

DRAFT ORDINANCE - STRICKEN VERSION (9-9-2022)

Sonoma County, California, Code of Ordinances
CHAPTER 25B WATER WELL CONSTRUCTION STANDARDS

CHAPTER 25B WATER WELL CONSTRUCTION STANDARDS¹

Article I. In General.

Sec. 25B-1. Declarations.

- (a) A significant component of water used in Sonoma County is obtained from underground sources.
- (b) Improperly placed, constructed, reconstructed, abandoned or destroyed wells, or borings, as defined in this chapter, may allow contaminated water from the surface or subsurface strata to migrate and contaminate useable ground waters.
- (c) The people of Sonoma County have a primary interest in the protection of groundwater resources, as contamination or depletion of groundwater may cause serious public health, safety, environmental or economic problems.

(d) California courts have found that the public trust doctrine is applicable to extraction of groundwater that adversely affects a navigable waterway.

(Ord. No. 6121, § III(Exh. A) , 7-28-2015); (Ord. No. XXXX, XX-XX-2022)

Sec. 25B-2. Purpose.

- (a) The purpose of this chapter is to protect the groundwater resource of the county through standards regulating the placement, construction, reconstruction, abandonment and destruction of wells and borings. It is further the purpose of this chapter to address the County's public trust obligation.

(Ord. No. 6121, § III(Exh. A) , 7-28-2015); (Ord. No. XXXX, XX-XX-2022)

¹Editor's note(s)— ;(Ord. No. XXXX, adopted XX-XX-2022) amended certain sections of Ch. 25B ; Ord. No. 6121, § III(Exh. A) , adopted July 28, 2015, amended former Ch. 25B in its entirety ~~to read as herein set out. Former~~ Prior to the July 28, 2015 ordinance adoption, Ch. 25B, pertained to water wells, and derived from Ord. No. 2326; Ord. No. 3726, adopted in 1986; Ord. No. 4316, § 1, adopted in 1990[1991]; Ord. No. 4906, §§ 7(A)—(D), adopted in 1995; Ord. No. 5329, § 1, adopted in 2002; and Ord. No. 5658, § 4(a), adopted in 2005.

Sec. 25B-3. Definitions.

The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

"Abandoned boring" means a boring that has not been properly refilled with cuttings and/or grout, as applicable, after construction has been completed, unless otherwise approved by the enforcing agency.

"Abandoned well" means a well, other than an "inactive well," whose use has been discontinued for one (1) year or longer, or has been permanently discontinued, or is in such a state of disrepair that it cannot be used for its original purpose.

"Annular seal" means a watertight seal of approved material placed between the well casing and the sidewall of the boring excavation.

"Annular space" means the space between an excavation and the casing of a well or the space between two (2) concentric casings.

~~"Area of special flood hazard" means the land in the floodplain within a community subject to a one percent (1%) or greater chance of flooding in any given year as determined by the Federal Insurance Administration in the most recent scientific and engineering report entitled, "The Flood Insurance Study for the County of Sonoma".~~

"Bacteriological compounds" mean bacteria, viruses, and protozoa that are disease causing agents (pathogenic) commonly found in the human or animal gut.

"Boring" means an artificially constructed, generally uncased, temporary hole below the original ground surface, made with rotary, air, water jet, direct push or similar technology, for the purpose of exploration of the subsurface of the earth for building or structure foundation, presence of water, or any other purpose other than construction of a well.

"Cathodic protection well" means a well constructed for the purpose of installing equipment or facilities for the electrical protection of metallic equipment in contact with the ground.

"Class I well" means a well constructed with a minimum twenty-foot deep annular seal.

"Class II well" means a well constructed with a minimum fifty-foot deep annular seal.

"Contaminant" means any physical, chemical, biological, or radiological substance or matter in water or soil that has potential to result in an adverse effect on human or animal health.

"Contaminated site" means a site that has soil or groundwater contamination that exceeds California Primary Maximum Contaminant Levels (MCLs).

"Contaminated well" means a well that produces groundwater that exceeds California Primary MCLs.

"Contamination" means any contaminant that exceeds the California Primary MCLs. "Destroyed well or boring" means a well or boring that has been destroyed pursuant to this chapter.

~~"Critical watershed areas" means watershed areas defined through the CA State Water Resources Control Board's 2015 Drought Emergency Regulations, including upper portions of Mark West Creek, Green Valley Creek, Mill Creek, and Dutch Bill Creek.~~

"Dewatering well" means an artificial excavation constructed by any method for the removal or hydraulic control of groundwater for construction purposes or during a groundwater or soil remediation project.

~~"Domestic use", consistent with California Code Regulations § 660, means the use of water in homes, resorts, motels, organization camps, camp grounds, etc., including the incidental watering of domestic stock for family sustenance or enjoyment and the irrigation of not to exceed one-half acre in lawn, ornamental shrubbery, or~~

gardens at any single establishments. The use of water at a camp ground or resort for human consumption, cooking or sanitary purposes is a domestic use.

"Drilling fluid" means a fluid used in drilling operations to remove cuttings from the borehole, to clean and cool the bit, to reduce friction between the drill stem and the borehole wall, and to prevent caving or sloughing of the borehole.

"Elevator jack shaft" means a device designed to house hydraulic ram equipment used to lift an elevator. An elevator jack shaft is housed in a borehole drilled and a casing advanced.

"Embankment reservoir" means an off-stream reservoir that utilizes embankments or manmade structures to impound water.

"Environmental drilling" means the subsurface exploration for contaminants and hazardous substances that may potentially impact soil and groundwater.

"Environmental well" means any artificial excavation by any method for the purpose of monitoring fluctuations in groundwater levels, quality of underground waters, or the concentration of contaminants in underground waters related to environmental remediation sites, or for the purpose of extraction or hydraulic control over contaminants or contaminated groundwater, or for the purpose of in-situ treatment of contaminated groundwater.

"Enforcing agency" means the agency identified by Table 25B-1 as having the responsibility and authority to review, and approve or deny the permit applications described in this chapter.

"Feed yard/lot" means commercial corrals or commercial holding areas for the primary purpose of holding or feeding animals (including fowl).

"Geothermal heat exchange well" means any uncased artificial excavation, by any method, that uses the heat exchange capacity of the earth for heating and cooling, in which excavation the ambient ground temperature is thirty (30) degrees Celsius (eighty-six (86) degrees Fahrenheit) or less, and which excavation uses a closed loop fluid system to prevent the discharge or escape of its fluid into surrounding aquifers or other geologic formations. Geothermal heat exchange wells include ground source heat pump wells.

"Geotechnical boring" means any boring constructed in the earth below the original ground surface solely for exploring or testing subsurface earth or groundwater.

"Groundwater availability area" means the four zones depicted on the map entitled "groundwater availability" which is on file with the Sonoma County permit and resource management department and available for public inspection.

"Grout" means a fluid mixture of cement and water of a consistency that can be forced through a pipe and placed as required. Various additives, such as sand, bentonite, and hydrated lime, are used to meet certain requirements. For example, sand is added when considerable volume of grout is needed.

"Hazardous material" means a material or substance that poses substantial or potential threats to public health or the environment.

"High volume well" means a well intending to serve twenty (20) or more acres of irrigated crops; a municipal well intending to serve fifteen (15) or more connections; or a commercial/industrial well intending to deliver thirty-five thousand (35,000) or more gallons per day.

"Horizontal well" means a water wells drilled horizontally or at an angle with the horizon (as contrasted with the common vertical well). This definition does not apply to horizontal drains or "wells" constructed to remove subsurface water from hillsides, cuts, or fills (such installations are used to prevent or correct conditions that produce landslides).

"Inactive well" means a well whose use has been discontinued and the owner has declared in writing to the enforcing agency the intention to use such well again for supplying water or for other approved purposes.

"Individual water well" means a water well furnishing water for human consumption and general use to four (4) or less service connections or serves an average of less than twenty-five (25) individuals daily.

"Inorganic compounds" mean any compound that does not contain carbon. For purposes of this ordinance, inorganic compounds refer to the MCLs for inorganics and include materials such as fertilizers or decayed organic materials, chlorides, and mineral metals.

"Known contaminated sites" are those identified on the state water resources control board databases (landfills, underground storage tanks, etc.) or areas known to governmental bodies that have groundwater and/or soil contamination.

