



TOWN OF ORLEANS

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BOARD OF
SELECTMEN

TOWN
ADMINISTRATOR

November 13, 2015

Mary Joe Perry, District Highway Director
MassDOT, District 5
1000 County Street
Taunton, Massachusetts 02780

Re: Town of Orleans Request to Conduct Site Investigations on a Portion of MassDOT property at the Route 6 Exit 12 Interchange.

Dear Ms. Perry:

With this letter, the Town of Orleans would like to request reconsideration by the MassDOT of its denial, per its letter dated October 16, 2015, of the request of the Town of Orleans for access to the southeast section (lobe) of the Exit 12 interchange on Route 6 in Orleans to conduct testing of the soils and geology at the site. The purpose of the testing is to determine potential suitability of this site or other sites in the vicinity for groundwater disposal of treated wastewater from the Town's proposed new wastewater treatment plant. We are providing additional information which will help to clarify the nature of the proposed testing at the site, and also respond to MassDOT's concerns expressed in the letter. Copies of the original letter of request by the Town and the MassDOT letter of denial are attached.

As you may know, the Town of Orleans is currently conducting a water quality and wastewater management study to address severe nitrogen loading into the sensitive watersheds in the Town. As part of that effort, the Town is investigating potential locations for groundwater discharge of fully treated effluent. The groundwater discharge would have the benefit of providing aquifer recharge. To determine if a site is feasible for groundwater discharge, a certain amount of field investigation is needed to verify soil and groundwater characteristics. The subject portion of the Route 6 Exit 12 interchange has been identified as one of a limited number of sites for field investigations to assess the potential feasibility of a groundwater discharge. At this time, the request for access to the site is solely to conduct limited field investigation (soil borings and groundwater monitoring). The data collected will be valuable for the Town in evaluating the feasibility of a groundwater discharge at this site or at other locations in the vicinity. Should the analysis reveal that the site would indeed be the most favorable site for a groundwater discharge; the Town would coordinate with MassDOT, as well as MassDEP, for approval for long-term use of a portion of the site.

In its letter of denial the MassDOT cited five reasons for its negative determination. Upon review of the MassDOT letter, the Town of Orleans believes that there may be a

misunderstanding of the nature of system that would be implemented at the site by the Town should the site investigations prove that groundwater discharge is technically and environmentally feasible. Based on the characteristics of the proposed disposal system described in its request, the Town does not believe that any of MassDOT's reasons would preclude the use of the property by the Town for the purpose stated. A brief summary of the Town's response to each MassDOT concern follows:

1. *MassDOT must keep its corridor lands, e.g. SHLOs (State Highway Layouts), open for any future maintenance work, or for highway expansion or reconfiguration.*

Town Response: The facilities that would be constructed would use only a fraction of the site, would include no permanent structures (only piping and small control valves), and could be easily relocated or rearranged on the site in the future if MassDOT had to reconfigure the interchange. The discharge of groundwater can be accomplished by either a groundwater discharge bed or by wicks. Discharge by a wick requires minimal land area for installation and long-term operation. Two figures are attached to this letter. Figure 1 is a location map that shows the location of the proposed wicks on the site. Figure 2 provides a bit more detail in that it shows the limited land area that is required for the proposed field testing. Access to the site, land for DOT construction staging or other use, visual buffers and other requirements could be accommodated on land on the site not required by the Town.

2. *Highway interchanges have a higher potential for accidents and truck roll-overs. A hazardous material spill within an area used for wastewater recharge could have widespread impacts to both the groundwater and to the operation of the proposed wastewater treatment plant.*

Town Response: The new Orleans wastewater treatment plant will not be located at this site. The proposed location of the treatment plant is approximately one-quarter mile away on Town land in a different watershed. With regard to groundwater protection in case of a spill on or adjacent to the roadways, the groundwater discharge beds or wicks would be elevated above the adjacent roadways because of the topography of the site. Any flows from a spill would not be tributary to the disposal beds. There would also be a significant natural buffer strip between the roadways and the beds as shown on Figure 1.

3. *MassDOT is subject to stormwater management regulations that are administered by both federal and state agencies. To install a municipal wastewater recharge system in one of its highway interchange lobes would significantly interfere with MassDOT's ability to comply with MassDEP stormwater standards, as well as the agency's MS4 permit, both of which mandate minimizing its contribution of "contaminants of concern" to impaired water bodies such as Namskaket Creek.*

Town Response: The Town-proposed groundwater discharge system would not affect or be affected by any MassDOT requirements for stormwater management under federal or state regulations. The elevation of the wicks, separation from the roadways and design of the system would preclude any interface. Access to the wicks would be via a pervious roadway, and would not contribute to stormwater runoff.

