



GEOTECHNICAL REPORT WORKSHEET & DEWATERING PLAN

Which Projects Must Complete This Worksheet?

Applicants for **all projects** anticipating needing to perform construction dewatering must complete this worksheet. These requirements apply to projects that have not yet received a Building Permit as of May 4, 2017.

Please note that this information must be stamped by a California licensed Geotechnical Engineer and will be made available to the public.

1. PROJECT INFORMATION

Project Name: _____ APN: _____

Project Address: _____

Applicant Name/ Developer: _____

Engineer: _____

Project Description: _____

2. SITE ASSESSMENT

Geotechnical Study provided¹²³⁴: Yes No

a. Depth to groundwater: _____

b. Maximum depth of excavation (including utilities, pits, shafts, etc.): _____

c. Proposed maximum depth of dewatering wells/pumping: _____

d. Maximum excavation depth: _____

e. Size and anticipated flow from each pump: _____

f. Anticipated dewatering flow rate and total dewatering duration: _____

g. Control to be utilized: Settling Tank Turbidity Curtain Other (describe): _____

h. Location of anticipated discharge including final receiving water (creek name or Bay): _____

i. All wells and other dewatering sites within a 400 foot radius (roughly one City block) of the property that may interact with dewatering activity, using information available from the City, show the exact location of these dewatering sites.

Map attached: Yes N/A (no wells or other dewatering sites within 400 foot radius)

j. Include a schematic diagram showing pipe and pump sizes and locations and sizes of all tanks, fill station, pipe route to nearest storm drain inlet (including flexible and rigid pipe locations), and all street and sidewalk impacts including trenching, saw cuts, and asphalt patching between project site and storm drain inlet.

Schematic attached: Yes No

k. Determine the radius of influence (i.e. extent of cone of depression) from each dewatering well as a function of time, based on local soil and groundwater conditions. Prepare a map and cross sections of the cone(s) of depression.

Map and cross sections attached: Yes No

l. State whether it is reasonably likely that the proposed dewatering will cause effects (including settlement or movement) on off-site structures or infrastructure, including the right of way, easements, and utilities within public utility easements. Yes No

¹ The Geotechnical Study must include verification of the anticipated drawdown curve with a pump test using **actual wells**, by the end of the two week start-up period.

² Cone Penetrometer Tests (CPT) is also encouraged to verify soils data. The actual pumping rates, following the two week start-up period, shall be limited to the rates used in the verification. The maximum amount of water pumped over the ten week period, (excluding the two week start-up period) shall be limited to that calculated during verification.

³ The ground water level must be measured at a distance representative of the distance to the nearest structure on an adjacent parcel, or farthest feasible point on the subject site. This monitoring shall be daily for the first week (including the two week start-up period), then weekly thereafter. **If drawdown results are greater than anticipated by the Geotechnical Study at the end of the two week start-up period or thereafter, a revised Geotechnical Study and any revised conclusions on impacts of the groundwater drawdown must be submitted.**

⁴ The Geotechnical Study and verification **shall not be required** if the storm drain pumping is continuously limited to thirty gallons per minute (gpm) following the two week start-up period. This could be accomplished through installation of groundwater cut-off walls (such as secant walls) or similar construction techniques. The ten week pumping period can be extended if the thirty gpm flow rate is continuously achieved following the two week start-up period. Additionally, the contractor need only provide off-site hauling of water sufficient to meet the needs of adjacent neighbors, as opposed to the one-day per week requirement for 2016.

m. State whether it is reasonably likely that the proposed dewatering will reduce the amount of water taken up by any vegetation or trees to a level that will affect the health or viability of the vegetation or trees. Utilize an Urban Forestry Sub Consultant (certified arborist) to verify any such effects on trees. Yes No

3. OFFSITE EFFECTS AND AVOIDANCE MEASURES

- Yes, offsite effects are anticipated and avoidance measures are detailed below
- No, offsite effects are not anticipated

To the extent that the qualified professional states that off-site effects are reasonably likely to occur, identify avoidance measures to be implemented that will minimize the type and severity of those effects. Avoidance measures are also to be employed to the extent practical to minimize the flow rate and duration of the pumping, even when off- site effects are not specifically identified. Avoidance measures may include, for example: reducing well count, well depth, well location, pumping rate, and/or duration of pumping; supplemental irrigation of trees or vegetation, soil amendment, or other plant protection methods recommended by a certified arborist; alternative dewatering or construction methods.

4. MONITORING PLAN (All applicants must fill out this section)

Describe monitoring plan to assess any actual effects on vegetation, trees, structures and infrastructure.

5. ENGINEER CERTIFICATION: The geotechnical study, description and extent of cone of depression , and determination of offsite effects must be stamped by a California licensed Geotechnical Engineer.

Geotechnical Report Prepared By: _____

Stamp With Signature:

6. APPLICANT CERTIFICATION: I acknowledge the following dewatering requirements:

- Fill Stations: Must demonstrate a maximum 10-minute truck fill time and 2 simultaneous, 100' hose, 10 gallons per minute (gpm) deliveries (for each hose) during the two week start up period defined below. Storage tank designed to be at least one-half full. Ongoing metering of instantaneous and total flow of fill stations required.
- Pump for no more than 10 weeks for residential sites. A two week start-up period ahead of the 10 weeks is allowed. At the end of the two week startup period, compliance with all performance standards and water quality standards shall be demonstrated.
- Report on all measurements and requirements (reports due at the end of the two-week start-up period, then bi-weekly, and then a final report at the end of pumping).
- At the basement slab center, pump the groundwater down no deeper than 3 feet below the depth of the slab, following the two week start-up period. Once the slab is poured, the depth to the center of the slab shall be 1 foot.
- Offer to water trees/plants on adjacent properties and do so if requested.
- Survey and mark land elevations on structures on adjacent parcels (assuming permission is obtained) prior to any pumping.

Applicant Name: _____

Applicant Signature: _____