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DEPARTMENT OF RESOURCE MANAGEMENT



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Environmental Health Division

**Minimum Onsite Wastewater Treatment System (OWTS) and
Water Well Plan Check Submittal Requirements**

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GENERAL

- Please apply online and submit all drawings electronically. See page 2 for instructions.**
- All water well, geotechnical boring, monitoring well, site and soil evaluation, and onsite wastewater treatment system (OWTS) construction applications shall be signed by the property owner, or shall be accompanied by an Agent Authorization form, or similar documentation, which specifies who the owner has authorized to obtain the permit for them.
- All alternative, engineered, experimental, and non-typical standard onsite wastewater treatment system (OWTS) plans shall be signed and stamped by the Registered Consultant responsible for their preparation. Electronic signatures are acceptable.
- Project address, parcel number, project data, and scope of work shall be noted on the first sheet of plans.
- Insurance documentation for C-57 licensed well drilling contractors shall be included with each application.
- Deviations from Solano County Code Chapter 6.4 may require a variance request and written approval.
- Application fees are due at time of submittal.

QUESTIONS?

- For well and septic information please call or email the Technical Program of Environmental Health Division at 707-784-1636 or ehtechnical@solanocounty.com
- For zoning or setback information contact the Planning Division: 707-784-6765 or planning@solanocounty.com



ELECTRONIC SUBMITTAL INSTRUCTIONS

All permits can be submitted electronically – often a paper copy of the application with the signature of the applicant is required. To apply:

- Visit: <https://aca-prod.accela.com/SOLANO/Login.aspx>
- Select: 'New Users: Register for an Account'
- Once registered, log in, apply for your permit, and upload all required documents
- Call 707-784-6765 or email EHTechnical@solanocounty.com with questions



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Many online services offered by the Agency require login for security reasons. If you are an existing user, please enter your user name and password in the box on the right.

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675 Texas Street, Suite 5500, Fairfield, CA 94533. Ph: (707) 784-6765



SITE AND SOIL EVALUATION PERMITS

ITEMS REQUIRED TO APPLY – UPLOAD ALL ITEMS TO THE ONLINE PORTAL

- Complete, signed, application
- Receipt or other verification that the application fee amount has been paid.
- Agent Authorization form, or similar documentation, indicating that the current property owner has consented to the proposed scope of work

ITEMS REQUIRED PRIOR TO PERMIT ISSUANCE

- Verification that the Registered Consultant proposing to perform the work is licensed

ITEMS REQUIRED DURING CONSTRUCTION – DEFERRED SUBMITTALS

- Site and soil evaluations must be performed in accordance with SCC Ch. 6.4-81, 6.4-81.1, and 6.4-81.2.
- Registered Consultant test pit logs
- Hydrometer and/or percolation testing data
- Mapping of test pit and percolation test hole locations

OTHER INFORMATION

- Field determination of highest level of anticipated groundwater may require actual wet weather monitoring and real time evaluation of actual groundwater levels, may require construction of monitoring well/s to depth of up to eight feet.



ONSITE WASTEWATER TREATMENT SYSTEM (OWTS)

ITEMS REQUIRED TO APPLY – UPLOAD ALL ITEMS TO THE ONLINE PORTAL

- Complete, signed, application.
- Complete set of stamped (if applicable) design plans, including a complete site plan
Please see Design Plan Requirements on page 5
- Manufacture cutsheets for any specified OWTS components. This includes septic tanks, pretreatment devices, piping fittings, mechanical switches, proprietary OWTS system components.
- Complete set of soil testing data, including test pit logs, hydrometer sample test results, and percolation test results. All soil testing locations should be included on the site plan
- Third party/proprietary OWTS system certifications, if applicable
- Receipt or other verification that the application fee amount has been paid
- Agent Authorization form, or similar documentation, indicating that the current property owner has consented to the proposed scope of work

ITEMS REQUIRED PRIOR TO PERMIT ISSUANCE

- If OWTS plans are associated with a Building permit application, verification that the Building permit submittal is consistent with the scope and siting of proposed construction is required
The OWTS permit will be issued concurrently with the Building permit
- Structures to be serviced by OWTS system must be approved by the Planning and Building Divisions for the proposed wastewater generating activity

