CHAPTER 8.06 SAN JUAN COUNTY CODE

RULES AND REGULATIONS

OF THE SAN JUAN COUNTY BOARD OF HEALTH

REGARDING WATER WELLS AND WATER SYSTEMS

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RULES AND REGULATIONS OF THE SAN JUAN COUNTY BOARD OF HEALTH REGARDING WATER WELLS AND WATER SYSTEMS

Article I. General Provisions

8.06.010 Purpose

The purpose of these rules and regulations is to protect the public health and groundwater resources and implement the goals and policies of the San Juan County Comprehensive Plan by:

A. Overseeing the siting and construction of water wells, per Chapters 173-160 WAC and RCW 18.104;

B. Providing standards for water supply pertaining to building permits for new structures requiring a source of potable water, per RCW 19.27.097 (State Building Code), and RCW 36.70A (State Growth Management Act);

C. Providing standards for water supply for subdivision per San Juan County Unified Development Code Sections 18.60 and 18.70, and RCW 36.70(A) (State Growth Management Act), and RCW 58.17 (State Subdivision Statute);

D. Regulating the construction and operation of community water systems; and

E. Establishing standards for approval of the construction and operation of individual water systems.

8.06.020 Authority

These rules and regulations are adopted by the San Juan County Board of Health under the authority and duties granted in RCW 70.05.060.

8.06.030 Adoption of State Regulations

WAC 246-290, WAC 246-291 (State Board of Health drinking water regulations) and WAC 173-160, RCW 18.104 (Department of Ecology well construction regulations) are hereby adopted by reference.

8.06.040 Water Program Jurisdiction

Responsibility and authority in the water program is shared between the San Juan County Department of Health and Community Services and the Washington State Department of Health and Department of Ecology. Areas of responsibility and authority are defined in interagency agreements between the Washington State Departments of Health and Ecology and the San Juan County Board of Health.

8.06.050 Administration

These rules and regulations shall be administered by the San Juan County Health Officer, under the authority granted in RCW 70.05.070.

8.06.060 Applicability

These rules and regulations shall apply to all new sources of water created after adoption of the rules and all sources for new construction, development permits, and land division; and to all new and existing public water systems.

8.06.070 Definitions

"Adequacy" means a sufficient amount of water for the intended use taking into consideration both average and peak demand, and source capacity.

"Adjacent community water system" means a system whose service area is within 1/4 mile of a proposed new well or proposed new water system boundary.

"*Adjacent property"* means neighboring property that is within the sanitary setback of a well or spring.

"Alternative water source" means any source of water for an individual single-family use other than a legally constructed well that produces more than 200 gallons per day per residence or an approved community water system that can provide adequate water for the intended use of the structure. These

include but are not limited to: rainwater catchment, hauled water, seawater treatment, wells producing ≤200 gallons per day per residence, and well water requiring treatment or monitoring.

"Applicant" means the developer, purveyor, property owner or their representative applying for a permit.

"Average demand or daily use" means the average daily water use per day per residence. For San Juan County average daily demand is 100 – 300 gallons per day per residence.

"Community (or public) water system" means any system serving water for human consumption other than one single-family residential connection except four or fewer connections on the same parcel.

"*Connection"* means a house, unless specifically stated otherwise in a water system's ownership agreement. An attached accessory dwelling unit will constitute one-third to one-half of a connection in addition to the house. The attached accessory dwelling will be rated at one-half of a connection unless the owner can demonstrate that the use will be less than one-half, but in no case will it be rated at less than one-third of a connection. A detached accessory dwelling unit shall include evidence of the availability on site of one equivalent residential unit of water in addition to the water required for the principal residence.

"Conservation" means a reduction in the amount of water necessary to carry out a beneficial water use. Maximum efficiency of water use that results in a reduction of water that is wasted.

"Consolidated formation" means any geologic formation in which the earth materials have become firm and coherent through natural rock forming processes. An uncased well drill hole will normally remain open in these formations.

"Contaminant" means anything that impairs the quality of ground water to a degree that creates a potential hazard to the environment, public health, or interferes with a beneficial use.

"County Hydrogeologist" means a Washington State licensed hydrogeologist that either works for or has a contract with San Juan County.

