2015
Informational Update
to
1992
Palouse Basin
Ground Water
Management Plan

PALOUSE BASIN AQUIFER COMMITTEE
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Foreward

In April 2012, the Palouse Basin Aquifer Committee (PBAC) began a review of the 1992 Palouse Basin Ground Water Management Plan (hereafter referred to as the PLAN). The PLAN has proved quite robust; much of what was included in the original PLAN remains true today. At the same time, significant advancement in what is known about the geology and ground water hydrology of the area has occurred.

The group hoped to update the PLAN in a fashion that would maintain its core components and where appropriate provide supplemental information synthesizing the knowledge that has been collected since it was first written. Rather than formally revising the original PLAN, PBAC decided to instead develop an informational update to the PLAN that would provide a synopsis of what has been learned and accomplished in the intervening 20 years.

This document is the result of that effort. In the materials that follow, **text from the original PLAN is presented in bold plain font**. *Update information is presented in italics*. Updates to plan figures contain the word "*Updated*" in the caption. Additionally, 2 new appendices are provided to capture administrative documents that have been enacted since the PLAN was first adopted.

Steve Robischon
Executive Manager
Palouse Basin Aquifer Committee

March 2015

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ACKNOWLEDGEMENTS

Many people contributed to the development of the Ground Water Management Plan between its start during the spring of 1989 and its acceptance by all six entities, the Idaho Department of Water Resources, and the Washington Department of Ecology in the spring of 1992. However, the plan would not have been completed without the effort of Kenneth A. Hall and the various people who served on the Management Plan Subcommittee. Some of those members were Jim Hudak, Mardi Baron, Jim Nebel, Pam Peterson, Ken Abbey, Craig Benjamin, and George Bloomsburg. The work of Jeff Filler as a consultant during the spring of 1990 also was necessary to get the plan pulled together so the committee could finish it. The work of all these people is acknowledged and appreciated.

The publishing assistance of the University of Idaho Facilities Management Communications Department, Kay Packer (Coordinator) and Temple Kinyon (Graphics Coordinator), and the editing of Bob Seale are greatly appreciated.

Lastly, the attention of Tom Townsend and Cal Warnick was important to the plan and we appreciate their interest in the water resources of the region.

We hope the Ground Water Management Plan will serve the communities well in the years to come.

George Bloomsburg
Executive Secretary
Pullman Water Resources Committee

September 1, 1992

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THE PULLMAN-MOSCOW GROUND WATER MANAGEMENT PLAN

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THE PULLMAN-MOSCOW
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1. INTRODUCTION

1.1 General

The Pullman-Moscow area of eastern Washington and northern Idaho relies almost entirely on ground water for its supply of municipal, institutional, and domestic water. Concern over declining ground water levels in the area motivated the municipalities and universities to form the Pullman-Moscow Water Resources Committee (hereafter referred to as the COMMITTEE) to address the declining ground water table issues and coordinate studies of the ground water and alternative water sources. The COMMITTEE has more recently been charged with developing a ground water management plan for the area by the governing states' water resource agencies. This document represents the plan developed by the COMMITTEE. The Pullman-Moscow Ground Water Management Plan (hereafter referred to as the PLAN). The purpose of the PLAN is to ensure that a safe supply of ground water, in terms of quantity and quality, will continue to exist for present and future use in the Pullman-Moscow Basin (hereafter referred to as the BASIN).

The group name was changed in June 1998 to Palouse Basin Aquifer Committee (PBAC). At the time, the reasons noted for the change were that the existing name could imply that water resources is just a concern of urban residents. The incorporation of a name based on a regional geographic feature would allow residents throughout the Palouse to feel they have a voice in water resource decisions. Reasons stated for support of the new name were that including "aquifer" in the name defines the committee's focus on ground water and it shows the committee has a broad-based focus on regional water resource management.

Chapters 1 and 2 provide introduction and historical background to the PLAN. Chapter 3 outlines ground water management in the context of state water laws in Washington and Idaho. Chapter 4 outlines the mission of the COMMITTEE. Chapter 5 describes technical aspects of the BASIN as well as the general response of ground water aquifers to pumping withdrawals. Chapter 6 contains the program in which management goals and strategies of the local entities are specified. A bibliography and appendices are also included.

1.2 Committee Membership

Membership of the COMMITTEE consists: Pullman, Washington; Moscow, Idaho; Whitman County, Washington; Latah County, Idaho; Washington State University; and the University of Idaho (the ENTITIES). Each of the ENTITIES has two representatives on the COMMITTEE. An Executive Secretary also serves the COMMITTEE as a part-time employee to perform

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administrative duties, provide technical assistance, and act as a liaison between the ENTITIES and other groups or individuals.

Colfax became a PBAC member in 2003, and terminated its membership in 2014. And although not a formal PBAC member, the City of Palouse has provided financial support to PBAC. Each of the entities has two representatives on the COMMITTEE, but currently the cities of Moscow and Pullman have three representatives participating in meeting discussions.

1.3 Charter between Pullman, Moscow, University of Idaho, and Washington State University

The COMMITTEE operates as the result of several intergovernmental agreements among the city governments of Pullman and Moscow, the two land-grant universities, and more recently, the two county governments.

Through a 1988 Intergovernmental Agreement (see section 4.2 and appendix A) the COMMITTEE is charged to coordinate planning in order to ensure a long-term supply of water for the ENTITIES, encourage water conservation, maintain an area ground water data base, investigate the primary and alternative water sources, and act as a liaison between the ENTITIES and the governing state agencies.

A PBAC Interagency Agreement was approved in 2003 defining the membership, duties and powers of PBAC. The 2003 agreement and subsequent amendments as well as the 2005 PBAC bylaws (see Appendix H and Appendix I) specify funding contributions and associated voting rights of participating entities. As of 2014, funding contributions are segmented into those associated with PBAC administrative activities and those tied to research activities. All member entities contribute to administrative activities: Pullman, Moscow, WSU and UI contribute $20,000 annually and are entitled to 2 votes each; Whitman County and Latah County contribute $5,000 annually and are entitled to 1 vote each. In addition, since 1999 annual research funding of $20,000 has been provided by each of the 4 major pumping entities (Pullman, Moscow, WSU, UI).

Through a Resolution of Understanding among the city and county governments, the universities, and the governing state water agencies (the Washington Department of Ecology and the Idaho Department of Water Resources), the state governments have agreed to work with the COMMITTEE in the formation of the PLAN.

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1.4 Ground Water Basin Definition, Geology, and Land Use

The BASIN managed by the PLAN is defined roughly by the surface drainage areas of the South Fork of the Palouse River upstream of the confluence of Four Mile Creek and the South Fork of the Palouse River, and a portion of the Union Flat Creek Drainage, as shown in Figure I. The studies of Smoot and Ralston (1987) and Lum, et al. (1990) includes this same area in addition to a portion of the main Palouse River drainage between Potlatch, Idaho and Colfax, Washington. For modeling purposes, the BASIN extends to the Snake River and includes the southwest facing side of the Snake River Canyon. Figure 2 shows the potential impact area of the PLAN. The area of potential impact includes the greater Palouse River Basin and the Lower Granite Pool on the Snake River.

Note: Significant BASIN characterization research has been conducted since the development of the 1992 PLAN. The state of knowledge as of 2011 is summarized in the Palouse Ground Water Basin Framework Project Final Report (http:/www.webpages.uidaho.edu/pbac/pubs/110128_Framework_Project_Final_Report.pdf). Text included within the body of this update should be considered as only a general summary; for detail, the reader is referred to the appendix and the source data it references.

The current working BASIN boundary is that defined by John Bush in 2005 (see updated Figure 1). There is ongoing discussion and uncertainty about the size of the BASIN, particularly its western and northern extents. Recent (2010-2012) research has investigated compartmentalization within the lower aquifer. The impact area of Figure 2 in the original plan can be viewed as the union of the BASIN boundary and the administrative boundary of the Washington Water Resource Inventory Area (WRIA) 34. The WRIA boundary is associated with the water resource administrative unit established by the State of Washington Water Resources Act.

Figure 3 shows graphically the main surface and subsurface components of the BASIN. Most of the BASIN is composed of loess loam soils overlaying many layers of basalt. In the eastern most part of the BASIN, the loess soils overlie the granitic basement formation, which extends downward and westward, forming a lower boundary to the basalts. The basalt formations and overlying loess soils continue westward from the BASIN toward the Columbia Basin of central Washington. Along the southwestern edge of the BASIN, the Snake River Canyon cuts deeply into the basalt flows, which are in places several thousand feet thick. Between the basalt layers lie sedimentary deposits (or interbeds). The basalts and interbeds make up the primary aquifer of the BASIN. As one moves westward in the BASIN from

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Moscow to Pullman, the interbeds become thinner and play a less important role in the ground water system.

The component description above remains essentially the same, with two exceptions. On the eastern side of the BASIN (generally east of the WA-ID state line), the loess overlies sediments of the Latah Formation know as the Sediments of Bovill, and does not lie directly above basalt. Recent research points to the potentially important role the Sediments of Bovill play in recharge to the upper aquifer in this portion of the BASIN. Also note that the current working BASIN's western boundary is defined by an anticline between Union Flat Creek and the Snake River, and the BASIN boundary does not extend to the Snake River Canyon. An updated Figure 3 comes from Bush and Garwood (2005).

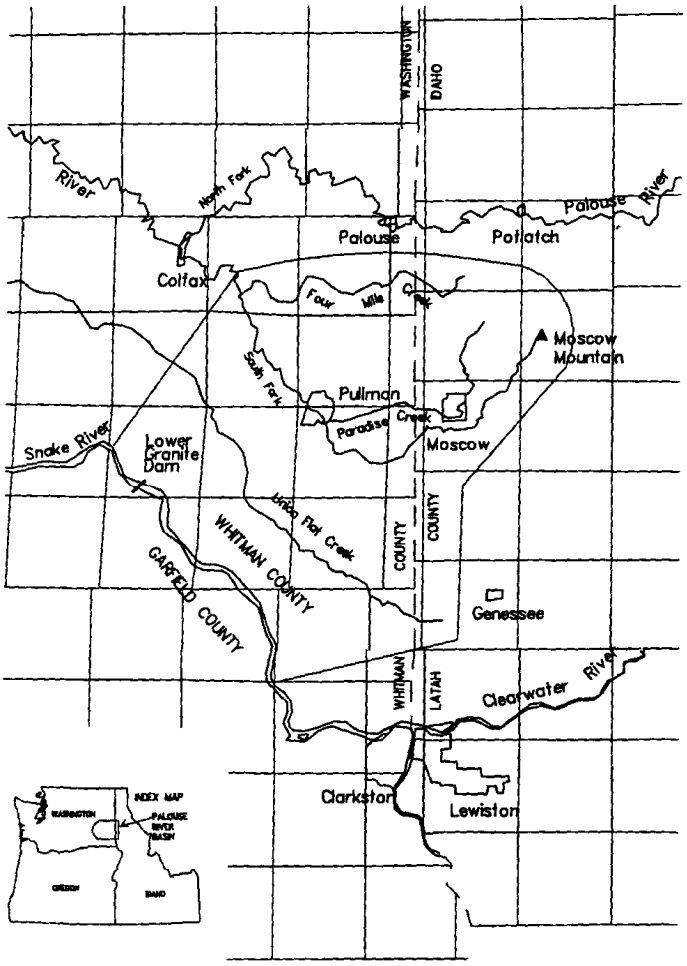

Figure 1. Pullman-Moscow Ground Water BASIN (from Lum et al., 1990)

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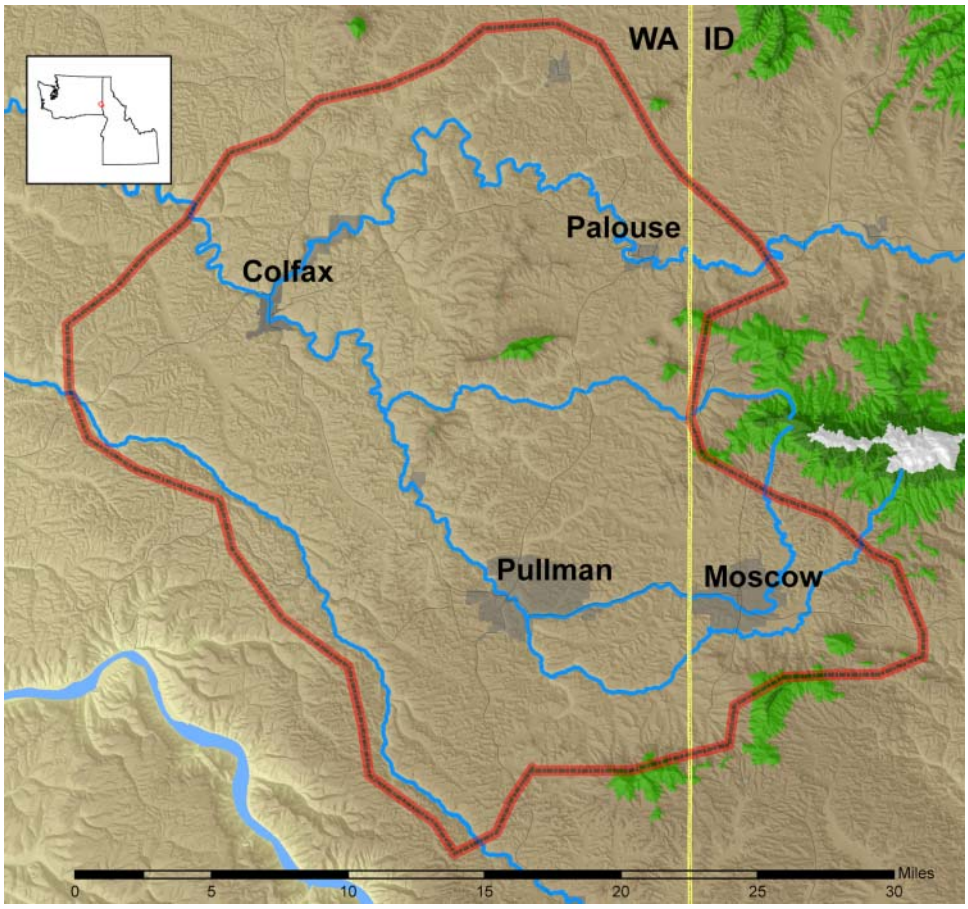

Updated Figure 1. Pullman-Moscow Ground Water BASIN

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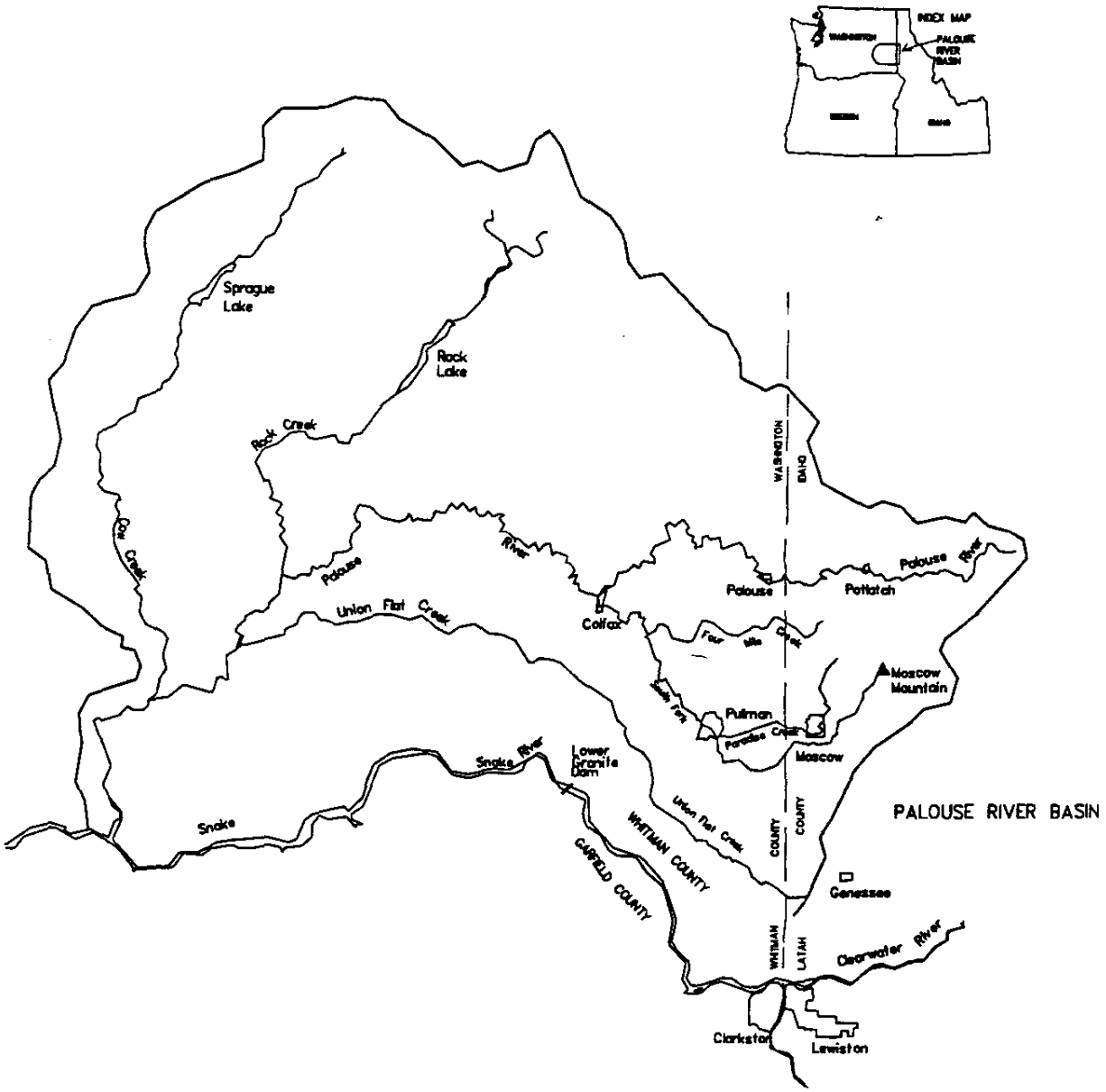

