

**C. REQUIRED SUBMITTALS/ APPLICATION ATTACHMENTS**

Check here to ensure the following are included with the application:

Included		
<input checked="" type="checkbox"/>	1.	Permit Application Fee (not required for renewal applications)
<input checked="" type="checkbox"/>	2.	Technical Report (not required for renewal applications)

**D. DIVERSION REQUEST AND DIVERSION SOURCE INFORMATION**

This application is for: (Please check one, as appropriate)

- New Diversion, not previously permitted
- Modification of Existing Permit No. \_\_\_\_\_ Activity No. (if known) \_\_\_\_\_
- Renewal of Existing Permit No. \_\_\_\_\_ Activity No. (if known) \_\_\_\_\_

**Attach additional sheets if space provided is not adequate.**

1. Present Allocation:
  - a. All Sources: N/A million gallons of water per month at a maximum rate of N/A gallons per minute.
2. Requested Allocation:
  - a. All Sources: 7 million gallons of water per month, at a maximum rate of up to (4) pumps at 1,200 gallons per minute and up to (7) pumps at 290 gallons per minute.  
Note: This allocation represents the maximum withdrawal expected during any one month (31 days) of the calendar year.
3. Diversion to be used for the temporary dewatering of excavations and trenches associated with construction.
4. Dewatering will occur from a series of 0 wells, 0 wellpoints, and/or 34 trenches ranging from 2 to 13 feet deep.
5. Complete the following for each existing and proposed dewatering wells, wellpoints, site-wide wells/wellpoints system, and/or trenches:

Dewatering State Well Permit No./ Site Wide Permit No. <sup>1</sup>	Well Local Name/ Trench Name	Location Description	Existing (E) Proposed (P)	Proposed Maximum Withdrawal Rate (million gallons)	
				Per Month	Per Year
See Attached Table D.5					

6. Complete Addendum A for each existing and proposed dewatering diversion source.

<sup>1</sup> Provide the individual State Well Permit Number for the Dewatering Well or Well Point or Provide the State Site-Wide Permit Number for the Dewatering Wells/Wellpoints. For dewatering activities where a well permit is not required according to N.J.A.C. 7:9D-1.11(g), provide the well local name only.

*Addendum to Sections 2.3.2 and 4.1 of the December 2015 Construction Dewatering Assessment Technical Report*

This Addendum to Sections 2.3.2 and 4.1 of the December 2015 *Construction Dewatering Assessment Technical Report* has been compiled in response to verbal comments received from the New Jersey Department of Environmental Protection (NJDEP) (verbal communication from James McDonald [NJDEP] to Heather Brewster [AECOM], dated January 19, 2016), with the objective to update and further evaluate the potential impact of the dewatering project on smaller capacity wells that may be present within ¼-mile of the project.

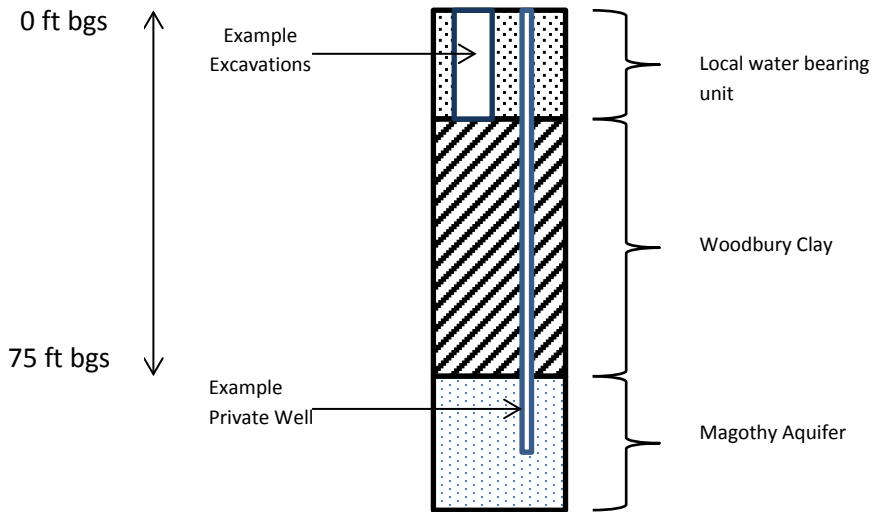
On January 26, 2016, AECOM conducted a well search for private, domestic, and irrigation wells within ¼-mile of the project, using the New Jersey Division of Water Supply and Geoscience database. Due to the size of the project site, in order to complete a comprehensive search a ¼mile search was completed from the four corners of the project, rather than a point centrally located within the project footprint. Excluding monitoring wells, test borings and abandonment reports, the database output identified twenty-one (21) existing private wells or domestic wells or irrigation wells within ¼-mile of the project. These wells range in depth from 55 ft below ground surface (bgs) to 225 ft bgs. Of the twenty-one (21) wells) identified, the eight (8) wells nearest the project site (ranging in depth from 55 ft below ground surface (bgs) to 200 ft bgs) were initially evaluated for any potential negative impacts from the proposed excavation dewatering activities. (see Figure 8).

**Figure 8 – Private Groundwater Wells within ¼ Mile of the Site**



The bottom of the proposed excavations for the project will extend into the local water-bearing unit of the Stratum 1 (as referenced in Section 2.1.2 of the NJDEP Water Allocation Permit Application, Temporary Dewatering [the Application] submitted on December 7, 2015) and contact the top of the clay of the Woodbury Formation. As discussed in Section 2.1.1 of the Application, the project site is underlain by the Woodbury Formation which consists a stiff to very stiff dark gray clay with a thickness just over 50 ft. As such, the Woodbury Formation acts as a hydrological aquitard, which separates the thin, upper (unconfined) water-bearing unit (in which the proposed excavation dewatering activities will be conducted) from the lower (confined) water-bearing unit (in which the private wells are screened).

