

## Exempt Wells Topic Paper

### Introduction

“Exempt well” is shorthand for groundwater withdrawals that are exempt from the water right permitting process through the Washington State Department of Ecology (DOE).

Specific **exemptions** include:

- withdrawal of groundwater for stock watering,
- irrigation of a lawn or non-commercial garden not exceeding one-half acre in size,
- single or group domestic purposes in amounts less than 5000 gallons per day, or
- industrial purposes in an amount less than 5000 gallons per day.

Exempt wells have become an accepted method of ensuring water supplies, and serve unique needs in rural settings. However, exempt withdrawals have the potential to negatively impact groundwater resources and/or public health. Exempt wells do not go through the rigorous tests of availability prior to appropriation, and so have the potential to significantly affect resource quality and quantity. While exempt wells do not pose an immediate threat, the potential negative impacts of further development based primarily upon such sources should be reduced as much as possible. Positive aspects of exempt wells should be kept in mind, and solutions employed to address specific situations.

This topic paper will discuss the pros and cons of exempt wells, and will outline current local water resource management efforts related to exempt wells. Potential solutions for addressing issues will be addressed in two upcoming WRAC topic papers: “Seawater Intrusion” and “Water System Coordination.”

### Pros and Cons of Exempt Wells

Exempt wells serve unique needs in rural settings. The following are **major positive aspects** of exempt wells.

1. Exempt wells support development of individual rural properties where public water is not available.
2. Exempt wells are the principal alternate method of providing water to multiple properties when water rights cannot be obtained due to DOE water right processing backlogs.
3. Multiple exempt wells may be an appropriate method to address seawater intrusion in areas where single, large volume withdrawals may induce up-coning of saltwater more severely than multiple small withdrawals. Although the net overdraft will be the same, diffuse exempt wells may be better for the resource overall.

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4. Exempt wells can provide an economical method for supplying a small development with water, as regulatory burdens and infrastructure needs are less for small systems.

Use of the groundwater exemption has become an accepted alternate method of supplying water to projects or developments regardless of location or parcel size (those having acceptable lot sizes in locations approved for building permits). The wells associated with these groundwater exemptions have the ability to negatively affect resource quality and quantity.

The following are **negative aspects** of exempt wells **for public health**.

1. Each new exempt well increases the potential opportunity for groundwater contamination.
2. Routine water quality sampling is not required from individual exempt sources, and sampling requirements are significantly reduced for small exempt systems. This may result in consumption of contaminated groundwater, which could result in detrimental health effects.
3. The health of water users is better served by larger, well-managed water systems than by systems too small to afford competent water system management.

The following are **negative aspects** of exempt wells **for resource management**.

1. Resource management and planning efforts must account for exempt withdrawals without the availability of use data.
2. Exempt withdrawals have the ability to cumulatively affect resource availability in areas where resources are limited, therefore contributing to seawater intrusion or dewatering.
3. Exempt wells are not subject to the rigorous tests of water availability to the same extent as permitted withdrawals.
4. Following construction, an exempt well drilled for a non-drinking water purpose is not subject to oversight from any public agency (i.e., oversight of use, flow, etc.).
5. Each new public water system using exempt wells must be permitted and monitored by ICHD and DOH, regardless of size (note: exempt public water systems use less than 5000 gallons per day). This increases workload and burden where resources may not be available; larger, non-exempt systems present a more efficient economy of scale for permitting and monitoring.
6. Exempt wells have potential to impair existing senior rights, as there is no review for impairment at the time of development.

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7. Exempt withdrawals may increase the potential for hydraulic continuity problems with surface water (i.e., reduction of stream flows).
8. The development of exempt public water systems, in many cases, is contrary to the goals of Island County Coordinated Water System Plan (adopted 1990).
9. Single exempt sources are allowed within the service area boundaries of public water systems reducing the systems ability to plan for service.
10. Financial viability of small exempt public water systems is problematic.
11. Water use monitoring and implementation of conservation programs are better served by larger, well-managed water systems than by systems too small to afford competent water system management.

## Legal Framework

“Exempt well” is shorthand for groundwater withdrawals that are exempt from the water right permitting process through the Washington State Department of Ecology (DOE), as defined in RCW 90.44.050. Legal interpretation of the exemption is varied throughout the state and has led to many court challenges.