Figure 2. Pullman-Moscow Ground Water Management PLAN Potential Impact Area

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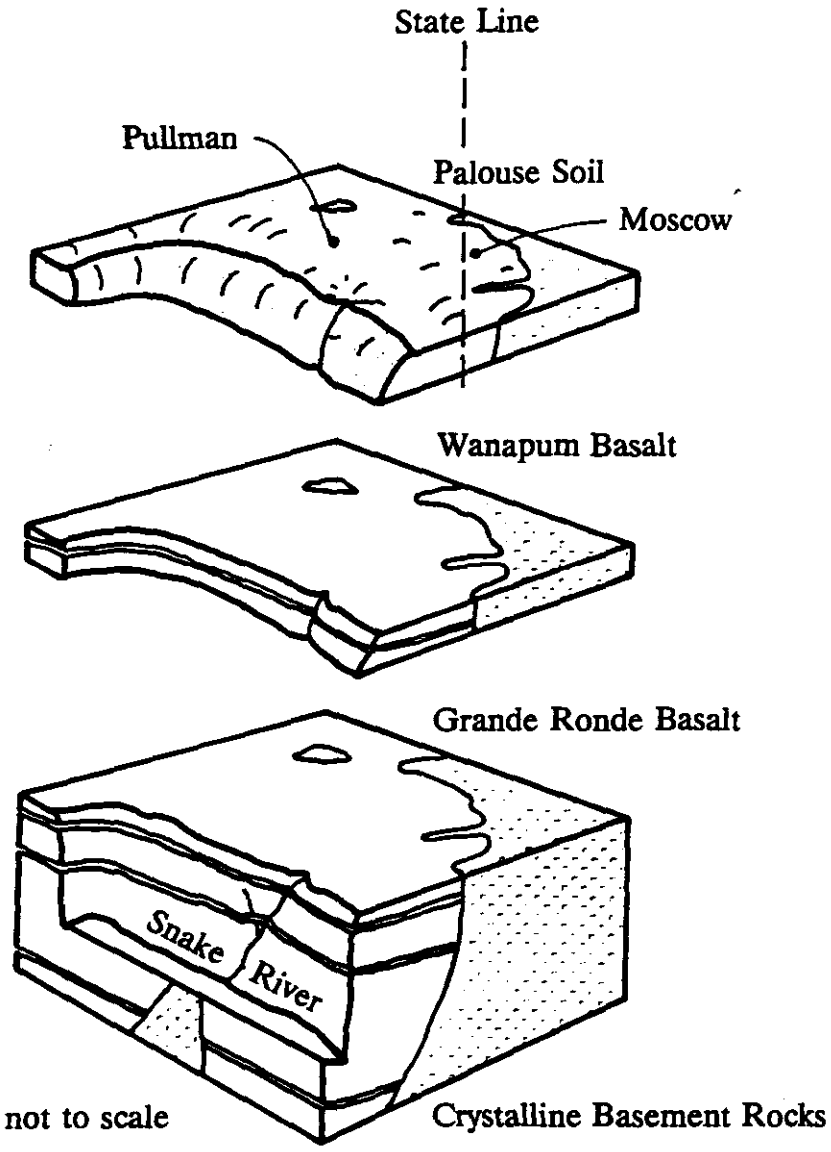

Figure 3. Graphical Representation of the Pullman-Moscow Ground Water BASIN

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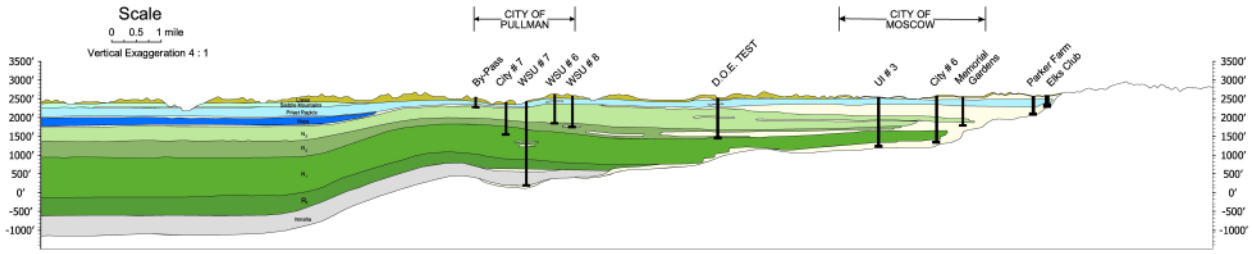

Updated **Figure 3. Graphical Representation of the Pullman-Moscow Ground Water BASIN (http://www.webpages.uidaho.edu/pbac/GeologicMaps/E_W_regional.pdf)**

The cities of Pullman and Moscow and the two universities are the major water purveyors in the BASIN. Most of the water is pumped from wells penetrating various depths of the basalt aquifers. Primary uses of the water are municipal, institutional, and private; essentially no ground water in the area is used for agricultural irrigation. Primary land use in the BASIN is dry-land farming of small grains, peas, and lentils. The high water storage capacity of the loess soils is sufficient to retain enough precipitation from the fall and winter months to carry most of the crops through the drier parts of the year. In the western part of the BASIN where the precipitation is less, successful dry land farming includes rotating the fields into fallow to allow sufficient moisture carryover from one year to the next. Prior to development, beginning in the 1800's, most of the BASIN was natural grassland and little was woodland.

Annual precipitation in the BASIN ranges from 15 inches along the Snake River to about 50 inches at the top of Moscow Mountain at the northeast corner. Precipitation averages 22 inches annually for Pullman and 24 inches annually for Moscow. Most of the precipitation in the area falls in the period November to June. In general, precipitation in the BASIN increases eastward and with increased elevation. Streams in the area flow generally to the west and northwest. Ground water in the BASIN is believed to flow primarily westward toward the Snake River.

Evidence of lower aquifer discharge into the Snake River canyon has not been documented. The current conceptual flow model is one of flow to the west and northwest.

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1.5 General Statement of Ground Water Concerns

Water levels in many wells in the Pullman and Moscow areas have declined since their first use. At times, water level declines have averaged one to two feet per year and have been greatest near the city centers. Concerns over the water declines have motivated a number of geologic and ground water modeling studies for the BASIN, as well as an evaluation of possible alternative water supplies. Water quality issues are not a major concern in the BASIN, because ground water quality is excellent and meets all federal drinking water standards.

Since the inception of the 1992 PLAN, water level declines in the lower aquifer have averaged less than 1 foot per year. The reader is referred to the 2013 Palouse Ground Water Basin Annual Water Use Report (found at http://www.webpages.uidaho.edu/pbac) for more detail. Though surface water quality has become more of a concern since 1992, the quality of the ground water in the BASIN remains high.

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2. HISTORY

2.1 General

Prior to the turn of the *(20th)* century, free flowing artesian wells were observed in both Pullman and Moscow. Water usage over the years has caused water levels in both the Pullman and Moscow areas to decline, at rates of one to two feet per year (Figure 9, see Chapter Section 5.4). Originally it was believed that Pullman and Moscow obtained water from different aquifers, due to differences in the water chemistries. As Moscow city wells were drilled deeper during the 1960's, it became apparent that both cities are served by a larger common ground water system. Water levels under both cities continued to decline, and several geologic and ground water modeling studies have investigated the dependability of the Pullman-Moscow aquifers for meeting future water use needs. Studies also have been made of possible alternative water sources for the area. Although the ENTITIES have had to drill deeper wells over time to obtain water, costs of obtaining and providing water in the area are lower than in many areas of the nation.

Since 1992, total pumping by the major entities (Pullman, Moscow, WSU, UI, Colfax, Palouse) has declined 15.5%. Water levels have not stabilized, however, the rate of water level decline between 1992 and 2011 has declined to less than 1 foot per year (-0.6 ft/yr for the 2007-2013 time period). Updated pumping and water level information is contained in the 2013 PBAC Annual Water Use Report (http://www.webpages.uidaho.edu/pbac/Annual_Report/Final_PBAC_Annual_Report_2013_hi_res.pdf). A recent study by Moran (http://www.webpages.uidaho.edu/pbac/Presentations/2011/110915_Moran_WL_Pumping_Relationships_report.pdf) concludes current recharge to and discharge from the lower aquifer are nearly equal.

Numerous additional studies have been conducted, and several alternative water sources have been or are currently being investigated. In 2011 the Palouse Ground Water Basin Framework Project compiled a list of nearly 400 documents related to work done in the Basin over time (http://www.webpages.uidaho.edu/pbac/pubs/130419_Framework_Database_Bibliography.pdf). In addition to the compilation task, the Framework project reviewed and synthesized the available documents, identified areas where gaps exist in our current understanding, and recommended projects to help eliminate those gaps.

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2.2 Geologic Studies

A number of geologic and geohydrologic studies have been conducted over parts or all of the BASIN. Exhaustive lists of previous investigations can be found in Ross (1965), Smoot and Ralston (1987), and Lum, et al. (1990). Ten Eyck and Warnick (1984) have provided a comprehensive annotated catalog of reports and studies pertinent to the Pullman-Moscow water supply.

Russell (1897) reported flowing artesian wells in Pullman and Moscow in the 1890's. Foxworthy and Washburn (1963) and Walters and Glancy (1969) provided significant geohydrologic studies of the area. Foxworthy and Washburn (1963), Ross (1965), Ringe (1968), Brown (1976), and Cotton (1982) have provided discussions of the geology of the BASIN. Klein (1987) and Bockius (1985) provided information on the basalt depths and basalt/granite interface. These and other studies of the BASIN have resulted in a general understanding of the ground water system as discussed in Sections 1.4 and 5.2, and used in more recent studies of Smoot and Ralston (1987) and Lum, et al. (1990).

Since 1992, 7.5 minute quadrangle geologic maps have been developed covering much of the Basin (Bush et al, see Framework Project bibliography). Recent research points toward a geologic conceptual model consisting of a number of sub-basins. These sub-basins appear to be hydraulically connected over the long term (similar long term water level declines), but somewhat isolated from each other in terms of short term water level responses to cross-basin pumping. Although the general understanding of the ground water system has advanced, questions remain as to the overall extent of the Basin, as well as locations and mechanisms of recharge and natural discharge.

2.3 Model Studies

Ground water studies of the BASIN have been conducted to provide a better understanding of the ground water system and to evaluate or predict future ground water levels. Jones and Ross (1972) modeled the ground water system of Moscow. Their results suggested that pumping in Moscow area wells was less than the recharge to the area, and that ground water should be able to sustain the needs of Moscow beyond the year 2000. Jones and Ross also suggested that the use of artificial recharge through recharge wells may be feasible for the upper portion of the Moscow area aquifers.

Barker (1979) used a two-dimensional ground water model to study the ground water system supplying both Pullman and Moscow. Barker considered an area of roughly 8-mile radius centered around Pullman. He modeled the subsurface aquifers as a single basalt system. His model underestimated water level declines for the area; water levels estimated

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for the year 2000 were reached by 1985.

Smoot and Ralston (1987) and Lum, et al. (1990), studied the BASIN using updated geologic information and a more complex, three-dimensional ground water model. The BASIN boundaries used by Barker were expanded to include the entire management BASIN shown in Figure 1 as well as a portion of the main Palouse River between Potlatch, Idaho and Colfax, Washington. The basalt formations were divided into an upper Wanapum basalt layer and a lower Grande Rhonde basalt. The BASIN was divided horizontally into squares 1/2-mile on a side. In the vertical direction, the BASIN was divided into 3 layers: one layer representing the loess soil profile, and two layers representing the basalt formations.

Results of the model studies by Smoot and Ralston (1987) and Lum, et al. (1990), suggest that the continuation of water level declines would depend on the rate of usage of the aquifers. These model studies suggest "*that ground water levels would stop declining if ground water pumpage were to stabilize at a constant level. However, ground water levels will continue to decline in the foreseeable future as long as ground water pumpage continues to increase*" [Lum, et al., (1990) page 1]. Both studies also suggest that the present rate of water withdrawal is somewhat less than the rate at which the BASIN is recharged.

The Framework project review of past models concluded that, in light of actual water level declines experienced since 1990, both the Barker and Lum models under predicted water level declines. Neither model would have predicted continued water level decline in response to the 15.5% reduction in pumping (since 1992) the BASIN has experienced.

2.4 Alternative Water Sources (Imported Water)

Water level declines in the BASIN have motivated studies of alternative sources of water for the area. Ebasco Services (1958) suggested that supplemental water supplies could be obtained using surface storage reservoirs in the BASIN. A number of water transfer schemes bringing water from outside the BASIN were also considered, ie., diversion from the Potlatch River near Julietta; diversion from the Clearwater River upstream from Lewiston; and diversion from the North Fork of the Palouse River. Stevens, et al. (1970) proposed six potential water supply sources: two diversion and storage schemes using the North Fork of the Palouse River; two schemes utilizing water from the Potlatch River; a scheme utilizing water pumped from Dworshak Reservoir; and a scheme of pumping water from Lower Granite Reservoir near Wawawai. Stevens, et al. (1973) also reported on a reconnaissance level feasibility study of a combined pumped-storage municipal water supply project near Union Flat and Almota Creeks.

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Some of the above schemes as well as a number of proposed flood control projects for the Palouse River Basin are summarized in a recent reconnaissance study by the U.S. Corps of Engineers (1989). The proposed alternatives identified by the corps are shown in Figure 4. Ground water and municipal water supply concerns in the BASIN have not been severe enough to motivate further study of these alternatives as of spring 1990.

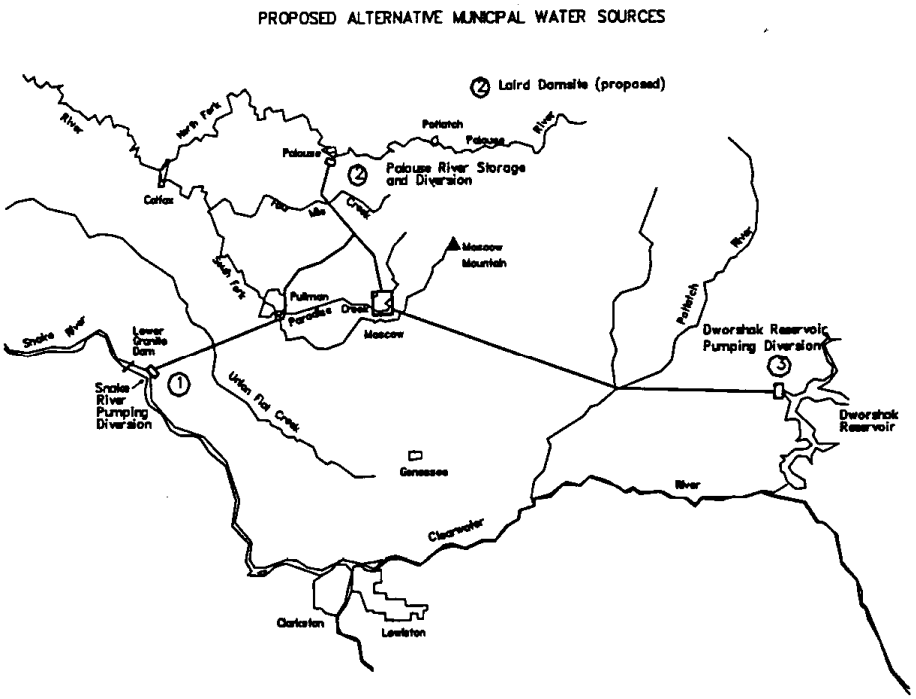

Figure 4. Proposed Municipal water Supply Alternatives (as identified by the Corps of Engineers, 1989).