"Lake" means a permanent natural body of water of any size, or an artificially impounded body of water having a source area of at least one (1) acre, isolated from the sea, and having an area of open water of sufficient depth and permanency to prevent complete coverage by rooted aquatic plants. As used in this chapter, lake does not include embankment reservoirs.

"Maximum contaminant level (MCL)" means the highest level of a contaminant that is allowed in drinking water by the state of California.

"Monitoring well" means any artificial excavation by any method for the purpose of monitoring fluctuations in groundwater levels or the quality of underground waters or studying the hydrologic conditions, except as exempt pursuant to Water Code Section 13712.5 as to crop root zones.

"Navigable waters" means waterways capable of being navigated by oar or motor-propelled small craft, consistent with the California public right of navigation test.

"Piezometer" means any of various instruments used to determine water elevations in wells by measuring the static liquid pressure.

"Pond" means a still, freshwater body that is smaller than a lake and often manmade. A pond can provide water for livestock, fish and wildlife, recreations, fire control, crop and orchard watering, and other related uses. As used in this chapter, pond does not include embankment reservoirs.

"Potable ground water" means water below the surface of the ground at a depth such that it has been protected from surface contamination by an impervious soil stratum or which has received an acceptable degree of natural treatment by filtration through a considerable amount of soil.

"Potable water" means water intended for human consumption which meets, at a minimum, state primary drinking water requirements as defined in Title 22 of the California Code of Regulations (or subsequent revisions) whether this water is supplied from ground water, treated ground water or any other source.

"Priority Basin" means a ground water basin determined to be medium or high priority by the California Department of Water Resources for the purposes of sustainable groundwater management, as that determination may be updated from time to time.

"Public water well" means a water well furnishing water for human consumption and general use to five (5) or more service connections or serves an average of at least twenty-five (25) individuals daily at least sixty (60) days out of the year.

"Public trust resources" means waterways the government is obligated to hold in trust pursuant to the public trust doctrine for the benefit of the public for purposes of commerce, navigation, recreation, fishing, and preservation of wildlife habitat and natural resources.

"Replacement well" means the construction of a new well to replace an existing well where the existing well is destroyed under permit within 90 days of completion of the replacement well.

"Sewage disposal system" means a septic tank and subsurface disposal field or other type system or appurtenance thereto, whether public or private, receiving domestic or industrial sewage waste. Sewage disposal system includes proposed onsite sewage disposal areas for which appropriate testing has been approved. Sewage disposal system does not include a sewer pipe line.

"Special flood hazard area" means any area designated by the Federal Emergency Management Agency as subject to flooding by the one-percent annual chance flood (100-year flood).

"Stream" means any natural channel with bed and banks containing flowing water or showing evidence of having contained flowing water (e.g. deposit of sand, gravel, or soil).

"Site" means any lot or parcel of land or contiguous combination thereof where well construction or reconstruction is performed or permitted.

"Test well" means a well constructed to obtain information needed for design of other wells. Test wells should not be confused with "exploration holes", which are temporary. Test wells are cased and can be converted to other uses such as groundwater monitoring and, under certain circumstances, to production wells.

"Water quality" means the chemical, physical, radiological, biological, taste and/or odor characteristics of water with respect to its suitability for a particular purpose.

"Well or water well" means any artificial excavation constructed by any method for the purposes of extracting water from, or injecting water into, the underground. This definition shall not include: (a) oil and gas wells, or geothermal wells constructed under the jurisdiction of the department of conservation, except those wells converted to use as water wells; or (b) wells used for the purpose of (1) dewatering excavations during construction, or (2) stabilizing hillsides or earth embankments; or (c) infiltration galleries and springs.

"Well development" means the act of cleaning out the clay and silt introduced during the drilling process as well as the finer particles of the aquifer directly around the well screen prior to putting the well into service.

"Well drilling contractor" means a person who is a licensed water well driller in the state of California and holds a valid C-57 contractor's license and who maintains a current workers' compensation insurance certificate on file with the enforcing agency.

"Well reconstruction" means and includes certain work done to an existing water well in order to restore its production, replace defective casing, seal off certain strata or surface water or similar work. Well reconstruction does not include internal relining, the cleaning out of sediments or surging, or maintenance to the pump or appurtenances where the integrity of the annular seal or water bearing strata are not violated.

"Well seal" means a water resistant joint between the pump or its plumbing and the well casing, or between the pump base and the concrete platform.

"Well site" means the area surrounding the well having a circular shape with a radius of ten feet (10') centered at the well head.

"Well vault" means a feature below the ground surface used to house the top of a well casing, a pump and/or a discharge pipe.

"Wetland" means those areas that meet either the federal definition of wetlands, as set forth in 33 CFR § 328.3, as that section may be amended from time to time, or the state of California definition of wetland as adopted by the State Water Resources Control Board as a State Wetland Definition, as that definition may be amended from time to time. In the event of a conflict between the federal and state definitions, whichever definition is more protective shall control.

(Ord. No. 6121, § III(Exh. A) , 7-28-2015)

(Ord. No. 6331 , § II(Exh. C), 12-15-2020)

(Ord. No. XXXX, XX-XX-2022)

Sec. 25B-4. Prohibitions and limitations.

- (a) Wells.
 - (1) The construction or installation of a new well within a stream or wetland is prohibited.
- (b) In areas where a groundwater management plan has been approved and has been adopted by the county, the requirement for the issuance of well permits and any limitations imposed on well permits shall be consistent with any regulations adopted by the board of supervisors to implement the adopted groundwater management plan.
- (c) No well shall be used for the disposal of any substance or liquid that may contaminate the groundwater.
- (d) Public trust resources limitation. This section addresses how the County of Sonoma fulfills its obligation to consider the public trust for the extraction of groundwater that adversely affects a navigable waterway.
 - (1) Public Trust Review and Public Trust Area.
 - i. The Enforcing Agency shall consider whether a proposed well within a Public Trust Review Area, as described in subsection (d)(1)(ii), will cause or exacerbate a substantial adverse impact on public trust resources of navigable waters after the imposition of mitigation measures to protect public trust resources.
 - ii. The Public Trust Review Area is the area where the underlying aquifer is likely to be interconnected with a navigable water, or interconnected with a tributary stream that flows to a navigable water, which is defined by the areas that are within (1) the contributing watershed of a navigable water as determined by a state or federal agency, as its determination may be updated from time to time, and (2) any of the following:
 - a. Areas mapped as Subterranean Streams or Potential Stream Depletion Areas by Stetson Engineers Inc. (2008), in support of the Policy for Maintaining Instream Flows in Northern California Coastal Streams completed and adopted by the CA State Water Resources Control Board in 2010, Resolution No. 2010-0021.
 - b. Critical watershed areas.
 - c. Priority basins.
 - (2) Application Information. In addition to materials otherwise required by this Chapter, an applicant for a water well permit within the Public Trust Review Area shall provide as part of its application information to the satisfaction of the Enforcing Agency that is sufficient for the Enforcing Agency to determine that the issuance of the water well permit within a Public Trust Review Area will or will not cause or exacerbate a substantial adverse impact on public trust resources of navigable waters after imposition of all feasible mitigation measures that can be imposed to protect the public trust resources.
 - (3) Findings and Determination. As part of the issuance, issuance with conditions, or denial of any water well permit within the Public Trust Review Area, the Enforcing Agency shall consider best available

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information and make written findings as to whether the issuance of the requested permit will or will not cause or exacerbate a substantial adverse impact on public trust resources in navigable waters after the imposition of feasible mitigation measures to protect those public trust resources. Any project features or mitigation measures that are necessary to the Enforcing Agency's written findings for approval of any new water well permit shall become conditions on the new water well permit.