"Critical Water Resource Area" means selected watersheds and critical aquifers where resources potentially are threatened by seawater intrusion or primary contaminants, or limited due to poor recharge. These areas may be designated by Resolution by the San Juan County Board of Health in response to recommendations by the Department of Health and Community Services based on studies conducted by the county or state, or by petition from community groups and community water systems.

"Cross Connection" means a physical arrangement connecting a potable water supply, directly or indirectly, with an unsafe water supply or other contaminating material, and capable of contaminating the potable water system.

"gpm" means gallons per minute.

"Group A public water system" means a public water system serving 15 or more connections or an

average of 25 or more people per day for 60 or more days within a calendar year.

"Group B public water system" means a public water system with a) less than 15 connections; b) an average of less than 25 people per day for 60 or more days within a calendar year; or c) any number of people for less than 60 days within a calendar year.

"GWI" means ground water under the influence of surface water. Any water beneath the surface of the ground where natural conditions cannot prevent the introduction of surface water pathogens into the source at the point of withdrawal.

"Health Officer" means the duly appointed San Juan County Health Officer, or a representative authorized and under the direct supervision of the Health Officer.

"Hydrogeologic Site Evaluation" means a report that evaluates water resource availability prepared by a licensed professional who has training and experience in hydrogeology per WAC 308-15-057.

"Individual water system" means a water system serving a single-family residence and no more than one guesthouse, or meeting the definition in WAC 246-290-010 for same farm.

"New construction" means any change of use or new structure that includes plumbing for both kitchen and bathroom facilities.

"Owner" means owner of the proposed or existing well or water system.

"Peak demand" means the amount of water needed to supply maximum demand or meet extreme conditions. Maximum demand typically occurs when a water system experiences high water use during summer months when irrigation and visitors impact the system. For San Juan County this amount is 540 gallons per day per residential connection. See Average demand.

"Potable" means water suitable for drinking by the public.

"ppm" means parts per million. Equal to milligrams per liter (mgl).

"Project Actions" means an application for a land division, a new and/or expanding water system, and/or a water availability certificate. Project actions do not include simple land divisions or building permit applications for structures that do not require water availability certificates.

"Sanitary easement" means a restrictive covenant recorded on the title of the property for a 50 - 200 foot radius (sanitary setback) around a well or spring.

"Sanitary setback" means a 50 - 200 foot radius around a well or spring where it is prohibited to construct or maintain sources of contamination. These include, but are not limited to: septic tanks and drainfields, sewerlines, underground storage tanks, vehicles, structures that include the use or storage of toxic materials, enclosures for maintaining livestock, or garbage of any kind or description.

"Seawater intrusion" means replacement of pumped fresh water by seawater in an aquifer. Potential

seawater intrusion is indicated by well water samples showing values of 100 ppm or greater of chlorides.

"Service area" means an area identified by a public water system that includes existing and future areas that will be served by that water system.

"Shallow well" means a well completed in unconsolidated material with less than 6 feet of impervious material between the water table and the surface; or any well less than 25 feet deep. Under state regulations any community well less than 50 feet deep is considered groundwater potentially under the influence of surface water. See GWI.

"Source Capacity" means the capacity of the water source that is proposed to serve a subdivision. For purposes of this chapter the minimum source capacity is 0.7 gpm per connection.

"Spring" means a shallow source of water that emerges from the ground naturally. Generally this water flows just under the surface over clay or bedrock and may be seasonal.

"Stabilize" means less than 0.1 foot of drawdown fluctuation/hour in the last 4 hours of a pump test after normalizing for tidal and barometric influences.

"Standard design" means a design meeting Department requirements for treatment, filtration, or storage.

"Unconsolidated formation" means any naturally occurring, loosely cemented or poorly indurated earth material such as uncompacted gravel, sand, silt, and clay.

"Vulnerability assessment" means evaluation of potential contamination for a specific area that could affect water quality in a well. This involves an inventory of activities such as: underground storage tanks, animal feedlots, landfills, septic tanks and drainfields, and urban runoff.

"Water Well Report (well log)" means the well record completed by the well contractor on the construction or alteration of a well.

"Well" means any excavation that is drilled, bored, driven, dug, or otherwise constructed when the intended use is the withdrawal of ground water.