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Since 1992, several studies of areas with potential for enhanced recharge have been conducted. In the Kamiak Gap area and along the margin of the Basin east of Moscow near Paradise Creek and the South Fork of the Palouse River, studies found that conditions were such that at the sites investigated the prevalence of clay layers in the subsurface would limit any enhanced recharge. Recent(2012) research by Moxley (http://www.webpages.uidaho.edu/pbac/Theses/Moxley_Stable_Isotope_Hydrological_Tracers_of_Aquifer_Recharge_2012.pdf) suggests recharge to the aquifer from the South Fork of the Palouse River between Pullman and Albion, and another study by Candel (2014) (http://www.webpages.uidaho.edu/pbac/Theses/Candel_Identifying_Hydrologic_Recharge_Connections_Moscow_Subbasin.pdf)found reports evidence of recharge to several wells near the forested margin of the basin along the Moscow Mountain front.

As a component of their 2008 Water Systems Plan Update, the City of Pullman investigated the feasibility of utilizing aquifer storage and recovery (ASR) to divert water from the South Fork of the Palouse River during high flow periods and store it in the subsurface. The City of Moscow is currently conducting a surface water reservoir feasibility study evaluating the potential to capture and store (or directly use) surface water from a number of different sources.

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3. AUTHORITY

3.1 General

The state governments of Washington and Idaho are charged with the administration of ground and surface water rights within their boundaries. Ground and surface waters are considered public property, and are "appropriated" in the form of "water rights". In the states of Washington and Idaho, water rights are obtained and protected in terms of a "prior appropriation" doctrine, such that a right that is "first in time" is "first in right". Water rights are generally established (through an application process) by diverting water that has not been previously appropriated and putting it to a beneficial use. In principle, the prior appropriation doctrine mandates that in periods or conditions of water shortage, "junior" (in time) water rights holder's water supplies are reduced or terminated to protect the "senior" rights.

The appropriation of ground water is generally limited to the amount of natural recharge to the BASIN or aquifers. However, the natural recharge to a ground water system is often difficult or impossible to determine. As a result, a recharge criterion is rarely satisfactory for actually limiting ground water use. Instead, water use is generally limited on the basis of feasible or economic pumping lift and potential impairment to present or senior users. In conditions of over-appropriation of ground or surface water, junior water rights are generally regulated in favor of valid senior water rights.

In both states, water is the property of the people of the state, and can be appropriated for beneficial use. The earliest, or senior, appropriators enjoy priority over later, or junior appropriators. In times of shortage, junior appropriators' use is curtailed to satisfy senior users.

3.2 Administration Under the Washington Code

In Washington, ground water use is limited to provide a "safe sustained yield" to existing water rights. The safe sustained yield criterion includes the protection of economic or feasible pumping lift and protection against impairment of present or senior users.

Washington code also allows for the designation of "Ground Water Management Areas" and "subareas". Ground Water Management Areas may be designated in areas of existing or potential water supply problems (either quantity or quality). The Ground Water Management Area Program in Washington is designed to promote ground water management at the local level with assistance (both administrative and financial) from the state.

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Codes specific to ground water use in Washington are listed below.

- **Appropriation doctrine for ground water--Revised Code of Washington (RCW) 90.44.010.**
- **Administration of Ground Water Rights--RCW 90.44 and Washington Administrative Code (WAC) 173-100.050.**
- **Ground water use limited so as to maintain a safe sustained yield·· RCW 90.44.130.**
- **Prevention of ground water waste--RCW 90.44.110.**
- **Impairment of senior users--WAC I73.I50.050.**
- **Definition of impairment--WAC 173.150.060.**
- **Determination of reasonable or feasible pumping lift—WAC 173.150.050.**
- **Adjudication of ground water rights--RCW 90.03.110 and 90.44.220.**
- **Ground Water Management Areas and Subareas--RCW 90.44.180 and 90.44.400. ·**
- **Ground Water Management Areas and Programs-—WAC 173-100.050.**
- **Protection of upper aquifer zones--WAC 173-154.**
- **Protection of withdrawal facilities associated with ground water rights--WAC 173-150.**
- **Well drillers licensing and well construction programs--RCW 18.104.**

In Washington, generally, new rights must not impair present and senior users, and must meet a public interest and availability test. Ground water use in a basin can be limited at an amount that preserves a "safe sustaining yield" to existing water rights. The safe sustained yield criterion may include the protection of economic or feasible pumping lift for "qualifying works" in an aquifer system.

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level with assistance (both administrative and financial) from the state. No formal Ground Water Management Area has been established in the Palouse Basin.

Washington's Watershed Planning Act convened and funded local organizations within a watershed to engage in a process to outline water use in that area. The Palouse Basin lies within Water Resource Inventory Area (WRIA) 34, and such a plan was prepared, finalized in 2007, and an implementation plan finalized in 2009.

Well construction in Washington must be done by licensed well drillers and meet minimum standards. Licensing helps meet construction standards designed to protect ground water quality and availability.

2003 changes to the Washington Water Code grant municipalities certain rights designed to provide certainty to growing communities. These are codified in sections of the main water code.

Laws and Rules specific to ground water use in Washington are listed below.

Laws (Revised Code of Washington)

- *Washington Water Code RCW 90.03*
  - *Adjudication of ground water rights RCW 90.03.110 and 90.44.220.*
- *Regulation of Public Ground Water-- RCW 90.44.*
  - *Permit required RCW 90.44.050*
  - *Certificate of vested rights RCW 90.44.090*
  - *Changes or amendments to existing certificates RCW 90.44.100*
  - *Priorities as between appropriators RCW 90.44.130*
  - *Ground Water Management Areas RCW 90.44.400*
- *Water Resources Act RCW 90.54*
- *Watershed Planning RCW 90.82*
- *Well drillers licensing and well construction programs RCW 18.104.*

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Rules (Washington Administrative Code)

- *Protection of Withdrawl Facilities Associated with Ground Water Rights (WAC 173-150)*
  - *Definition of qualifying works WAC 173-150-030*
  - *Impairment of senior users WAC I73-I50-050*
  - *Definition of impairment WAC 173-150-060.*
  - *Determination of reasonable or feasible pumping lift—WAC 173-150-050.*
- *Ground Water Management Areas and Programs WAC 173-100*
- *Protection of upper aquifer zones WAC 173-154*
- *Minimum Standards for Construction and Maintenance of Wells WAC 173-160*
- *Regulation and Licensing of Well Construction Contractors and Operators WAC 173-162*

3.3 Administration under the Idaho Code

Ground water in Idaho is managed using three principle criteria: 1) Ground water development or use must not exceed the average annual recharge to the basin; 2) existing ground water users must be protected in regard to reasonable pumping levels; and 3) a reasonable enforcement of relative priorities among users must not block full economic development of a ground water basin. In Idaho, the Director of Water Resources may restrict any water right application based on the above criteria.

As to criterion 3) in the paragraph above, Idaho Statute 42-226 states that "while the doctrine of 'first in time is first in right' is recognized, a reasonable exercise [emphasis added] of this right shall not block full economic development of underground water resources."

Idaho code also allows for the designation of Ground Water Management Areas. A Critical Ground Water Area may be designated wherever or whenever the ground water supply is insufficient to provide for irrigation or other uses at the present rate of withdrawal. In a Critical Ground Water Area, the Director of Water Resources may deny future water right applications as well as terminate or reduce present use, in accordance with priority dates. Ground Water Management Areas may be designated in areas believed to be approaching the "Critical" stage. In such areas the Director may also deny future permit applications and reduce present usage. Ground Water Management Area designation can be brought about by a decree of the Director, while Critical Ground Water Area designation involves a public hearing procedure.

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Groundwater management designation can be brought about by public notice and order of the Director. For both CGWAs and GWMAs, the Director may approve a management plan for managing the effects of groundwater withdrawals on the aquifer and on hydraulically connected sources of water.

Codes specific to ground water use in Idaho are listed below.

- **Appropriation doctrine for ground water--Idaho Code (IC) 42-103.**
- **Administration of ground water--IC 42-201.**
- **Ground water use limitation in regard to natural recharge--IC 42-237A.**
- **Prevention of ground water waste--IC 42-237a.**
- **Protection of reasonable pumping levels--IC 42-226.**
- **Impairment of senior users--IC 42-226.**
- **Adjudication of water rights--IC 42-1406. A**
  - *Northern Idaho Adjudication--IC 42-1406B*
- **Ground Water Management Areas--IC 42-233b.**
- **Critical Ground Water Areas--IC *42-223a and* 42-233b.**
- **Recharge Districts--IC 42-4201A and 42-4202.**

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4. THE PULLMAN-MOSCOW WATER RESOURCES COMMITTEE

4.1 General

A Pullman-Moscow Water Resources Committee represented by Pullman, Moscow, University of Idaho, and Washington State University was formed in 1967 to undertake a cooperative effort in addressing the water supply problems being faced by the ENTITIES. Since its formation, the COMMITTEE has supported a number of studies of the local ground water resource and alternative sources of water for the ENTITIES. The COMMITTEE has worked in cooperation with the Washington Department of Ecology, the Idaho Department of Water Resources, the U.S. Geological Survey, and the U.S. Army Corps of Engineers on numerous water issues. The COMMITTEE has also retained various consultants on water supply issues or concerns. In 1988, membership of the COMMITTEE was extended to Whitman and Latah Counties. In 1989, a Resolution of Understanding was developed among the COMMITTEE and the State agencies whereby the COMMITTEE would, with assistance of the two States, develop the PLAN for the BASIN.

Member ENTITIES are outlined in Section 1.2. Representatives of the ENTITIES at the time of plan adoption are listed in Appendix E.

The City of Colfax was added as a formal member of the (by now renamed) Palouse Basin Aquifer Committee (PBAC) as a signatory to a 2003 PBAC Interagency Agreement.

Costs of operating the COMMITTEE are borne by the ENTITIES and include salaries and consultant fees, clerical help, research and publishing costs, and other expenses. Costs are divided between the ENTITIES according to shares. The two cities and two universities have two shares each, while each of the counties has one share, for a total of ten shares.

The City of Colfax has one share, for a total of 11 shares. The City of Palouse, although not a formal PBAC member, has (since 2007) also contributed funding toward the administration of the COMMITTEE

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4.2 Intergovernmental Agreements

Several intergovernmental agreements have been executed by the ENTITIES for purposes such as retaining consultants, determining operating budgets, and defining membership. Specific purposes of the Intergovernmental Agreement of 1988 (which superseded previous agreements) are listed below:

1. Coordinate planning to assure a long-range supply of water to the ENTITIES.

2. Update and expand the data base already begun during earlier studies.

3. Encourage conservation in order to extend the useful life of the aquifers.

4. Investigate alternative sources of water which can meet the incremental increases in demand of the region.

5. Educate and advise the ENTITIES and the public on the quality and quantity of the public water supplies serving Pullman, Moscow, and the surrounding area.

6. Act as a liaison between the ENTITIES on water resource concerns.

7. Promote communication between the ENTITIES, the Washington State Department of Ecology, and the Idaho Department of Water Resources (see Appendix for full document).

A PBAC Interagency Agreement (which superceded previous agreements) was approved by the (7) member entities in June 2003. Full text of the agreement is provided in Appendix H. The agreement outlined the following PBAC duties:

1. *Coordinate planning to assure a long-range supply of water to the PARTIES.*
2. *Maintain and continue to update and expand the databases developed through previous studies and data acquisition efforts.*
3. *Encourage conservation to promote the life of the Palouse Basin Aquifer.*
4. *Investigate supplemental and/or alternate sources of water.*
5. *Educate and advise PARTIES on the quantity and quality of the public water supply within the Palouse Basin Aquifer*
6. *Act as liaison between the PARTIES on water resource concerns.*
7. *Promote communication between the PARTIES, the Washington Department of Ecology, and the Idaho Department of Water Resources.*
8. *Perform such other duties or functions as may be agreed to by the PARTIES in writing and made addendum to this agreement.*

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In 1999 PBAC funded a research effort (the OK project, for Osiensky and Keller, the principal investigators) for a three year term to better characterize the ground water resource. At the end of the project, PBAC continued to annually fund research projects. In 2007 a resolution was passed to formalize annual research contributions from the four largest pumpers (Pullman, Moscow, WSU, UI). Also in 2007 a resolution was passed increasing the annual ENTITY assessments for administrative management of the committee. The 2003 agreement and 2007 resolutions are included in Appendix H.

4.3 Role of the Executive Secretary

In 1988 the paid position of an Executive Secretary for the COMMITTEE was established. Specific duties of the Executive Secretary are summarized below:

1. To maintain a data base of information on the BASIN ground and surface waters, including pumping records and copies of reports written on the BASIN over the past 100 years.

2. To serve as a liaison between the two state water agencies and the COMMITTEE.

3. To serve as an advisor to the COMMITTEE concerning technical aspects of proposed future studies.

4. To provide continuity to the COMMITTEE.

5. Perform administrative services of the COMMITTEE including minutes and mailings.

6. Aid the COMMITTEE in formulating an action plan for the ENTITIES (see Appendix for full document).

In 2005 PBAC created two separate positions to replace the single previous role of Executive Secretary: Executive Manager and Technical Advisor. As of 2014, the Technical Advisor position is vacant and its duties have been assumed by the Executive Manager.

The duties of the Executive Manager include:

- *Serves as the PBAC Manager, provides general overview of all activities of PBAC and keeps PBAC so advised in a timely, brief, and concise manner, and makes recommendations for action by PBAC.*
- *Prepares agendas and minutes for PBAC meetings, coordinates with the Chairperson in conducting meetings.*

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- *Prepares, administers, and coordinates the budget and invoicing for PBAC. Provides related reports to PBAC on a monthly basis.*
- *Compiles and publishes the PBAC annual report summarizing pertinent water data and project activities.*
- *Prepare and make presentations to local groups and organizations to further understanding of the challenges facing PBAC and the proposed solutions.*
- *Maintains PBAC web site.*
- *Functions as the overall project manager for all research, construction, and special projects.*
- *Maintains an office presence with a phone and email access. Acts as a depository for recent reports, theses and other serious research pertaining to the Palouse Basin.*
- *Prepares pertinent news releases and distributes to media as authorized by the PBAC.*
- *Serves as liaison between PBAC and water regulatory agencies of Idaho and Washington and other agencies/entities.*

The duties of the Technical Advisor include:

- *Serves as the PBAC technical advisor, providing technical information and recommendations to PBAC and serving as the technical interface between PBAC and the scientific community.*
- *Provides technical oversight for all research, construction, and special projects. Provides technical guidance for all projects, representing the interests of PBAC. Provides technical support to the Executive Manager in preparing project reports.*
- *Provide technical support to the Executive Manager in preparing special project agreements, Memorandums of Understanding, Rights of Entry, permits, research agreements, consulting contracts, construction contracts, purchase agreements, and other such agreements and documents.*
- *Makes projections concerning needed research and proposed solutions to meet PBAC goals of stabilizing the deep aquifer system water levels and ensuring a dependable, long-term, quality water supply for the Palouse Basin.*
- *Maintains and facilitates the use of the collective sum of research on the Palouse Basin.*
- *Maintains and refines the existing databases for pumping and water levels for the Palouse Basin aquifer systems.*
- *Maintains the collection of well logs and other technical data owned by PBAC.*
- *Provides technical support to the Executive Manager in updating the ground Water Management Plan and Annual Report.*

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4.4 Resolution of Understanding

Specific Objectives agreed upon in the Resolution of Understanding of 1989 among the ENTITIES and the state water agencies are listed below:

1. The COMMITTEE will pursue funding to conduct and promote studies and research relative to improving knowledge of the water resources of the BASIN.

2. The COMMITTEE will prepare a management plan for the BASIN in cooperation with the two state agency parties, The Washington State Department of Ecology and the Idaho State Department of Water Resources, which will address both water quantity and water quality concerns.

3. The COMMITTEE will prepare, as an initial step in the development of the management plan a principal work plan and time schedule which will outline the concerns and issues to be studied. This work plan will indicate the party or parties with responsibilities for each task and an estimated schedule for completion of each task.