- (4) Information. Best available information, including but not limited to adopted groundwater sustainability plans, hydrologic and hydrogeologic reports, biological opinions, minimum instream flows adopted by a state or federal agency, amongst other information, shall be used to determine a substantial adverse impact to Public Trust Resources for the project. Geographic and temporal proximity of best available information to the proposed well may be considered by the Enforcing Agency.
- (5) Administrative Appeal. Any interested person may appeal the determination made by the Enforcing Agency under subsection (d)(3) to the Board of Supervisors. An appeal shall be filed in writing with the planning director within ten (10) days after the decision that is the subject of the appeal; provided, however, that the county may still revoke any erroneously issued permit or entitlement even after the expiration of the ten-day appeal period. The appeal shall specifically state the basis for the appeal and shall be accompanied by the required filing fee.
- (6) Request for Overriding Considerations. At the request of the Enforcing Agency, the Board of Supervisors, after holding a public hearing, and based on written findings of overriding considerations that balance the protection of public trust resources with the health, safety and welfare needs of the community, including the need for drinking water, may approve the issuance of a water well permit or issuance with conditions.
- (7) The Board of Supervisors may consolidate and concurrently consider an appeal filed pursuant to subsection (d)(5) and a request for written findings of overriding considerations pursuant to subsection (d)(6).

(e) Notwithstanding any provision of this Chapter, the following proposed wells are exempt from section 25B-4(d):

- (1) A water well outside of the Public Trust Review Area.
- (2) Any well for which a well application is determined to be complete by the enforcing agency prior to October 4, 2022.
- (23) A replacement well that serves a parcel that is solely used for domestic purposes, where the cumulative groundwater use from all wells on the parcel, including the proposed well, is limited to 2.0 acre feet or less per year, and the existing well is destroyed under permit within 90 days of completion of the replacement well.
- (34) A water well for residential, agricultural or other land uses, where the cumulative groundwater use from all wells on the parcel, including the proposed well, is limited to 2.0 acre feet or less per year, and where the owner or user of the well complies with all applicable water conservation and monitoring requirements listed in Article VIII.
- (45) A water well for residential, agricultural or other land uses, where the cumulative groundwater use from all wells on the parcel, including the proposed well, is limited to the amount of groundwater used for legally established land uses that existed as of October 4, 2022, and where the owner or user of the well complies with all water conservation and monitoring requirements listed in Article VIII.
- (56) A well that is used solely for injecting water into the underground.

(67) A public water well for which environmental review under the California Environmental Quality Act is complete.

(8) Any well that is determined to be exempt pursuant to additional screening criteria that the Board of Supervisors may adopt to identify categories of water well permit applications which do not substantially impact public trust resources, and which shall be approved pursuant to a ministerial permit, where all requirements for a ministerial permit are met. The Board of Supervisors shall consider impacts to public trust resources and make findings consistent with protection of public trust resources when establishing screening criteria based on available data.

(Ord. No. 6121, § III(Exh. A) , 7-28-2015); (Ord. No. XXXX, XX-XX-2022).

Article II. Procedure and Construction Requirements.

Sec. 25B-5. Permits.

- (a) Enforcing Agency. The enforcing agency responsible for reviewing and making decisions on each type of permit application required by this chapter is identified by Table 25B-1.

Table 25B-1. Enforcing Agency

Type of Permit Application	Enforcing Agency
Borings	Permit and Resource Management Department
Environmental Drilling	Department of Health Services
Environmental Wells	Department of Health Services
Monitoring Wells	Permit and Resource Management Department
Wells or Water Wells	Permit and Resource Management Department

- (b) General Permit Requirements.

- (1) Permit Required. A permit shall be required prior to commencing any of the following work:
 - (i) Construction or reconstruction of a well.
 - (ii) Construction of a boring that is fifteen feet (15') or more below the original ground surface or when groundwater is encountered shallower than fifteen feet (15') below the original ground surface.
 - (iii) Construction of an elevator jack shaft, cathodic protection well, inclinometer or piezometer that is fifteen feet (15') or more below the original ground surface or when ground water is encountered shallower than fifteen feet (15') below the original ground surface.
 - (iv) Destruction of an existing or abandoned well.
- (2) The well contractor shall apply for and obtain a permit from the enforcing agency prior to commencing construction, reconstruction, or destruction of wells or borings. Permit issuance shall be contingent upon compliance with the requirements specified in this chapter.
- (3) The well contractor shall have on file with the enforcing agency a copy of a valid C-57 water well contractor license issued in accordance with the provision of the contractor license law of the state of California. In addition, the well contractor shall have on file with the enforcing agency a copy of a

certificate of insurance which states there is in existence a valid policy of workers' compensation in the form approved by the state insurance commissioner. The requirement for workers' compensation insurance coverage can be waived for those drillers who are exempt. Said certificate shall show the following:

- (i) The expiration date; and
- (ii) Coverage provided for construction permits in accordance with Labor Code 3800.

(c) Application for Permit.

- (1) Applications for permits shall contain required fees and all information necessary to verify conformance with this chapter. The application shall be made in writing and signed by the well contractor on such forms as may be prescribed by the enforcing agency. Where an at-cost fee or indemnification agreement is required as part of the application, the Enforcing Agency may require the property owner's signature.
- (2) Disclosure of Existing Water Wells. All permit applications for a new wells shall include a disclosure by the property owner and/or well drilling contractor of the following information pertaining to anyfor each existing wells on the property located within one hundred feet (100') of the proposed well, to the extent that such information is known or knowable to the property owner:
 - (i) The current and future uses of the existing well(s);
 - (ii) Existence of contamination in the existing well(s);
 - (iii) The construction detail of the existing well(s), including such as its dimensions, depth, casing material, seal depth and screen interval;
 - (iv) A copy of the well log(s);
 - (v) Any existing well(s) to be destroyed (see Section 25B-8).
- (3) Scope of Well Permit.
 - (i) The initial permit application may include one (1) primary and up to four (4) alternate well sites or test holes. The permittee shall advise the enforcing agency of final well location by submitting a revised site plan. All dry holes must be destroyed pursuant to this chapter and must be shown on the revised plan. The revised plan shall be submitted prior to final clearance on the permit.
 - (ii) The initial permit application may include one (1) or more wells that are to be destroyed.
 - (iii) The construction and/or destruction of the well(s) shall be on the same parcel.
 - (iv) Each well permit authorizes one (1) completed well and, if applicable, one (1) or more wells to be destroyed.
- (4) Scope of Well Destruction Permit. Each well destruction permit authorizes one (1) or more wells to be destroyed, provided the wells to be destroyed are on the same parcel.
- (5) Cost of Permit. Each application shall be accompanied by the appropriate fee as adopted by ordinance or resolution of the board of supervisors. Refunds shall be in accordance with the current refund policy of the enforcing agency.
- (6) Term of Application. Unless it is a discretionary application under Section 25B-5(e)(2), eEach application submitted pursuant to this chapter shall expire and become null and void within one (1) year of the date of submittal unless a permit is issued, except as set forth in [Section] 25B-5(c)(7).
- (7) Application Extension. Prior to the expiration of the application as provided above, the applicant holding an unexpired well application may apply for an extension of time. The enforcing agency may

extend the expiration date of the application for a period not exceeding one hundred eighty (180) days per extension request when such extension is warranted, including but not limited to (i) to correct an error by the enforcing agency, (ii) when a legal action prevents the application from being issued within the time limits detailed in [Section] 25B-5(c)(6), or (iii) in the interest of public health and safety. No application shall be renewed more than once.

(d) Emergency Wells.

- (1) An applicant for a water well may request expedited processing where the ~~Water-proposed~~ well drilling is immediately necessary to protect human life, health, and safety or property due to a sudden, unforeseen impairment in the quantity or quality of water available. Requests must be accompanied by verifiable evidence demonstrating necessity of the proposed well. ~~may be commenced prior to obtaining a permit. All work performed under such emergency conditions shall comply with the requirements of this chapter. The well contractor constructing the water well or the property owner shall notify the enforcing agency and provide evidence acceptable to the enforcing agency of the necessity of the water well on or before three (3) business days after the onset of the emergency situation. The well contractor shall apply for a well permit within five (5) days after the commencement of such emergency work.~~

(e) Issuance and Types of Permits.

