

DOMESTIC WATER SUPPLY
PERMIT-TO-OPERATE

MARIN COUNTY CODE SECTION 7.28

A domestic water supply is a private, perennial source of water that supplies water for human consumption. No person shall operate a domestic water supply within the unincorporated area of Marin County without first applying for and being issued a permit (Marin County Code Section 7.28).

APPLICATION INSTRUCTIONS- Please submit the following:

1. A completed **application form** and associated application fee. Specify the proposed number of residences and parcels served. Complete ALL applicable sections; use N/A when appropriate.
2. A **description of the water source**. A "Well Completion Report" (DWR Form 188). Landowners can request a copy of the Well Completion Report from the Central Office of DWR: (<http://www.dpla.water.ca.gov/cd/groundwater/index.html>). Forms are available at: (<http://www.dpla2.water.ca.gov/publications/groundwater/wcrequest-owner7.pdf>). If a well report is unavailable or if the water source is a different type such as a spring, infiltration gallery or a direct surface water source, submit a detailed description of the source's construction.
3. Three copies of a detailed and scaled **plot plan**, showing the following:
 - a. Topography, property boundaries, and the labeled locations of all buildings drawn to scale on paper with a minimum size of 8 1/2" x 11".
Parcel maps can be obtained from the Marin County Assessors office or printed on-line:
<http://www.co.marin.ca.us/depts/AR/MapBook/index.asp>
Parcel and topographic maps, and aerial photographs can be printed on-line:
www.MarinMap.org
 - b. Location and type of proposed water source.
 - c. Locations of any existing water supply systems or sources such as wells and springs.
 - d. Locations of any existing or proposed sewage disposal systems within 150 feet of the proposed well(including neighbors'). Include leach fields, septic tanks, sewer mains and sewer laterals on the plans.
 - e. Existing and historic locations of potential polluting hazards such as animal enclosures, feedlots, barns, fuel tanks, storage/preparation areas for biocides, fertilizers or chemicals.
4. A completed **yield test** form, provided by the County of Marin. Generally, the "dry season" test should be performed within the last year. The "dry season" is defined by EHS as July 15 to October 1. However, extensions of the ending dates and suspensions of the starting dates are routine due to rainfall. Older test data, in compliance with County requirements, may be evaluated.
5. **Water quality tests** performed by a state certified laboratory within the last six months. Contact the Water Specialist if historic test results are available. Submit a written **treatment plan** if results exceed the maximum levels of any primary standard. Submit results for the following Title 22 state standards:
 - Primary Bacteriological Standards, Primary Inorganic Chemical Standards,
 - Secondary Drinking Water Standards (see attached shortened list of chemicals),
 - Primary Organic Chemical Standards (required if sources of contamination are suspected)
6. For common water systems (serving two to four lots and less than five residences) or State Small Water Systems (serving five to fourteen residences on multiple lots), **easements and maintenance agreements**, recorded on the deed. These documents legalize water rights and maximum volume of water allowed, and responsibilities regarding equipment maintenance, care, construction and operation.
7. Additional information, as needed. Note when a proposed *water well* on one parcel will serve a **different parcel**. Note when the property is located within **city limits** or if protected by a **locked gate** and fence.

COMMUNITY DEVELOPMENT AGENCY

Environmental Health Services
3501 Civic Center Drive, Rm 236
San Rafael, CA 94903
(415) 499-6907 FAX (415) 507-4120

OFFICE USE ONLY
Receipt # _____
Check # _____
Date _____
Received by _____
PERMIT # _____

APPLICATION (check type of work)

NUMBER OF WELLS FOR APPLICATION _____

- | | | |
|--|---|---|
| <input type="checkbox"/> Drill Domestic Water Well | <input type="checkbox"/> Construct Monitoring Wells | <input type="checkbox"/> Cathodic Protection Wells |
| <input type="checkbox"/> Drill Non-domestic Water Well | <input type="checkbox"/> Well Destructions | <input type="checkbox"/> Soil Borings / Test or Instrumentation Holes |
| <input type="checkbox"/> Operate Domestic Water Supply | <input type="checkbox"/> Repairs/Upgrades | Number of borings / holes _____ |