4. The COMMITTEE will encourage public involvement in the development of the PLAN through public hearings and education programs.

5. The COMMITTEE will facilitate the implementation of the PLAN in concert with the member ENTITIES (see Appendix for full document).

4.5 Committee Role — Past, Present, and Future

The COMMITTEE has provided a coordinated effort among the ENTITIES in addressing water supply concerns and issues for the BASIN. This effort has resulted in a number of studies being performed in cooperation with other government agencies and private consultants. This effort has also resulted in the charge for the COMMITTEE to develop the PLAN. The COMMITTEE will continue to coordinate cooperative management of the BASIN ground water resources, and act as an advisory and oversight body in the implementation of the PLAN. The COMMITTEE's role pursuant to the PLAN is discussed in greater detail in Section 6.3.

As of June 2014, the PLAN is being reviewed and information is being updated by the COMMITTEE and its ex oficio WDOE and IDWR members. To date, COMMITTEE rolls remain much as they were in 1992: coordination of planning/management , education, communication, conservation encouragement, maintenance of existing databases, pumping and water level monitoring, and advisory/liason between member ENTITIES and administrative officials.

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5. GENERAL BASIN CHARACTERISTICS

5.1 General

For effective ground water management, it is essential that water managers, water users, decision makers, and the general public have a basic understanding of the BASIN aquifers, as well as the general response of the aquifers to pumping or usage. In this chapter, basic characteristics of the BASIN aquifers are explained, as well as observed responses of the aquifers to pumpage and recharge. Also included in this chapter are historical and current information on the BASIN ground water system.

5.2 Ground Water Flow and Storage in the Pullman-Moscow Basin

Ground water in the BASIN originates as precipitation in the form of rain or snow (Figure 5). Some of the precipitation runs off directly and leaves the BASIN as stream flow. Precipitation that does not run off directly infiltrates into the soil, and may move downward, laterally, or may be stored in the soil for consumptive use by surface vegetation. Water that is not used consumptively by plant cover moves further downward and may form saturated zones in the soil. From the soil water table, the water may continue to move downward toward the basalt formations or laterally toward streams in the area. Streams that lie above the water tables may also lose water into the ground water system. Wells can be drilled into the soil water tables, but generally yield relatively small amounts of water due to the low soil permeability.

Ground water that reaches the basalts generally is stored in or travels through voids in the basalt and inter-lying sedimentary deposits. These voids may be in the form of cracks and joints in the basalts or spacing around individual grains in the sedimentary deposits. Model studies of the BASIN supported by field investigations suggest that the general direction of ground water flow is downward and toward the west. Some of the ground water near the surface of the basalt formations may move into streams in the BASIN. Ground water that is deeper in the aquifers moves toward and eventually discharges into the Snake River, seeps out along the Snake River canyon walls, or moves farther westward toward the Columbia basin. The movement of ground water toward the west and downward in the aquifers is the result of a potential or hydraulic gradient in those directions. Water levels in wells generally decline or are deeper in the aquifers to the west.

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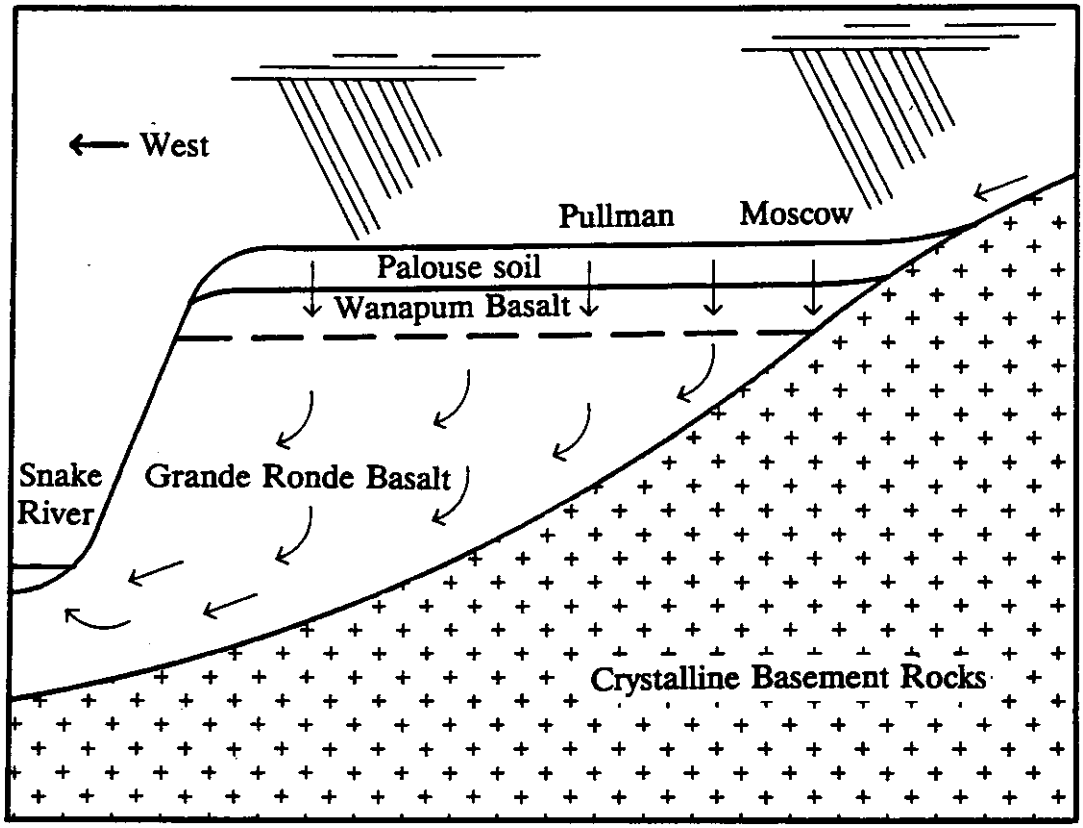

Cross-section not to scale

Figure 5 . Conceptual Representation of Surface and Ground Water Flow in the Pullman-Moscow Basin.

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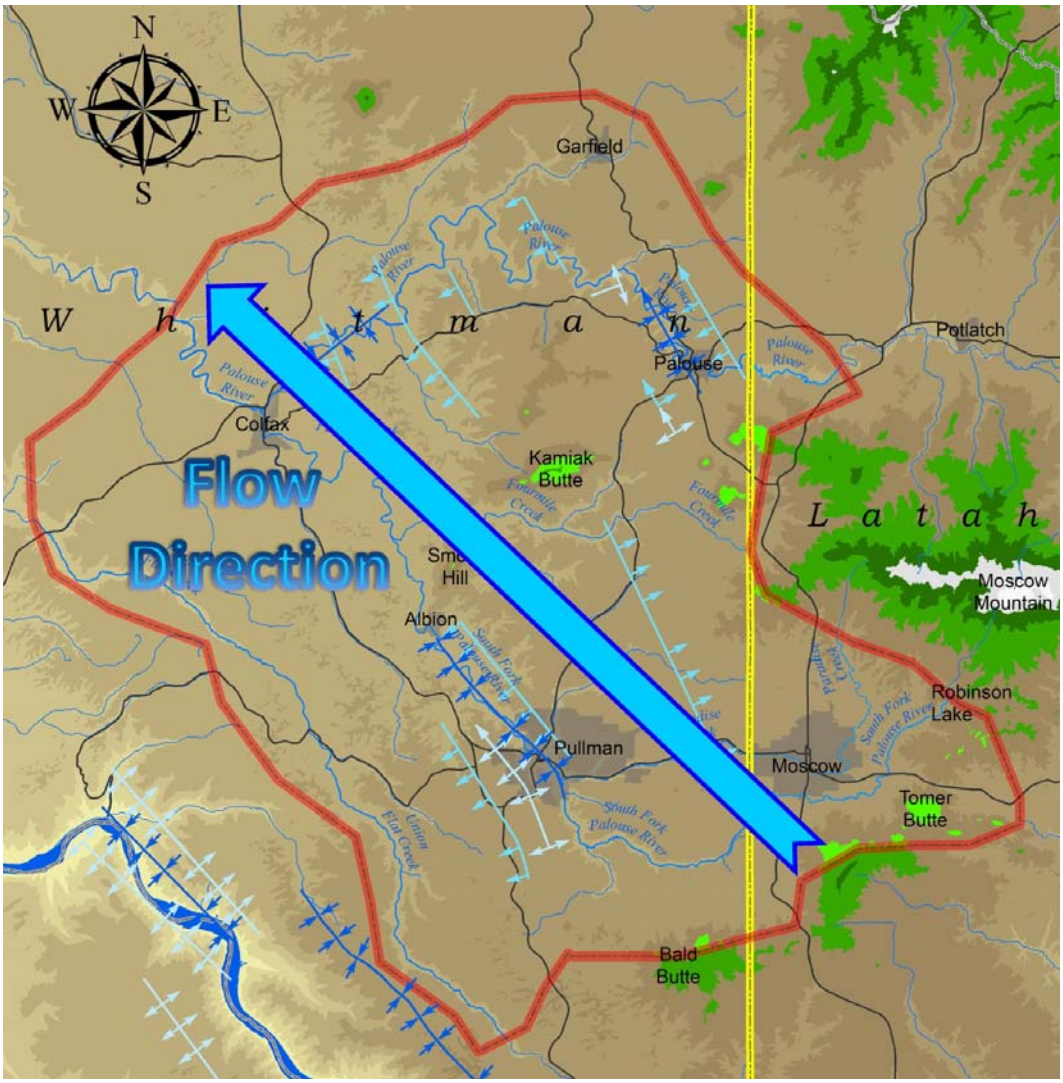
Current conceptual models include the presence of a series of southeast to northwest trending structural features that drive ground water flow in the lower aquifer toward the northwest (see Updated Figure 5). There may be a structural barrier to flow toward the Snake River. Analyses of water surfacing in the canyon walls of the Snake River indicate the water(where sampled) possesses an upper aquifer signature.



Updated **Figure 5. Conceptual Representation Ground Water Flow Direction in the lower aquifer in the Pullman-Moscow Basin**

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The basalt flows terminate near the eastern edge of the BASIN east of Moscow. Where there is no basalt, ground water is believed to flow along the westward sloping granitic basement formation and enter the basalt aquifers at the basalt-basement interface (Figure 5). Exact ground water flow paths and travel times in the BASIN are not known. In the Moscow area, the shallow Wanapum Basalt layer plays a more important role in the ground water system. Effective ground water management in the Moscow area will need to consider the somewhat distinct (and yet interconnected) behavior of the upper Wanapum and deeper Grande Rhonde Basalt zones of the aquifers.

Research conducted in 2006 concluded that (where studied) extensive clay horizons at the basalt-basement interface (the eastern margins of the basin where the lava flows run up against the granite or quartzite highlands) hinder recharge to the (upper) basalt aquifers. Compartmentalization on short term time scales (hours-days) appears to be present within both the upper Wanapum and lower Grande Ronde aquifers. At longer time scales (months-years) the lower aquifer compartments exhibit similar water level trends, while the upper aquifer compartments exhibit dissimilar trends. During the summer of 2012, large water level declines (on the order of 10 feet) were experienced in the upper aquifer compartment surrounding Moscow wells #2 and #3. It is likely that, even though there appears to be seasonal recharge to this compartment of the upper aquifer, pumping rates similar to those of the summer of 2012 in this compartment cannot be sustained over the long term.

5.3 Ground Water Response to Usage

Under natural conditions, a balance exists between the amount of ground water being discharged from a basin (in this case to the Snake River, streams in the BASIN, or toward the Columbia Basin), and the recharge or amount of water coming into the BASIN in the form of precipitation or percolation from streams or other water bodies. When ground water is pumped (or removed artificially) from a ground water system, the natural balance is interrupted.

When water is pumped from a well, the water level, or corresponding water pressure near the well, is lowered, or drawn down (Figure 6). This draw-down provides the pressure gradient that causes the ground water to flow toward and into the well. Draw-down due to pumping is greatest near the pumping center and decreases outward. As pumping from the well continues, the extent of the lowered water levels expands, forming a cone of depression around the well or pumping center. This cone of depression expands until a new equilibrium condition is reached. The new equilibrium condition generally results in:

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• a decrease in natural discharge from the BASIN;

• a decrease in the amount of ground water stored in the BASIN; and

• an increase in BASIN recharge.

In the BASIN, pumping withdrawals may result in decreased discharge to streams in the area, decreased discharge to the Snake River, and decreased ground water flow westward toward the Columbia Basin. Since surface water usage in the BASIN is minimal, such changes in discharge are not of primary concern.

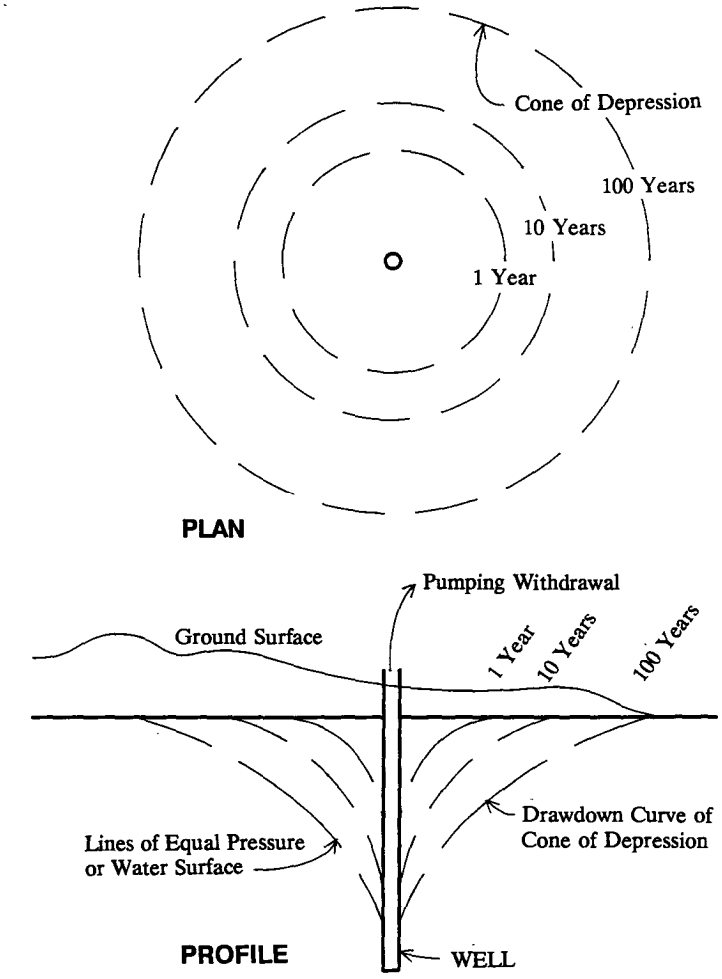

Figure 6. Conceptual Representation of Draw-down of water Levels Over Time Around an Area of Constant Pumping.

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As noted in the section 5.2 update, the current conceptual model postulates ground water flow primarily to the northwest and not to the Snake River.

It is now recognized that decreases in discharge to streams associated with ground water use does potentially pose a concern. The Washington State Water Code (90.03 RCW) section 247 addresses minimum stream flows in Washington. The Watershed Planning Act (90.82 RCW) enables local planning groups to recommend instream flow rules to the Washington Department of Ecology for rule-making. In the Palouse Watershed Planning Unit (WRIA-34), preliminary work was completed in 2005 to develop instream flow recommendations for the North Fork of the Palouse River. The other surface water bodies inside the BASIN have not yet been addressed in terms of water quantity, but ongoing water quality improvement project activities (TMDL) do consider the impact of ground water discharge upon surface water quality.

The cone of depression caused by pumping always lowers the ground water levels or pressures around the well, regardless of the amount of recharge. Some ground water storage will always be lost with pumping. In areas where there are several wells operating at significant withdrawal rates, for example in or around a municipality, the effects of pumping several wells will be similar to that of a single well, ie., water levels will be drawn down throughout and around the area containing the wells. The area containing and surrounding the wells will always experience some water level decline. In the BASIN this effect can be seen by the reduced water levels in and around the two major cities, with the declines decreasing outward. Ground water levels farthest from the major pumping centers have experienced the smallest declines, and in some places may approximate pre-development conditions.

In some basins, a lowering of the ground water table can actually cause a greater amount of water to be recharged to the basin as excess surface water is diverted into the ground water system by the water level change. This effect, however, does not appear to play a significant role in the BASIN. Studies are presently underway at the University of Idaho in regard to ground water recharge from area streams (see Ralston and Li, 1989).