ITEMS REQUIRED DURING CONSTRUCTION – DEFERRED SUBMITTALS

- As-built plans are required prior to the final approval for the permit
- If OWTS system is an alternative or experimental type, a final design certification from the Registered Consultant that designed the OWTS system is required
- If OWTS system is an alternative or experimental type, an O&M contact sheet/application, initial O&M permit fee, and Service Provider Contact Information document are required prior to final approval
- If the OWTS system has electrical components (pumps, floats, or alarms), verification that the electrical wiring has been inspected and approved by the Building Division is required prior to the Environmental Health inspection of the operation of those electrical components

OTHER INFORMATION

- OWTS permit applications associated with Building permit applications are issued at the same time



OWTS DESIGN PLAN REQUIREMENTS

Design Plans

- Plans stamped by REHS, PE, or CEG
- Designer information on plans
- Address and/or parcel number stated on plans.
- Plans shall be dated to allow for version tracking

Site Plan

- Plans scaled to either 1" = 20' or 1" = 30'
- North arrow
- Easements (nature and location)
- Water wells, streams, drainage, swales, and cutbanks within 100 ft. of property identified on plans
- Topographic contours and elevations provided.
- Show entire legal parcel (all property lines included)
- OWTS reserve area fully dimensioned and shown on plans

Setbacks – Vertical and Horizontal

- 10 ft. setback from leachfield to all structures and foundations, 5 ft. setback from septic tanks to all structures and foundations
- 10 ft. setback to property lines for properties on a public water system, 25 ft. setback to property lines for properties on water wells
- 100. Ft. setback arc to all water wells, including those on neighboring properties, shown
- Creek, stream, drainage, and cutback setbacks shown
- Horizontal setbacks meet requirements of SCC Ch. 6.4-82, Table 2
- 60-inch vertical separation to limiting layer for conventional and non-typical standard systems
- 36-inch vertical separation to limiting layer for pressurized disposal fields
- 24-inch vertical separation to limiting layer for engineered systems with NSF 40 pretreatment

Floor Plan of the Proposed Development

- Proposed development requires Planning approval AND has Planning approval
- House floor plan matches what is shown in Building permit plans

Soil Testing Data

- At least two test pit logs (one for primary, one for reserve area) included with design plans
- Soil characterized using USDA soil classification system, including soil texture
- Depth and characteristics of any limiting layer, if applicable, described in soil test pit logs
- Depth and characteristics of any mottling and/or observed groundwater is described
- If effective soil below proposed trench bottom is sandy loam, sandy clay loam, or loam, please include hydrometer test results for verification of soil type
- If effective soil below proposed trench bottom is sand, loamy sand, sandy clay, clay loam, silt loam, silty clay, silty clay loam, silt, or clay, please include percolation testing data or utilize application rates from Table 5 Chapter 6.4
- Test pit and percolation test holes shown on site plan
- Soil application rate has been averaged



OWTS DESIGN PLAN REQUIREMENTS, continued

- Infiltration rates are based upon either SCC Ch. 6.4-88, Table 5, or manufacture provided infiltration rates – whichever is more conservative/lower
- No reduction in infiltration area given for proprietary OWTS system components

Piping

- Pipe material and diameter specified
- Percent slope / fall specified on gravity lines
- Sleeving specified on pipes crossing areas of vehicle traffic
- Two-way clean out locations
- Tracer wire may be required on long underground piping runs

System Sizing and Capacity

- Residential OWTS systems are sized at 150 gallons/day/bedroom
- Primary residence OWTS design plan shows at least 450 gallons/day capacity, regardless of bedroom count
- OWTS system has been sized according to SCC Ch. 6.4-87 and Ch. 6.4-87, Table 4
- For residential OWTS design plans, bedroom count matches Assessor Recorder data, and/or Building permit submittals
- For residential OWTS design plans, SCC Ch. 6.4-90(b)(6) definition of “bedroom” has been applied
- Soil application rate has been averaged
- OWTS reserve area fully dimensioned and shown on plans
- No reduction in infiltration area given for proprietary OWTS system components

Septic and Dosing tanks

- Septic tank sized per SCC Ch. 6.4-84.1(c)
- Dosing tank sized with emergency storage capacity of at least 150 gallons or one third the daily design flow of the system, whichever is greater
- Emergency storage measured from the invert of the inlet tee and the point of high-water alarm activation
- Concrete tanks specified, unless site access prevents placement of a concrete tank
- If tank is located in area where seasonal groundwater is less than 6 ft. from ground surface, anti-buoyancy measures are included in plans
- Risers and lids specified

