

Spokane County Water Availability Advisory Committee

FINAL REPORT

January 24, 2013

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Acknowledgments

This report is based on the discussions and decisions of Spokane County’s Water Availability Advisory Group. Spokane County is very grateful for the time and effort of each member of the Advisory Group. The report was prepared by Susan Gulick of Sound Resolutions—who also facilitated the Advisory Group—with the assistance of Jim Mathieu of Northwest Land and Water (a licensed hydro-geologist). Mike Hermanson managed the project for Spokane County under the direction of Rob Lindsay. The project was funded by the Department of Ecology via grants to the WRIA 54, 56, and 55/57 Watershed Planning Units.

Background

Ongoing water availability from individual wells is an emerging issue in Spokane County. There are homes that were built with individual wells that have subsequently gone dry, or where the flows are so low they can no longer supply adequate water for the residents. At times, new wells are installed and neighboring homes see their water flow reduced as more wells draw from a limited aquifer. Public water systems are often asked to bring water to these homes; however, it can be very costly and inefficient to install water pipes to areas outside a water system's boundaries. In some instances, residents' only option is to haul water to their homes.

Water resource planning and land use planning have historically been disconnected. In the past, the state managed water and local governments managed land use. Water resources and land use, though, are fundamentally connected and over the past few decades the legal framework has begun to recognize this. According to current Washington State Law:

*“Each applicant for a building permit of a building necessitating potable water shall provide evidence of an adequate water supply for the intended use of the building. Evidence may be in the form of a water right permit from the department of ecology, a letter from an approved water purveyor stating the ability to provide water, **or another form sufficient to verify the existence of an adequate water supply.**”*

(RCW 19.27.097, emphasis added)¹

This leaves counties the difficult task of creating standards to verify the existence of an adequate water supply. State law offers little to no guidance on issues related to the sustainability of the water supply or the seasonal variations in water availability.

Watershed Planning Units have grappled with this issue for many years. Watershed plans from the Spokane area recommend a review of the current water availability standard and procedures. In particular, this recommendation is detailed in both the WRIA 54 Watershed Plan and Detailed Implementation Plan. A process to review the water availability standard was prioritized for funding by all three Spokane area watershed planning groups.

At the core of the issue is the technical and economic feasibility of evaluating water supply sustainability in developments serviced by individual wells. In response to these Watershed Planning Units (and with funds allocated by the watershed planning groups), Spokane County convened an advisory group to review the current standards and determine if the standards or the data collection methods could be improved to better evaluate not only the availability but also the sustainability of the water supply for new construction.

Water availability has two distinct components: physical availability (i.e. is there enough water in the ground to supply a well) and legal availability (i.e. does a property owner have the legal right to drill a well and use the water). While Spokane County's immediate concern is determination of physical availability, a recent decision by the Washington State Supreme Court highlights the importance of also understanding issues related to the legal availability of water. In the case *Kittitas County v. the Eastern Washington Growth Management Hearings Board*, the Supreme Court ruled that counties must regulate

¹ Other statutes relevant to land use and water resource management include RCW 18.104.040, RCW 43.27A.090, RCW 58.17.110, RCW 90.44.050, Chapter 90.54 RCW (The Water Resources Act) and Chapter 36.70A RCW (The Growth Management Act).

land use to assure that it is consistent with available water resources. While the state Department of Ecology is responsible for appropriating groundwater by permit, counties are responsible for land use decisions that affect groundwater resources—including determinations of both physical and legal availability. The Court stated that limiting county responsibilities to only assuring physical availability *“effectively allows the County to condone the evasion of our state’s water permitting laws. This could come a great cost to the existing water rights of nearby property owners, even those in adjoining counties, if subdivisions and developments overuse the well permit exemption, contrary to law.”* This decision demonstrates the increasing water management role counties are being directed to take by state law, both in code and case law.

Formation of Advisory Group

Spokane County formed the Water Availability Advisory Group to address specific issues related to physical water availability. Spokane County also hired a professional facilitator to guide the work of the Advisory Group. A list of the Advisory Group members is included as Attachment A.