Specific **exemptions** defined in the statute include:

- withdrawal of groundwater for stock watering,
- irrigation of a lawn or non-commercial garden not exceeding one-half acre in size,
- single or group domestic purposes in amounts less than 5000 gallons per day, or
- industrial purposes in an amount less than 5000 gallons per day.

While these exempt withdrawals do not have to obtain a water right permit, they are not exempt from other substantive provisions in the water code. Specifically, such exemptions must comply with the beneficial use requirement, are supplemental to surface water rights, and are subject to the priority system of first in time is first in right. (Wash. Rev. Code 90.44.040, 90.44.020, and 90.44.060.)

The State Attorney General and the State Courts have held that where a single housing development requires greater than 5000 gallons per day, regardless of the number of wells drilled, the project is considered a single withdrawal of ground water and is not exempt from the permit requirements of the water code. (State Dept. of Ecology v. Campbell & Gwinn, 2002.)

Washington law does not allow the owner of an exempt well to transfer or change the withdrawal of water to a different location or to a different purpose (e.g., such as changing the use of water from domestic home use to industrial).

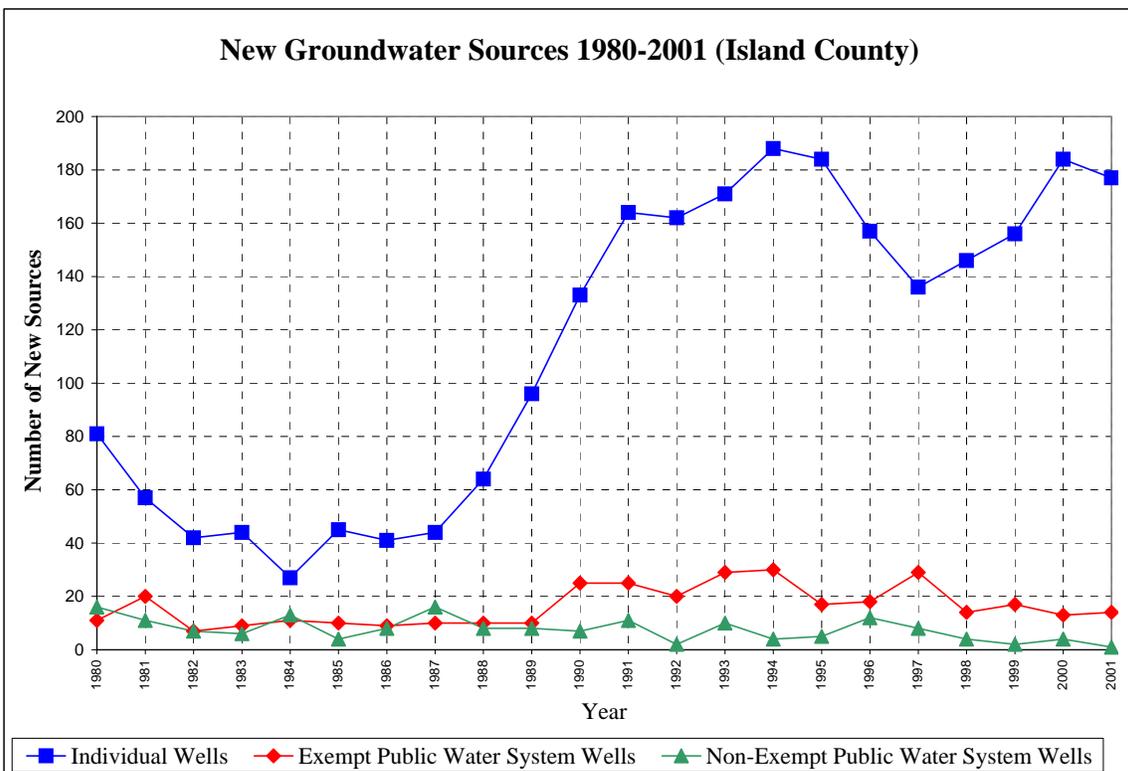
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## Issue Description

Exempt well development in Island County has exceeded the development of other water sources since the late 1980s (see Figure 1). Population growth is a factor but it appears to be only partially responsible for this shift away from other sources. Island County increased from 44,000 to 66,000 between 1980 and 1990, and to over 70,000 in 2000. An increase in exempt well development may correlate with an increase in population from 1980 to 1990, but other factors are in effect in the period from 1990 to 2000 (and probably were also in effect between 1980 and 1990).