8.06.080 Enforcement

When a public or private water system is out of compliance with these rules the Department of Health and Community Services may initiate appropriate enforcement actions, regardless of any prior approvals, including, but not limited to:

A. Issuance of a compliance schedule;

B. Issuance of departmental orders requiring submission of plans, design reports, and construction report forms;

C. Issuance of departmental orders requiring specific actions or ceasing unacceptable activities within a designated time period. Copies of these orders will be sent to the San Juan County Prosecuting Attorney and Board of Health;

D. Issuance of departmental orders to stop work and/or refrain from using any water system or improvements thereto until all written approvals required by statute or rule are obtained. The enforcement action will be reviewed with the San Juan County Board of Health;

E. Imposition of civil penalties as authorized under chapter 70.119A RCW or local authority; and

F. Legal action by the prosecuting attorney.

8.06.090 Designer Certification

Designer certification will be required for designs submitted for all community water systems. Group A public water systems must be designed by a licensed engineer. Group B public water systems may be designed by a licensed engineer or certified designer and must comply with state and county minimum design standards (Appendix B).

A. Application for a water system designer's certificate of competency shall be made to the Health Officer. Satisfactory completion (70% or higher) of a written examination to demonstrate competency in the design and construction of individual and small public water systems will be required.

B. The Department of Health and Community Services may suspend, revoke, or deny any water system designer's certification of competency for negligence, incompetency, misrepresentation, or failure to comply with these rules and regulations, WAC 246-290, WAC 246-291, and/or WAC 173-160 is established.

C. Certification. The fee for water system designer certification shall be assessed according to the current San Juan County Health and Community Services fee schedule in effect at the time of application. Certification shall be in effect for the unexpired portion of the calendar year in which certification is obtained. The application for renewal and the appropriate fee must be submitted to the Health Officer prior to February first of the year in which renewal is desired. If the renewal fee is not submitted to the Health Officer prior to February first, the designer certification will be expired and the initial fee will be required for renewal.

8.06.100 Licensing of truck transportation of potable water

A. All persons engaged in the commercial transporting potable water will be licensed by the Health Officer. This license will be granted based on compliance with Guidelines for the Truck Transportation of Potable Water Supply for Public Use (Appendix C).

B. Certification. A fee shall be assessed according to the current San Juan County Health and Community Services fee schedule in effect at the time of application. Certification shall be in

effect for the unexpired portion of the calendar year in which certification is obtained. The application for renewal and the appropriate fee must be submitted to the Health Officer prior to February first of the year in which renewal is desired. If the renewal fee is not submitted to the Health Officer prior to February first, the certification will be expired and the initial fee will be required for renewal.

Article II. Well Construction and Site Approval

8.06.110 Site Approval – Individual Wells.

A. A Well Site Inspection Report must be filed with the Department prior to drilling all new wells. This Report may be completed by the well driller, a certified designer, licensed engineer, or the Department. This report will include a plot plan on a consistent and standard scale indicating: parcel number, well i.d. number, well location coordinates, property lines and easements, existing and proposed buildings, marine shorelines, bodies of fresh water (including seasonal streams), existing and proposed roads and driveways, existing and proposed septic systems, any potential or existing source of contamination, and adjacent public and private water sources.

B. Well siting on lots utilizing an on-site sewage disposal system (OSS) shall contain a plot plan signed by the licensed well driller and a engineer or certified septic designer showing the proposed location of the OSS and well.

C. Well siting must meet the following criteria, or comply with the variance procedures in subsection C of this section:

1. Wells shall be located at least 100 feet from a drainfield and 1000 feet from a solid waste landfill. Wells shall be located at least 100 feet from a septic tank and components, unless additional surface seal (double seal) or other mitigation is used.
2. Wells shall be located at least 100 feet from the neighboring property line, except:

    a. Nothing herein shall prevent a well from being located within 100 feet of the neighboring property line provide the neighboring property owner has signed and recorded a sanitary covenant restricting the placement of any potential sources of contamination within 100 feet of said well; or
    b. The department may grant a variance to allow a well to be located no less than 50-feet from the property line. Said variance must be granted prior to drilling the well. The variance must be supported by a vulnerability assessment. Variance requests and vulnerability assessments must be submitted by a qualified water system designer, well driller, or engineer and contain proposed mitigation measures.