- (1) Ministerial Permit Application. An application that is not discretionary under section 25B-5, subsection (e)(2), is a ministerial permit application that shall be approved, and a well construction, well reconstruction or well destruction permit issued, when the enforcing agency verifies that:
- (i) The proposed well construction, well reconstruction or well destruction complies with the provision of this chapter, other applicable provisions of this Code, and the conditions of any applicable land use permit or other entitlements; and
 - (ii) Where the proposed well construction, well reconstruction or well destruction is part of a project for which an application for a discretionary land use permit has been submitted, the discretionary land use permit has been issued and any relevant discretionary permit conditions have been complied with. This requirement shall not apply where a well is required to demonstrate water availability for the proposed discretionary project.
- (2) Discretionary Permit Application. Notwithstanding any provision of Chapter 23A to the contrary, an application for a new water well under this Chapter 25B that is subject to the public trust limitation under section 25B-4(d) may be approved, approved with conditions, or denied, by the Enforcing Agency in its discretion. Discretionary permit applications found by the enforcing agency to not have or exacerbate a substantial adverse impact to a public trust resource must also satisfy all requirements under this chapter applicable to ministerial permits, including construction standards, for the permit to issue. Applications not subject to the public trust limitation are subject to ministerial review. Where the proposed well is part of a project that is subject to a discretionary use permit or other discretionary action under Chapter 26, or any other legal requirement, the well permit may not issue until all requirements for the discretionary project approval are met.

(3) Well Construction and Well Reconstruction.

- (i) Class I permits are designated for the installation, replacement or reconstruction of a well, test well, test hole or piezometer, where such well location conforms with the minimum distances set forth in Table 1.
- (ii) Class II permits are designated for the installation, replacement or reconstruction of a well, test well, test hole or piezometer, where such well location is closer than the minimum distances set forth in Table 1.

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- (iii) Well permits shall be required for elevator jack shafts greater than fifteen feet (15') in depth, geotechnical borings, geothermal heat exchange wells, cathodic protection wells, dewatering wells, inclinometers, piezometers, and any other wells or borings.
- (34) Well Destruction. Well destruction permits are designated for the destruction of one (1) or more wells on a given parcel.
- (45) Term of Permit. Each permit issued pursuant to this chapter shall expire and become null and void if the work authorized has not been completed within one (1) year following the date of permit issuance, except as set forth in [Section] 25B-5(e)(65). Upon expiration of any permit, no further work may be done until a new permit for such purpose is approved in accordance with provisions of this chapter.
- (65) Permit Extension. Within the permit time limits detailed in [Section] 25B-5(e)(54), any permittee holding an unexpired well permit may apply for an extension of the time. The enforcing agency may extend the expiration date of the permit for a period not exceeding one hundred eighty (180) days per extension request, where the permittee has requested the extension in writing and when such extension is warranted, including but not limited to:
- (i) To correct an error by the enforcing agency; or
- (ii) When a legal action prevents the project from being completed within the time limits detailed in [Section] 25B-5(ed)(54); or
- (iii) In the interest of public health and safety.
- No permit shall be renewed more than once.
- (67) The enforcing agency may deny a permit when:
- (i) The application is incomplete; or
- (ii) The application contains false information; or
- (ii) The proposed work would not comply with this chapter or other applicable laws.
- (f) Inspections.
- (1) Initial Inspection. Upon receipt of an application pursuant to this chapter, the enforcing agency may make an inspection of the drilling site prior to the issuance of a permit. The purpose of the inspection is to verify conformance to this Code.
- (2) Permit Issuance. Upon issuance of the permit, all wells or test holes constructed, reconstructed, or destroyed, shall be subject to inspection by the enforcing agency, to verify conformance to this Code.
- (3) Notification of Commencement. The well drilling contractor shall notify the enforcing agency when work commences, and shall provide an estimated completion date.
- (4) Notification of Seal. The well seal shall be placed on a normal county business day. The permit applicant shall notify the enforcing agency of the date and time of the seal placement. The notification shall be prior to 12:00 a.m. on the day of seal placement and at least one (1) hour prior to the seal placement. If the enforcing agency does not arrive within fifteen (15) minutes of the designated date and time and provided proper notification was made, the well may be sealed without inspection and work may continue. The driller must seal the well in full compliance with the standards of this ordinance and any permit conditions.
- (5) Inspection of Well or Boring Seal. The enforcing agency may inspect the annular space or grout depth prior to the placement of the sealing material and may make inspections at other times as it may deem appropriate, to verify conformance to this Code. The enforcing agency shall final a permit within sixty

(60) days of receipt of department of water resources well completion report, provided that the well was completed in accordance with the requirements of the approved permit.

- (g) Provisions Cumulative. The provisions of this article are in addition to any other requirement for a permit for construction, destruction, alteration or repair of a well or a water treatment system, i.e. a building permit for plumbing or electrical.

(Ord. No. 6121, § III(Exh. A) , 7-28-2015); (Ord. No. XXXX, XX-XX-2022).

Sec. 25B-6. Well construction requirements.

- (a) Requirements for Well Construction. All materials and workmanship shall be no less than the quality specified herein. These requirements are minimum standards only. The standards contained in the department of water resources bulletins 74-81, 74-90 and any subsequent revisions shall apply to all work authorized by this chapter, except that in the event of a conflict between the bulletins and the standards of this chapter, the standards of this chapter shall take precedence.
- (b) Location. Wells shall be set back the minimum distance from other uses and facilities as shown in Table 25B-2. All setback distances are to be measured in plan view.

Table 25B-2. Minimum Setback Distances

Uses and/or Facilities	Setback (feet)
Property line	5
Septic tank/sewage disposal system	100
Public or private sewer pipe line of approved watertight piping and joining materials	25
Other public or private sewer pipe line	50
Seepage pit or cesspool	150
Feed yard/lot	100
Non-leaking underground storage of hazardous materials	100
Aboveground storage of hazardous materials	50
Municipal biosolids land application sites	100
Pond, lake, stream or wetland as measured from top of bank	30
Embankment reservoirs — the setback shall be a distance that does not affect the integrity of the embankment structure	
Existing well on same parcel — does not apply to replacement wells, well reconstruction or backup well(s) for commercial wells or community wells.	20
Existing well on different parcel — does not apply to replacement wells, well reconstruction or backup well(s) for commercial wells or community wells.	30
Known Contaminated Sites	
Open Sites	2500
Closed Sites	1000

- (c) Class I wells shall conform to the minimum distances set forth in Table 25B-2 and shall be located where no soil contamination exists that would result in a contamination of the potable groundwater.

Class I wells may be located closer than the minimum distances set forth in Table 25B-2 for the uses and/or facilities listed in Table 25B-3 if application of the minimum distances set forth in Table 25B-2 would prevent the installation of a well on the parcel and no other source of water exists from a well, spring, or municipal supply.

Table 25B-3. Class I Well Categories

Uses and/or Facilities
Pond, lake, stream, or wetland as measured from the top of bank.
Existing well on same parcel.
Existing well on different parcel.

- (d) Class II wells may be located closer than the minimum distances set forth in Table 25B-2 for the uses and/or facilities listed in Table 25B-4 provided the annular seal conforms to [Section] 25B-6(l)(1). In no instance shall Class II wells be less than fifty feet (50') from any of the uses and/or facilities listed in Table 25B-4.

Table 25B-4. Class II Well Categories

Uses and/or Facilities
Septic tank/sewage disposal system
Seepage pit or cesspool
Feed yard/lot
Non-leaking underground storage of hazardous materials
Municipal biosolids land application sites

- (e) High Volume Well Location. High volume wells shall be set back the minimum distance from other uses and facilities as shown in Tables 25B-2 and 25B-5. The setbacks in Table 25B-5 do not apply to replacement wells, well reconstruction, backup well(s) for commercial wells or community wells, or existing wells on the subject parcel which serve the subject parcel.

Table 25B-5. Minimum Setback Distances for High Volume Wells

Uses and/or Facilities	Setback (feet)
Existing well in Groundwater Availability Area 1 or 2	100
Existing well in Groundwater Availability Area 3 or 4	200

- (f) High Volume Well Report. High volume wells shall be set back from existing wells in accordance with Table 25B-3, unless a hydrogeologic report recommends a different setback. The report must be prepared and submitted by a California Registered Geologist or Hydrogeologist. In no cases shall the setback be less than fifty feet (50').
- (g) Known Contaminated Sites. Wells shall be set back from known contaminated sites in accordance with Table 25B-2. A Class I or Class II well may be located closer than the minimum distances set forth in Table 25B-2 for known contaminated sites provided concurrence from ~~the agency with primary regulatory oversight is received by~~ the enforcing agency and.