**Figure 9 – Example Illustration of the Proposed Excavations and Private Wells (in cross section)**



**Table 8** lists the corresponding well details, including the distance to the closest dewatering feature of the project, well depth, the reported well yield, block and lot information, and the likely water-bearing unit for each well.

**Table 8 – Private, Domestic, or Irrigation Well within 1/2-mile Mile of the Project**

Permit Number	Well Use	Physical Address	Nearest Dewatering Feature <sup>1</sup>	Distance to Nearest Dewatering Feature (ft)	Is Well within 1/4-mile of Nearest Dewatering Feature	Well Depth (ft)	Well Capacity (gpm)
2800019108	Domestic	NR	30	1,400	No	150	10
2800004031	Domestic	Daniel Avenue	30	500	Yes	152	8
2800008506	Domestic	NR	23	625	Yes	150	10
2800029216	Domestic	Hogback Road	21	1,125	Yes	180	0
2800010639	Domestic	NR	21	650	Yes	200	10
2800011221	Domestic	Domestic	21	1,500	No	100	10
2800056829	Domestic Replacement	231 Bordentown-Crosswicks Rd	21	1,500	No	160	12
2800011790	Domestic	NR	4	1,175	Yes	110	10
2800008079	Domestic	Bordentown-Crosswicks Rd	4	2,800	No	185	10
2800014681	Domestic Replacement	NR	2	350	Yes	200	10
2800019840	Domestic Replacement	NR	2	1,950	No	250	15
2800053699	Domestic Replacement	69 Bordentown - Chesterfield Rd	20	1,400	No	200	12
2800009832	Domestic	NR	20	775	Yes	55	10
2800005169	Domestic	NR	20	1,775	No	225	10
2800007701	Domestic	NR	20	1,400	No	150	8
2800015584	Domestic Replacement	Bordentown - Chesterfield Rd	20	2,350	No	100	10
E201007851	Domestic Replacement	57 Bordentown - Chesterfield Rd	20	2,050	No	205	N/R
E201403103	Domestic Replacement	61 Bordentown-Chesterfield Rd	20	2,200	No	200	12
2800012870	Domestic	NR	24	1,550	No	140	10
2800002486	Domestic	NR	24	1,100	Yes	125	10

<sup>1</sup> - see Table 1 of the Technical Report  
N/R not reported in the database output

- Well number 2800004031 (permit number) is located northwest of the project site. This well is reported as having a total depth of 152 ft. bgs, placing it in the Magothy aquifer. Proposed excavation number 30 (line trench) is nearest this well (approximately 500 ft to the southeast) and is planned to extend 8 ft bgs.
- Well number 2800008506 (permit number) is located northwest of the project site. This well is reported as having a total depth of 150 ft. bgs, placing it in the Magothy aquifer. Proposed excavation number 23 (box excavation) is nearest this well (approximately 625 ft to the southeast) and is planned to extend 8 ft bgs.
- Well number 2800029216 (permit number) is located north of the project site. This well is reported as having a total depth of 180 ft. bgs, placing it in the Magothy aquifer. Proposed excavation number 21 (box excavation) is nearest this well (approximately 1,125 ft to the south) and is planned to extend 8 ft bgs.
- Well number 2800010639 (permit number) is located northeast of the project site. This well is reported as having a total depth of 200 ft. bgs, placing it in the Magothy aquifer. Proposed excavation number 21 (box excavation) is nearest this well (approximately 650 ft to the southwest) and is planned to extend 8 ft bgs.
- Well number 2800011790 (permit number) is located northeast of the project site. This well is reported as having a total depth of 110 ft. bgs, placing it in the Magothy aquifer. Proposed excavation number 4 (perimeter trench) is nearest this well (approximately 1,175 ft to the southeast) and is planned to extend 5 ft bgs.

- Well number 2800014681 (permit number) is nearest to the project site. This well is reported as having a total depth of 200 ft bgs, placing it in the Magothy aquifer. Proposed excavation number 2 (trench excavation) is nearest to this well (approximately 350 ft to the west) and is planned to extend to 5 ft bgs.
- Well number 2800009832 (permit number) is the shallowest well near the project site. This well is reported as having a total depth of 55 ft. bgs, placing it in the Magothy aquifer. Proposed excavation number 20 (perimeter trench) is nearest this well (approximately 775 ft to the northwest) and is planned to extend 4 ft bgs.
- Well number 2800002486 (permit number) is located south of the project site. This well is reported as having a total depth of 125 ft. bgs, placing it in the Magothy aquifer. Proposed excavation number 24 (box excavation) is nearest this well (approximately 1,100 ft to the north) and is planned to extend 2 ft bgs.

**Table 6** (*Estimated Dewatering Rates at each Construction Element*) of the Application shows that the estimated radius of influence resulting from the proposed dewatering activities at each the proposed excavations is not greater than 215 ft (excavation 21), which is less than half the distance to the nearest private well (permit number 2800010639). Note further that the construction dewatering will be conducted in the upper water-bearing unit (S1), whereas the private (potable) wells are screened in the lower water-bearing unit (S3). Using this information, it is reasonable to infer that the water-bearing unit in which the proposed excavation dewatering activities will be conducted is both vertically and horizontally separated from the water-bearing unit in which the private wells are set. Furthermore, given the distance of the private wells from the dewatering activities (>2-times the longest radius of influence) and given that units S1 and S3 are separated by the thick clay sequence of the Woodbury Formation, we conclude that the water supply to the private wells near the project site will not be negatively impacted by the dewatering project.