3. Wells completed with 6 feet or more of impermeable material between the surface and water table must have a 100-foot *sanitary setback*, unless a variance is supported by a *vulnerability assessment*. A variance may be granted for no less than a 50-foot radius.
4. Wells completed with less than 6 feet of impermeable material must have a 100-foot sanitary setback. A variance to setback requirements may be issued by the Department of Ecology.

5. *Shallow wells* and *springs* must have a 100 foot sanitary setback and submit an inventory of all potential sources of contamination within 600 feet.
6. If the sanitary setback affects an adjacent property, the owner must obtain a s*anitary easement*, recorded with the Auditor's Office, prior to well construction.

D. If the siting requirements cannot be met the applicant must submit a vulnerability assessment by a qualified water system designer, well driller, or engineer, with proposed mitigation measures.

E. Failure to meet siting requirements will result in denial of any county permits requiring demonstration of potable water.

8.06.115 Site Approval – Community Supplies

A. A Well Site Inspection Report must be filed with the Department prior to drilling a new community water system well. The report may be completed by the well driller, a certified designer, licensed engineer, or the Department. This report will include a plot plan on a consistent and standard scale indicating: parcel number, well i.d. number, well location coordinates, property lines and easements, existing and proposed buildings, marine shorelines, bodies of fresh water (including seasonal streams), existing and proposed roads and driveways, existing and proposed septic systems, any potential or existing source of contamination, and adjacent public and private water sources.

B. Well siting must meet the criteria as outlined in the Washington Administrative Code (WAC) 246-290 (Group A Systems) or WAC 246-291 (Group B Systems).

8.06.120 Construction Standards

Well construction or modification must comply with standards in Chapter 173-160 WAC, Minimum Standards for Construction and Maintenance of Wells, and meet the standards below:

A. All wells shall have a permanent identifying tag attached with a unique number that conforms with Department of Ecology requirements. This number shall be recorded on the water well report.
B. All wells shall be equipped with a water meter.
C. Shallow wells and springs must be constructed according to the standards in EPA Manual of Individual and Non-Public Water Supply Systems and Chapter 173-160 WAC, Minimum Standards for Construction and Maintenance of Wells.
D. In areas where seawater intrusion is indicated no well drilling activity shall go deeper than the fresh ground water layer. Where these activities encounter potential seawater intrusion, the driller must construct the well to minimize the impact or decommission the well.

8.06.130 Construction in a Public System Service Area

No new well shall be constructed within the service area of an existing public water system without written notice to the system management. Well construction must comply with covenants and

restrictions, and/or provisions of the water system's plan.

Article III. Source Approval

8.06.135 Certificate of Adequacy

The *health officer* may issue certificates of adequacy for new or existing individual wells. All certificates issued must specify an expiration date and any conditions for approval. The source capacity must comply with the San Juan County Standards for Adequacy Determinations as defined in Appendix E. Prior to issuance of the certificate the applicant must develop and submit to the *health officer* the following information:

A. Well Site Inspection Report. The report must contain the information as detailed Section 8.06.140.

B. Water Well Report (well log).

C. Pump test report. In addition, the pump test report must be conducted in accordance with the San Juan County Pump Test Standards as outlined in Appendix D.

D. A bacteriological and inorganic analysis. The bacteriological and inorganic analysis must comply with the San Juan County Standards for Adequacy Determinations as defined in Appendix E. Test results for chloride must comply with the standards in Appendix E, Table A.

The health officer may revoke or deny a certificate for due cause. Examples include, but are not limited to:

A. Misrepresentation or concealment of a material fact in the information submitted; or

B. Changes in site or well conditions resulting in a failure to comply with the regulations; or

C. Failure to meet conditions of the certificate or regulations.

8.06.140 Building Permits

Applicants for building permits which contain plumbing fixtures dependent on water for their operation must demonstrate an *adequate,* potable water supply for the intended use of the structure. This evidence shall consist of one of the following:

A. Written notice from a community water system purveyor that service will be provided to the proposed structure. This water system must meet state or county requirements for compliance as defined in WAC 246-290, WAC 246-291, and these regulations.