~~Upon request by the agency with primary regulatory oversight,~~ the applicant ~~shall~~ provides to the enforcing agency a hydrogeologic report, prepared by a California registered geologist or hydrogeologist, which evaluates and

concludes that a different setback and/or an annular seal depth equal to or greater than the annular seal depth contained in ~~{Section}~~ 25B-6(l)(1) will be adequately protective.

The enforcing agency may require a "notification of recommended ground water monitoring" to be recorded in the Sonoma County Assessor's records and must reference the well evaluation report.

- (h) Replacement Wells. The existing well shall be destroyed within 90 days of completion of the ~~upon~~ replacement well.
- (i) Protection. At all times during well construction and well development the well and well site shall be protected in such a manner as to prevent tampering with the well, foreign matter from entering the well, erosion, or the discharge of drilling fluid or foam into streams or waterways. Water and drilling fluid used in drilling shall be free from contamination, or rendered free from contamination, by chlorination or other approved methods. Pits constructed for recirculation of drilling fluid during construction shall be so protected that no undue safety hazard is created for humans or animals. Pits shall be backfilled immediately upon completion of well development.
- (j) Sealing off strata. When well construction penetrates aquifers known to contain contaminated water, the well shall be sealed to prevent cross contamination of other useable aquifers. Methods shall be reviewed and approved and inspected if necessary by the enforcing agency.
- (k) Casings.
 - (1) Steel well casing shall be manufactured in accordance with the specification of the American Society for Testing and Materials (ASTM), the American Petroleum Institute (API) or America Water Works Association (AWWA). All steel casing used in well construction shall be new and have a minimum wall thickness of 0.1406 inches US Standard for wells up to and including eight inches (8") in diameter and a minimum wall thickness of 0.1875 inches US Standard for wells greater than ten inches (10") in diameter or greater.
 - (2) Stainless steel casing shall meet the provisions of ASTM A409, "Standard Specifications for Welded Large Diameter Austenitic Steel Pipe for Corrosive or High Temperature Service."
 - (3) PVC casing shall be new, shall be manufactured in accordance with ASTM Standard F-480 and shall meet SDR-26 qualifications or greater. Other equivalent material may be used with prior approval of the enforcing agency (see Section 25B-12).
 - (4) Damaged or defective material shall not be used.
 - (5) All casing shall be watertight except for the perforated sections.
 - (6) All glues and primers used for PVC well casing shall meet applicable ASTM standards.
 - (7) The casing shall extend a minimum of twelve inches (12") above the ground surface or a minimum of six inches (6") above a concrete surface pad, or the casing may be cut lower if the well head is fitted with a water resistant seal or placed in a well vault.
 - (8) Casing shall be equipped with centering guides through the required seal depth creating an even radial thickness of the annular seal.
- (l) Well Grouting and Construction. All water wells shall have a well seal and an annular seal.
 - (1) The primary purpose of a well seal is to prevent contamination or degradation of water wells and the ground water by intrusion of poor quality water and/or cross contamination of aquifers. The annular space between the well casing and the wall of the drilled hole or between the conductor pipe and the wall of the drilled hole or the well casing shall be filled from the ground surface into an impervious formation, if possible, or at least to the minimum annular seal depth with approved neat cement,

cement grout, bentonite clay or other equivalent sealant material approved by the enforcing agency. The minimum depth of the annular seal shall be as follows:

- | | | |
|-------|----------------------------|----------|
| (i) | Public water wells | 50 feet |
| (ii) | Individual wells—Class I | 20 feet |
| (iii) | Individual wells—Class II | 50 feet |
| (iv) | West Petaluma Nitrate Area | 100 feet |
- (2) In wells where no water bearing strata are encountered within twenty feet (20') of the surface, the well seal shall extend at least ten feet (10') downward from the surface. The well drilling contractor shall provide a written request for a seal less than twenty feet (20'). The written request shall include the basis for the request (lithology encountered, etc.), the C-57 license number and a signature on the contractor's letterhead.
- (3) Annular Seals. The annular space shall be sealed after completion of drilling or after a stage of drilling. In areas of multiple water-bearing zones and areas of known contamination, the annular space must be sealed immediately or within twenty-four (24) hours after completion.
- (i) Annular sealing materials shall not be installed without the aid of a tremie or grout pipe unless the interval to be sealed is dry and no deeper than thirty feet (30') below ground surface.
 - (ii) In placing the annular seal with a tremie pipe, the pipe shall be installed within five feet (5') of the desired seal depth and removed after the grout is installed.
 - (iii) Annular sealing materials shall be placed by mechanical pumping to maintain a positive displacement when water is present in the interval to be sealed.
 - (iv) As a minimum, the uppermost fifty feet (50') of sealing material shall be placed in one (1) continuous operation, or alternate method approved by enforcing agency (see [Section] 25B-11).
 - (v) Sealing material shall be placed by methods (such as the use of a tremie device or equivalent) that prevent freefall, bridging, or dilution of the sealing material, or separation of sand or aggregate from the sealing material.
 - (vi) In cases where a tremie device is used, the tremie device shall be lowered to the bottom of the zone being sealed, and raised slowly as the material is introduced. The discharge end of the tremie device shall be continuously submerged in the sealing material until the zone to be sealed or filled is completed.
 - (vii) Tremie pipes are not needed for bentonite chips or pellets.
 - (viii) Dry bentonite pellets or chips may be placed directly into the annular space below water, where a short section of annular space, up to ten feet (10') in length, is to be sealed.
- (4) Water used to prepare sealing mixtures shall be free of contaminants and shall be compatible with the type of sealing material used, be free of petroleum and petroleum products, and be free of suspended matter.
- (5) Cement. Cement used in sealing mixtures shall meet the requirements of ASTM C150, Standard Specification for Portland Cement, including the latest revisions thereof. Cement-based sealing material shall be constituted as follows:
- (i) Neat cement. Neat cement shall be mixed at a ratio of one (1) ninety-four-pound sack of Portland cement to five (5) to six (6) gallons of clean water.
 - (ii) Sand cement. Sand cement shall be mixed at a ratio of not more than one hundred eighty-eight (188) pounds of sand to one (1) ninety-four-pound sack of Portland cement (two (2) parts sand to

one (1) part cement, by weight) and about seven (7) gallons of clean water. This is equivalent to a '10.3 sack mix'.

- (iii) Quick setting cement, setting retardants, bentonite and other additives may be used if they do not exceed five percent (5%) of the volume. Hydrated lime may be used up to ten percent (10%) of the volume of the sealing material.
- (6) Bentonite sealing materials and their uses shall be in accordance with the manufacturer's specifications or as approved by the enforcing agency (see Section 25B-11). Bentonite sealing materials shall have a minimum solids content of twenty percent (20%).
- (7) All loose cuttings or other obstructions to sealing shall be removed from the annular space before placement of the annular seal.
- (8) Well casing shall be equipped with centralizers to ensure the two-inch minimum radial thickness of the annular space is maintained. Centralizers need not be used in cases where the well casing is centered in the borehole during well construction by use of removable tools, such as hollow-stem augers.
 - (i) Centralizers shall be metal, plastic, or other non-degradable material. Centralizers must be positioned to allow the proper placement of sealing material around the casing within the interval to be sealed.
 - (ii) Metallic centralizer components shall meet the same metallurgical specifications and standards as the metallic casing to reduce the potential for galvanic corrosion of the casing.
- (9) Foundation and Transition Seals.
 - (i) A packer or similar retaining device, or a small quantity of sealant that is allowed to set, may be placed at the bottom of the interval to be sealed before the final sealing operations begin to form a foundation for the seal.
 - (ii) A transition seal may be allowed up to five feet (5') in length, consisting of bentonite or fine sand, must be placed in the annular space to separate filter pack and cement-based sealing materials.
 - (iii) Transition seals shall be installed by use of a tremie device, or equivalent. Water shall be added to the bentonite transition seal prior to placement of cement-based sealing materials where bentonite is dry in the borehole. Water shall be added to the bentonite at a ratio to allow for proper hydration as specified by the manufacturer. Tremie pipes are not required for bentonite chip seals.
- (m) Conductor Casing. If a temporary conductor pipe is used to prevent caving during placement of the seal or during drilling, it shall be removed as the seal is placed.
 - (1) Temporary conductor casing may be left in place in the borehole after the placement of the annular seal only if it is impossible to remove because of unforeseen conditions, or if its removal will seriously jeopardize the integrity of the well or the integrity of the subsurface barriers to contaminant movement. Inadequate drilling equipment shall not be used as the basis for leaving temporary conductor casing in place. If the conductor casing cannot be removed, the grout shall be placed between the inner liner and conductor casing and to a minimum depth ten feet (10') below the conductor casing or the required seal depth, whichever is greater.
- (n) Well Screens. Well screens shall be factory manufactured, slotted or perforated exceptions may be made for downhole perforations of steel casing or other perforation methods with the approval of the enforcing agency (see Section 25B-11).
- (o) Well Filter Pack. Well filter packs shall be chlorinated during the installation and shall be added at a rate that will prevent bridging. A filter pack may be installed to allow for the addition of gravel or sand to the pack. The gravel or sand shall be clean and free of contamination.