In addition, there would be no “contaminants of concern” discharged through the Town’s system. The water recharged to groundwater would be treated in accordance with its DEP Groundwater Discharge Permit (GWDP), which would require compliance with groundwater and surface water quality standards, including any required Total Daily Maximum Load (TMDL) required by the state.

4. *Allowing the discharge of municipal wastewater to a SHLO would create and unmanageable precedent and result in MassDOT being put in the untenable position of accommodating every request to use highway land for a wide range of municipal of quasi-public land uses and services.*

Town Response: For numerous reasons the Town does not believe that the proposed use of the Exit 12 interchange would set a precedent for MassDOT. The Town expects that any similar request of MassDOT by any other entity would be considered on its specific, unique merits and concerns and not rejected without reasonable consideration.

The minimally intrusive, non-structural nature of the system proposed by the Town, the environmental conditions necessitating the proposal, the ability to modify the system if required in the future, the innocuous nature of the discharge and other reasons cited above define a unique situation that would, if site investigations so conclude, meet the rigorous limitations and requirements of the MassDOT, the DEP and other agencies. In fact, the joint use of public lands for compatible uses that meet critical regional needs, such as renewable energy production, or wastewater and septage treatment of outer and lower Cape Towns, is a sound, “green”, robust solution that should be promoted by state agencies in a spirit of cooperation with each other and with the Commonwealth’s towns, as evidenced by the very similar groundwater discharge system built on Route 6 DOT property in Provincetown, the prison built on the highway median in Dedham, or solar panels on certain roadways throughout the Commonwealth.

5. *MassDOT envisions significant liability arising should a problem occur with the type of activity you propose to take place on state-owned property.*

Town Response: The system proposed by the Town is not a complex, novel or hazardous activity. In fact, wastewater and stormwater currently flow under and around numerous roadway segments of MassDOT-owned properties in Orleans, on Cape Cod and throughout New England. The proposed approach is

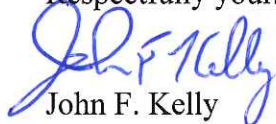
compatible with environmental objectives throughout the state, including groundwater recharge, treatment and discharge of stormwater, sustainable, multi-purpose uses of public lands, protection of critical resources (the Namskaket Marsh being protected by this plan is a state-designated Area of Critical Environmental Concern) and other common public objectives. The recharge of groundwaters near public roads is a very common activity in the state, the responsibilities, liabilities and terms of mutual cooperation of which have been worked out in virtually every public project in the state.

We do want to note that the Town is being proactive in obtaining approvals for potential groundwater discharge sites. The Town is proceeding to secure legislative authorization to test and potentially use the subject site if it is determined to be necessary. We would like to reiterate that the Town is only, at this time, requesting approval to conduct testing to determine soils, geologic and environmental characteristics of the site, not for final permission to use the site for permanent disposal purposes. The completion of the field testing at this time may indicate that the site is not technically feasible, thus avoiding wasted time and resources of the MassDOT, the Town staff, its consultants and the legislative delegation in unnecessarily pursuing such authorization.

In summary the Town of Orleans requests reconsideration of the Town's request for site access. We would welcome the opportunity to meet with you and your team in person to describe the proposal in more detail, answer any questions the Department may have and work out any design or operational requirements that must be addressed going forward.

Thank you for your attention to this request. The Town requests expeditious response because, as mentioned to your staff, the Town's consultants need to complete site investigations before winter to meet schedules for Town Meeting next May.

Respectfully yours,



John F. Kelly
Town Administrator

Attachments

cc: Board of Selectmen
Representative Sarah K. Peake
Senator Daniel A. Wolf
Thomas Tinlin, MassDOT, Highway Administrator
Patricia Leavenworth, MassDOT, Chief Engineer
George Meservey, Director of Planning
Andrea Coates, MassDOT District Environmental Engineer
Mike Domenica, Water Resources Associates



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

-  Potential Monitoring Well
-  Potential Access Road
-  Potential Wick Location

Figure 1
Locus Map
 Water Quality and Wastewater Planning
 Route 6 (Interchange 12) Cloverleaf
 Wick Discharge



-  Potential Test Pit
-  Potential Test Well at Wick Location
-  Potential Monitoring Well
-  Potential Wick Location
-  Potential Road
-  Potential Cleared Area

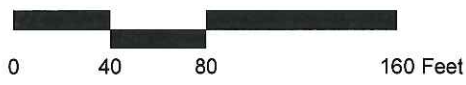


Figure 2
Test Pit Locations
 Water Quality and Wastewater Planning
 Route 6 (Interchange 12) Cloverleaf
 Wick Discharge