Li (1991) reported the presence of ground water – surface water interactions between the upper aquifer sediments/basalt and Paradise Creek in the vicinity of the UI Ground Water Research Lab on the west end of the UI campus. Hopster (2003) reported the sources of springs studied on Union Flat Creek and the South Fork of the Palouse River were mainly from perched water tables or the sediment-basalt contacts rather than from within the basalts. She also used recession analyses to conclude the majority of discharge to the streams (Union Flat Creek, South Fork of the Palouse River, Fourmile Creek) is derived from the basalts. Sinclair and Kardouni (2009) used modeling studies to conclude ground water – surface water

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interactions exist not only on Paradise Creek, but also on the South Fork of the Palouse River, with the highest quantity of surface water discharge occurring in a stretch downstream of Pullman. Additional research by Moxley (2012) also identified ground water – surface water interactions between Pullman and Albion on the South Fork of the Palouse River.

The response of a ground water system to pumping is more complicated than diversion of surface waters. The effects of surface water diversions are generally observed immediately and generally occur only in the downstream direction. The effects of ground water withdrawals, on the other hand, are not confined to a single direction. In fact, pumping may affect water levels in a basin in all directions. Furthermore, the time required for pumping effects to reach various points in a ground water system often takes years. In this regard, ground water management may be difficult, and model studies can play an important role.

As long as the discharge (both natural and pumping) from a basin is less than the recharge, water level declines (the time-lag effect notwithstanding) will be roughly proportional to the pumping amount. When the discharge from a basin exceeds the natural recharge, ground water levels will continue to decline, and ground water will be mined or depleted, even when pumping is held constant. Careful monitoring and analysis of ground water levels in an area are important to assure that such a condition does not develop.

Recent modeling studies of the Pullman-Moscow ground water basin [Lum et al. (1990)] suggest that mining is not occurring and that declining water levels are the result of increased pumping rates. This result needs to be further investigated by additional model studies.

Pumping rates have remained steady or declined since 1992. Pumping in 2013 was 15.5% less than in 1992. The Lum et al model would have predicted water level stabilization by 2013, but water levels have continued to decline. The rate of decline has decreased with time: 1970 -1991 averaged 1.38 feet/yr, 1992- 2013 averaged 0.9 feet/yr, and the rate of decline between 2006 and 2013 averaged 0.6 ft/yr.

5.4 Present Basin Conditions

Present (1990) water levels in principal wells in the BASIN are at an elevation of about 2260 feet (above mean sea level) for Pullman, and 2250 feet for Moscow. Due to topographical differences between and within the cities, water levels are approximately 75 to 250 feet below the land surface in the Pullman/Washington State University wells, and some 300 feet below the surface in the Moscow/University of Idaho wells. Figure 7 shows the historical combined pumping of Pullman, Moscow, Washington State University, and the University of Idaho. Pumping volumes are averaged over 5-year periods and, therefore, do not directly reflect year-to-year variations. Figure 8 shows more recent pumping withdrawals for the

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BASIN. Withdrawals by the city of Pullman are combined with Washington State University; Moscow withdrawals are combined with those of the University of Idaho. As the figures indicate, pumping withdrawals have generally stabilized for both communities over the last 15 years.

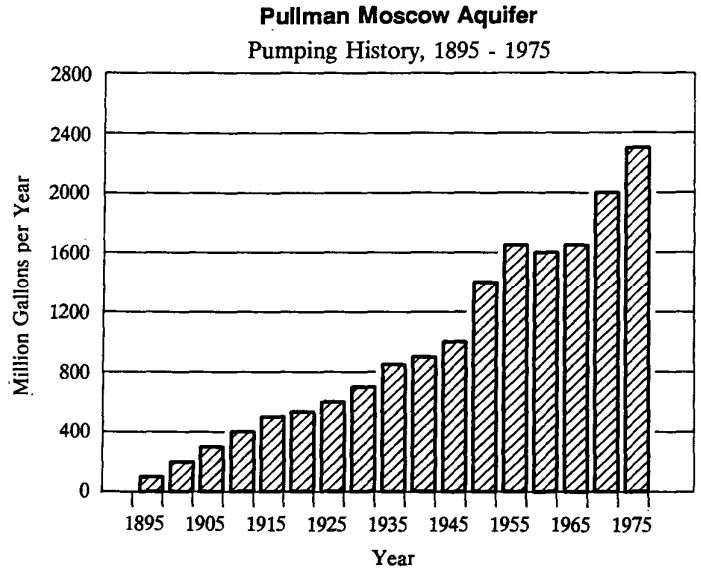

Figure 7. Historical Pumping Withdrawals in the Pullman-Moscow Area (Data from Lum, at al., 1990, Figure 9).

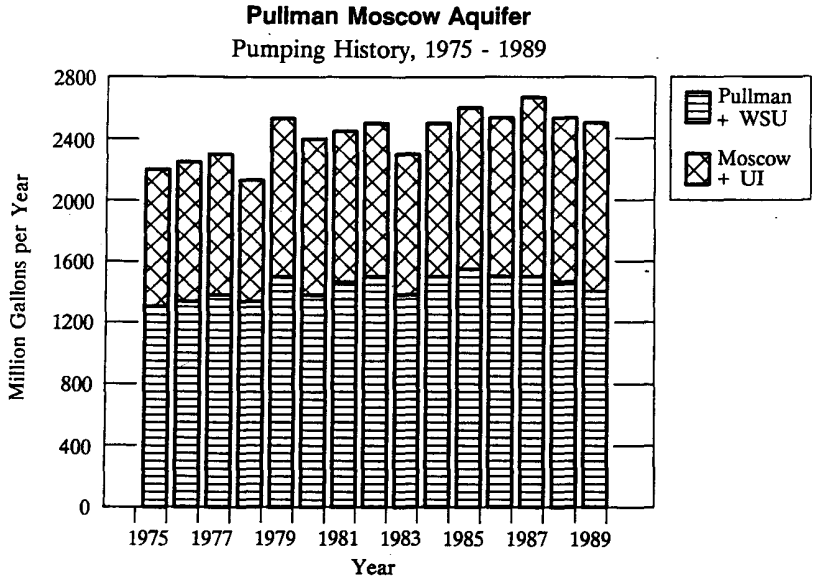

Figure 8. Recent Withdrawals in the Pullman-Moscow Area (Data from Pullman- Moscow Water Resources Committee).

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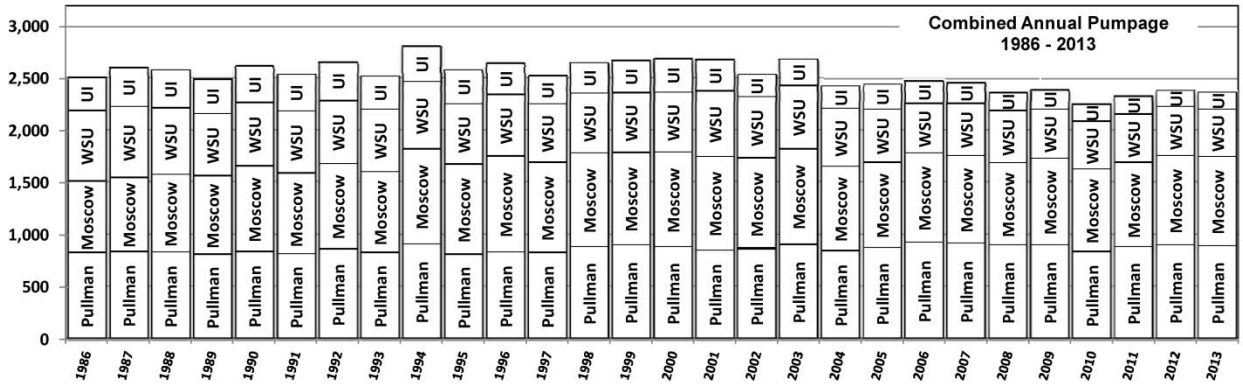
As of spring 2012, water levels in principal wells in the lower aquifer in the BASIN are at an elevation of approximately 2245 feet (above mean sea level) in Pullman, Moscow, and Palouse. Combined withdrawals have been reduced by 15.5% since 1992. (see Updated Figure 8).



Updated **Figure 8. Recent Withdrawals in the Pullman-Moscow Area (Data from Palouse Basin Aquifer Committee).**

Figures 9 and 10 show historical ground water levels in the Pullman and Moscow areas. Water levels in the Moscow area have stabilized (as of 1985-1989), while water levels in Pullman continue to show some decline.

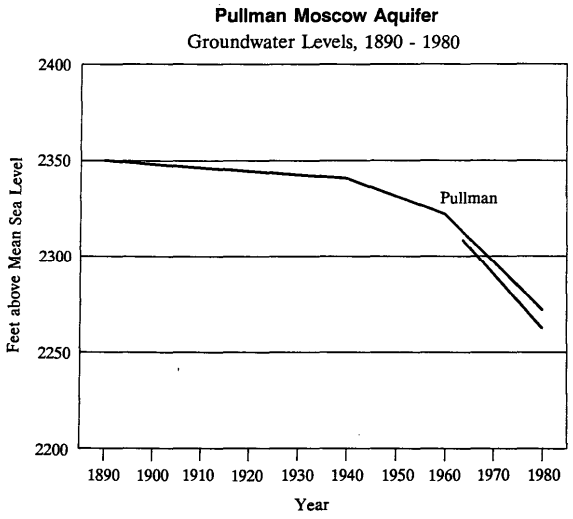


Figure 9. Historical Ground water Levels in the Pullman-Moscow Area (Adapted from Lum, et al., 1990).

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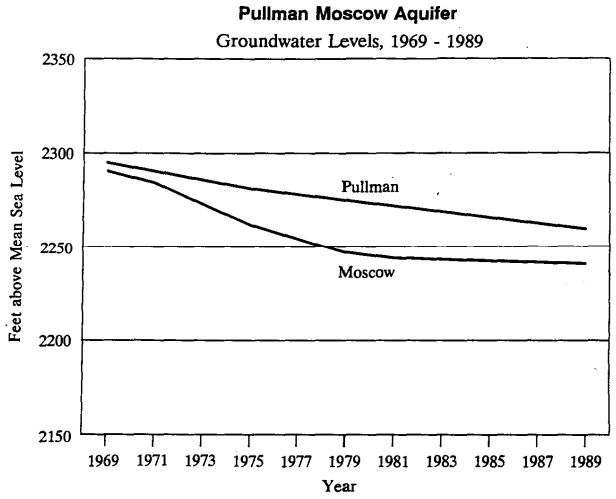
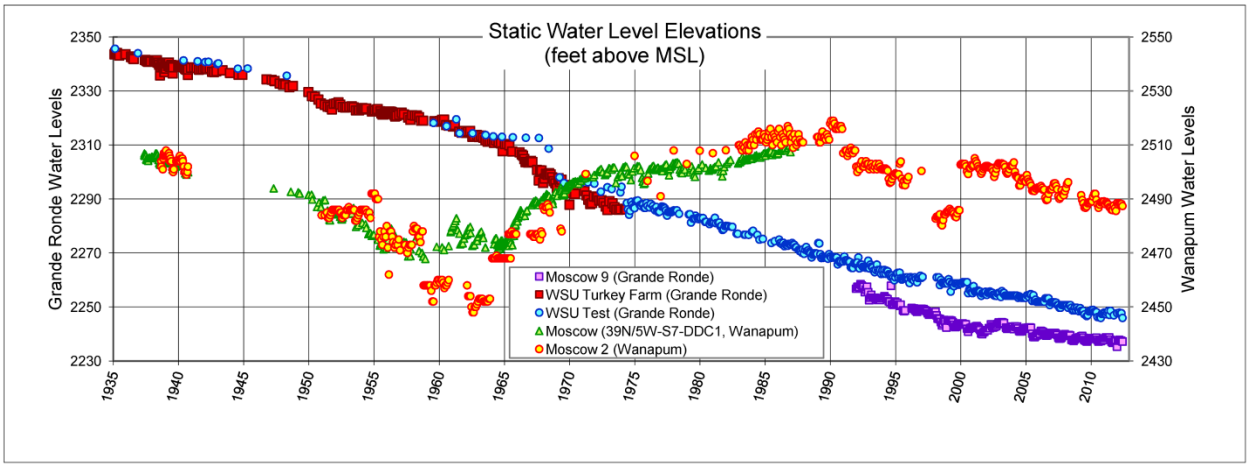


Figure 10. Recent Ground water Levels in the Pullman—Moscow Area *(Data from the Pullman-Moscow Water Resources Committee).*

Water levels in Pullman, Moscow, and Palouse continue to decline, although (as noted in Section 5.3) the average rate of decline (at the WSU test well) has decreased by over 50% between the 1970-1991 and the 2006-2013 time periods. An Updated Figure 9 shows water levels in both the upper and lower aquifers (note different scales). Updated Figure 10 shows water levels in the WSU Test Well since 1992.



Updated **Figure 9. Historical Ground water Levels in the Pullman-Moscow Area** *(Data from the Pullman-Moscow Water Resources Committee).*

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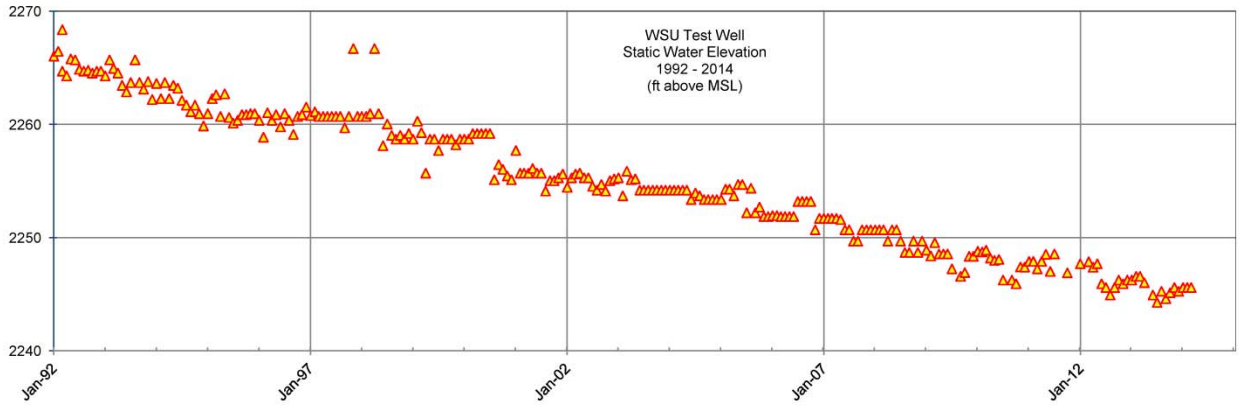

Updated **Figure 10. Recent Ground water Levels in the WSU Test Well** *(Data from the Palouse Basin Aquifer Committee).*

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PULLMAN-MOSCOW WATER RESOURCES COMMITTEE
ACTION PLANS

6. GROUND WATER MANAGEMENT PLAN

6.1 Overview

Successful management of the Pullman-Moscow ground water resource requires the utilization of an effective management plan. This chapter describes the role of the COMMITTEE and its goals and actions. Also in the chapter are the stated action plans of the ENTITIES for achieving the goals of the PLAN. The need for educational programs and conservation activities are addressed in the following paragraphs. Provisions for annual reviews of these adopted plans, reporting procedures, data maintenance, and recommended research for the BASIN are also set forth.

6.2 Role of the Committee

The role of the COMMITTEE is to encourage ENTITIES to implement the PLAN. The COMMITTEE will also monitor the success of the ENTITIES in carrying out their action plans and achieving the goals of the PLAN. Each ENTITY will be expected to adopt an action plan, interfacing with the stated goals of the PLAN. The COMMITTEE will provide guidance related to water-use plans, conservation strategies relative to water use, implementation policies, and the preparation of local ordinances or zoning regulations.

6.2.1 Education and Information Exchange

One of the key functions of the COMMITTEE will be to provide a forum for the exchange of successful and effective management policies, strategies, and techniques among the ENTITIES and other interested groups and governing bodies. Public involvement and education in BASIN water management issues are extremely important. The success of public education and the level of participation in conservation and other water resource issues will be assessed annually. It will be incumbent upon the members of the COMMITTEE to keep abreast of effective water resource management practices and articulate these concepts to the ENTITIES and their constituents. Action plans will be revised as new techniques for managing the ground water and better understanding of the basin ground water system become available.