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- (p) Well Vaults. Well vaults are subject to the following standards:
- (1) The top of such vault shall be covered with a concrete lid or equal material.
 - (2) The casing shall extend at least three inches (3") above the vault floor.
 - (3) The well vault shall be constructed and protected so that flood, rain, or surface waters cannot accumulate in the vault.
 - (4) The well vault and lid shall be traffic-rated where there is vehicular access to the vault.
 - (5) The vault shall be provided with a gravity discharge protected against entrance of rodents and insects or a drainage sump and an automatic sump pump.
 - (6) The discharge from the sump pump shall not be connected to any sewer or pipe drains.
 - (7) Vaults shall have easy access for proper operation, maintenance, and inspection of the equipment, and be adequately secured.
 - (8) Vaults shall be adequately sized so as to permit maintenance of the equipment.
 - (9) Where well vaults are used, the wellheads shall be water resistant.
 - (10) The thickness of the well vault floor shall be two inches (2") thick concrete at a minimum.
- (q) Well Seal. Where the pump is installed directly over the casing, a water resistant seal (gasket) shall be placed between the pump head and the pump base (slab), or a water resistant seal (gasket) shall be placed between the pump base and the rim of the casing, or a well seal shall be installed to close the annular opening between the casing and the pump column pipe.
- (1) Where the pump is offset from the well or where a submersible pump is used, the opening between the well casing and any pipes or cables entering the well shall be closed by a water resistant seal or well seal.
 - (2) If the pump is not installed immediately or if there is a prolonged interruption in construction of the well, a lockable, welded or cemented cover shall be installed at the top of the casing.
 - (3) During construction or repair of the well, the well or the hole opening shall be protected by a cover at all times, except during active construction under the supervision of the well drilling contractor. The cover shall be water resistant and secured in place in such a manner that it cannot be removed except by equipment or tools.
 - (4) A concrete base or pad, sometimes called a pump block or pump pedestal, shall be constructed for all public wells at ground surface around the top of the well casing and contact the annular seal, unless the top of the casing is below ground surface. The base shall be free of cracks, voids, or other significant defects likely to allow water intrusion. Contacts between the base and the annular seal, and the base and the well casing, must be water resistant and must not cause the failure of the annular seal or well casing. Where cement-based annular sealing material is used, the concrete base shall be poured before the annular seal has set.
 - (5) The upper surface of the base shall slope away from the well casing. The base shall extend at least two feet (2') laterally in all directions from the outside of the well boring. The base shall be a minimum of four inches (4") thick.
- (r) Well Cap Opening. An access opening in the well cap, well casing or pump base for the purpose of disinfecting the well, measuring the water level, adding required filter pack material, or for any other purpose necessary for maintenance and operation of the well shall meet the following:
- (1) Access opening shall be protected with a threaded water-tight seal, plug or cap at all times.

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- (2) Access opening shall be protected against the entry of small animals, insects, drainage pump drippage, and other contaminating matter.
 - (3) Air vents shall be installed for all wells except for those wells located within an area of special flood hazard, i.e. the one-hundred-year flood plain. For those wells located within an area of special flood hazard area:
 - (i) No air vent shall be installed until such time as mechanical equipment is installed; and
 - (ii) Well caps shall be glued or welded to the casing.
 - (s) Disinfection. Upon completion of newly constructed or reconstructed wells, all well parts shall be adequately disinfected with chlorine or an equivalent disinfectant.
 - (t) Well Development.
 - (1) Well construction or reconstruction shall remove the minimum amount of soil necessary to perform the work, and shall avoid settlement of overlying surface material. All drilling mud shall be fully removed from the well.
 - (2) During well development the annular seal shall be protected from erosion.
 - (u) Horizontal Wells. Horizontal ~~water supply well~~water wells must meet all construction and setback requirements for vertical wells. The setback distances shall be measured horizontally from the setback feature to the closest point along the horizontal well when the proposed well and setback features are shown in plan view.
 - (v) Elevator Jack Shaft Construction. Inspections are required for all elevator jack shafts that require permits. All elevator jack shafts that extend deeper than ten feet (10') below grade must be constructed with a two-inch radial thickness annular seal to prevent the vertical migration of fluids. This annular seal must extend from the bottom to the top of the borehole.
 - (w) Maintenance of Well Sites. Every well site shall be maintained by the property owner so as to be free of weeds, debris, animal confinement, and storage of chemicals or materials which may cause contamination of the water supply or damage to the well installation.
 - (x) Backflow Prevention. All pump discharge pipes not discharging or open to the atmosphere shall be equipped with an automatic device to prevent backflow and/or back siphonage into a well. Irrigation well systems, including those used for landscape irrigation, and other well systems that employ, or which have been modified to employ, chemical feeders or injector shall be equipped with a backflow prevention device(s) approved by the enforcing agency.
 - (y) Well Water Elevation. All water wells shall be constructed, pursuant to PRMD Technical Bulletin W-1, to allow for the routine and unobstructed collection of groundwater level measurements.
 - (z) Well Meters. All permitted water wells for which an application is submitted after October 4, 2022 shall be installed with a totalizing water meter that measures all groundwater extracted from the well, except for water wells that serve a parcel that is solely used for domestic purposes and uses 2.0 acre feet or less of water per year.

(Ord. No. 6121, § III(Exh. A) , 7-28-2015); (Ord. No. XXXX, XX-XX-2022).

Article III. Well Abandonment.

Sec. 25B-7. Abandoned wells, test wells or holes, and destruction of wells.

- (a) **Abandoned Wells.** All abandoned wells and abandoned borings shall be destroyed in accordance with the requirements of this chapter.
- (b) **Inactive Wells.** A well may not be considered abandoned if the owner declares in writing to the enforcing agency his or her intention to use such well again for supplying water or for other approved purposes, and if such well has no defects in construction. All inactive wells shall be provided with a watertight cover at the top of the well or well casing. Such cover shall be secured by locks or by other means that prevents removal of the cover without the use of equipment or tools. The well shall also be marked so as to be clearly seen, and the ground surrounding the well shall be sloped away from the casing and kept clear of brush, debris and waste material.
- (c) **Uncompleted Wells or Borings.** Any well or boring that is not completed as a finished well shall be destroyed by the well drilling contractor in accordance with this section and the California Well Standards Bulletin 74-81 prior to leaving the site.
 - (1) Wells or borings shall be backfilled with the same soil excavated or sand, gravel and/or rock to such a degree that ninety (90) days after completion of backfill, such backfill is at or above surrounding ground level.
 - (2) An alternate method is to fill such hole with equivalent sealing materials (see Section 25B-11).
 - (3) If any water is encountered, the top thirty feet (30') shall be sealed with proper seal or grouting material. From the bottom of the well or boring to thirty feet (30') from the surface, clean, uncontaminated sand or gravel may be used.
- (d) **Well Destruction.** Prior to destroying a well, a report on the well shall be submitted to the enforcing agency by a well contractor. Such report shall indicate the type of well to be destroyed, all known information regarding the geological conditions of the soil and water strata and the methods and materials to be used in the destruction and sealing process. The methods and materials used in destroying wells and test holes shall be such that the usable ground water is protected from contamination or the entrance of surface water thereto. All wells shall be destroyed as follows:
 - (1) Any obstruction in the well shall be removed when possible.
 - (2) A hole, at least one foot (1') larger in diameter than the drilled hole, shall be excavated around the well casing to a maximum depth of five feet (5') below ground surface. The well casing shall be cut off six inches (6") above the bottom of the excavation and removed. Under no circumstances shall the casing extend above the ground surface. The well driller may propose alternative methods of destruction (see Section 25B-11) for those wells where physical access limits the ability to remove the casing.
 - (3) The remaining casing shall be ripped or perforated from the surface to a depth of thirty feet (30'), or deeper as required by the enforcing agency. The well driller may propose alternative methods of destruction (see Section 25B-11) for those wells where physical access limits the ability to remove the casing.
 - (4) The placement of the material shall be done in such a way as to avoid bridging and to assure a dense seal, in order to exclude water intrusion.
 - (i) The well shall be filled with the appropriate material from the bottom of the well up.
 - (ii) The well shall be filled to within not more than thirty feet (30') from the surface with uncontaminated clay, sand or other approved material (see Section 25B-11), then sealed, in one (1) continuous operation, to a depth of at least thirty feet (30') with approved sealing materials as described in the well destruction permit application. The sealing material shall spill over into

the excavation, forming a cap. After the sealing material has set, the excavation shall be filled with compacted native soil.

