfside Crossing and other developments seeking town permits. WCC is pumping fresh water with no treatment and while they transparently report water test results for a number of chemicals

and heavy metals, there are compelling constituents, like PFAS/PFOA and C-8 molecules found in firefighting foam, Teflon, scotch guard found in everyday items or routinely used in firefighting training. Surfside Crossing's water demands only highlight the need for the town to become increasingly vigilant in its monitoring of the quality of the water pumped from the Nantucket aquifer.

5. The Surfside Crossing comprehensive development application must be evaluated on the basis of present and existing regulatory permits and conditions set forth therein not on what might happen with future permits.

Conclusion

There are numerous serious and significant public concerns surrounding the application for the construction of the Surfside Crossing development. These concerns cannot reasonably be outweighed by the addition of 25 affordable housing units tucked in a development comprised of 156 total units packed into a 13+ acre parcel. While the Town of Nantucket and the WWC have thus far managed to successfully balance growth and development with environmental concerns, the future requires different and more adaptive management strategies. This letter attempts to raise awareness about the potential for water quantity and quality issues stemming from increased pumping – especially pumping approved by WWC – an entity that appears to lack a current permit from MADAP to pump drinking water and has not produced information explaining how future increases will impact water quantity/quality under the increasing effects of climate change. It is, of course, for the Board and the community to decide, but in my opinion this project should not go forward based on the record before us. Indeed there should be only guarded increases in pumping from this sole source aquifer until the science and data underlying the water quality and quantity concerns, updated to take into account the predicted impacts of climate change, are thoroughly examined with meaningful professional, scientific, and community input. Therefore, in my opinion, this project should be denied at this time.

Sources

Person, M, J. Taylor, S. L. Dingman. 2005. Sharp Interface Models of Salt Water Intrusion and Wellhead Delineation on Nantucket Island, Massachusetts. *Groundwater* 36:5, 731-742.

Priyanka, B.N. and A. Mahesha. 2015. Parametric Studies on Saltwater Intrusion into Coastal Aquifers for Anticipate Sea Level Rise, *Aquatic Procedia* 4, 103 – 108.

Stratus Consulting and Denver Water. 2015. Embracing Uncertainty: A Case Study Examination of How Climate Change is Shifting Water Utility Planning. Prepared for the Water Utility Climate Alliance (WUCA), the American Water Works Association (AWWA), the Water Research Foundation (WRF), and the Association of Metropolitan Water Agencies (AMWA) by Stratus Consulting Inc., Boulder, CO (Karen Raucher and Robert Raucher) and Denver Water, Denver, CO (Laurina Kaatz). May 12, 2015. Retrieved from: https://www.csuohio.edu/urban/sites/csuohio.edu.urban/files/Climate_Change_and_Water_Utility_Planning.pdf

USGCRP, 2018: *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M.

Lewis, T.K. Maycock, and B.C. Stewart (eds.)). U.S. Global Change Research Program, Washington, DC, USA. doi: 10.7930/NCA4.2018. Retrieved from: <https://nca2018.globalchange.gov/chapter/front-matter-about/>

Sincerely,

A handwritten signature in blue ink, appearing to read 'John R Coon', is written over the word 'Sincerely,'.

John R Coon, JD, PhD