Spokane County asked the Advisory Group to review the water availability standard currently used by Spokane County and offer advice and recommendations on whether it can be improved. The underlying question was whether there are better methods to evaluate physical water availability and sustainability that are technically sound, cost effective and legally defensible. The focus of the discussion was on the physical availability of water—not legal availability—although the challenges of determining legal availability were often integral to the discussions, particularly in light of the recent Supreme Court ruling.

The Advisory Group has developed a series of recommendations on the following issues, which are each discussed in more detail below.

1. Determination of water availability prior to issuance of a building permit
2. Assessment of long term availability of water resources
3. Geographic “problem areas” and creation of Overlay Zones

In addition, the Advisory Group offers suggestions on how Spokane County should proceed to address the “unfinished business” that the Advisory Group did not have time complete. These items include:

1. Determination of water availability prior to land division
2. Impairment to senior water rights

Dissenting Opinions of Advisory Group Members

The Advisory Group was comprised of diverse membership with significant differences of opinions and perspectives. The group worked toward consensus, but 100% consensus was not possible. The final recommendations of the Advisory Group are items that received broad support of the Advisory Group, but not unanimous consensus.

Not all Advisory Group members fully accepted the premises of the project. Some strongly objected to limiting the focus of the group to physical availability of water (and not addressing issues related to legal

availability). Others did not agree that there is clear evidence of water availability problems in Spokane County, and stressed the need to rely on Best Available Science² in making determinations of water availability. These members voiced concerns throughout the process that low producing wells do not necessarily mean that there is not adequate water; inadequate flow could indicate physical problems with the well or pump, or indicate that the well was not installed at the proper depth.

Letters clarifying concerns and areas of disagreement are included in Attachment B. The letters are summarized below.

The Center for Environmental Law and Policy (CELP)

CELP's primary concern is that the Advisory Group did not address the County's duties relating to legal availability of water. CELP does not believe it is possible to neatly separate the issues of legal and physical availability of water, and therefore the Advisory Group has not addressed key issues of water resource management for which the County is legally responsible.

Futurewise

The concerns of Futurewise (and concurred with by CELP) include the following:

- The creation of plats or lots under a Certificate of Exemptions should only be allowed to create units 40 acres or larger.
- Pump tests do not establish the legal right to water.
- Before wells are allowed it should be determined that they will not harm existing water users individually and cumulatively.
- The Little Spokane basin is closed and no new wells should be allowed, and more should be done to ensure senior water rights are protected. Other areas that are close to full or over-allocation of water should not allow the use of exempt wells unless a legal right is demonstrated.
- The County must comply with the Department of Ecology mitigation policy for water rights in areas where water is not physically or legally available.
- The County must create performance measures to determine its policies are effectively protecting the long term sustainability of groundwater.

Individual Realtors

Two realtors who are members of the Advisory Group and also members of the Spokane Association of Realtors' Government Affairs Committee express concerns about the absence of good science in making water resource management decisions. They feel that there is limited information on the geophysical characteristics of many areas of the County, and that it is premature to impose regulatory restrictions on property owners in the absence good science. They also believe that there is great variability in soils and other physical attributes throughout Spokane County. Given this variability, they do not believe it is feasible to develop overarching policies or regulations for all wells within Spokane County. They also believe that it is an assumption that there are water availability limitations within the County. They noted that well construction, maintenance, and other problems with wells can result in inadequate conveyance of water and do not necessarily mean there is a shortage of available water.

² The Chapter of the Washington Administrative Code addressing Best Available Science as part of the Growth Management Act (Chapter 365-195 WAC) is attached as Appendix M.

Spokane Home Builders Association

The Spokane Home Builders Association concurs with the letter provided by the realtors. In particular, the association emphasizes:

- The importance of personal responsibility, and the need to advise affected parties that good data may not exist on future water availability;
- The need for detailed geophysical data to help ensure proper well placement, depth and construction;
- The mandatory use of Best Available Science; and
- The economic burden on a community when science is not at the forefront of regulatory decision-making and lawsuits.

Citizens' Alliance for Property Rights (CAPR)

CAPR advocates for the use of Best Available Science (BAS) as Spokane County evaluates water issues, and questions if BAS was used in all the handouts provided to the Advisory Group. CAPR believes that additional geophysical studies are needed, particularly micro gravity studies and seismic studies to identify ground water resources in Eastern Washington. CAPR believes it is likely that more ground water resources are available than those currently identified. In the absence of good information about the groundwater hydrology, CAPR states that unnecessary restrictions on property use should not be applied.