B. A valid certificate of adequacy issued per Section 8.06.135.

C. Documentation of a private well source that includes: a Water Well Report and/or a pump test demonstrating the source meets the quantity requirements detailed in San Juan County Standards for Adequacy Determinations (Appendix E), and a bacteriological test and inorganic chemical analysis meeting the requirements of San Juan County Standards for Adequacy Determinations as defined in Appendix E.

D. Alternative water sources. Alternative water sources will be permitted for single-family residential use. A combination of sources and systems may be used to fulfill the quantity and quality requirements for a single-family residential building permit. There must be no cross-connection between potable and non-potable water supplies. Alternative sources will not be allowed for subdivision approval. Alternative water sources must be approved by the Health Officer and may include:

1. Shallow wells and springs with unsatisfactory bacteriological tests, but absent E. coli or fecal coliform. Applicant must submit a design for treatment by a qualified engineer, water system designer, or meeting design standards established by the Department of Health and Community Services (see Appendix A) and record on the property title a statement that the system is alternative and a description of operation and maintenance requirements.

2. Wells which have a well log and pump test with yields less than 200 gallons per day per residence. Applicant must submit plans for storage, supplemental water sources or water use reduction (see Appendix A) to the Department of Health and Community Services and record on the property title a statement that the system is alternative and a description of operation and maintenance requirements.

3. Hauled water storage design meeting county guidelines (Appendix A). If the water is intended for domestic use the applicant must submit a design by a qualified engineer, water system designer, or meeting design standards established by to the Department of Health and Community Services that includes treatment and record on the property title a statement that the system is alternative and a description of operation and maintenance requirements.

4. Rainwater catchment design meeting county guidelines (Appendix A). If the water is intended for domestic use, the applicant must submit a design by a qualified engineer, water system designer, or meeting design standards approved by Department of Health and Community Services that includes treatment and record on the property title a statement that the system is alternative and a description of operation and maintenance requirements.

5. Seawater treatment systems designed by a qualified engineer or water system designer, with applicable approvals from the San Juan County Permit Center under the Shoreline Master Program (Chapter 18.50 SJCC) and Department of Ecology for use of surface water. Applicant must submit plans to the Department of Health and Community Services and record on the property title a statement that the system is alternative and a description of operation and maintenance requirements.

6. Wells receiving arsenic, barium and/or fluoride treatment meeting the county guidelines

(Appendix A). The applicant must submit a design by a qualified engineer or water system designer. The design must meet standards approved by the Department of Health and Community Services that includes treatment, monitoring and recording on the property title a statement that the system is alternative and a description of operation and maintenance requirements.

8.06.150 Subdivision

Applicants for short subdivisions, long subdivisions, and subdivision alterations shall demonstrate an adequate, potable source of water for each new parcel in the proposed subdivision. For purposes of this section, new parcel shall include all parcels created except parcels containing existing residential structures served by existing water supplies. Minimum source capacity for individual and community supplies shall be 0.7 gpm/connection. The minimum water quality testing parameters for individual and/or community water system sources shall be a complete inorganic chemical analysis and a recent (<6 months) bacteriological sample. All water quality tests must comply with drinking water standards in WAC 246-290, WAC 246-291. See San Juan County Code 13.08 for fire flow requirements.

A. Community Water Supplies:

1. For a new community system with groundwater as the proposed source, the yield of the well(s) shall be demonstrated by a pump test as outlined in Section C below. In addition, the well(s) must have complete water quality tests (Inorganic Chemical Analysis & Bacteriological sample) submitted prior to preliminary approval.

2. If the applicant proposes to connect to an existing community water system, the water system must demonstrate to the Department of Health and Community Services the ability to provide water to the proposed parcels and compliance with current regulations. Prior to final approval the applicant must provide proof of authorization for service connection for the proposed lots.

3. The community water system or expansion of an existing system must be approved, constructed, and a water service installed to the property line of each lot prior to final plat approval.

B. Individual Wells

1. If water is to be provided by private wells, in order to provide proof of adequate supply for preliminary approval, a well (or wells) with sufficient capacity to serve the proposed lots as a community system must be drilled and tested, or individual wells must be drilled and tested and approved on each lot.

2. Individual wells must comply with the community water supply standards for siting, testing, and source capacity. Said well(s) must be pump tested as outlined in Section C below. Any conditions of approval for the wells will be incorporated as conditions of final plat approval.