Grease Interceptors

- Interceptors shall be at least 1000 gallons or sized based upon the following formulas below, whichever is greater: (i)
Commercial Kitchen: Capacity = Number of meals per hour multiplied by the waste flow rate multiplied by retention time multiplied by storage factor

Leachfield and Sand Bed

- Leachfield construction details shall be consistent with design narrative
- Length, width, and depth of leachfield shall be dimensioned on the site plan and construction details
- Fill soil or sand that must meet specific requirements for the system shall have those requirements described in detail on the plan
- Aerial/Site plan view and cross section detail of leachfield



OWTS DESIGN PLAN REQUIREMENTS, continued

Pretreatment Unit

- NSF 40 certification for pretreatment unit
- Manufacture cutsheet indicating operational capacity and parameters of pretreatment unit
- Service agreement for pretreatment unit

Pump and Pump Sizing

- Total Dynamic Head (TDH) calculations, Hazen-Williams formula, Equivalent Pipe method, or some other approvable calculations show friction losses for system
- Elevation difference between pump and leachfield
- Squirt height, for pressure dose systems
- Manufacture pump curve
- Manufacture cut sheet – pump model and size (gallons/minute output)
- Control panel has a method to count the number of doses and elapsed pump run time
- Check valve
- Air vacuum breaker component specified, if applicable
- Connection between pump and force main allows for ease of pump removal and maintenance
- Dose settings (duration and frequency of timed pump activation) are provided

Floats and Alarms

- Float distance/heights specified
- Alarm float is on separate circuit than pump.
- Audible and visual alarm

Special Considerations for Commercial OWTS Systems

- Duplex pumps specified, with wiring to control panel to specify alternating pump activation
- Septic tank sizing performed according to Solano County Code Ch. 6.4-84.1
- System sizing performed in conformance with SCC Ch. 6.4-87
- System sizing matches Use Permit description, if applicable
- Flow meter location specified



WATER WELL CONSTRUCTION

ITEMS REQUIRED TO APPLY – UPLOAD ALL ITEMS TO THE ONLINE PORTAL

- Complete, signed, application.
- Mapping showing proposed location of water well – multiple maps may be required to show relative position of proposed well on the property.
Domestic Wells pumping less than 2 acre feet of water per year are exempt from Governors Executive Order
- Verification of application fee payment
- Well drillers current insurance
- Agent Authorization form, or similar documentation, indicating that the current property owner has consented to the proposed work.

ITEMS THAT MAY BE REQUIRED PRIOR TO PERMIT ISSUANCE

- If proposed well is to be used as a Public Water Supply (PWS) well, please include a copy of a Division of Drinking Water (DDW) approved Preliminary Technical Report (PTR) indicating that approval has been granted to initiate construction of a PWS water system, per California Health and Safety Code (CHSC), Section 116527.
- If proposed well is for agricultural or other non-domestic uses, please include a hydrology report as specified by County “6/12/2023 - Water Well Application Addendum” and in accordance with the Governor’s Executive Order N-3-23. Approval from the Groundwater Sustainability Agency for the proposed well location is required.
- If well is proposed on a Solano Irrigation District (SID) Point-Of-Entry (POE), non-public water system property please include acknowledgement that drilling of the well will remove the property from the SID POE program and the associated seasonal loss of SID irrigation water from the property.

ITEMS REQUIRED DURING CONSTRUCTION – DEFERRED SUBMITTALS

- Driller’s lithology log or e-log is required when calling in for sanitary seal inspection to verify the proposed seal depth meets the requirements of the CA Well Standards.
- Well construction details specifying the casing perforation depths
- A copy of the Well Completion Report (WCR) that is submitted to the California Department of Water Resources (DWR) Online System of Well Completion Reports (OSWCR) shall be submitted by the driller within 30 days of the completion of work, per SCC Ch. 13.10 and California Water Code Section 13751.