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6.2.2 Data Base

It shall be the responsibility of the COMMITTEE to continue to gather, maintain, and evaluate a data base of well locations, water consumption, and water levels for the BASIN. The COMMITTEE will develop a program of data monitoring and analysis to better evaluate the ground water system response to consumption patterns. From this information, the COMMITTEE will ascertain BASIN water consumption and water level data in conjunction with the goals of the PLAN. Furthermore, the COMMITTEE will begin accumulating information and data related to monitoring the quality of the ground water. State and Federal water management agencies will be consulted and worked with in order to maximize effective data gathering and analysis.

6.2.3 Research

Many research projects have been completed over the past decade in the hopes of better understanding the BASIN configuration. From this research has evolved a conceptual view of the aquifers system with the acceptance of the USGS MODEL. To further refine the MODEL, the COMMITTEE will continue to acquire, maintain, and upgrade information as it relates to the ground water system.

This research will need to continue to be a cooperative effort with state, federal, local, and private sources. Over the course of the next several years, the COMMITTEE will establish research priorities essential to furthering the understanding of the BASIN. Research regarding the BASIN will be conducted in the following main areas:

- **Model studies to evaluate the effects of various alternative management strategies on the aquifer;**

- **Field investigations to better determine the geologic and hydrogeologic characteristics of the BASIN; and,**

- **Economic or cost-feasibility studies of various alternative conservation measures and incremental water supply sources.**

These research areas are outlined in greater detail in Appendix D. It will be the responsibility of the COMMITTEE to prioritize actual research needs, set budgets for such activity, and identify and solicit revenue sources.

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In late 2009, with WDOE funding, a project (called the Framework project) was initiated with objectives that included: 1) compiling existing geologic and hydrologic documents, 2) synthesizing the information contained within the body of research, 3) identifying data gaps in knowledge of the resource, and 4) recommending projects to fill those gaps. In early 2011 the project was finished. A project report is available on the PBAC web site, a document database has been compiled, and nearly 400 documents have been scanned and are available in electronic form (see http://www.webpages.uidaho.edu/pbac/).

6.2.4 Annual Reports

The PLAN will be reviewed at least annually by the COMMITTEE. The COMMITTEE will be responsible to see any annual adjustments or changes in the PLAN are endorsed by the governing state agencies and adopted by the ENTITIES.

6.2.5 Five-Year Plan Review

At the end of each five-year cycle a detailed PLAN review will be made and the PLAN will be modified as necessary to reflect the changing needs of the ENTITIES and the PLAN. The goals, recommended strategies, and research priorities will be evaluated in regard to changing physical, economic, social, and political conditions of the Pullman-Moscow area. These revisions will be implemented based upon updated BASIN information, the success of particular management strategies, and input from public hearings. The adoption and implementation of any changes to the PLAN will be done with the full review of the ENTITIES and the two state agencies.

6.2.6 Reporting

The COMMITTEE will provide five year progress reports summarizing the success of the PLAN; The report will be made available to the public, the ENTITIES, and the state agencies detailing the progress made on each of the PLANS' goals as well as the success of the ENTITIES in implementing this action plan. Furthermore, water usage and water level trends in the BASIN will be documented in relationship to the MODEL and the target goals of the PLAN.

PBAC provides an annual water use report that summarizes pumping, water levels, and progress towards meeting committee goals, and is committed to reviewing and updating the plan every five years.

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6.3 Goals of the Committee

The following goals and their expanded definitions form the foundation of the PLAN. The ENTITIES are to include in their respective action plans strategies for attaining the goals of the PLAN. The action plans combined with the COMMITTEE's goals form the substance of the PLAN.

- GOAL –

- **TO PROVIDE FOR FUTURE BENEFICIAL USE OF THE BASIN GROUND WATER WITHOUT DEPLETING THE BASIN AQUIFERS WHILE PROTECTING THE QUALITY OF THE WATER.**

  The primary goal is to insure that a stable ground water level is maintained in the BASIN aquifers. The COMMITTEE adopts the standard that the two universities and the two cities shall attempt to limit their annual aquifer pumping increases to one percent (1.0%) of their pumping volume based on a five (5) year moving average starting with 1986. At no time shall the accumulated total pumping exceed 125% of the 1981-1985 average for the two universities and the two cities. These initial limits on pumping rates are based upon historical data and water levels predicted by the MODEL. An estimate of the dispersed county pumping will be made based on an average per capita use for all county residences within the BASIN boundaries. Latah and Whitman counties will attempt to limit pumping increases from the BASIN aquifers to 125% of the estimated 1990 pumping levels. Further refinement of the MODEL will be necessary to establish acceptable limits on long term pumping rates which will confirm a stable water level for future users. The COMMITTEE will update the MODEL periodically and acceptable pumping levels may be modified upward or downward upon agreement by the ENTITIES.

- GOAL –

- **TO PROMOTE A PROGRAM OF PUBLIC EDUCATION AND AWARENESS REGARDING BASIN GROUND WATER MANAGEMENT ISSUES.**

  The COMMITTEE shall pursue and develop a program of public education to encourage conservation and reuse of water. Programs soliciting public support for committee activities and efforts to stabilize the water level will be developed.

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- GOAL –

- **TO PROMOTE CAREFUL MONITORING AND ANALYSIS OF THE GROUND WATER LEVEL AND USAGE DATA FOR THE BASIN.**

  The COMMITTEE shall continue to maintain records of the ground water levels and usage data collected on the BASIN.

- GOAL –

- **TO CONTINUE TO EXPLORE POSSIBLE SUPPLEMENTAL WATER SOURCES FOR ANTICIPATED AND POTENTIAL FUTURE WATER USE IN THE BASIN.**

  The COMMITTEE shall pursue the development of a Least Cost Plan (LCP) for providing supplemental water which will be completed within three years after the date of acceptance of this PLAN by all six ENTITIES and the states. The LCP shall evaluate potential incremental sources of water for the region and the relative costs of such sources. The information documented in the LCP shall be used in refining a course of action to insure an adequate long term water supply for the ENTITIES. The LCP shall be updated when the COMMITTEE determines there is just cause for an update.

- GOAL –

- **TO REVIEW AND MAKE RECOMMENDATIONS ON ALL WATER USE OR LAND USE APPLICATIONS WHOSE ANTICIPATED IMPACT ON THE GROUND WATER SYSTEM POTENTIALLY LIES OUTSIDE THE STATED GOALS OF THE PLAN OR POLICIES ADOPTED BY THE MEMBER ENTITIES.**

- GOAL ·

- **TO REVIEW AND MAKE RECOMMENDATIONS RELATIVE TO THE DEVELOPMENT OF AN AGREEMENT FOR WATER TRANSFERS ACROSS THE STATE LINE.**

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The goals of the committee have been reviewed and revised several times since 1992. As of late 2011, the committee goals are:

Consistent with the Palouse Basin Groundwater Management Plan, develop and Implement a balanced basin wide Water Supply and Use Program by 2025.

- *Create and maintain an action plan for aquifer system sustainability, enhancement and/or alternate water supply development.*

- *Direct research and implement pilot projects necessary to understand the basin hydrogeology in a manner sufficient to support the Water Supply and Use Program and the affiliated supply projects.*

- *Encourage and facilitate entities in meeting their specific pumping, conservation, efficient use, water recycling and other goals.*

Review the Palouse Basin Groundwater Management Plan.

Educate entities and the public on the state of the basin water supply and the status of PBAC's mission and goals.

Maintain harmonious and effective working relationships across the state line to fairly meet the needs of all entities.

Revisit the goals and mission statement annually.

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6.4 Role of the Entities

Responsibility of implementation of the PLAN rests with the ENTITIES.

6.4.1 Plan Adoption

Each ENTITY will incorporate the PLAN into their respective city or county comprehensive plan or university development plan.

6.4.2 Plan Implementation

In conjunction with the PLAN, each ENTITY has developed an action plan supporting the goals of the PLAN. The action plan adopted by each ENTITY is enumerated in the following paragraphs. Each ENTITY reserves the right to modify and improve its individual action plan as it deems appropriate. However, each modification shall be made in accordance with the provisions of the PLAN.

Specific reference to the issue of Growth and Potential Developers will be addressed in each ENTITY's action plan as follows:

1. **Incorporate into each ENTITY's comprehensive plan anticipated growth rates and corresponding water usage increases with strategies for meeting the water needs of the community, county, or university.**

2. **Adopt regulations requiring developers to provide water conservation, re-use, and recycling plans along with anticipated use and impact statements before their developments are approved. (See Washington interim guidelines for major water users.)**

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ACTION PLANS 0F THE ENTITIES

As of the end of 2012, all pumping entities, individually and in aggregate, are within the voluntary (1% annual increase and 125% ceiling) standards in the 1992 plan.

When the original plan was created, not all of the entities had formal water systems plans in place. Since that time several of the entities have created comprehensive water use or water system plans that fit within their specific administrative and regulatory environments. Rather than duplicating those efforts in this plan, some entities instead have chosen to reference their plan(s) as they exist in their "native" jurisdictions. Current plans and/or references for each entity follow the listings of their original (1992) action plans:

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Moscow Action Plan

The following is the action plan of the City of Moscow. It specifically supports the goals of the COMMITTEE as appropriate for this ENTITY, as stated in the PLAN, and as referenced below. In no case is this action plan intended to be in conflict with the PLAN.

COMMITTEE Goals:

- **To provide for future beneficial use of the BASIN ground water without depleting the BASIN aquifers while protecting the quality of the water.**
- **To promote a program of public education and awareness regarding BASIN ground water management issues.**
- **To promote careful monitoring and analysis of ground water level and usage data for the BASIN.**
- **To continue to explore possible supplemental water sources for anticipated and potential future water use in the BASIN.**
- **To review and make recommendations on all water use or land use applications whose anticipated impact on the ground water system potentially lies outside the stated goals of the PLAN or policies adopted by the member ENTITIES.**
- **To review and make recommendations relative to the development of an agreement for water transfers across the state line.**

In support of the COMMITTEE goals and activities, the City of Moscow proposes to:

- **Attempt to limit annual aquifer pumping increases to one percent (1.0%) of the pumping volume based on a five (5) year moving average starting with 1986 (745 mgy). At no time shall the accumulated total or pumping exceed 125% of the 1981-1985 average (increase from 700 mgy to 875 mgy).**
- **Continue summer/winter differential water rates.**
- **Require developers to project water use.**
- **Participate in programs that offer free water conserving devices to customers.**

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- **Create a conservation fund with a four cents/1,000 gallon surcharge to customers to pay for those devices, to fund research projects recommended by the COMMITTEE, and hire assistance to implement programs.**

- **Adopt local codes requiring new water users to utilize water conserving appliances, ie., smaller toilet tanks, etc.**

- **Meter city use of water.**

- **Calibrate consumer meters.**

- **Address water issue in Comprehensive Plan.**

- **Participate in education programs, ie., schools, bill stuffers, cable T.V.**

- **Encourage recycling at building permit level for major water users.**

- **Continue to make city wastewater treatment plant (MWTP) effluent available to the University of Idaho.**

- **Continue use of WWTP effluent for irrigation at MWTP.**

- **Establish demonstration projects utilizing low water requirements - landscaping parks utilizing low irrigation trees and shrubs.**

- **Continue 24 hour daily recordings of water levels and pumpage.**

- **Continue submitting data to the COMMITTEE computer program in timely manner (monthly.)**

- **Assure the ground water quality is protected in the BASIN by:**

  Reviewing any project with possible recharge to the aquifers.

  Complying with or exceeding State and EPA water quality standards for discharge into streams.

  Regulating toxic and hazardous waste storage to create strict standards to prevent contamination of aquifers.

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Prohibiting chemical dump site over the aquifers.

Continuing compliance with EPA regulations regarding underground storage tanks.

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Updated Moscow Action Plan

In support of the COMMITTEE goals and activities, the City of Moscow proposes to:

- *Attempt to limit annual aquifer pumping increases to one percent (1.0%) of the pumping volume based on a five (5) year moving average of the pumping starting with 1986 (745 mgy). Attempt to limit the accumulated total pumping to a targeted maximum of 125% of the 1981-1985 average (increase from 700 mgy to 875 mgy).*

- *Continue a conservation based rate structure for single family residential customers. Promote programs to encourage conservation and sustainable water use by multi-family residential and commercial uses.*

- *Continue the formal Conservation Program which includes actions such as offering free water conserving devices to customers and consider adding a toilet replacement rebate program.*

- *Continue membership in COMMITTEE with funding for studies and research projects as authorized by the City Council.*

- *Continue program to update failing consumer water meters.*

- *Continue to participate in education programs (i.e. schools, bill stuffers, cable TV)*

- *Encourage water recycling at building permit level for major water users.*

- *Continue to make city wastewater treatment plant (WWTP) effluent available to the University of Idaho in accordance with the City's agreement with the University.*

- *Continue use of WWTP effluent for irrigation at WWTP in accordance with the City's agreement with the University.*

- *Continue 24-hour daily recordings of water levels and production.*

- *Continue input to the COMMITTEE of City's monitoring efforts.*

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- *Comply with all State and Federal regulations pertaining to hazardous materials, storm water disposal, solid waste disposal, sewage sludge disposal, non-point source, household contributions, and well construction and abandonment.*

- *Explore possible expansion of WWTP effluent reuse.*

- *Continue examination of alternate water supply options as approved by the City Council.*

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Pullman Action Plan

The following is the action plan of the City of Pullman. It specifically supports the goals of the COMMITTEE as appropriate for this ENTITY, as stated in the PLAN, and as referenced below. In no case is this action plan intended to be in conflict with the PLAN.

COMMITTEE Goals:

- **To provide for future beneficial use of the BASIN ground water without depleting the BASIN aquifers while protecting the quality of the water.**
- **To promote a program of public education and awareness regarding BASIN ground water management issues.**
- **To promote careful monitoring and analysis of ground water level and usage data for the BASIN.**
- **To continue to explore possible supplemental water sources for anticipated and potential future water use in the BASIN.**
- **To review and make recommendations on all water use or land use applications whose anticipated impact on the ground water system potentially lies outside the stated goals of the PLAN or policies adopted by the member ENTITIES.**
- **To review and make recommendations relative to the development of an agreement for water transfers across the state line.**

In support of the COMMITTEE goals and activities, the City of Pullman proposes to:

- **Attempt to limit annual aquifer pumping increases to one percent (1.0%) of the pumping volume based on a five (5) year moving average starting with 1986 (827 mgy). At no time shall the accumulated total pumping exceed 125% of the 1981-1985 average (increase from 767 mgy to 959 mgy).**
- **Address water use in City's Comprehensive Plan and Zoning Code.**
- **Require new development to submit projected water use.**
- **Enact most stringent code available regarding low flow plumbing fixtures for new construction and remodel building permits.**

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- **Participate in programs that offer users flow restrictors and toilet dams to reduce consumption.**

- **Consider increasing user rates during summer irrigation periods to discourage wasteful practices.**

- **Install low water use landscaping at all City facilities and install more efficient irrigation systems.**

- **Require installation of low water use landscaping on all new commercial and multi-family developments.**

- **Enact a conservation surcharge on all users with revenues dedicated to educational efforts including COMMITTEE sponsored research projects.**

- **Distribute conservation information through mailings to users, T.V., radio, and newspaper advertisements.**

- **Construct low irrigation demand landscaping demonstration projects on city owned sites.**

- **Continue membership in COMMITTEE with funding for studies and research projects.**

- **Continue input to the COMMITTEE of city's monitoring efforts. Develop usage data by user class ie., residential, single family, multi-family, commercial, institutional, industrial.**

- **Comply with all State and Federal regulations pertaining to hazardous materials, storm water disposal, solid waste disposal, sewage sludge disposal, non-point source, household contributions, and well construction and abandonment.**

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Updated Pullman Action Plan

The following is the action plan of the City of Pullman. It specifically supports the goals of the COMMITTEE as appropriate for this ENTITY, as stated in the PLAN, and as referenced below. In no case is this action plan intended to be in conflict with the PLAN.

