

**COMPREHENSIVE PLAN
SECTION B, ELEMENT 4
WATER RESOURCES**

April 20, 2010

EXHIBIT 1

ELEMENT 4

WATER RESOURCES

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4.1 INTRODUCTION AND PURPOSE

Over the next 20 years, the goals and policies in this section will guide the people of San Juan County in assuring fresh, clean water for the current and future needs of all species. They necessarily recognize four conditions. The first is that rainfall generally measures between eighteen and twenty-two inches per year, relatively little in the Pacific Northwest. The second is that precipitation is concentrated between November and March. The third is a geologic profile dominated by bedrock domes and cemented glacial till, and the fourth is the unique, multiplicity of island based, disconnected watersheds.

These goals and policies set out the ways in which San Juan County will manage precious fresh water resources clearly and fairly, for the benefit of our citizens, fish, wildlife and plant communities.

4.1.A. Existing Information

For over twenty years San Juan County has been working on studies and developing planning protocols to guide the management of its fresh water resources. In 2004, the San Juan County Water Resource Management Plan was adopted by both the County and Department of Ecology and constitutes the bedrock of this section. In addition to the county-wide plan, three sub-basin plans have been completed and adopted; and, stringent requirements for evaluating potential impairment or contamination of groundwater supplies and seawater intrusion protection measures have been adopted. The goals and policies of this element are based on these documents:

- San Juan County Water Resource Management Plan, 2004
- Lopez Village Water Supply Report and Recommendations and Abbreviated Coordinated Water System Plan, 2003
- East Orcas Water Supply Report and Recommendations, 2006
- Eastsound Water Supply Report and Abbreviated Coordinated Water System Plan, 2008
- Best Available Science for Critical Aquifer Recharge Areas, 2008

4.2 GOALS AND POLICIES

4.2.A General Goals and Policies

General Goals:

1. In consideration of Best Available Science, protect & manage the quality and quantity of ground and surface water so as to preserve hydrologic systems, designated beneficial uses, and fish and wildlife habitat that rely on fresh water.
2. Coordinate water planning and protection efforts among San Juan County departments with authority over development, land use, drinking water, wastewater treatment, stormwater management, road construction and maintenance, solid waste management, and natural resource protection.

3. Establish coordinated, cost effective programs for monitoring water quality, water quantity and associated habitats and species so that changes can be identified and protection programs modified as necessary.
4. Establish publicly supported methods of funding the actions in this Element.

General Policies:

1. Promote water conservation as a means to ensure the availability of fresh water resources. Encourage the reuse of gray-water, rainwater catchment, and land application of treated wastewater as conservation practices.
2. Encourage the retention of healthy native soils, vegetation and forest cover. Encourage preservation and increased infiltration of fresh water.
3. Support environmentally responsible, sustainable forestry and agricultural practices that protect water quality and enhance infiltration of runoff.
4. Support land conservation programs designed to acquire property with particular value for protecting water quality, quantity and recharge.
5. Ensure adequate treatment of domestic wastewater from new and existing development.
6. Ensure that future development will not harm surface and groundwater resources and the habitat dependent thereon.
7. Assess and manage cumulative impacts so that predevelopment water quality, quantity, infiltration and runoff rates can be protected.
8. Develop and fund programs to a) reduce the use of harmful chemicals including pesticides and petroleum based fertilizers; b) encourage safer use and disposal of chemicals; and c) enhance hazardous waste disposal opportunities.
9. Establish and support technical assistance programs to help property owners protect ground and surface water and associated habitat.
10. Maintain a local water resource management program through the San Juan County Water Resource Management Committee.
 - a. Establish a program that addresses all water use, including use of exempt wells and alternative sources, such as desalination and rainwater catchment, and that includes decision-making based on long-term development and analysis of resource information.
 - b. Support long-term monitoring and a county hydrogeologist to provide and analyze information on water resources.

11. Work cooperatively with state & federal agencies and coordinate protection and management of water resources in the county.
12. Practice adaptive management. Consider new information as it becomes available, and revise water resource protection programs as necessary.
13. Create county aquifer protection district(s) to fund on-going monitoring and analysis.
14. Provide support and incentives to community water systems to develop cooperative agreements for sharing expertise and resource management responsibilities.
15. Develop a public education program that provides up-to-date information on water resource issues.
16. Departments within San Juan County government should lead by example and model good water protection practices.
17. Make adopted plans and data available to the public and all County Departments.
18. In decision making, utilize locally adopted policies and water resource analysis meeting the Best Available Science Standard.
19. Encourage voluntary enhancement such as rain water catchment, stormwater retention & other technologies that will benefit water quality and quantity related to this element.
20. Manage water policy in accordance with the above listed existing and future amended plans.
21. Exempt well users should be encouraged to meter and record the amount of water allocated for that use.

