Groundwater Well Siting and Construction Guidelines

Pre-Application Water Quality Checklist

Address:_____ City:_____ APN:_____

Well Location: Lat:_____ Long:_____

Submitted by:_____ Company:_____

Phone:_____ Email: _____

Type of Work
☐ New ☐ Destruction ☐ Replacement ☐ Deepening ☐ Other: _____

Water Well Type
☐ Domestic ☐ Test Hole/Well ☐ Industrial ☐ Cathodic Protection ☐ Agricultural ☐ Irrigation ☐ Other: _____

Separation Distances (Groundwater Well Siting and Construction Guidelines, Section VI.A.)

Potential Contamination Source	Minimum Separation Distance	Verification	Standard Met?
Pit privy; Any sewer (sanitary, industrial, or storm; main or lateral); Wastewater treatment system (*i.e.*, septic tank, subsurface sewage leaching field)	Domestic or Stock Well: 100 ft All Other Wells – 150/200/600 ft (Note 1)	Sketch	☐ Yes ☐ No
Stormwater infiltration well	150 ft	Sketch	☐ Yes ☐ No
Earthen-surfaced animal housing (e.g., corral, confined pasture, animal barn)	100 ft for a rural residential and 600 ft for a commercial animal confinement	Sketch	☐ Yes ☐ No
Cesspool or seepage pit	Domestic or Stock Well: 150 ft All Other Wells – 600 ft	Sketch	☐ Yes ☐ No
Petroleum/chemical storage tank or product non-transmission line (subsurface)	300 ft	Sketch; GeoTracker	☐ Yes ☐ No
Petroleum/chemical product transmission pipeline (subsurface)	1,000 ft	Sketch; State Fire Marshall	☐ Yes ☐ No
RCRA Sites subject to corrective action; Superfund sites	1 mile (5,280 feet)	GeoTracker	☐ Yes ☐ No
Petroleum storage tanks (leaking underground); Records of federally-registered, or state-permitted or registered, hazardous waste sites identified for investigation or remediation; Properties identified for environmental concerns	0.5 mile (2,640 feet)	GeoTracker	☐ Yes ☐ No
Sewage, manure or waste evaporation/percolation pond; Sewage, manure or waste irrigation and spreading area	600 ft	Sketch	☐ Yes ☐ No
Solid Waste Disposal Site	0.5 mile (2,640 feet)	GeoTracker	☐ Yes ☐ No

1. A 150 feet setback from a public water well where the depth of the effluent dispersal system does not exceed 10 feet; 200 feet from a public water well where the depth of the effluent dispersal system is between 10 and 20 feet; and 600 ft from a public water well when the dispersal system is greater than 20 feet in depth.

Flood Plains (Groundwater Well Siting and Construction Guidelines Section VI.B.)

Is the well located in a 100-Year Floodplain as designated by FEMA? □ Yes □ No

If yes, check the option below that will be implemented to prevent surface water from entering the well. Attach plans, specifications or other information documenting the approach.

□ Option A: The top of the well casing and any openings into the top of the well will be no less than 12 inches above the 100-year flood elevation.

□ Option B: The top of the well casing and any openings into the top of the well will be no less than 12 inches above grade. Openings designed to permit the entrance and/or egress of air or gas will be constructed to prevent surface water from entering the well structure.

□ Option C: Alternate method proposed by the applicant

Annular Seal (Groundwater Well Siting and Construction Guidelines Section IX.)

Applicable Special Management Area(s)	Applicable Option	Minimum Required Annular Seal Depth	Verification	Standard Met?
□ SMA1: Corcoran Clay Area	□ Penetrates Corcoran Clay	At least 10 feet into Corcoran Clay	□ Proposed seal depth □ Depth to top of Corcoran Clay from Updated GW Quality Dataset □ Data from nearby borings or wells □ Test well/boring logs □ Field verification based on logs	□ Yes □ No
	□ Completed above Corcoran Clay	At least 80 ft and not more than 50 ft above the screen interval		
□ SMA2: Alluvial Fan Area	□ Upper Zone Well	At least 80 ft and not more than 50 ft above the screen interval	□ Proposed seal depth	□ Yes □ No
	□ Below Upper Zone	At least 200 feet, 50 feet below the Upper Zone or 10 feet into a Competent Clay below the Upper Zone	□ Proposed seal depth □ Data from nearby borings or wells □ Test well/boring logs □ Field verification based on logs	
□ SMA3: Fractured Rock	□ Default Minimum Seal	150 feet	□ Proposed seal depth	□ Yes □ No
	□ Seal to Solid Rock	At least 10 feet into Solid Rock beneath water table	□ Proposed seal depth □ Field verification based on logs	
	□ Alternate well completion based on site-specific data	In accordance with recommendations from driller	□ Data from nearby borings or wells □ Test well/boring logs	
□ SMA4: Upper Zone Contamination Risk Area for (check all that apply): □ NO3 □ 1,2,3-TCP □ Uranium	□ Completed in Upper Zone	At least 80 ft and not more than 50 ft above the screen interval	□ Proposed seal depth □ Data from Aquifer Risk Map and Updated GW Quality Analysis Dataset □ Depth to bottom of Upper Zone □ Data from nearby borings or wells □ Test well/boring logs □ Field verification based on logs	□ Yes □ No
	□ Completed below the Upper Zone, Default Minimum Seal Depth	Not less than 50 feet below the bottom of the Upper Zone		
	□ Completed below the Upper Zone; Seal to Competent Clay	At least 10 feet into Competent Clay below the Upper Zone		