COMMITTEE Goals:

- *To provide for future beneficial use of the BASIN ground water without depleting the BASIN aquifers while protecting the quality of the water.*
- *To promote a program of public education and awareness regarding BASIN ground water management issues.*
- *To promote careful monitoring and analysis of ground water level and usage data for the BASIN.*
- *To continue to explore possible supplemental water sources for anticipated and potential future water use in the BASIN.*
- *To review and make recommendations on all water use or land use applications whose anticipated impact on the ground water system potentially lies outside the stated goals of the PLAN or policies adopted by the member ENTITIES.*
- *To review and make recommendations relative to the development of an agreement for water transfers across the state line.*

In support of the COMMITTEE goals and activities, the City of Pullman proposes to:

- *Attempt to limit annual aquifer pumping increases to one percent (1.0%) of the pumping volume based on a five (5) year moving average starting with 1986 (827 mgy).*
- *Attempt to limit the accumulated total pumping to a maximum of 125% of the 1981-1985 average (increase from 767 mgy to 959 mgy).*
- *Carry out its Conservation Program as outlined in its most current Water System Plan [as of March 1, 2013: Chapter 5.3 of the City of Pullman Water System Plan, Volume 1, Final, May 2008].*

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- *Continue to pursue future supply options as detailed in its most current Water System Plan [as of March 1, 2013: Chapter 6.3 of the City of Pullman Water System Plan, Volume 1, Final, May 2008].*

- *Continue membership in COMMITTEE with funding for studies and research projects.*

- *Continue input to the COMMITTEE of city's monitoring efforts. Develop usage data by user class ie., residential, single family, multi-family, commercial, institution, industrial.*

- *Comply with all State and Federal regulations pertaining to hazardous materials, storm water disposal, solid waste disposal, sewage sludge disposal, non-point source, household contributions, and well construction and abandonment.*

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Latah County Action Plan

The following is the action plan of Latah County. It specifically supports the goals of the COMMITTEE as appropriate for this ENTITY, as stated in the PLAN, and as referenced below. In no case is this action plan intended to be in conflict with the PLAN.

COMMITTEE Goals:

- **To provide for future beneficial use of the BASIN ground water without depleting the BASIN aquifers while protecting the quality of the water.**
- **To promote a program of public education and awareness regarding BASIN ground water management issues.**
- **To promote careful monitoring and analysis of ground water level and usage data for the BASIN.**
- **To continue to explore possible supplemental water sources for anticipated and potential future water use in the BASIN.**
- **To review and make recommendations on all water use or land use applications whose anticipated impact on the ground water system potentially lies outside the stated goals of the PLAN or policies adopted by the member ENTITIES.**
- **To review and make recommendations relative to the development of an agreement for water transfers across the state line.**

In support of the COMMITTEE goals and activities, Latah County proposes the following goals apply to all land under the authority of County government:

- **Estimate the dispersed/county pumping based on an average per capita use for all county residences both within the BASIN boundaries and for the full county.**
- **Latah County will attempt to limit annual aquifer pumping increases to one percent (1.0%) of the pumping volume based on a five (5) year moving average starting with 1986 figures. At no time shall the accumulated total pumping exceed 125% of the 1981-1985 average.**

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Work with the Planning and Building Department to:

- **Provide educational brochure with building permits promoting water conservation, low water use landscaping, and general sensitivity to the Pullman-Moscow Aquifer.**

- **Encourage use of low water volume fixtures. Consider offering a financial incentive for conservation devices at the time of application for permit of new construction.**

- **Encourage well registration for purposes of data collection.**

Establish water conservation policies at all facilities and/or properties managed by Latah County. These policies shall pertain to irrigation practices and physical features of construction.

Refine the county emergency response plan to handle disasters which could affect ground water contamination.

Encourage the development and implementation of water and power conservation programs developed by governmental agencies and private industry.

Endorse and provide funding for water research projects.

Work with the County Cooperative Extension Office and Soil Conservation Service District to develop an outreach program for water quantity and quality education.

Seek assurances of ground water quality in conjunction with solid waste disposal sites. This will include baseline monitoring of present and future solid waste disposal sites.

Regulate development on or the drainage of wetlands not regulated by definition by the Army Corps of Engineers.

Regulate developments which could jeopardize water quality.

Use a land use procedure, for example a "conditional use permit," for developments which propose to use water supplies in the day-to-day operation of a non-residential or commercial venture.

Use the COMMITTEE to conduct a preliminary recommendary hearing prior to the above mentioned County proceeding in the case of a land use with a dependence on water use for successful operation of a commercial venture.

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Updated Comprehensive Plan will reflect water conservation and protection goals.

Develop a local well-head protection ordinance.

Recognize riparian zones within the County and offer protection through ordinance or conditional use permit review.

Define and support programs for protection of water quality as administered by the North Latah Health District and the state agencies with local authority in this field.

Amend the Zoning Code to require Conditional Use Permits for projects with water impacts.

Apply water protection program standards to the whole county.

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Updated Latah County Action Plan

The following is the action plan of Latah County. It specifically supports the goals of the COMMITTEE as appropriate for this ENTITY, as stated in the PLAN, and as referenced below. In no case is this action plan intended to be in conflict with the PLAN.

COMMITTEE Goals:

- *To provide for future beneficial use of the BASIN ground water without depleting the BASIN aquifers while protecting the quality of the water.*
- *To promote a program of public education and awareness regarding BASIN ground water management issues.*
- *To promote careful monitoring and analysis of ground water level and usage data for the BASIN.*
- *To continue to explore possible supplemental water sources for anticipated and potential future water use in the BASIN.*
- *To review and, if appropriate, make recommendations on water use or land use applications whose anticipated impact on the ground water system potentially lies outside the stated goals of the PLAN or policies adopted by the member ENTITIES.*
- *To review and make recommendations relative to the development of an agreement for water transfers across the state line.*

In support of the COMMITTEE goals and activities, Latah County proposes to:

- *Promote the perpetual viability of adequate water resources in Latah County to meet present and future needs.*
- *Endeavor to ensure water is used in a way that protects and enhances the public health and safety.*
- *Maintain sustainable groundwater resources and prevent degradation of groundwater quality.*

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- *Encourage water conservation through, but not limited to, the use of landscaping that does not need irrigation (xeriscaping), shared water systems, and use of water conserving technologies. Developments should use water resources as efficiently as reasonably possible.*

- *Encourage evidence based approaches to and scientific research of water resource issues; and when considering the impact of land uses on water resources and the effects of such uses on surrounding properties, encourage incorporating the most current scientific knowledge including, without limitation, the use of hydrologists, geologists, environmental engineers and other experts where appropriate.*

- *Discourage use of groundwater for irrigation consistent with the philosophy of Idaho Code 67-6537.*

- *Provide educational information with building permits promoting water saving fixtures, water conservation, low water use landscaping, well registration, water rights and general knowledge about water resources.*

- *Establish water conservation policies at all facilities and/or properties managed by Latah County. These policies shall pertain to irrigation practices and physical features of construction.*

- *Encourage the development and implementation of water education and conservation programs.*

- *Endorse and support water research projects.*

- *Review and, if necessary, amend the comprehensive plan, zoning policies, and the emergency management plan to address water resource concerns.*

- *Recognize riparian zones within the County and offer protection and protection goals.*

- *Require that new developments comply with applicable regulations for ground water and surface water protection.*

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Whitman County Action Plan

The following is the action plan of Whitman County. It specifically supports the goals of the COMMITTEE as appropriate for this ENTITY, as stated in the PLAN, and as referenced below. In no case is this action plan intended to be in conflict with the PLAN.

COMMITTEE Goals:

- **To provide for future beneficial use of the BASIN ground water without depleting the BASIN aquifers while protecting the quality of the water.**
- **To promote a program of public education and awareness regarding BASIN ground water management issues.**
- **To promote careful monitoring and analysis of ground water level and usage data for the BASIN.**
- **To continue to explore possible supplemental water sources for anticipated and potential future water use in the BASIN.**
- **To review and make recommendations on all water use or land use applications whose anticipated impact on the ground water system potentially lies outside the stated goals of the PLAN or policies adopted by the member ENTITIES.**
- **To review and make recommendations relative to the development of an agreement for water transfers across the state line.**

In support of the COMMITTEE goals and activities, Whitman County proposes to:

- **Estimate the dispersed county pumping based on an average per capita use for all county residences within the BASIN boundaries. Whitman County Department of Environmental Health will attempt to limit significant pumping increases from the BASIN aquifers.**
- **Review and, if necessary, amend the county comprehensive plan and zoning policies to address quantity and quality concerns.**
- **The Whitman County Department of Environmental Health and the Washington State Extension Service office will promote conservation practices and use of water saving devices for <u>all</u> water users (no matter what type of source.)**

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- **Encourage the use of water saving devices for all new construction via hand-outs with the building permit application.**

- **Continue to encourage all public water purveyors to meter all services within their systems.**

- **<u>Promote</u> wise landscaping and "water" uses through the use of "best management practices" concepts.**

- **<u>Support</u> the COMMITTEE in pursuing research projects.**

- **Support the Washington State Department of Health requirements that all new <u>public</u> drinking water wells to install static level measuring devices at the time of pump installation. All <u>existing</u> public drinking water sources, if not already so equipped, will be retrofitted with such a measuring device at the time of pump/hardware removal.**

- **Support the Washington State Department of Health requirements that pump head measuring and monthly recording of pumping volumes as part of the annual report.**

- **<u>Support</u> the identification of critical recharge areas within the county.**

- **Assure that new developments comply with State agency regulations for ground water and surface water protection.**

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Updated Whitman County Action Plan

The following is the action plan of Whitman County. It specifically supports the goals of the CQMMITTEE as appropriate for this ENTITY, as stated in the PLAN, and as referenced below. In no case is this action plan intended to be in conflict with the PLAN.

COMMITTEE Goals:

- *To provide for future beneficial use of the BASIN ground water without depleting the BASIN aquifers while protecting the quality of the water.*
- *To promote a program of public education and awareness regarding BASIN ground water management issues.*
- *To promote careful monitoring and analysis of ground water level and usage data for the BASIN.*
- *To continue to explore possible supplemental water sources for anticipated and potential future water use in the BASIN.*
- *To review and, if appropriate, make recommendations on water use or land use applications whose anticipated impact on the ground water system potentially lies outside the stated goals of the PLAN or policies adopted by the member ENTITIES.*
- *To review and make recommendations relative to the development of an agreement for water transfers across the state line.*

In support of the COMMITTEE goals and activities, Whitman County proposes to:

- *Review and, if necessary, amend the county comprehensive plan and zoning policies to address quantity and quality concerns.*
- *The Whitman County Department of Environmental Health and the Washington State Extension Service office will promote conservation practices and use of water saving devices for all water users (no matter what type of source.)*
- *Encourage the use of water saving devices for all new construction via hand-outs with the building permit application.*

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- *Continue to encourage all public water purveyors to meter all services within their systems.*

- *Promote wise landscaping and "water" uses through the use of "best management practices" concepts.*

- *Support the COMMITTEE in pursuing research projects.*

- *Through education, support the Washington State Department of Health requirements that all new public drinking water wells to install static level measuring devices at the time of pump installation. Encourage owners of existing public drinking water sources, if not already so equipped, to retrofit wells with such a measuring device at the time of pump/hardware removal or repair.*

- *Encourage the implementation of the Washington State Department of Health requirements that well owners annually report pump head measuring and monthly recording of pumping volumes as part of the annual report by well owners.*

- *Support the identification of critical recharge areas within the county.*

- *Require that new developments comply with State agency regulations for ground water and surface water protection.*

For detail, go to: www.whitmancountv.org

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University of Idaho Action Plan

The following is the action plan of the University of Idaho. It specifically supports the goals of the COMMITTEE as appropriate for this ENTITY, as stated in the PLAN, and as referenced below. In no case is this action plan intended to be in conflict with the PLAN.

COMMITTEE Goals:

- **To provide for future beneficial use of the BASIN ground water without depleting the BASIN aquifers while protecting the quality of the water.**
- **To promote a program of public education and awareness regarding BASIN ground water management issues.**
- **To promote careful monitoring and analysis of ground water levels and usage data for the BASIN.**
- **To continue to explore possible supplemental water sources for anticipated and potential future water use in the BASIN.**
- **To review and make recommendations on all water use or land use applications whose anticipated impact on the ground water system potentially lies outside the stated goals of the PLAN or policies adopted by the member ENTITIES.**
- **To review and make recommendations relative to the development of an agreement for water transfers across the state line.**

In support of the COMMITTEE goals and activities, the University of Idaho proposes to:

- **Attempt to limit annual aquifer pumping increases to one percent (1.0%) of the pumping volume based on a five (5) year moving average starting with 1986. This average will begin at 353 mgy plus the new allocation for well #5 of 48 mgy for a total of 401 mgy. At no time shall the accumulated total pumping exceed 125% of the 1981-1985 average. (1981-1985 average is 301 times 125% equals 376 mgy plus 48 mgy from well #5 for a total allocation of 424 mgy.)**
- **Continue to switch domestic irrigation from wells #3 and #4 to the recycled water irrigation system.**

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- **Submit an application to the State of Idaho for permission to switch water sources for select programs from wells #3 and #4 to well #5 and future shallow wells.**

- **Continue to install best available conservation technology in new facilities and building remodels.**

- **Increase recharge through infiltration via land application of stream runoff and recycled water at various places around the University of Idaho campus.**

- **In selected areas of campus, provide demonstration sites for research and testing of xerophytic grasses, shrubs, flowers, and other landscaping which require less water.**

- **Financially support the COMMITTEE'S educational efforts.**

- **Supplement the COMMITTEE's educational program with distribution of appropriate information on campus water use and conservation.**

- **Make public all successful University of Idaho water conservation demonstration projects which can be copied by the public or other ENTITIES.**

- **Continue to supply COMMITTEE with monthly data on ground water pumping and recycled water irrigation volumes.**

- **Comply with all State and Federal regulations pertaining to hazardous materials, storm water disposal, solid waste disposal, sewage sludge disposal, non-point sources, and well construction and abandonment.**

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Updated University of Idaho Action Plan

- *In selected areas of campus, provide demonstration sites for research and testing of xerophytes grasses, shrubs, flowers, and other landscaping which require less water.*
- *Financially support the COMMITTEE'S education efforts.*
- *Supplement the COMMITTEE's educational program with distribution of appropriate information on campus water use and conservation.*
- *Make public all successful University of Idaho water conservation demonstration projects which can be copied by the public or other ENTITIES.*
- *Continue to supply COMMITTEE with monthly data on ground water pumping and recycled water irrigation volumes.*
- *Comply with all State and Federal regulations pertaining to hazardous materials, storm water disposal, solid waste disposal, sewage sludge disposal, non-point sources, and well construction and abandonment.*
- *Any new water-cooled equipment must use chilled water from the central chilled water system.*
- *No domestic, deep aquifer water shall be used for cooling. Existing water-cooled equipment shall be converted as found and funds available.*
- *Shallow aquifer wells are now used in aquaculture research on west campus, to reduce the usage of deep aquifer well water.*
- *Water saving flush valves, showerheads, and faucet valves have been retrofitted and are part of our design standards for new construction.*
- *If allowable Irrigation will be on Reclaimed water. Move all systems onto automation as funds are available. All new systems shall be automated.*

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Washington State University Action Plan

The following is the action plan of Washington State University. It specifically supports the goals of the COMMITTEE as appropriate for this ENTITY, as stated in the PLAN, and as referenced below. In no case is this action plan intended to be in conflict with the PLAN.

COMMITTEE Goals:

- **To provide for future beneficial use of the BASIN ground water without depleting the BASIN aquifers while protecting the quality of the water.**
- **To promote a program of public education and awareness regarding BASIN ground water management issues.**
- **To promote careful monitoring and analysis of ground water level and usage data for the BASIN.**
- **To continue to explore possible supplemental water sources for anticipated and potential future water use in the BASIN.**
- **To review and make recommendations on all water use or land use applications whose anticipated impact on the ground water system potentially lies outside the stated goals of the PLAN or policies adopted by the member ENTITIES.**
- **To review and make recommendations relative to the development of an agreement for water transfers across the state line.**

In support of the COMMITTEE goals and activities, Washington State University proposes to:

- **Attempt to limit annual aquifer pumping increases to one percent (1.0%) of the pumping volume based on a five (5) year moving average starting with 1986 (642 mgy). At no time shall the accumulated total pumping exceed 125% of the 1981-1985 average (increase from 702 to 877 mgy).**
- **Convert irrigation to computer controlled automatic systems on 70-90% of all turf within IO years.**
- **Eliminate 20 GPM of cooling water to the drain within three years.**
- **Financially support the COMMITTEE activity.**

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- **Install water meters on its major water users.**

- **Supplement the COMMITTEE's educational program with distribution of appropriate information on campus.**

- **Report all appropriate water data to the COMMITTEE for analysis.**

- **Set a goal of no increase in withdrawal rate for the next two years to test the MODEL with actual data.**

- **Protect the ground water quality by:**

  Maintaining good landscape practices and reviewing chemical use.

  Monitoring and/or eliminating all underground storage tanks containing chemicals.

  Continued monitoring of the old hazardous waste site.

  Monitoring sewer systems and correcting any deficiencies (leaks, cross connections, etc.) noted.