Issues with Recommendations

1. Determination of Water Availability Prior To Issuance of a Building Permit

Problem

Applicants for building permits are required to demonstrate that there is adequate water supply for the proposed use of the building that will be constructed. The applicant identifies if the project will receive water from a public water system or an individual well. For those relying on individual wells, counties must establish a method to verify the existence of adequate water supply.

Currently Spokane Regional Health District (SRHD) administers the water availability determination. The basic requirement is a well must be capable of producing 1440 gallons over a 24 hour time period, for each household served.³ Rather than require a test conducted over a 24 hour time period, the applicant can demonstrate that a well is capable of producing 1440 gallons per day through a four hour pump test that shows a minimum production of one gallon per minute (one gallon per minute over 24 hours equals 1440 gallons). The four hour pump must be conducted by a pump contractor, licensed engineer or well driller certified by SRHD. The required pump test documentation only includes the address of the well, the owner, the tested pump rate, and a signature of the certified pump contractor, licensed engineer or well driller. Some contractors provide additional information such as pumping rates and water level drawdown at points during the test, such as each ½ hour interval, though this is not required.

In general, when a well goes dry or nearly dry, the homeowner must pay the cost to extend water lines from a public water purveyor. However, water purveyors do not have endless supplies of water; they

³ The Advisory Group noted that wells that serve more than one household frequently have conflicts over the shared allocation of water. A higher gpm requirement for shared wells would help address the issue but the Advisory Group did not develop specific recommendations for this.

are limited by their own water rights and the physical availability of their water supplies. Furthermore, a water purveyor may be too far away to access the home. In cases where public water supplies are not available, the homeowner has to consider other options, such as having water hauled to their home.

As part of the Advisory Group process, Northwest Land and Water (NLW), a hydro-geology consulting firm, was hired to evaluate this standard and suggest alternatives for the Advisory Group's consideration. NLW reviewed a number of pumping test submittals to Spokane County. There was a wide discrepancy in the amount of information that is recorded during a pump test and provided to the County. This can make it difficult to assess whether the pump test demonstrates the required 1440 gallons over a 24-hour period standard. The data submitted often cannot be analyzed to determine if the recorded flow is sustainable beyond the four hour test period.

During the course of this project some water purveyors identified areas where they have extended lines to homeowners that have run out of water. Pump tests conducted on the wells for those homes were examined and in several instances the well was reported to produce one gallon per minute, but the additional pumping rate and water level drawdown information showed a well that may not be able to sustain the one gallon per minute pumping rate beyond the four hour test. For example, one test showed a well that was drawn down 345 feet during the course of the test and the water level never stabilized; yet the well *did* produce one gallon per minute over the four hour pump test.

Options Considered

NLW presented options for revised requirements to evaluate water availability, including procedures for pump tests, reporting requirements, and county review. Two distinct options were presented. The first would require well pumpers to follow a prescribed testing protocol and to provide more detailed data than is now required. This would allow a simple analysis of the data to determine whether the well is projected to sustain a one gallon per minute (gpm) pumping rate for a minimum of seven days. The second option would not require the pumper to follow a specific protocol but would require the County or the applicant to engage a hydro-geologist or someone with very strong technical skills to analyze the data.

The primary difference between the two options is that the first would require a specific test protocol and analysis to be performed by the pump test company; the second would allow more flexibility in the test protocol but require more rigor on behalf of the County or the applicant's hydrogeologist to analyze the results. The second option was deemed to be too great of a burden for both the County and applicants, and the Advisory Group focused their attention on potential revisions to pump test protocols, data reporting, and analysis.

All options considered would retain the current requirement of a four hour pump test that demonstrates the capability of producing 1440 gallons in a 24 hour period, or one gallon per minute. However, the new recommendation would require data collected during the four hour pump test be extrapolated out seven days, and show a minimum of one gpm could be sustained for a seven day period. The specific recommended protocol is detailed in the following recommendation section.