4.2.B Public Water Supply Goals and Policies

San Juan County's fresh water resources are provided by local rainfall only. The islands' geography is characterized by the rainshadow created by the Olympic mountains to the south and Vancouver Island to the west, by predominantly steep terrain and bedrock geology, by small watershed catchment areas, and by extensive shoreline. These conditions result in low rainfall, limited groundwater storage, and extensive runoff and discharge to the sea.

Public Water Supply Goals:

1. Manage water resources in San Juan County carefully with ongoing assessment of the availability of fresh water.
2. Conduct long term monitoring of streams and wells.

3. Cooperate with State agencies and local water users to effectively manage water resources.
4. Conserve water to meet the demands of population growth, sustainable agriculture and fish and wildlife habitat.

Water Supply Development Policies:

1. Develop new water supplies meeting the requirements of San Juan County codes relating to:
 - well construction and siting,
 - coordination within water system service areas,
 - aquifer protection measures,
 - data collection,
 - long-term capacity analysis.
2. Work cooperatively with State agencies to base future water allocations on capacity by watershed, recognizing the following:
 - Agricultural resource lands,
 - Streams, wetlands, and nearshore habitat,
 - Urban growth areas.
 - Domestic supply

Conservation policies

3. Conservation is the most cost-effective way to obtain water to meet the demands of growth, sustainable agriculture, and fish & wildlife habitat.
4. Educate the public, including seasonal visitors & tourists, about the benefits of water conservation.
5. Managing San Juan County's fresh water resources requires a high standard of efficiency for all water use: domestic, commercial, and irrigation.
6. Water supply approval will continue to be based on the conservative policy of 1000-gallons-per-day/connection for source approval, and the historic rate for average daily domestic consumption of 100-300 gallons/connection.
7. Alternative sources of water, such as rainwater catchment and desalinization, should be allowed for existing residential and agricultural parcels provided they meet all County and State department of health requirements and environmental impacts can be addressed.

Water allocation policies and exempt wells

8. Meter records are the basis for all water right assessments, including exempt wells. Perfection of water rights shall be based on reasonable beneficial use and preventing waste.

9. Evaluation of new water right applications shall include studies and plans approved by San Juan County and the Department of Ecology.

4.2.C Stormwater Goals and Policies

Stormwater poses a widespread risk to the health of our island watersheds. Forests produce the least runoff, the greatest amount of infiltration, and the best water quality.

Soil compaction, altering drainage patterns, and replacing forest with pasture, lawn, driveways, and structures results in less infiltration, more surface runoff, and if not controlled, the discharge of warm, polluted water. As the amount of runoff increases, less water is available for beneficial uses including drinking water.

Increasing surface runoff also increases the quantity of pollutants that are swept into the water during storms. The removal of riparian vegetation and over grazing by livestock destroys nature's filtration system, which can result in runoff, sediment, and nutrients flowing unimpeded into the water. Developing an area can also expose more pollutants to stormwater.

Goals:

1. Prevent flooding and property damage.
2. Promote groundwater recharge.
3. Protect the quality of ground and surface water.

Policies:

1. Promote water conservation and the concept of stormwater as a usable resource.
2. When feasible, treat, manage and infiltrate stormwater on site, as close to impervious areas and sources of pollution as possible. Allow off site discharge only as a last resort with mitigation.
3. When stormwater management ponds are necessary, ensure they are sited and designed to comply with the WA Dept. of Fish and Wildlife requirements, to maintain predevelopment runoff patterns, to protect water quality, and to prevent increases in water temperature.
4. Ensure that clearing, grading and stormwater management regulations and enforcement programs:
 - a. Prevent flooding and property damage, protect fish and wildlife habitat, and protect the quality and quantity of surface and ground water in a cost effective manner.
 - b. Establish criteria that identify sites and projects with a low risk to property, water resources and associated habitat.

- c. Ensure that property owners can prepare and implement their own stormwater management plans on low risk sites and low risk projects.
 - d. Incentivize the use of Low Impact Development techniques.
 - e. Guidance documents that may be used in the management of stormwater include but are not limited to the Low Impact Development Technical Guidance Manual for Puget Sound, 2005 and the Rain Garden Handbook for Western Washington Homeowners, and the Stormwater Management Manual for Western Washington, 2005.
 - f. Develop or adopt a stormwater management manual suitable for rural counties.
5. Develop cost effective technical assistance programs for property owners.
 6. Complete watershed based management plans that assess and provide mitigation options for the cumulative impacts of land use and development.
 7. When necessary, identify and construct cost effective, publicly owned infrastructure designed to prevent harm to property, water resources and associated habitat.
 8. Provide incentives and cost share programs for landowners willing to install community stormwater management systems that implement Best Management Practices (BMPs).