OWNER'S NAME: _____

SITE ADDRESS: _____

Mailing Address: _____

ASSESSOR'S PARCEL(S) # _____

Email: _____ Zip _____

Phone: () _____ Fax: () _____

WELL DRILLER: _____

CONSULTANT: _____

Mailing Address _____

Mailing Address: _____

_____ Zip _____

_____ Zip _____

Phone: () _____ Fax: () _____

Phone: () _____ Fax: () _____

C-57 lic. # _____ Marin County Business Lic. # / Exp. Date (unincorporated areas) _____

Complete if applying to drill new water, monitoring, geothermal or cathodic protection wells or repairs/upgrades:

Use of water well: Domestic ___ Irrigation/Ag ___ Commercial ___ Other than a water well _____

This water supply will be used as a drinking water source: Yes ___ No ___ The water well will serve:

How many parcels? ___ How many residences? ___ Other info about use _____

Sewage Facilities: Septic System ___ Distance to well: ___ feet Public Sewer Main: ___ Distance to well: ___ feet

Building sewer lateral material: PVC or Cast Iron or Ceramic or Other _____ Distance to well: ___ feet

Include site plan with homes, septic tank, leach fields, plumbing, water and fire protection storage tanks, animal enclosures, etc.

Complete if applying to operate a domestic water supply:

Water source is a well, spring, infiltration gallery, other? _____

1. Bacteriological test date: _____ 2. Chemical tests date / treatment plan: _____

3. Yield test date: _____ 4. Well drillers report: WCR# _____ 5. Water storage in gallons for drinking only: _____

6. Plans (see requirements above) _____ 7. How many parcels? _____ 8. How many residences? _____

Complete if applying to construct monitoring wells:

(Include 3 sets of a scaled site plan; indicate USTs.)

Reason for installing monitoring wells: _____ Depths of wells: _____ Seal depths: _____

Sketch or description of the proposed construction of the monitoring wells _____

Complete if applying to drill cathodic protection wells:

(Include 3 sets of a scaled site plan.)

Distance to street sewer mains: ___ feet Underground tanks: _____ feet Distance to sewer laterals: ___ feet

Complete if applying for soil borings / test holes:

(Include 3 sets of a scaled site plan.)

Reason for drilling / type of test hole: _____ Depths of holes: _____ Sealing material _____

Complete if applying for destroying a well:

(Include 3 sets of a scaled site plan.)

Type of well: Domestic ___ Irrigation/Agricultural ___ Monitoring ___ Cathodic Protection ___ Other (describe) _____

Reason for destroying well: Abandoned _____ Hazardous contamination _____ Dry / No Yield ___ Other _____

All work shall meet standards in the California Well Bulletins 74-81, 74-90, and the CA Code of Regulations, Title 26.

Signed by: _____ Date: _____

**RULES AND REGULATIONS FOR
ESTABLISHING MINIMUM DOMESTIC WATER SYSTEM REQUIREMENTS
PURSUANT TO MARIN COUNTY CODE SECTION 7.28**

1. Source Yield

All sources shall be perennial. The minimum sustained yield of water from a source or sources and minimum water storage capacity shall not be less than the following:

<u>Use</u>	<u>Sustained Yield</u>		<u>Storage</u>
	<u>Pumped Source</u> Gal/Min	<u>Gravity Source</u> Gal/3-day	
One Residence	1	2160	1,000
Two Residences	2	4320	2,500
Three Residences	3	6480	4,000
Four Residences	4	8640	5,000

For uses other than that specified above the minimum yield and storage requirements shall be based on estimated consumption as approved by the "Health Officer."

2. Test Method

A. Gravity Fed Source - Flow from the source shall be measured by recording the time it takes to fill a container of known volume (minimum size (2) two gallons). The average of three such measurements taken within (1) one hour shall comprise a test. At least (3) three tests shall be taken each spaced at least 6-days apart. Testing of a horizontal well shall not be performed until at least 30 days after the well has been drilled.

B. Pumped Source

Step 1. Commence the test no sooner than 7-days after development of the well. Record the time and the initial level of the water in the well prior to start of pumping.

Step 2. Start pumping at a rate of 10 GPM, or more, until a 3-day minimum yield is pumped from the well, or until the well is "pumped dry".*

a. If a 3-day yield is obtained without "pumping dry" skip to Step 5.

b. If the well is "pumped dry" continue to Step 3.

Step 3. Record the time at which the well is "pumped dry" and the new pumping rate at which the pump continues to operate.