During the review of the current test protocol, one of the components first discussed by the group was the length of the test. As with many testing procedures a longer data collection period adds to the certainty of the results; however, the length of the test also has cost implications. NLW explained that a longer pump test is always better, but that four hours provides adequate data. The increased value of

additional data may not be worth the cost of a longer pump test. NLW also explained that extrapolating the data for a seven day trend will provide a much better indication of the long-term sustainability of the well. While nothing is certain, a seven day projection is much better than the current procedure, which simply measures one gpm over four hours and does not extend this trend into the future. Spokane County could choose a different length of time (e.g. five days or 10 days) but with 10 days the extrapolation will be less accurate, and five days may not be long enough to identify wells that cannot sustain one gpm for the long-term.

NLW indicated that how the test is conducted and how much data is recorded is just as important, if not more important, than the length of the test. NLW recommended a step rate test that starts at a low pumping rate, one gpm or less, and incrementally increases over the four hour period. This would provide much more reliable data on what withdrawal rate can be sustained as compared to a pump test that starts at a high rate and incrementally decreases until a sustained rate is found. In addition to the specific protocol for increasing pumping rates, NLW also recommended more frequent recording of the pumping rates and water levels. This will allow the data to be analyzed to determine if the well can sustain a one gpm supply for seven days.

The Advisory Group also discussed a sliding standard where a six-hour pump test would be required if it appeared that the well would have difficulty meeting the one gpm standard. This would allow better data from wells on the margin of meeting the standard, while not requiring the cost of a longer pump test by applicants whose well appears to be well above the one gpm standard.

At the request of the Advisory Group, the facilitator contacted eight well pump contractors in the Spokane region, and was able to have detailed conversations with three. The pump contractors were asked a series of questions about how the proposed options would affect their business. Reactions ranged from strong opposition to openness. Key points from the interviews are noted below.

- The pump contractor with the strongest objections stressed that the way they do it now is just fine. Their costs would go up to gather the additional data and he doesn't think it would tell you anything useful, because "you can't predict Mother Nature. There is no way to tell if water will be there tomorrow; all we can tell you is whether water is there the moment we pump."
- Another pump contractor felt that the new option would not affect their costs much and would be an acceptable method. However, they are currently operating on a very small margin to do these pump tests and are not making much, if any, profit so new requirements are always a concern. "Please make them as clear and simple as possible."
- Another said that the new requirement to record data at short intervals would mean they couldn't complete other tasks while conducting the test, which means their costs would increase.
- Changing the rate of flow from low to high did not seem to be a concern.
- Pumpers were concerned about the costs of losing sounders in the wells.
- All pumpers said supplying data in digital format would be an added hardship and requested that the County enter the data. They are not using handheld computers in the field so digital submission would add data-entry time (and therefore increase costs). In the future, if the industry begins to move toward handheld computers or other electronic systems, this could become easier. Advisory Group members noted that pumpers could purchase pressure transducers that would automatically gather digital information at regular intervals. Sonar measurements could also be used. However, the purchase of either sonars or pressure

transducers would be an added cost for well pump contractors.

The Advisory Group also discussed the issue of seasonal variations in water availability. NLW noted that there is no way to look at seasonal variability with a four-hour pump test. You could use data from long-term water level trends in the County to evaluate the potential seasonal variability in identified areas. However, this would probably be too complicated for the average homebuyer or homebuilder to do.

Advisory Group members emphasized that there is a great need for education. Purchasers of land or existing homes need to see strong disclaimers that there is no guarantee that water will be available indefinitely. Education is also needed to inform water users of the potential impacts of their water use on their neighbors.

Recommendations

- A. The Advisory Group recommends the following procedures for well pumping tests conducted in conjunction with the issuance of a building permit:
 - i) Pumping data should be required to be submitted on a standard form. The data sheet should include a cover sheet that provides basic information about the well, the owner, and the appropriate technicians (pumper, driller, hydrogeologist, etc.).
 - ii) Pumping tests should be required to follow a specified protocol of pumping at three to four different constant rates, moving from low rates to high rates. Recording of water levels should be required at five minute intervals, and recording of pumping rates should be required at 10 minute intervals.
 - iii) The data from the pumping tests should be provided to the Spokane Regional Health District (SRHD) and then digitally entered into a form which would automatically generate a graph of the drawdown trend. The option for direct submission of digital data by well pump contractors should be provided, but not required.
 - iv) The SRHD should determine adequate water supply for a building permit if the trend indicates that one gpm can be sustained for more than seven days.
 - v) The SRHD should allow longer pump tests or recovery data analysis if the pumper determines it is necessary to prove or disprove to the SRHD the one gpm sustained output for seven days.