Figure 1: Exempt Well Development (Island County 1980-2001)



The proliferation of exempt wells in Island County may be due to a combination of the Growth Management Act (GMA), the backlog of water rights applications, and a lack of enforcement of existing drinking water regulations. ICHD has supported property owners through utilizing exempt wells as a water supply option. The GMA may be largest driving force of the proliferation of exempt wells, as it requires larger rural lot sizes (5 acres outside of Urban Growth Areas) than is economical for water system development. This is ironic, as a goal of the GMA was to direct growth to urban centers and/or existing infrastructure. The Washington State Department of Ecology (DOE) has experienced a variety of external forces that have decreased its ability to process water right applications since the early 1990s.

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The State Department of Health (DOH) has not enforced its drinking water regulations, in particular its water system design standards. When a water system is found not in compliance of design standards, it has the option of declaring a moratorium on future water hookups instead of upgrading to meet new water needs (related to pressure, pipe size, and sometimes water rights). So when new developments are not able to join with existing systems, they drill new wells (often exempt) to meet their water supply needs.

## Public Health Issues

Increased numbers of exempt wells increases a threat to public health. As the number of wells developed within any particular aquifer increases, the potential for groundwater contamination also increases. Figure 1 shows the number of new wells drilled: each well possesses the capacity to act as a conduit for surficial contaminants to reach the aquifer by way of the well casing or drill hole. Risk is also related to the protection area requirements: exempt wells do not have the same level of protection as do public water systems. Individual wells have a pollution control radius of 100 feet inside of which the property owner may conduct a variety of activities. Public water supply wells are required to plan for protection of much larger areas around the well (wellhead protection areas) that receive ample scrutiny to alleviate the potential for groundwater contamination. Any contamination may remain undetected, as these wells receive little or no monitoring.

Routine water quality sampling and reporting are not required from individual exempt sources. Sampling and reporting requirements are significantly reduced for exempt systems. This lack of oversight may result in consumption of contaminated groundwater, with detrimental health effects.

## Resource Management Issues

Increased numbers of exempt wells interferes with the ability to do comprehensive and accurate resource management. Water resource assessment requires an understanding of how given resources are utilized by location, withdrawal rates, and use. Exempt wells are not subject to resource availability evaluations. As a result, little information is known concerning:

- the availability of the resource,
- potential impairment of senior rights,
- impairment of hydraulic continuity (i.e. reduction of stream flows), or
- actual water use.

Exempt wells are not reviewed prior to development. Well drilling information is submitted to the ICHD only after a well has been drilled, and so there is no oversight of impacts to aquifer resources. Exempt public water systems are not subject to the rigorous tests of water availability to the same extent as permitted, non-exempt public systems. Following construction, an exempt well drilled for a non-drinking water purpose is not subject to oversight from any public agency (i.e., oversight of use, flow, etc.).

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The development of exempt wells in Island County could cumulatively affect resource availability in areas where resources are limited, therefore contributing to seawater intrusion and the dewatering of perched aquifers. Aquifer resources are currently evaluated on a source-by-source basis, but without considering the cumulative impacts of exempt wells. Figure 2 shows the number of households served by new exempt wells, by system type. This graph shows the annual impacts of new exempt wells on the groundwater resource. It is important to know how much water is being drawn from any given aquifer, because of the need to understand future growth limitations in the area.

Each new exempt public water system must be permitted and monitored by ICHD and DOH, therefore increasing the workload and burden where resources may not be available. (Note: Most local health jurisdictions have the responsibility to monitor Group B systems, yet are not provided a funding source to do so.)

The proliferation of exempt wells is contrary to the goals of the Island County Coordinated Water System Plan (CWSP). “The CWSP is a policy framework in which utilities, agencies and the public can begin to focus and prioritize efforts to ensure the reliability of the County’s entire existing water resource and prepare for future needs in an orderly and efficient manner” (Island County CWSP, 1990). The CWSP outlines more coordination between systems to help each other and reduce the need for exempt wells.