* "Pumped Dry" is the point at which the pump starts to pump air, thus lowering the pumping rate.

- Step 4. Continue pumping and record the pumping rate at one-hour intervals commencing at the time in Step 3, until the same reduced pumping rate is obtained on 3 consecutive hours.
- a. If the 3 consecutive hourly readings are less than the minimum yield required, the yield is inadequate.
 - b. If the 3 consecutive hourly readings are equal to or greater than the minimum allowable yield and a 3-day yield was pumped from the well, continue to Step 5.
 - c. If the consecutive hourly readings are equal to or greater than the minimum allowable yield, but a 3-day yield was not pumped from the well, continue pumping until this total 3-day yield is obtained, then continue to Step 5.

Step 5. End pumping and record the time and the elevation of the water level at the completion of pumping.

Step 6. 72 hours after the time recorded in Step 5, measure and record the water level in the well.

- a. If the initial water level recovers 100% after 72 hours, then the yield of the well is adequate.
- b. If the above recovery is not obtained for the well, this yield is inadequate.

C. Yield Test Results - The results of the yield tests shall be recorded on the forms provided by the "Health Officer." All applicable blanks on the forms shall be filled out. The yield of a gravity fed source shall be the lowest of the (3) three tests. The yield of a pumped source shall be the pumping rate established by the "3-day yield pumping tests."

3. Seasonal Timing of Tests

The yield testing shall be performed during the dry season (July 15 to October 1, unless the "Health Officer" expands this time limit due to lack of precipitation). Testing outside of the dry season may be allowed if sufficient data as approved by the "Health Officer" is submitted which correlates the actual test results with dry season results to establish actual sustained yield at the driest season.

4. Qualifications of Persons Making Tests

Yield tests shall be made only by State Licensed Well Drilling Contractors (C-57), General (Class A License) Engineering Contractors, Civil Engineers, or Geologists, except where a gravity fed source will supply one (1) single-family dwelling, the test maybe made by the property owner. Verification by a representative of the "Health Officer" may be required.

5. Source Setbacks

The source shall have minimum setbacks as specified below:

- From Property Line 5 feet
- From Subsurface Disposal Field 100 feet
- From Septic Tank or other Subsurface Storage Tanks
(except water tanks) 100 feet
- From Other Public or Private Sewer Pipe Line. 50 feet

6. Water Quality

The water shall meet the physical, chemical and bacteriological standards of the California Department of Health and the U.S. Environmental Protection Agency. Where an analysis indicates that the source initially would not meet such standards, the applicant shall provide a proposed method of water treatment, or condition of, such as chlorination, filtration, or chemical adjustment to meet such standards.

(Please refer to the attached list of tests required by Marin County.)

TEST METHOD - PUMPED SOURCE

OWNER / ADDRESS OF WELL _____

DATE WELL WAS DEVELOPED _____ DATE OF PUMP TEST _____

MINIMUM SUSTAINED YIELD FROM RULES & REGULATIONS _____ Gal/Min _____ Gal/3-day

STEP	TIME	DEPTH TO GROUND WATER	PUMPING RATE	TOTAL VOLUME DRAWN FROM WELL
Step 1: Start test	_____ AM/PM _____ Date	_____ FT (below ground surface)		
Step 2: If 3-day volume is pumped, go to Step 5.	_____ AM/PM _____ Date	_____ FT	_____ GPM	_____ GAL
Step 3: If Well is pumped dry, go to Step 4.	_____ AM/PM _____ Date	_____ FT	_____ GPM	_____ GAL
Step 4: Hourly pumping rates	_____ AM/PM _____ Date		_____ GPM	
Three consecutive, stable hourly readings are required. (Continue on additional sheets if necessary)	_____ AM/PM		_____ GPM	_____ GAL
	_____ AM/PM		_____ GPM	_____ GAL
	_____ AM/PM		_____ GPM	_____ GAL
Step 5: End of pumping	_____ AM/PM _____ Date	_____ FT		_____ GAL Total for entire test.
Step 6: Recovery Reading taken 72 hours after Step 5	_____ AM/PM _____ Date	_____ FT		

For the well to be approved, the sustained yield OR the total volume of water drawn from the well must meet minimum standards AND a 100% recovery in the water level final pumping rate must be realized.