NOTE: This recommendation solely addresses determinations of physical water availability and does not any address legal obligations of Spokane County to ensure consistency between land use and available water resources, protect public groundwater from detrimental land uses, and determine that water is legally available. See Kittitas County v. EWGMHB, 172 Wn.2d 144, 175-81 (2011)

- B. The Advisory Group recommends that Spokane County and/or the SRHD offer education and training for well pump contractors, and provide ample lead time before the new requirements take effect. Spokane County should also provide information to prospective home/property buyers to educate them about water resource issues and potential seasonal variations in well levels.

2. Assessment of Long Term Availability of Water Resources

Problem

There are varying amounts of hydrologic information and data within Spokane County. It is important to understand how the entire hydrologic system of a basin works, including how changes to one part of the system (such as increased groundwater withdrawals) impact another part of the system (such as surface water flows). To definitively determine the sustainability of a given aquifer, a comprehensive hydrogeological study needs to be completed. This is prohibitively expensive for an individual home builder.

There is a lot of information and understanding about the Spokane Valley Rathdrum Prairie Aquifer (SVRP) and the Spokane River system. In 2007 a bi-state aquifer study was completed for the SVRP and included a report that described the entire hydrogeologic system, and a groundwater model that allows for assessment of various future water use scenarios. This study, the resulting documents, and the model now serve as the baseline of hydrogeologic understanding for all parties involved in water management. While there are increasing amounts of data for the Little Spokane River, West Plains, and Hangman Creek watersheds, there is much less understanding about how these systems work as a whole, and there is not one source that describes the hydrogeologic system in a manner that can be utilized as a basis for water management decision making. Attachment C shows each of these areas and a general description of the current hydrogeologic understanding.

A key question for Spokane County is what *actions* to take in the absence of perfect science and complete information. Some Advisory Group members advocated for resource protection as the conservative approach to the absence of science; others advocated that new regulations or restrictions of property rights should not be considered in the absence of good science.

Options Considered

The Advisory Group discussed the need for additional data as a sub-text of nearly every topic discussed. In general, there are insufficient data in the areas of the County where there are water availability concerns.

Advisory Group members appreciate the information Spokane County has compiled to date, and would like to see it readily available to the public. The Advisory Group would also like to see additional trend monitoring of groundwater levels, particularly in areas where there concerns about long-term water availability. The Advisory Group also discussed the need for additional computer modeling and scientific research of the hydrologic interactions within and between aquifers and streams.

The Advisory Group members stressed the need to ensure that all studies relied on are based on the best available scientific methods.

Recommendations

- A. The Advisory Group recommends that Spokane County develop user-friendly access to past hydro-geological studies.

- B. The Advisory Group recommends that Spokane County develop and implement a long term groundwater level monitoring program to establish scientifically defensible trends in water levels⁴.
- C. The Advisory Group recommends that Spokane County and other entities continue to expand the understanding of water availability and sustainability within Spokane County, particularly for basins where information is limited, ideally by developing groundwater models that can assist in determining water availability.
- D. The Advisory Group recommends that Spokane County continue to seek funding for hydrogeologic investigations that use the best available scientific methods.

3. Geographic “problem areas”

Problem

There are significant hydro-geologic variations in Spokane County. Some areas of the County have ample water availability; other areas have distinct water availability issues, and the specific issues may vary between problem areas. There is a desire to address the water availability concerns in some parts of the County without creating undue burdens in the other areas of the County.

For example, the Little Spokane River is often below the minimum flow established in Washington Administrative Code in the late summer. As a result there are concerns with groundwater withdrawals that impact Little Spokane River stream flows and existing water rights. It is possible that this could be better addressed through policies specifically designed for the Little Spokane watershed, rather than county-wide policies.