C. Pump Test Protocol. All new groundwater supplies shall be pump tested in accordance with DOE's WRIS Bulletin 30, Aquifer Test Procedures. The developer shall complete and submit a pump test protocol to be reviewed by the County Hydrogeologist prior to testing. Minimum requirements for conducting the pump test include:

1. Pump tests shall be conducted between mid-July and mid-October or as defined by the County Hydrogeologist.

2. At least one monitoring well must be used, if available.

3. The developer shall be responsible for costs associated with the aquifer test.

4. At a minimum, the following steps should apply:

    a) A step-drawdown test to determine the pumping rate and recovery data,
    b) A 24-hour sustained-rate pump test using an automatic recording device, and
    c) If the water level does not stabilize or chloride levels increase (> 20mg/L on field samples), continued pumping for 72 hours.

D. Minimum Review Requirements. All new groundwater supplies shall be reviewed and include an evaluation of long-term well capacity and impact on the local aquifer. The County Hydrogeologist will determine whether all or part of a Hydrogeologic Site Evaluation (Section E below) will be required. The County Hydrogeologist will review the initial information and other relevant data and either make a decision regarding the proposal or provide detailed additional testing and analysis requirements needed to evaluate the impacts the proposed withdrawal will have on local groundwater resources. A Hydrogeologic Site Evaluation will be required for projects that have potential for groundwater contamination or impairment. Information required to be submitted for initial review include:

1. well site approval,

2. water quality tests for complete inorganic chemical analysis,

3. surveyed wellhead elevation,

4. location coordinates,

5. proposed use,

6. layout of plat,

7. pump test results.

E. Hydrogeologic Site Evaluation: If required, a hydrogeologic site evaluation shall be prepared and address resource availability in relationship to the scope of the project. The hydrogeologic site evaluation must address requirements as specified by the County Hydrogeologist which may include but is not limited to the following:

1. Hydrogeologic Setting:

   a) Description of the geologic setting of the site illustrated with geologic and soil maps.
   b) Description of the occurrence and movement of groundwater in the area, including a general discussion of the aquifers present in the area.
   c) General discussion of groundwater availability in the area, including a discussion of historic problems such as well failures or seawater intrusion.
   d) A scaled map showing location of wells and springs within 1000 feet of the site or as required by the County Hydrogeologist.

2. Site-Specific Resource Availability:

   a) An aquifer test conforming to the guidelines found in WRIS Bulletin No. 30. The test should be analyzed to determine the hydraulic properties of the aquifer (storativity and transmissivity), and to the degree possible, the spatial variability of these properties.
   b) A map(s) showing static water level elevations for the aquifer(s) proposed for use for the project.
   c) An evaluation of theoretical changes to water level elevations resulting from the proposed withdrawal, and the method that was used.
   d) An evaluation of the potential to induce or exasperate seawater intrusion in the aquifer.

F. Project actions that cannot mitigate potential impacts that degrade or impair the groundwater source will be denied.

8.06.155 Simple Land Divisions

Applicants completing simple land divisions must document water availability and adequacy on each new parcel, as outlined, below.

A. Community Water Supplies:

1. Obtain written notice from a community water system purveyor that service is available and will be provided to the lot(s). Said system must be in compliance with current regulations; or

2. Develop a new community or two-party water system to serve the lot(s). System installation is not necessary provided documentation is received regarding the intention and ability to develop a two-party system.

B. Individual Wells

Well(s) with sufficient capacity to serve the proposed lots must be drilled, tested and approved on each new parcel. Individual wells must comply with the community water supply standards for siting, testing, and source capacity (0.7 gpm per connection). Any conditions of approval for the well(s) will be incorporated as conditions of approval.

C. Special Conditions:

Record a disclosure statement that proof of potable water was not demonstrated, warning all purchasers of lots or parcels within the simple land division that a potable water supply has not been demonstrated and no building permit will be issued by San Juan County without first satisfying the requirements for proof of potable water of the Department of Health and Community Services.

8.06.__ Seawater Intrusion Protection

The following section applies to all existing and proposed groundwater wells and associated water systems in San Juan County.