- (iii) When there is water present, sealing material shall be placed in the interval to be sealed by methods (such as the use of a tremie device or equivalent) that prevent free fall, dilution, and/or separation of aggregates from cementing materials.
 - (iv) In cases where a tremie device is used, the tremie device shall be lowered to the bottom of the zone being sealed, and raised slowly as the material is introduced. The discharge end of the tremie device shall be continuously submerged in the sealing material until the zone to be sealed or filled is completed.
- (e) Large Diameter Wells. Destruction of large diameter wells shall be in compliance with the standards described in "CGA Standard Practices". As much of the liner as possible (or safe) shall be removed prior to filling. Other methods providing equivalent aquifer protection may be approved by the enforcing agency (see Section 25B-11).
- (f) Contaminated Well. Upon determination by either enforcing agency listed in Table 25B-1 that a well is contaminated, or is a potential hazard to the purity of the underground waters, and reasonable efforts to clear the contamination have been unsuccessful, the enforcing agency, shall have the authority to:
 - (1) Enforce permanent destruction of said well in accordance with the provisions listed in this section and/or those destruction standards or methods required by the agency with primary regulatory oversight, or
 - (2) Review proposals for continued use of the well in accordance with the provisions listed in Section 25B-8.
- The property owner shall be responsible for the destruction, abandonment, capping, continued maintenance, monitoring or studies of such wells or test holes.
- (g) Contaminated Well Studies. The enforcing agency shall have the authority to require studies of contaminated wells to determine proper destruction techniques, to determine if the well presents a threat to groundwater or to other wells or to determine if the well is in compliance with other requirements of this Code.
- (h) Temporary Capping of Wells.
 - (1) A contaminated well may be temporarily capped for up to five (5) years or until efforts to remediate contaminated ground water have been successfully accomplished.
 - (2) A contaminated well that is screened across two (2) or more water bearing zones and/or has the potential to contaminate non-contaminated water bearing zones, packers shall be installed in addition to the temporary cap.
 - (3) The enforcing agency may extend the five-year time period if necessary to accommodate the ground water remediation process. The enforcing agency may approve alternative methods of water supply while remediation efforts are in progress.
- (i) Alternative Water Supplies. The enforcing agency may approve alternative water supplies in order to insure a potable water supply. These may include hauling potable water to an approved storage tank and pressure system or other methods that will insure a continued source of potable water.
- (j) Contaminated Well Exemption Criteria. A contaminated well need not be destroyed if the well meets the following criteria:
 - (1) The continued use of the well complies with all applicable state of California regulatory requirements; and,

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- (2) The continued use of the well does not impair or exacerbate a ground water investigation or cleanup project; and,
 - (3) The Sonoma County DHS has made a determination that continued use of the well is protective of public health; and,
 - (4) The continued use of the well complies with the well water treatment provisions of [Section] 25B-8.
- (Ord. No. 6121, § III(Exh. A) , 7-28-2015)

Article IV. Well Water Treatment.

Sec. 25B-8. Use of wells with water exceeding MCLs.

- (a) Public Water Well. A public water well regulated by either the state water resources control board, division of drinking water or Sonoma County Department of Health Services (DHS), Environmental Health and Safety (EHS) is exempt from this article.
- (b) Continued use of a contaminated well shall be subject to the following standards:
 - (1) The contamination is caused by bacteriological compounds, organic compounds or inorganic compounds.
 - (2) For well water intended for human or animal consumption, water treatment equipment or devices shall reduce the contaminant to a level below the maximum contaminant level (MCL) or if a MCL does not exist the treatment level shall be established with concurrence of the public health officer.
 - (3) Water treatment equipment or devices shall be installed by a qualified contractor licensed to install water treatment devices (C61, C55, C36 and C57). The on-going service and maintenance of the treatment system shall be provided by an appropriately licensed contractor (C61, C55, C36, C57).
 - (4) Treatment equipment backwash discharge shall be disposed of via an approved fixed air gap device into approved public sewer facilities. Where a public sewer connection is not available backwash discharge from the treatment unit shall be disposed into a dedicated dry well or a leach line.
 - (5) The property owner shall have water quality analytical testing conducted in accordance with Table 25B-6 Frequency of Sampling. Testing shall be performed by a state certified laboratory and test results shall be submitted annually to the enforcing agency. The Percent Exceedance of MCL in Table 25B-6 applies to untreated well water relative to the California Primary MCL for any given constituent. The formula to determine the Percent Exceedance of MCL is presented as Equation (1).

Equation (1): $PE-MCL_1 = ((C_1 / MCL_1) - 1) * 100$

Where: PE-MCL₁ is the Percent Exceedance of MCL for a given constituent
 C₁ is the untreated well water concentration for a given constituent
 MCL₁ is the State of California Primary MCL for a given constituent

Table 25B-6. Frequency of Sampling

Percent Exceedance of MCL	1% to 25%	26% to 50%	51% to 100%	101% to 1000%	>1000%
Sampling Frequency	Annually	Bi-Annually	Quarterly	Monthly	Daily

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- (6) The water quality test results shall demonstrate that the concentration of contaminant(s) in the treated water is below maximum contaminant level(s) (MCL) or if a MCL does not exist the treatment level shall be established with concurrence of the public health officer.
 - (7) The property owner shall keep records of all water quality test results for a period of three (3) years.
 - (8) The requirement for treatment and ongoing testing of the water shall be subject to the North Bay Association of REALTORS® statutory disclosure forms signed and acknowledged by all parties. Property owners shall have the responsibility to notify all tenants.

(Ord. No. 6121, § III(Exh. A) , 7-28-2015)

Article V. Well Reports.

Sec. 25B-9. Well reports.

- (a) Every person who digs, bores or drills a well, or abandons or destroys such a well or who deepens or reperforates any such well shall file with the enforcing agency a report of completion of such well within thirty (30) days after its construction, alteration, or destruction has been completed.
- (b) The report shall be made in compliance with California Water Code Section 13751, on forms furnished by the department of water resources or the enforcing agency, and shall contain such information as the department of water resources or the enforcing agency shall require, including but not limited to:
 - (1) Description of the well site including GPS or latitude/longitude coordinates to allow the enforcing agency to locate and identify the well;
 - (2) Detailed log of the well;
 - (3) Description of the type of construction;
 - (4) Details of perforation;
 - (5) Methods used for sealing off surface or contaminated waters;
 - (6) Methods used for preventing contaminated waters of one (1) aquifer from mixing with the waters of another aquifer, if applicable;
 - (7) Signature of the well driller; and,
 - (8) In the case of geothermal heat exchange wells, the report shall also contain the following information:
 - (i) A description of the site that is sufficiently exact to permit the location and identification of the site and number of geothermal heat exchange wells on the same lot.
 - (ii) A description of the borehole diameter and depth and the type of geoechange system installed.
- (c) Inspection of reports.
 - (1) Disclosure of well reports will be made pursuant to California Water Code Section 13752.

(Ord. No. 6121, § III(Exh. A) , 7-28-2015); (Ord. No. XXXX, XX-XX-2022).

Article VI. Enforcement and Penalties.

Sec. 25B-10. Enforcement and penalties.