4.2.D. Fish, Wildlife and Native Habitat - Goals and Policies

The complex geology of the San Juans supports a diverse land cover that, in conjunction with our streams, wetlands and nearshore areas, supports a wide array of plants and animals. Our habitats are small, disconnected, and often rocky, and for many of them protection is either recommended or is required by State or Federal law.

Goals:

1. In consideration of the Best Available Science and the requirements of the Growth Management Act, ensure there is no net loss of the functions and values of wetlands and fish and wildlife habitat, giving special consideration to anadromous (migratory) fish.
2. Implement currently adopted salmon recovery and Marine Stewardship Area plans.

Policies:

1. Ensure that stream, shoreline and wetland buffers and other mitigation measures are adequate to remove contaminants and ensure good water quality and habitat.

2. Maintain or enhance the infiltration of runoff to ensure adequate recharge to streams and wetlands, and to preserve subsurface and stream flows to nearshore waters.
3. While man made ponds can benefit people and the natural environment, if improperly sited and designed they can disrupt natural drainage patterns, increase water temperatures, increase evaporation of water, and negatively impact streams, wetlands and the fish and wildlife that depend on them. Ensure that regulations governing man made ponds prevent negative impacts to fish and wildlife, consistent with State requirements (Note: The construction of ponds within drainageways is prohibited by WAC 220-110-180).
4. Protect and enhance wetlands and eliminate the conversion of wetlands to other land uses.
5. Protect and restore instream flows for anadromous fish and facilitate native fish passage.
6. Promote agricultural land use practices that reduce or eliminate impacts on water resources.

4.2.E. Agricultural Water Use Goals and Policies

Forage production and livestock are the dominant agricultural practices in San Juan County. Small farm production of both vegetable and fruit crops is also increasing. Water conservation is already an important part of these agricultural enterprises. In fact, in 1992, county residents chose to recognize the value of our agricultural soils by designating over 13,000 acres as Agricultural Resource land. Without adequate water, this designation is meaningless.

With proper management, our intensively managed farmland and pasturelands provide ecosystem services such as water filtration and wildlife habitat. In light of these benefits, as well as social assets including cultural history and open view corridors, agricultural water usage must be factored into county water planning.

As the islands' populations have increased, the demands on groundwater have increased and will continue to do so with additional growth. The future of farming and food security in San Juan County will depend upon the continued access to, and wise use of, water.

Goals:

1. Protect the availability of water for current and future agricultural use in San Juan County.
2. Provide incentives for water conservation in agricultural settings to ensure that water resources are utilized in a manner that complements and protects remaining water resources while extending the production of food and fiber.

Policies:

1. To preserve and protect the future use of water for agricultural production, owners of Agricultural Resource Lands, and other land used for agriculture, should obtain and perfect water rights.
 - a. Exempt well users should be encouraged to meter and record the amount of water allocated for that use..
 - b. To protect groundwater resources, well water levels should be measured annually.
2. Water needed for agricultural use must be protected when evaluating long-term capacity for new water supply development.
3. Agricultural water use should be managed to assure a sustainable quantity and quality of water for all uses.
4. Discourage the transfer of water from Agricultural Resource Lands.

4.2.F. Data Collection Goal & Policies

Goal:

1. To compile existing data, and when necessary to collect new data to support responsible and effective decision making on water resource issues.

Policies:

1. Recognize that a local program of data collection and analysis is the most important tool available to aid policy development and effective resource management as the County's fresh water resources face increased demands associated with growth, agricultural use, and environmental protection.
2. Ensure that data which is collected is comparable to that collected by other organizations in the region, including Canadian organizations, and that the data is shared with those organizations.
3. To make the best use of available funding, a) when possible, use existing data to understand and manage water resources, and b) conduct local studies and monitoring programs in partnership with universities, water purveyors, non-profit organizations, volunteers and local, state and federal agencies and departments.
4. Support an on-going program of ground and surface water monitoring to identify water quantity, quality and changes over time.
5. Determine the availability of water supplies in growth areas.
6. Monitor indicator habitats and organisms associated with fresh water to identify problem areas, establish trends over time, and evaluate the effectiveness of management strategies.

7. Closely monitor streams and habitats that support salmon, steelhead and other migratory fish to ensure that conditions are improving, consistent with the San Juan County Salmon Recovery Plan.
8. Map and monitor wetlands.
9. Funding for data collection should be established through County development and use fees, the Stormwater Utility and state and federal grants.