A. Project Actions that have a potential to cause or contribute to seawater intrusion shall be evaluated by the Health Officer to determine their impacts on the groundwater resource.
B. The San Juan County Health Department will identify areas of the county at risk for seawater intrusion based on existing groundwater wells with chloride data and proximity to shoreline, as depicted in the existing San Juan County Seawater Intrusion Risk Area map and hereafter amended. Risk assessment parameters are listed in Table 1, below.

Table 1. Assessment Criteria

Location criteria	Groundwater Criteria
1. Within 1000 feet of the shoreline, or 2. Within 1000 feet of wells with chloride levels greater than 160 ppm, or 3. Within 1000 feet of wells with changes in chloride levels greater than 20 ppm	1. Wells completed in unconsolidated material: water level elevations less than 8 feet above sea level (based on NAVD 88), or 2. Wells completed in bedrock: pumping water level below sea level, or 3. Well tests 100 ppm or greater for chloride; or changes in chloride levels greater than 20 ppm, or 4. Well chemical analysis confirms chloride from sea water intrusion

C. Application

1. Project actions will be evaluated for seawater intrusion risk based on the risk assessment and the proposed Project Action. The extent of the hydrogeologic evaluation will be in proportion to the scope and risk of the proposal. Projects that may cause or contribute to seawater intrusion (projects meeting two or more of the Location and Groundwater criteria) may be subject to a Hydrogeologic Site Evaluation, as defined in section 8.06.150 E. Projects will be reviewed on a case-by-case basis by the County Hydrogeologist to determine the extent of the hydrogeologic evaluation required. Information required to be submitted for initial review is located in Table 2.

Table 2: Initial Submittal Requirements

Water Availability Applications – Individual Wells		Land Division Applications	New and/or Expanding Group A & B Water System Sources
> 5 Acres	< 5 Acres		
Exempt – No Requirements for Seawater Intrusion Review	1. Well Log 2. Chloride and Conductivity analysis 3. Surveyed wellhead elevation	1. Well Log 2. Complete inorganic chemical analysis 3. Surveyed wellhead elevation 4. Location coordinates 5. Proposed use 6. Pump test results	1. Well Log 2. Complete inorganic chemical analysis 3. Surveyed wellhead elevation 4. Location coordinates 5. Proposed use 6. Pump test results

2. Non-project actions. Public water systems in seawater intrusion risk areas shall be required to sample for chloride and conductivity in April and October of each year. Single family wells in seawater intrusion risk areas that have been conditionally approved shall be required to sample for chloride and conductivity in April and October. Water quality

analysis shall be performed by a state certified laboratory and submitted to the Health Officer annually.

D. The Health Officer may impose conditions of approval designed to prevent degradation of groundwater quality or quantity. Such conditions may include monitoring, pumping regimes, storage, conservation, and other measures.

E. Project Actions that cannot mitigate the impact of seawater intrusion on the fresh groundwater resource may be modified or denied by the Health Officer. In addition, Project Action utilizing wells that exceed the EPA chloride maximum contaminant level of 250 mg/L will be denied.

F. In areas where seawater intrusion is increasing, or hydrogeologic studies indicate that the groundwater resource is at risk of degradation from intrusion, the Health Officer will recommend that the San Juan County Board of Health declare a Critical Water Resource Area.

Article IV. Water System Approval

8.06.170 Design Approval and Planning Requirements

A. *Group A public water systems* fall under the jurisdiction of the Washington State Department of Health, pursuant to the Joint Plan of Operation with San Juan County Board of Health. Group A systems must comply with provisions of these rules and regulations pertaining to well siting, design standards, and monitoring requirements for seawater intrusion and primary contaminants. All other requirements for approval of the public water system shall be determined by the Washington State Department of Health under WAC 246-290.

B. *Group B public water systems* fall under the jurisdiction of the San Juan County Health Officer, pursuant to the Joint Plan of Operation with the State Department of Health. Group B systems must comply with provisions of these rules and regulations pertaining to well siting, design standards, and monitoring requirements for salt-water intrusion and primary contaminants. Other requirements for approval shall be determined by the Department of Health and Community Services under these regulations.