Another example is areas of the county that have low producing granitic aquifers. A more rigorous assessment of well production may be more appropriate in these areas but not in areas served by sand and gravel aquifers that generally do not have as many issues with well production.

Options Considered

The Advisory Group had ongoing discussion of the option of designating geographic areas for specific treatment to deal with water availability. This would allow targeted use of more rigorous requirements in the areas with known problems while retaining relatively simple requirements in other parts of the County. It would also allow the County to address legal as well as physical water availability issues. However, it was frequently noted that it would be difficult to draw the boundaries of these areas, both technically and politically.

The Advisory Group felt creation of zoning overlay zones would provide a geographic-based approach. Criteria for determining where overlay zones should be located include:

- Basins that are closed to new water rights
- Basins with high levels of growth, either currently or projected
- Watershed sub-basin boundaries containing the areas of concern
- Delineated aquifers with known problems, including both water quantity and water quality problems because water quality issues can also affect the availability of potable water.

⁴ Groundwater monitoring should not be confused with well *metering*. Groundwater monitoring relies on voluntary participation from a small number of well owners within the study area to monitor groundwater levels. The Advisory Group is not recommending mandatory well metering.

Recommendation

- A. The Advisory Group recommends that Spokane County establish zoning overlay zones where there are serious water availability concerns. To do so, the County should:
 - a. Develop criteria for designating an area a water availability overlay zone; and
 - b. Rely on existing available hydro-geologic data to develop overlay zone boundaries. If practical, the overlay zones should address variations in water availability due to seasonal changes in water levels.
- B. After overlay zones are established, the Advisory Group recommends that Spokane County establish policies and new requirements to manage water availability concerns within the zones. Spokane County should consider a number of options, including:
 - a. Establishing more rigorous testing for water availability within these zones,
 - b. Establishing minimum setbacks of wells from surface water,
 - c. Establishing minimum well depths,
 - d. Establishing maximum well pump output,
 - e. Establishing separate density requirements for lots served by public water supply and permit-exempt wells, and/or
 - f. Establishing minimum lot sizes for new parcels.
- C. The Advisory Group recommends that many forms of mitigation be allowed to provide flexibility in meeting the requirements within overlay zones.

Issues Needing Further Consideration

1. *Determination of water availability prior to land division*

Problem

There are two methods for the approval of land divisions within Spokane County: sub-divisions in accordance with Chapter 58.17 RCW or a certificate of exemption issued by Spokane County. All sub-divisions subject to Chapter 58.17 RCW are required to demonstrate that potable water supplies are available. To demonstrate this, Spokane Regional Health District requires that the applicant provide one of the following:

- Proof that the new lots will be served by a public water supply system;
- A pump test from a well located on each proposed new lot that meets the same requirements as for a building permit; or
- A report from a hydro-geologist that includes a statement of adequacy (along with other requirements).

A Certificate of Exemption (CE) may be granted for *some* (but not all) divisions of land into parcels of greater than 10 acres. Many land divisions in rural areas outside of public water service areas are divided through the CE process. There are no requirements to demonstrate water availability within the CE approval process. The CE is granted at the counter within the Planning Department as an administrative process; there are no opportunities for review or appeal of these determinations and environmental review is not required.

The provisions for CE are a bit complicated and there are many nuances regarding which divisions are eligible for a CE. For those property divisions that are eligible, however, there is no requirement for any evaluation of water availability.

All building permits, regardless of how the land was divided, require a determination of water availability.

There is concern that if property is divided without adequate assessment of water, the purchasers of the lots will not be aware that water may not be available, and therefore the lot is not really “buildable”. Also, a water availability assessment at the time of land division allows for consideration of the needs and impacts of a development plan. A development plan can be tailored to match the water availability of the entire property, but once the lots are created that flexibility is greatly diminished.

Options Considered

The Advisory Group discussion focused on two key questions:

- Should there be a requirement to demonstrate that water is available prior to land divisions?
- If so, are the current procedures used by Spokane Regional Health sufficient, or should changes be recommended.

Washington State Law requires counties to evaluate water availability during the subdivision process, so the focus of the first question is the CE process.