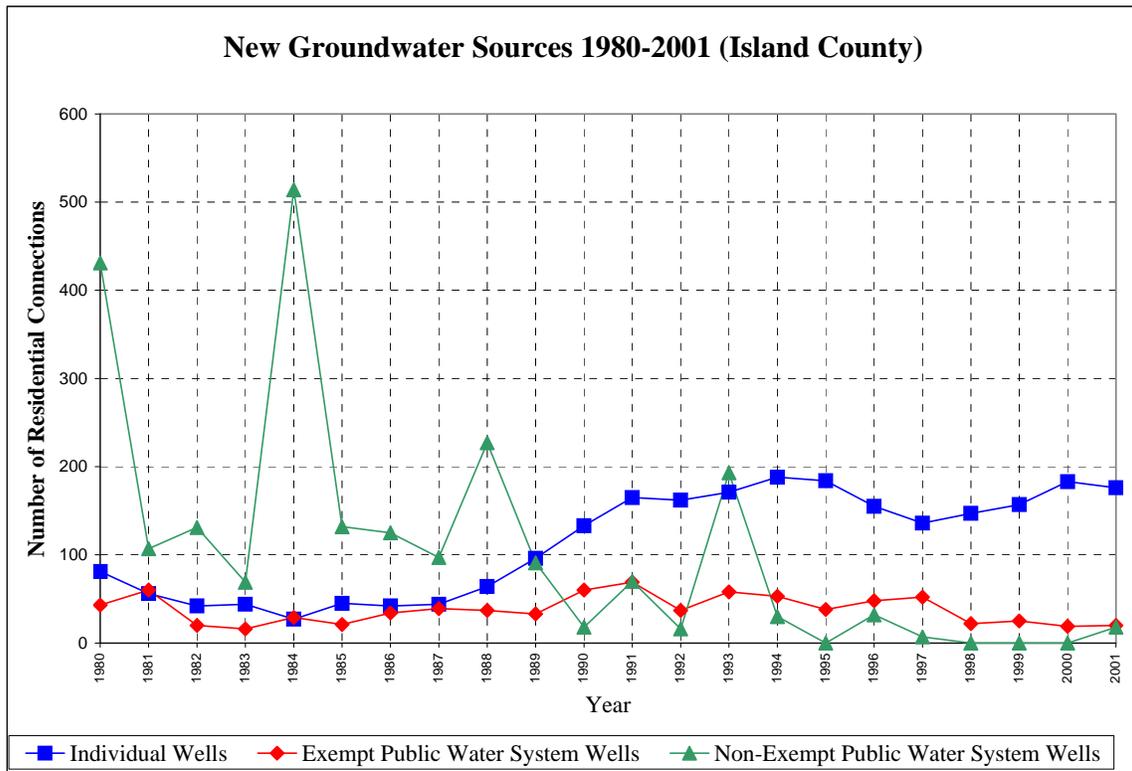


Figure 2: Number of Households served by New Exempt Wells, by System Type (Island County 1980-2001)

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The current practice of allowing drilling of exempt wells within service areas undermines the ability of water systems to manage their water supply and plan for future service. This is especially a problem if individuals within a service area drill exempt wells for outdoor landscaping irrigation (i.e., to sidestep high costs of water bills during summer months). DOE does not differentiate between domestic wells and irrigation wells; however Island County does.

The CWSP also addresses the need for financial viability of exempt public water systems. The use of exempt wells results in the development of small public water systems that are owned, operated, and managed by separate entities, and so their financial viability can be problematic. In general, the provision of service from large (non-exempt) public water systems results in a higher level of service, better economy of scale, and more efficient use of resources. A subsequent topic paper will be developed to address the need to update and implement the CWSP.

## **Current Local Water Resource Management Efforts**

A variety of program activities within Island County government currently address the issue of exempt well development. These activities include the implementation of individual water system requirements pursuant to GMA requirements, and continuing implementation of the Coordinated Water System Plan (CWSP) for public water systems and ongoing resource management efforts within ICHD.

### Existing Process for Individual Well Development

Development of an individual or single domestic well as a potable water source in Island County is governed by the requirements of Island County Code, Chapter 8.09. Pursuant to the requirements adopted under the Growth Management Act (GMA), all individual wells must be appropriately sited, pump and quality tested, and affixed with an individual meter prior to building permit issuance.

Individual wells are required to be surrounded by a 100 foot sanitary radius (two hundred foot diameter). Much of the shoreline property in the county was platted to maximize the number of parcels along shoreline areas, resulting in many parcels that do not meet the two hundred foot minimum width required to drill a well. Generally, the development of individual wells occurs in the rural areas of the county where parcel size does not limit the establishment of a new well.