CALCULATED SUSTAINED YIELD _____ Gal/Min (OR) TOTAL YIELD _____ Gal/3-day

Name of Company

Name of Tester

Signature of Tester

Date

TEST METHOD
PUMPED SOURCE – PAGE 2

OWNER / ADDRESS OF WELL _____

DATE OF PUMP TEST _____

STEP	TIME	DEPTH TO GROUND WATER	PUMPING RATE	TOTAL VOLUME DRAWN FROM WELL
Step 4: (Cont.) Hourly pumping rates	_____ AM/PM _____ Date	_____ FT (below ground surface)	_____ GPM	_____ GAL
	_____ AM/PM		_____ GPM	_____ GAL
	_____ AM/PM		_____ GPM	_____ GAL
	_____ AM/PM		_____ GPM	_____ GAL
Three consecutive, stable hourly readings are required.	_____ AM/PM		_____ GPM	_____ GAL
	_____ AM/PM		_____ GPM	_____ GAL
	_____ AM/PM		_____ GPM	_____ GAL
	_____ AM/PM		_____ GPM	_____ GAL
	_____ AM/PM		_____ GPM	_____ GAL
	_____ AM/PM		_____ GPM	_____ GAL
	(Continue on	additional	sheets if	necessary)

For the well to be acceptable, the final pumping rate OR the total volume of water drawn from the well must exceed the minimum sustained yields AND a 100% recovery in the water level must be realized.

Name of Company

Name of Tester

Signature of Tester

**YIELD TESTING FOR
DOMESTIC DRINKING WATER SYSTEMS**

1. Source Yield - Gravity Source

The minimum sustained yield of water from a source or sources and minimum water storage capacity shall not be less than the following:

<u>Use</u>	<u>Sustained Yield</u>	<u>Storage</u>
	<u>Gravity Source</u> Gal/Min	
One Residence	0.50	1,000
Two Residences	1.00	2,500
Three Residences	1.50	4,000
Four Residences	2.00	5,000

For uses other than that specified above the minimum yield and storage requirements shall be based on estimated consumption as approved by the "Health Officer." All sources shall be perennial.

2. Test Method

A. Gravity Fed Source

Flow from the source shall be measured by recording the time it takes to fill a container of known volume (minimum size (2) two gallons). The average of three such measurements taken within (1) one hour shall comprise a test. At least (3) three tests shall be taken each spaced at least 6-days apart. Testing of a horizontal well shall not be performed until at least 30 days after the well has been drilled. The yield of a gravity fed source shall be the lowest of the (3) three tests.

C. Test Results

The results of the yield tests shall be recorded on the forms provided by the "Health Officer." All applicable blanks on the forms shall be filled out.

3. Seasonal Timing of Tests

The yield testing shall be performed during the dry season (July 15 to October 1, unless the "Health Officer" expands this time limit due to lack of precipitation). Testing outside of the dry season may be allowed if sufficient data as approved by the "Health Officer" is submitted which correlates the actual test results with dry season results to establish actual sustained yield at the driest season.

4. Qualifications of Persons Making Tests

Yield tests shall be made only by State Licensed (C-57) Well Drilling Contractors, General (Class A License) Engineering Contractors, Civil Engineers, or Geologists, except where a gravity fed source will supply (1) one single family dwelling, the test may be made by the property owner. Verification by a representative of the "Health Officer" may be required.

**TEST METHOD
GRAVITY SOURCE**

Test #1

Test #2

Test #3

_____ Date

_____ Date

_____ Date

1. _____ Gal/_____ Min

_____ Gal/_____ Min

_____ Gal/_____ Min

2. _____ Gal/_____ Min

_____ Gal/_____ Min

_____ Gal/_____ Min

3. _____ Gal/_____ Min

_____ Gal/_____ Min

_____ Gal/_____ Min

Test #1 Average

Test #2 Average

Test #3 Average

_____ Gal/_____ Min

_____ Gal/_____ Min

_____ Gal/_____ Min

Yield = Lowest average =

_____ **GPM**

_____ Name of Company

_____ Name of Tester

_____ Signature of Tester

_____ Date

Phone _____

INSTRUCTIONS ON HOW TO PERFORM THE GRAVITY SOURCE TESTING CAN BE FOUND IN THE MARIN COUNTY RULES AND REGULATIONS FOR DOMESTIC WATER SUPPLIES.