The Advisory Group discussed a variety of options, including:

- Establishing a flow standard (gpm);
- Requiring specific testing procedures from multiple wells (e.g. observation well or neighbor’s well); and
- Requiring long-term monitoring or metering.

The Advisory group also discussed how to assess impacts on neighbors and/or stream flows, particularly in closed basins.

Some Advisory Group members expressed concerns about too much government intrusion and did not think there was a need for more stringent requirements at the time of property divisions. Others felt that the CE process should require the same demonstration of water availability as the sub-division process.

The Advisory Group also discussed the economies of scale of water availability investigations at the time of land division. The costs of a water availability investigation spread over multiple lots allows for a more rigorous investigation at a lower cost per lot. For example, an investigation that involves aquifer tests of two or more wells would provide a much better understanding of the local hydrogeology and impacts outside the boundaries of the land division. The test wells could be converted to domestic wells after the investigation so the cost is not lost.

Next Steps

The Advisory Group did not finalize recommendations on this topic, but encourages Spokane County to continue working on the issue. In particular, the Advisory Group suggests additional consideration of the following options:

- A. The Advisory Group encourages Spokane County to review the requirements for demonstration of adequate water prior to the creation of multiple lots for single family home development through the Certificate of Exemption (CE) process.

- B. The Advisory Group encourages Spokane County to further assess the option of requiring an evaluation of potential impairment to senior water users as part of the determination of water availability prior to sub-divisions.
- C. Given the ongoing changes to water management rules and regulations in the state due to court decisions and regulatory updates, the Advisory Group recommends that Spokane County is diligent in updating local procedures and enforcement efforts to comply with these regulations.

2. *Impairment to senior water rights*

Problem

A serious concern with water availability is the impairment of water rights held by others. Impairment means to interfere with the water availability (or diminish the water quality) of existing water users. When a new water permit (the precursor to a water right) application is considered by Ecology, potential impairment of senior water right holders is investigated. If the new water permit would result in impairment to senior water right holders, in most circumstances the permit is not issued. As implied by the name, permit-exempt wells do not go through this process. However, they are only exempt from the requirement to obtain a permit—they are not exempt from water law. A permit-exempt use is not allowed to impair senior water right holders. In practice, a permit-exempt use is generally small in comparison to other water rights, and it is the cumulative use by multiple permit-exempt wells that raises the most concern. Additionally, with new permit-exempt wells the burden to prove impairment rests with the senior water right holder. This leads to addressing impairment after it has already occurred, and it is costly and difficult to determine which wells are responsible for the impairment.

The linkage between permit-exempt use and impairment came to the forefront in Washington in 2007 in Kittitas County. The Yakima basin is now closed to new permit-exempt wells that are not mitigated because they were impacting the water availability of existing water users. Senior water rights holders in Kittitas County filed a petition to stop allowing additional water withdrawals from the basin. Ecology responded to the petition by withdrawing the basin from further net increases in withdrawals, including permit-exempt wells. Spokane County would like to address the issue of water availability before the situation becomes litigious.

In addition, the Little Spokane River Basin is closed to new water rights, but new exempt wells continue to be installed. This may change with the Kittitas precedent, but that is unclear. A publication by the Department of Ecology entitled “[Water Availability in Your Watershed](#)” explains the situation in the Little Spokane River watershed as follows:

The Little Spokane watershed is generally closed to new consumptive water uses from surface water and connected groundwater. Applications for single in-house domestic use or stock watering may be approved if the proposed use will not impair existing water rights.

The groundwater permit exemption allows certain users of small quantities of ground water (most commonly, single residential well owners) to construct wells and develop their water supplies without obtaining a water right permit from Ecology. However, water rights developed through the permit exemption are not exempt from the water right seniority system and could be regulated (interrupted) during future drought periods. For more information about the groundwater permit exemption, refer to www.ecy.wa.gov/pubs/fwr92104.pdf.

If senior water rights are impaired and junior users are required to curtail their water use, other options

may be available, including mitigation, purchase of water rights through water banking, and personal water storage for usage during periods of low stream flow. In addition, water use can be minimized through conservation measures. Limitations on outdoor water use are common constraints placed on junior water rights.