The requirement for individual well meters was first adopted in 1992 and was meant as a means by which property owners could monitor their own water use and encourage conservation. Although meters have been required on individual sources for over 10 years, there has been no attempt to quantify individual water well use based upon meter readings.

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The impact of individual well use on water resources within Island County is dependent upon a variety of factors including quantity of use, resource availability, housing density, well construction, and proximity to the shoreline. As noted above, development of a well is not hindered by current regulatory process if constructed by a licensed professional, placed upon a parcel of land sufficient to support a one hundred foot sanitary radius, and is not located in a medium or high risk seawater intrusion area. This topic will be addressed in the upcoming “Seawater Intrusion” topic paper.

## Existing Process for Public Water System Development

In January of 1990 Island County adopted the Coordinated Water System Plan (CWSP). This plan was intended to provide for the development of policies, procedures, and recommendations to guide water utilities so that water supply planning could be accomplished through coordinated rather than piecemeal efforts. One of the guiding principles of the plan was to minimize the proliferation of small systems while maximizing the coordination of larger systems consistent with land-use planning efforts.

The CWSP establishes a process by which utilities claim a specific area for the provision of direct water service called a “service area.” Utilities generally establish boundaries consistent with areas of denser platting similar to urban rather than rural settings. In Island County patterns of development in the 1960s and 1970s resulted in many “islands” of platted lots surrounded by large rural parcels of lands. Each of these subdivisions is served by a separate water system.

The establishment of a service area accomplishes a number of tasks for a water utility:

- The service area purveyor has “first right of refusal” for any requests for water service within their service area. Prior to the subdivision of land or the development of any public water system within the boundaries of the service area, the applicant must first request service from the existing purveyor. Individual well proposals do not necessarily require a request for service prior to development and in many cases, continue to be developed within existing service areas.
- The service area provides the utility with some assurance that a customer base is assigned to the utility prior to the development of capital facilities and water system infrastructure.
- The service area establishes a boundary for other water utilities for the purposes of future water system expansion planning.

Proposals for new public water systems outside existing system service areas utilize a different process. When a new public water system is proposed and it is determined that their project does not lie within the boundaries of an existing service area, ICHD staff (using the application for well-site inspection) identify purveyors from adjacent utilities that may be able to provide service. The applicant is provided with a Certificate of Water Service Availability to present to neighboring purveyors to solicit their interest in providing utility service to the applicant’s project. Only if all adjacent purveyors deny

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utility service or if the applicant determines that the conditions for the provision of service are unacceptable can they develop a new public water system.

The success of CWSP policies and procedures to limit the development of small public water systems in Island County is questionable. Figure 1 shows that not only has the county experienced a significant increase in individual well development since 1990, there has been an increase in the development of Group B system sources over Group A system sources for the same period of time. While Group A system sources are generally subject to the water right permitting process with DOE, most Group B systems are developed under the permit exemption. For the CWSP to be successful, better coordination is needed to encourage existing purveyors to expand or join utilities. CWSP issues will be discussed in the “Water System Coordination” topic paper.

## Seawater Intrusion Policy and Critical Recharge Areas

Although exempt withdrawals are not subject to resource availability review through DOE, Island County has the ability to evaluate the impact of such withdrawals utilizing two mechanisms. In 1990, Island County entered into a joint policy with the Washington State Department of Health entitled the State Department of Health Island County Seawater Intrusion Policy (amended effective March 21, 2003). This policy allows for the requirement of information necessary for proposed withdrawals, irrespective of their exempt status, to be analyzed with respect to resource availability. A complete review and analysis of this policy and its implications for resource planning will be provided in a subsequent topic paper.

The second resource-planning tool that may be used to address the impact of exempt groundwater withdrawals is found in Island County’s Critical Recharge Area Protection Code (ICC 8.09.097). This section allows for the Island County Health Officer to evaluate any project that is likely to contaminate groundwater, and to appropriately mitigate such impacts. Although not commonly used to address exempt groundwater withdrawals, the authority does currently lie with the Health Officer to do so.

## **Recommendations**

Solutions for the issues of seawater intrusion and water system coordination will be addressed in two upcoming WRAC topic papers: “Seawater Intrusion” and “Water System Coordination.” Recommendations for exempt wells will be deferred until these topic papers are complete.

The WRAC is using the “Exempt Wells” topic paper as an educational opportunity, and is not asking for approval of options at this time.