Applicable Special Management Area(s)	Applicable Option	Minimum Required Annular Seal Depth	Verification	Standard Met?
□ SMA5: Other Contamination Risk Area (check all that apply): □ NO3 Deep Zone □ Arsenic (As) □ Chrome 6 (Cr6+) □ w/i setback from Regulated Site	□ Upper Zone well	See Upper Zone requirements for SMA4	□ Proposed seal depth □ Aquifer Risk Map for As and Cr6+ □ Data from Updated GW Quality Analysis Dataset for NO3 □ Depth to bottom of Upper Zone □ Field verification based on logs	□ Yes □ No
	□ Well completion designed by Qualified Professional	In accordance with recommendations by Qualified Professional	□ Letter from Qualified Professional with recommended seal depth □ Aquifer Risk Map for As and Cr6+ □ Data from Updated GW Quality Analysis Dataset for NO3 □ Depth to bottom of Upper Zone □ Field verification based on logs	□ Yes □ No
	□ Evaluation of reported closed contamination or school site case by qualified professional	In accordance with recommendations by qualified professional	□ Letter from Qualified Professional with recommended seal depth	□ Yes □ No

Notes:

1. GeoTracker: https://geotracker.waterboards.ca.gov/
2. FEMA: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd
3. Updated Groundwater Quality Analysis Dataset: "Updated Groundwater Quality Analysis and High Resolution Mapping for Central Valley Salt and Nitrate Management Plan," by Central Valley Regional Water Quality Control Board, dated June 2016
4. Aquifer Risk Map: https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=17825b2b791d4004b547d316af7ac5cb
5. GeoTracker GAMA: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/

Instructions

Gather the information below to complete the checklist. Complete the checklist sequentially and attach all appropriate documentation.

Separation Distances

1. Attach a sketch, map or marked Google Earth image showing the well location and distance to the nearest:
    a. Well location and Assessor's Parcel;
    b. Pit privy, sewer line, septic tank, leach field, cesspool, or seepage pit;
    c. Storm water infiltration well;
    d. Earthen-surfaced animal housing (corral, confined pasture, barn, etc.);
    e. Petroleum or chemical storage tank and/or supply lines;
    f. Sewage, manure or waste evaporation/percolation pond; and/or
    g. Sewage, manure or waste irrigation and spreading area.
2. Attach a screen shot from the GeoTracker site showing the location of the following:
    a. The well location;
    b. Permitted Facilities including: Permitted Waste Discharge Requirements Sites, Permitted USTs, DTSC Hazardous Waste Sites, Land Disposal Sites, Oil/Gas Sites, and Confined Animal Sites within 0.5 mile (2,640 feet); and
    c. Cleanup Sites including: LUST Cleanup Sites, Cleanup Program Sites, Military Cleanup Sites, and DTSC Cleanup Sites within 1 mile (5,280 feet).

Flood Plains

1. Attach a screen show from the FEMA website showing the location of the well and outlines of any identified 100-year flood plains within 1 mile (5,280 feet) of the well.

Annular Seal

1. Attach a screen shot from Google Earth using the kmz plug-in or GIS files available from the County showing the location of the well and nearby Special Management Areas established in the vicinity;
2. Attach screen shots from Google Earth using the KMZ plug-in or GIS files available from the County showing the location of the well and the following:
    a. If the well is located in SMA1, the depth and thickness of the Corcoran Clay;
    b. If the well is in SMA1 or SMA2, the depth to the base of the Upper Zone; and
    c. If the well is in SMA1 or SMA2, the concentration of Upper Zone NO3-N, Lower Zone NO3-N, 1,2,3-TCP, Uranium Arsenic and Hexavalent Chromium.
3. Indicate if the driller intends to verify and adjust seal depths based on field log or elog data.
4. Attach site-specific data, if applicable, including the following:
    a. Lithologic log, elog and/or sampling data from an existing nearby well(s) or boring(s).
    b. Data from GeoTracker or GeoTracker GAMA.
    c. Lithologic log, elog and/or sampling data from a new test well or boring for which a prior permit has been obtained.
5. If applicable, attach a letter from a Qualified Professional (Professional Civil Engineer or Professional Geologist) with a recommended well seal and completion design, and supporting data and information.
    a. Letter must be signed and stamped
    b. Attach lithologic logs, elogs and water quality data, as appropriate, for nearby wells or borings. .
    c. Provide the scope and results of any site specific investigation, if conducted, including any test wells or borings.
    d. If the well is located within the specified minimum setback distance from a reported contamination incident that has been closed by the regulatory agency or within the specified minimum setback distance from a school investigation site, attach an evaluation of the case(s) that indicates the well will not pose a risk of vertical contamination migration or lateral contamination migration and capture of contamination associated with the case(s).