Options Considered

The Advisory Group discussed the complications of assessing potential impairment to adjacent senior water rights holders. Some felt that this should be left to civil actions between the two property owners; others noted that it is almost impossible to tell which well is impairing your water. Property owners with long-term water may find that they no longer have sufficient water after new houses are built in the vicinity, but it is very difficult to prove which new well caused the problem.

Evaluation of potential impairment is standard procedure for municipal water rights so there are methods to evaluate this. However, it is a complicated and costly evaluation and would be a lot to ask of individual home builders.

The Advisory Group discussed that the best way to address impairment concerns may be to develop overlay zones and require more analysis of water availability and potential impairment within these areas. However, as noted above, it may be difficult to draw boundary lines for overlay zones, particularly in the absence of better data.

Evaluating impairment would be most effective prior to land divisions (subdivision or CE). The impact of water use by more than one home could be considered, and the cost of doing a more thorough hydrogeologic investigation could be distributed over many lots instead of just one. This would allow for the identification of mitigation strategies in the event that an impact is indicated. It would also provide assurances to future purchasers that the divided lots have been evaluated for water availability.

The Advisory Group also discussed the Little Spokane example where there is potential impairment of surface water rights from ground water use: Water right holders along the river have junior water rights to the instream flow and are curtailed nearly every year when stream flows drop below a certain level. Yet new wells—which are even more junior—continue to be installed, and these new wells may be affecting the flows and contributing to the curtailment of water use by existing users. What protection or recourse is available for the existing well owners and surface water right holders on the Little Spokane whose water availability is being impacted by new wells?

Next Steps

The Advisory Group did not finalize recommendations on this topic, but encourages Spokane County to continue working on the issue. In particular, the Advisory Group advocates for additional consideration of the following options:

- A. Evaluation of potential impacts to senior water rights and the legal availability of water at the time of property divisions
- B. Further research and discussion of methods to protect senior water rights without imposing unnecessary restrictions on new development.

Conclusion

Determinations of physical availability of water are complicated. The Advisory Group worked diligently to address many of the challenges in assessing physical water availability. In particular, the Advisory Group spent a great deal of time and effort developing a recommendation for revised procedures to measure water availability as part of an application for a building permit. The Advisory Group hopes that this change will result in more accurate determinations of long-term water availability.

The Advisory Group recognized the value of the hydrogeologic data the County has been gathering and analyzing. The Advisory Group encourages Spokane County to continue to gather data, particularly in the areas of the County with known water availability issues.

The Advisory Group acknowledged that water availability issues do not exist in all areas of Spokane County. Therefore, the Advisory Group recommends that Spokane County create zoning overlay zones that allow the County to address the water availability concerns in some geographic areas without creating undue burdens in areas where there is ample water.

There were additional issues regarding physical availability that the Advisory Group did not have time to complete final recommendations. The Advisory Group hopes that Spokane County will continue their efforts to assess water availability at the time of land division, and to evaluate and mitigate potential impairment to senior water users.

Finally, the issue of *legal* availability of water was not addressed by this Advisory Group, but repeatedly was raised as a key issue facing Spokane County. The Advisory Group encourages Spokane County to develop a process to address how the County can assess legal availability of water, in addition to physical availability.

Attachments

- A. List of Advisory Group Members
- B. Comment Letters from Advisory Group Members
- C. Preliminary Assessment of Available Hydrogeologic Information
- D. Potential Tools to Address Water Availability
- E. Water Supply and Land Use Steps
- F. Background on Water Availability and Sustainability Standards
- G. Water Availability Standard Presentation, Feb. 29, 2012 Advisory Group Meeting
- H. Instream Flow Presentation, March 29, 2012 Advisory Group Meeting
- I. Presentation of Water Availability Standards from Other Jurisdictions, March 29, 2012 Advisory Group Meeting
- J. Northwest Land & Water Hydrogeological Presentation, April 12, 2012 Advisory Group Meeting
- K. Spokane County Hydrogeological Data presentation, April 26, 2012 Advisory Group Meeting
- L. Real Estate Disclosure Statements
- M. Chapter 365-195 WAC: Growth Management Act—Best Available Science
- N. Plats Outside Water Service Areas Since 2003
- O. Subdivision Options Flowchart