C. For community water systems with only two residential connections on separate parcels, or commercial establishments providing water to less than 25 customers and/or employees per day, minimum requirements for approval shall apply, unless otherwise determined by the Department of Health and Community Services. Minimum requirements include:

1. A well log or pump test showing adequate capacity for the proposed use.

2. A simple design involving a well pump and pressure tank, with no treatment.

3. Initial Complete Inorganic Chemical and bacterial testing and then yearly testing for bacteria.

4. Well site approval and a recorded sanitary setback.

5. A completed Water Facilities Inventory Form.

6. For two party systems, an ownership and management agreement.

D. All proposed new sources of groundwater for public water systems within 1/4 mile of a water system service area must apply to that system for service prior to drilling a well.

E. All new and expanding public water systems must be capable of producing 0.7 gallons per minute per connection.

F. Community water systems in areas designated as *Critical Water Resource Areas* must develop water system plans as per WAC 246-290-100, WAC 246-291-140, and this regulation. These plans shall include:

1. Resource protection, including water conservation plans, Water Shortage Contingency Plans, watershed control, and policies for cooperation with other public and private systems in the area;

2. Policies for expansion. Response to persons intending to drill a new public supply well within 1/4 mile of the water system service area, including:

   a. Conditions under which service will be offered,

   b. Conditions under which a geohydrologic report will be requested, and

   c. Policies for requesting mitigating conditions if hydrologic concerns are substantiated.

3. Policies for denying approval of a private well within the system's service area.

Additional Procedures for New Community Water Systems in the Lopez Village Critical Water Resource Area:

1. Prior to approval of any new community water supplies a pump test designed to determine aquifer characteristics is required.

   a. The protocol for this test must be designed by a professional engineer with expertise in groundwater hydrology or by a professional hydrogeologist with qualifications accepted by the Health and Community Service Department.

   b. At a minimum the test must meet San Juan County pump test standards for wells with seawater intrusion and the protocol for the test must have prior written approval by the Department of Health and Community Services for each application.

2. All new community water systems will be subject to conditional approval to limit the amount of water used per connection.

3. All new community water systems are required to be managed under a contract with an approved Satellite Management Agency with the following management requirements:

    a. Monthly meter readings

    b. Monthly static level readings from the well(s)

    c. Monthly chloride and conductivity testing

    d. Coordination of withdrawals (pumping times) with adjacent water systems to minimize the impact of drawdown

4. All new community systems shall be designed by a professional engineer or certified designer with experience in water system design and approved by the Health and Community Services Department.

5. All new community systems shall be constructed to meet standards from the State Department of Health's Water System Design Manual (6/99) until new minimum standards are established through the Lopez Village UGA Coordinated Water System Plan.

6. All new community systems are subject to filing a written agreement to consolidate with a public utility district when one is established, in a form approved by the Health and Community Services Department.

G. Group A public water systems must be designed by a licensed engineer. Group B public water systems must be designed by a licensed engineer or certified designer and must conform with the San Juan County Minimum Design Standards for Group B Water Systems (Appendix B).

H. Water systems designed to use more than 5000 gallons per day or irrigate more than 1/2 acre must obtain water rights from Washington State Department of Ecology prior to approval.

8.06.__ Waivers

The Health Officer may grant waivers of the requirements of this chapter consistent with the criteria set out in WAC 246-291-060.

8.06.__ Appeals

Decisions by the Health Officer made under this chapter shall be made to the Board of Health following procedures set out in Ordinance No. ____-2007. Notwithstanding the above appeals of the Health Officer under SJCC 8.06.150 shall be heard by the Hearing Examiner and shall be consolidated with the hearing on the merits of the subdivision application.

8.06.180 List of Appendices

The following appendices contain standards used by the department in implementing and enforcing this code. Copies of all appendices will be kept on file at the department. Appendices A through E shall be modified by resolution of the board of health. Appendix F may be revised by the department.

A. Minimum Design Standards for Alternative Individual Water Systems

B. Minimum Design Standards for Group B Public Water Systems.

C. Guidelines for Truck Transportation of Potable Water

D. Pump Test Requirements

E. Standards for Adequacy Determinations

F. Form Letter:

1. Notice to adjacent water systems;
2. Response from water system to request for service

8.06.190 Severability

If any section, sentence, clause, or phrase of this chapter should be held invalid, the invalidity thereof shall not affect the validity of any other section, sentence, clause, or phrase of this chapter.

8.06.200 Effective Date

This chapter is necessary for the preservation of the public health, safety, and welfare of the inhabitants of San Juan County and shall take effect upon adoption.