- (a) **Power to Enforce.** The enforcing agency shall be responsible for enforcing the provisions of this chapter and may issue correction notices, notices of violation, stop work orders, and citations for any violations of this chapter, or any permit issued pursuant to this chapter.
- (b) **Permits Deemed Void.** Any permit issued in conflict with the provisions of this chapter shall be deemed void.
- (c) **Violations.**
 - (1) **Public Nuisance.** Any activity performed contrary to the provisions of this chapter is hereby declared to be unlawful and a public nuisance.
 - (2) **Criminal Violation.** Any person, whether an agent, principal, or otherwise, violating or causing the violation of any provision of this chapter or any permit issued pursuant to this chapter shall be guilty of a misdemeanor, and upon conviction thereof, shall be punishable in compliance with Section 1-7 of this Code.
 - (3) **Stop Work Order.**
 - (i) Any activity in violation of this chapter or any permit issued pursuant to this chapter shall be subject to the issuance of a stop work order.
 - (ii) Any violation of a stop work order shall constitute a misdemeanor and a public nuisance, and shall be subject to the remedies and penalties established by the county, including as set forth in Section 1-7.3.
- (d) **Suspension, Revocation, Determination of Void Permit or Modification.**
 - (1) **Enforcing Agency Action.** A well or demolition permit may be suspended, revoked, determined void, or modified by the enforcing agency, if the enforcing agency determines any of the following:
 - (i) Circumstances under which the permit was granted have changed and the public health, safety, and welfare require the suspension, revocation, or modification;
 - (ii) The permit was granted, in whole or in part, on the basis of a misrepresentation or omission of a material statement in the permit application; or
 - (iii) One (1) or more of the conditions of the original permit have not been substantially fulfilled or have been violated; or
 - (iv) Work authorized by the permit is in violation of any ordinance or regulation or any of the provisions of this Code.
 - (2) **Effect of Revocation.** The revocation of a well or demolition permit shall have the effect of terminating the permit and denying the privileges granted by the original permit.
- (e) **Enforcement Action.** When the enforcing agency determines that an activity is being performed in violation of the provisions of this chapter, the enforcing agency may initiate an enforcement action pursuant to Section 1-7.3 of this Code.
- (f) **Enforcement Penalties.** When the enforcing agency determines that an activity is being performed in violation of the provisions of this chapter, the enforcing agency may impose penalties pursuant to section 1-7.1 of this Code.
- (g) **Remedies Not Exclusive.** The remedies identified in this chapter are in addition to and do not supersede or limit any and all other remedies, civil or criminal. The remedies provided in this chapter shall be cumulative and not exclusive.

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- (h) Additional Permit Processing Fees. Any person who performs any activity requiring a permit under this chapter without first obtaining the required permit shall pay the additional permit processing fees established by the county's fee schedule for the correction of the violations and any applicable penalties, before being granted a permit for the activity.
 - (i) Hazard Abatement. Whenever the enforcing agency determines that any well on private property has become a hazard to public safety, endangers property, or adversely affects the safety, use, or stability of adjacent property, an overhead or underground utility, or a public way or watercourse, or could adversely affect the water quality of any watercourse or water body, the permit authority shall provide written notice to the owner or other person in control of the property advising of the problem. Upon receipt of the written notice from the enforcing agency, the owner or other person in control of the property shall, within the time specified in the notice, eliminate the hazard and conform with the requirements of this chapter. Failure to eliminate the hazard within the time prescribed could result in an enforcement action pursuant to Sonoma County Code Section 1-7.3, and subject to potential penalties.

(Ord. No. 6121, § III(Exh. A) , 7-28-2015)

Article VII. Alternative Materials, Design and Methods.

Sec. 25B-11. Alternative materials, design and methods.

- (a) Alternative Materials, Design and Methods of Construction and Equipment. The provisions of this chapter are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this chapter. An alternative material, design or method of construction shall be approved where the proposed material(s), design, or method offered is, for the purpose intended, at least the equivalent of that prescribed in this chapter in quality, strength, effectiveness, durability and safety and in no event shall be less than the minimum standards prescribed under state law in the water code or as set forth in applicable DWR bulletins.
- (b) This alternative method procedure shall not apply when the board of supervisors or one (1) of the regional water quality control boards hereinafter expressly prohibits the application of the alternative method process outlined in this article to a particular environmental hazard area or zone.

(Ord. No. 6121, § III(Exh. A) , 7-28-2015)

Article VIII. Well Monitoring and Water Conservation and Best Management Practices.

Sec. 25B-12. Well Monitoring. Well monitoring is required of all water wells for which an application is submitted after October 4, 2022, except for water wells that serve a parcel that is solely used for domestic purposes and with cumulative groundwater use of 2.0 acre feet or less of water per year. all existing and proposed water wells on parcels for which a water well permit was approved and found exempt from section 25B-4(d) pursuant to section 25B-4(e)(4) or (5).— Unless the conditions of approval for a discretionary permit require otherwise, well monitoring includes the following requirements:

- (a) Well Meter Records and Reporting. Except for water wells that serve a parcel that is solely used for domestic purposes and with cumulative groundwater use of 2.0 acre feet or less of water per year T, the owner or user of a well shall record meter readings at least monthly, and shall report the readings to the enforcing agency annually by February 1 of the following calendar year.

(b) Meter maintenance. For wells subject to subsection (a), of Section 25B-12, the owner or user of a well shall maintain the water meters in good working order and calibrated at least once every five years. Maintenance and calibration records shall be maintained and submitted to the enforcing agency upon request.

(c) Well metering requirements may be waived by the enforcing agency if written verification from a groundwater sustainability agency or other regulating agency is provided to the enforcing agency that confirms that the site is subject to equivalent groundwater monitoring, and resulting metering data is available or reported to the enforcing agency consistent with this Article.

The Board of Supervisors may establish fees in connection with review and processing of submitted reports by the enforcing agency.

(Ord. No. XXXX, XX-XX-2022).

Sec. 25B-13. Water Conservation and Best Management Practices. Unless the conditions of approval for a discretionary permit require otherwise, the following Water Conservation and Best Management Practices are required on parcels for which a water well permit was approved and found exempt from section 25B-4(d) pursuant to section 25B-4(e)(4) or (5):

(a) Cumulative groundwater extraction.

(1) For wells exempt from section 25B-4(d) per section 25B-4(e)(2) or (3), cumulative groundwater extraction for the parcel shall be limited to 2 acre feet per year collectively from all wells on the parcel.

(2) For wells exempt from section 25B-4(d) pursuant to section 25B-4(e)(5), cumulative groundwater extraction for the parcel shall be limited to the historic volume of groundwater extracted per year collectively from all wells on the parcel to support legally established land uses that existed as of October 4, 2022. When calculating the amount of historic groundwater use, an average over the three-to-five-year period immediately prior shall be used. Exceedance of applicable groundwater extraction limits is a violation of this Chapter.

(b) Individual totalizing water meters shall be installed on all separate service connections served by a shared well.

(c) The design and operation of all existing and future landscaped areas shall meet or exceed standards of chapter 7D3, Sonoma County Water Efficient Landscape Regulations.

(d) Non-functional turf that is solely ornamental and not regularly used for human recreational purposes or for civic or community events is prohibited.

(e) All showerheads and toilets within all existing and future habitable spaces on the project parcel shall meet current water efficiency standards defined in the 2019 CA Green Code or most current version.

(f) All commercial, industrial, and institutional sites shall submit a water conservation plan that details best management practices to reduce potable water use to the maximum extent feasible

(g) Vineyards and orchard irrigation. Vineyards and orchards within critical watershed areas shall limit groundwater use for irrigation to 0.4 acre-feet per acre per year or less. Vineyards and orchards within priority basins shall limit groundwater use for irrigation to 0.6 acre-feet per acre per year or less, and

comply with water conservation requirements as specified in a groundwater sustainability plan or other regulations adopted by a groundwater sustainability agency, applicable to the project site. In all other areas, vineyards and orchards shall limit groundwater use for irrigation to the existing groundwater use prior to October 4th, 2022, supported by metered data or a site specific irrigation demand analysis; if no data or analysis is provided then a limit of 0.6 acre-feet per acre per year or less shall apply. When calculating the amount of irrigation groundwater use, an average over the three-to-five-year period immediately prior shall be used.