WATER WELL DESTRUCTION

ITEMS REQUIRED TO APPLY – UPLOAD ALL ITEMS TO THE ONLINE PORTAL

- Complete, signed, application.
- Mapping showing proposed location of water well – multiple maps may be required to show relative position of proposed well on the property
Please see Water Well Site Plan Requirements section.
- Verification of application fee payment

ITEMS REQUIRED PRIOR TO PERMIT ISSUANCE

- Description of well proposed for destruction: casing material, size, depth, and static water level
- Proposed method of destruction
- If casing perforation is proposed, Environmental Health requires at least two cuts every 5 feet to total depth of casing

If Blasting is proposed, please include:

- Blaster's Current Certificate of Liability Insurance
- Blaster's ATF license
- Blaster's California OSHA Blasting License
- Blaster's California DOJ Certificate of (Firearms) Eligibility
- Blast Plan
- City, Fire Department, Public Works permits or permissions for blasting on this project.
If no permits are required, an email from the City/Fire Department/Public Works Department stating that no permit is required will suffice -OR- an email from the applicant stating that that no permits are required with the name, title, number and email of the person they spoke to will suffice – EH will verify with the provided contact that permission has been granted for the blasting.
- Please specify if the blaster or the primary drilling company will be submitting the Well Completion (Destruction) Report to Environmental Health.

ITEMS REQUIRED DURING CONSTRUCTION/DESTRUCTION – DEFERRED SUBMITTALS

- A copy of the Well Completion (Destruction) Report (WCR) that is submitted to the California Department of Water Resources (DWR) Online System of Well Completion Reports (OSCAR) shall be submitted by the driller within 30 days of the completion of work, per SCC Ch. 13.10 and California Water Code Section 13751.



GEOTECHNICAL BORINGS

ITEMS REQUIRED TO APPLY – UPLOAD ALL ITEMS TO THE ONLINE PORTAL

- Complete, signed, application.
- Agent Authorization form, or similar documentation, which can be tracked back to the property owner and specifies who the owner has authorized to obtain the permit.
- Mapping showing proposed location of borings – multiple maps may be required to show relative position of proposed borings on the property. Boring locations shall be labeled/numbered
Please see Water Well Site Plan Requirements section.
- Verification of application fee payment
- Verification of grout materials and destruction methodology

ITEMS REQUIRED PRIOR TO PERMIT ISSUANCE

- Description of boring depths
- Current Certificate of Contractors Liability Insurance

ITEMS REQUIRED DURING BORING CONSTRUCTION/DESTRUCTION – DEFERRED SUBMITTALS – ITEMS REQUIRED TO “FINAL” PERMIT

- Completed seal without inspection form with supporting photographs may be required



WATER WELL SITE PLAN REQUIREMENTS

Site Plan (Drawn neatly, to scale and fully dimensioned work area no smaller than 1" = 20')

- Property owner name
- Site Address and parcel number
- Scale indicated
- Show entire legal parcel (all property lines included)
- North arrow
- Adjacent streets/roads
- Easements (nature and location)
- Show setbacks (property lines, septic systems, and hazardous materials storage). Label setback distances.
- Existing water wells on the property
- Sewage disposal systems (septic tank and leach lines – existing/proposed & reserve area)
- Propane tanks
- Hazardous Materials Storage – example – pesticide storage
- Animal enclosures

RESOURCE MANAGEMENT CONTACT INFORMATION

675 TEXAS STREET, SUITE 5500, FAIRFIELD, CA 94533

BUILDING DIVISION

- Building Official – Saeed Iravani 707-784-6765
- Plan Check Engineer 707-784-6765
- Permit Technicians 707-784-6765
- Building Inspectors 707-784-6765
- Code Compliance Officers 707-784-6765
- Inspection Request Line 707-784-4750

PLANNING DIVISION 707-784-6765

Zoning, land use, lot line adjustments, subdivisions, zoning regulations and setbacks

ENVIRONMENTAL HEALTH 707-784-6765

Technical Division: New onsite wastewater treatment systems, upgrades to existing onsite wastewater treatment systems, onsite wastewater treatment system destructions, site and soil investigation for onsite wastewater treatment system development, new wells, monitoring wells, cathodic protection wells and well destructions

PUBLIC WORKS 707-784-6765

ROADS AND ENCROACHMENT

New driveways connecting to a county road may require an encroachment permit. Any new roads that are being proposed or any work on roads will require Public Works approval.

PUBLIC WORKS 707-784-6765

GRADING ENGINEER

Contact this division for any proposed grading