  Monitoring existing septic tank systems and properly siting future systems.

  Insuring that proper well construction procedures are followed.

  Complying with all State and Federal regulations pertaining to ground water and surface water quality.

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Updated WSU Action Plan:

- *Carry out its Conservation Program as outlined in its most current Water System Plan [as of November 21, 2013: Chapter 4.0 of the Washington State University Water System Plan, Volume 1, Final, December 30, 2008].*

- *This document can be accessed on the internet at http://facops.wsu.edu/WSUWaterSysUpdate2008.aspx*

- *Continue membership in COMMITTEE with funding for studies and research projects.*

- *Continue input to the COMMITTEE of the University efforts to monitor consumption.*

- *Develop usage data by building and irrigation zone as monitoring systems are installed.*

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APPENDIX A

INTERGOVERNMENTAL AGREEMENT

(Pullman-Moscow Water Resources Committee)

THIS AGREEMENT is entered into by the City of Pullman, Washington; the City of Moscow, Idaho; the County of Whitman, Washington; the County of Latah, Idaho; the University of Idaho; and Washington State University (hereinafter sometimes referred to as the Entities) to be effective the first day of August, 1988 or as soon thereafter as the requirements set forth in Paragraph XIV are accomplished.

WITNESSETH:

WHEREAS, the water supply in Latah County, Idaho, and Whitman County, Washington, is an important regional concern; and,

WHEREAS, the City of Pullman, Washington; the City of Moscow, Idaho; the County of Whitman, Washington; the County of Latah, Idaho; the University of Idaho; and Washington State University deem it in the public interest to work jointly and cooperatively on water resource problems and issues; and,

WHEREAS, the Entities are authorized to enter into and carry out this Intergovernmental Agreement pursuant to the provisions of Idaho Code Sections 67-2326 gt. sgg., and Chapter 39.34 of the Revised Code of Washington; now, therefore

IT IS HEREBY AGREED by and between the Entities as follows:

I. Committee Established: In order to carry out the purposes established in this Agreement, the Entities hereby agree to the establishment of a committee to be known as the Pullman-Moscow Water Resources Committee (PMWRC).

II. Membership: The PMWRC shall consist of twelve appointed members with two members each representing the following Entitles: the City of Pullman, Washington; the City of Moscow, Idaho; the County of Whitman, Washington; the County of Latah, Idaho; the University of Idaho; and Washington State University. Each member shall serve at the pleasure of the Entity which appoints that member for a term of two years with the 1st term beginning on August 1, 1988.

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III. Purpose: The purposes of this Agreement are to:

(A) coordinate planning to assure a long·range supply of water to the entities;

(B) retain the momentum and continue to update and expand the database already begun through previous studies;

(C) encourage conservation to promote the life of the aquifer serving the Entities;

(D) investigate continuing and/or alternate sources of water;

(E) educate and advise the entities on the quantity and quality of the public water supply for the water basin serving the Cities of Moscow, Pullman, and the surrounding area;

(F) act as liaison between the Entities on water resource concerns; and

(G) promote communication between the Entities, the Washington Department of Ecology, and the Idaho Department of Water Resources.

IV. Powers: The PMWRC shall have the power to:

(A) collect and disseminate statistics and other information;

(B) allocate expenditures of funds contributed by the Entities;

(C) designate one of the Entities as a depository for funds and for the administration of those funds;

(D) hire personnel (by written agreements setting forth all duties and compensation) who will serve at the pleasure of, and whose duties will be determined by, the PMWRC;

(E) enter into legal and financial agreements, but only after any such agreements have been reviewed and approved by the Entities;

(F) apply for and administer grants; and

(G) work with the Entities in educating the public.

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V. Officers and Voting:

(A) One member shall serve as Chairperson, one member shall serve as Vice Chairperson, and one member shall serve as Secretary. One member may serve as Treasurer and this office may be combined with the office of Secretary if the PMWRC so chooses.

(B) Each member of the PMWRC shall have one (1) vote. In the event of a tie vote, the issue shall fail.

(C) Entities may select alternate members in a manner considered appropriate by the selecting Entity. In the event that an appointed member of the PMWRC will be unable to attend a meeting of the PMWRC, the Entity represented by that appointed member may be represented by that appointed member. Alternate members representing absent appointed members shall have the same privileges as appointed members; provided, however, that no Entity shall have more than two votes on the business coming before the PMWRC.

VI. Meetings and Election of Officers:

(A) The PMWRC shall hold meetings at such times and places as set forth in its by-laws.

(B) The PMWRC shall annually elect its officers as set forth in its by-laws.

(C) The quorum necessary for the PMWRC to transact business or elect officers shall be constituted when seven members or a majority of the members representing the Entities entitled to vote in accordance with the provisions of Paragraph VII (D)are present at the meeting.

VII. Financing:

(A) Annually the PMWRC shall establish a budget for the ensuing operating year, which budget shall be established in sufficient time to allow each Entity to budget its contribution for the ensuing operating year.

(B) Contributions are due and payable from each entity with one half of the amount due on July Ist and the remaining one half on January 1st of the following year of each year of this Agreement. The funding ratio for contributions for administration and projects which uniformly impact all Entities shall be as follows:

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The University of Idaho, Washington State University, the City of Moscow, and the City of Pullman, shall each, as its contribution, pay twenty (20) percent of the operating budget of the PMHRC;

The County of Latah and the County of Whitman shall each be responsible for ten (I0) percent of the operating budget of the PMNRC.

(C) This funding ratio may be altered for the funding of specific projects according to the interests and benefits of each participating entity. Altered funding ratios shall be approved by each Entity participating in the altered funding ratio.

(D) Any Entity not current in the payment of a contribution shall lose all voting rights until such time as that Entity is current in contributions for that operating year.

VIII. Duration: This Agreement shall have a term of ten years from and after August 1, 1988, unless the PMNRC is sooner dissolved as set forth in Paragraph XI (A).

IX. Annual Report: The PMNRC shall report on its activities to each Entity on an annual basis.

X. By-Laws: The PMHRC may adopt, amend or repeal by-laws, in whole or in part which are not inconsistent with the terms and conditions of this Agreement, by a majority vote at any regular or special meeting of the PMHRC. A majority vote for the purposes of adopting, amending or repealing by-laws means a majority of all members of the PMNRC qualified to vote in accordance with the provisions of Paragraph VII (D) and not a majority of a quorum.

XI. Dissolution and Disbursement of Funds and Property:

(A) Any Entity may automatically withdraw from the PMWRC by submitting a written statement setting forth its intent to withdraw to the remaining Entities at least sixty (60) days prior to the effective date of its withdrawal.

(B) The PMWRC shall be dissolved through a written agreement approved by a majority of the Entities or through the withdrawal of three of the participating Entities.

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(C) Any surplus funds or property remaining at the time of dissolution shall be distributed to the Entities in the proportion to the amount of money each Entity had contributed to the PMWRC budget during the one-year period (365 days) prior to the dissolution. If it is impossible to distribute such property, it shall be sold as surplus property of auctioned off with the proceeds disbursed as set forth in this Paragraph (C).

XII. Real Property: The PMWRC may neither acquire nor hold real property.

XIII. Expenditures: The disbursement of funds contributed by the Entities and received from other sources shall be managed by one of the Entities to be designated by the PMWRC which may, from time to time, be changed by a majority vote of all Entities participating in the membership of the PMWRC qualified to vote in accordance with the provisions of Paragraph VII (D) and not a majority of a quorum.

XIV. Filing and Effective Date: Copies of this Agreement shall be filed with the Pullman City Clerk, Whitman County Auditor, the Secretary of State of the State of Washington, the Moscow City Clerk, the Latah County Auditor, and the Secretary of State of the State of Idaho prior to its entry into force. This Agreement shall be effective upon execution by the Entities and the accomplishment of all filing requirements as provided herein subject to the approval of the Secretary of State for the State of Idaho as provided for in Section 67-2329 Idaho Code.

XV. Repealer: As between the City of Pullman; the City of Moscow; the County of Whitman, Washington; and the County of Latah, Idaho; all earlier agreements between them relating to water supply and the Pullman-Moscow Water Resources Committee that have not already terminated by the passage of time or the completion of their purpose(s) are hereby revoked and terminated, and specifically the following inter-local agreements shall be automatically terminated on the effective date of this Agreement, to-wit:

(A) Agreement for Engineering Services Water Supply Study Pullman-Moscow Water Resources Committee.
Dated: January 15, 1970
Signatories: City of Pullman
City of Moscow
University of Idaho
Washington State University
Stevens, Thompson & Runyan, Inc.

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(B) An Agreement Relating to a Water Study for Pullman-Moscow Region.
Dated: February 11, 1970
Signatories: Washington State University
University of Idaho
City of Pullman
City of Moscow

(C) An Agreement Relating to the Pullman-Moscow Water Resources Committee.
Dated: October 30, 1972
Signatories: Washington State University
University of Idaho
City of Pullman
City of Moscow

(D) An Agreement Relating to the Pullman-Moscow Water Resources Committee.
Dated: July 11, 1974
Signatories: City of Pullman
City of Moscow
University of Idaho
Washington State University

(E) Contractual Agreement between the City of Pullman, acting for the Pullman-Moscow Water Resources Committee and Washington State University on behalf of the College of Engineering.
Dated: August 13, 1974
Signatories: The City of Pullman acting for the Moscow—Pullman Water Resources Committee
Washington State University

(F) An Agreement Relating to the Pullman-Moscow Water Resources Committee (Study of aquifer serving Pullman/Moscow area).
Dated: January 30, 1985
Signatories: City of Pullman
City of Moscow
University of Idaho
Washington State University

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IN WITNESS WHEREOF, the parties to this Agreement have caused it to be executed to be effective the day and year first set forth above, and each signatory represents that he or she is authorized to sign this Agreement.

CITY OF PULLMAN, WASHINGTON

/s/ Carole A. Helm
Mayor

ATTEST:

/s/ John Tonkovich
Financial Director

CITY OF MOSCOW, IDAHO

/s/ Gary Scott
Mayor

ATTEST:

/s/ Elaine Russell
Clerk

WHITMAN COUNTY, WASHINGTON

/s/ Dan Boone
Commissioner

/s/ James Hanning
Commissioner

/s/ John Henley, Jr.
Commissioner

LATAH COUNTY, IDAHO

/s/ Tom Spangler
Commissioner

/s/ Laverne Nelson
Commissioner

/s/ Nancy Johansen
Commissioner

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APPENDIX B

RESOLUTION OF UNDERSTANDING
between
PULLMAN-MOSCOW WATER RESOURCES COMMITTEE
IDAHO DEPARTMENT OF WATER RESOURCES
WASHINGTON DEPARTMENT OF ECOLOGY
1989

WHEREAS, the Pullman-Moscow Water Resources Committee composed of representatives of Pullman, Moscow, University of Idaho, Washington State University, Whitman County and Latah County has an interest in the protection and management of the ground water resources of the Pullman-Moscow basin; and

WHEREAS, the Idaho Department of Water Resources and Washington Department of Ecology have the legal authority and the technical expertise to administer and regulate water law in their respective states, and the responsibility and desire to participate and assist in the management of the ground water resources; and

WHEREAS, there is evidence to show that the potential exists for the overuse of quality ground water resources within the basin; and

WHEREAS, a ground water management plan developed and implemented in concert with public needs and interests and in accordance with state and local laws, rules and regulations can serve to avert the overuse of the ground water resources in the basin; and

WHEREAS, the parties to this Resolution are desirous of developing and implementing such a ground water management plan; and

WHEREAS, the parties hereto are authorized to enter into this Resolution of Understanding for the purposes stated herein.

NOW, THEREFORE BE IT RESOLVED that the parties to this Resolution do agree to the following:

The Idaho Department of Water Resources (IDNR) and Washington Department of Ecology (WDE) agree to commit sufficient staff time to assist in the completion of such tasks as may be appropriate. IDWR and WDE further agree to pursue the implementation of a coordinated Washington-Idaho ground water management plan for the Pullman-Moscow basin in accordance with their respective state law policies.

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The Pullman-Moscow Water Resources Committee (PMWRC) agrees to work with the state agencies and to serve as the forum for input from local governments, interest groups and private citizens.

Specific obligations of the Committee are as follows:

1. **PMHRC will pursue and administer funding to conduct and promote studies and research relative to improving knowledge of the water resources of the basin.**

2. **PMHRC will prepare a management plan for the basin in cooperation with the two state agency parties (IDWR and WDE), which will address both water quantity and water quality concerns.**

3. **PMHRC will prepare as an initial step in the development of the management plan a principal work plan and time schedule which will outline the concerns and issues to be studied. This work plan shall indicate the party or parties with responsibilities for each task and an estimated schedule for completion of each task.**

4. **PMHRC will encourage public involvement in the development of the water management plan through public hearings and education programs.**

5. **PMWRC will facilitate the implementation of the ground water management plan in concert with the member entities of the Committee.**

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BE IT FURTHER RESOLVED, this Resolution shall be effective upon execution by all parties and accomplishment of the filing requirements and approvals as may be necessary. This resolution shall remain in effect until the completion of the ground water management plan or until any party to the agreement terminates its participation by written notice of termination to the other parties.

This Resolution can be amended at any time by written notice to all parties, except that action by the Committee at a regularly scheduled meeting and notice to I DWR and WDE shall satisfy the written notice or PMWRC or Committee members.

/s/ Carole Helm 5-30-89	**/s/ Mandi Baron 5-30-89**
Pullman Date	**Moscow Date**
/s/ Kenneth E, Abbey 5-30-89	**/s/ Joseph Geiger 5-30-89**
Washington State University Date	**University of Idaho Date**
/s/ John Henley 5-30-89	**/s/ Nancy Johansen 5-30-89**
Whitman County Date	**Latah County Date**
/s/ Fred Olsen 5-30-89	**/s/ Wayne Haas 5-30-89**
Washington Department of Ecology Date	**Idaho Water Resources Date**

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APPENDIX C

PUBLIC INPUT

In October of 1989 a community workshop was held in Pullman to allow public participation in the identification of ground water concerns and their possible solutions. The workshop was beneficial in that it allowed people in the Pullman-Moscow area to voice concerns and suggestions and to become better informed on the BASIN ground water problems or issues. From the workshop, it became apparent that:

1. **community people do want to become involved in BASIN ground water issues,**

2. **the public is in need of more information regarding the BASIN ground water system, and,**

3. **the public is in favor of water conservation in the BASIN.**

Community participation in the PLAN development and adoption will be furthered through public input via the member entities, another community workshop, and a public hearing.

The second public workshop was held on October 10, 1991 in Moscow, Idaho. After brief comments from officials of the Idaho Department of Nater Resources and the Washington Department of Ecology, the group was requested to consider two questions: 1) your assessment of actions proposed for your area and 2) how citizens involvement can be developed. Six groups were then formed to consider these questions in relation to each of the six entities. Revisions in the action plans of the entities resulted from these discussions.

The final public hearing was held on March 25, 1992 in Moscow, Idaho. There were no changes suggested to the PLAN. Idaho Department of Water Resources and Washington Department of Ecology officials announced that they were developing an interagency agreement under which the PLAN would be administered. A copy of the agreement is included as Appendix F of the PLAN.

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APPENDIX D

SUGGESTED RESEARCH

Areas of research that will aid effective management of the BASIN are outlined below:

1. **Field investigations**

   a. Geologic studies;

   b. Flow path and flow time studies;

   c. Soil percolation (lysimeter) studies;

   d. Studies of the recharge from (or discharge to) streams in the BASIN;

   e. BASIN discharge to streams and rivers in the BASIN and seepage to the Snake River canyon;

   f. Artificial recharge using recharge ponds or reservoirs and recharge wells; and

   g. Soil recharge enhancement and erosion reduction studies;

2. **Model studies**

   a. Acquisition of a computer ground water MODEL; for convenient use by the COMMITTEE and ENTITIES;

   b. Study of the sensitivity of MODEL output to MODEL input, particularly in areas where relatively large uncertainties exist in the input data;

   c. Update and upgrade the MODEL as appropriate to accommodate updated input information or changing computational or output needs; and

   d. Use the MODEL to evaluate alternative management strategies or scenarios.

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3. Feasibility studies

a. Conservation, re-use, and recycling methods;

b. Alternative surface water sources, including water storage within the BASIN and water transfers from outside the BASIN;

c. Inter-entity water transfers;

d. Alternative ground water sources;

e. Split uses of upper and lower aquifers water; and,

f. Dual water systems for irrigation with lower quality water.

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APPENDIX E

COMMITTEE REPRESENTATIVES

(1990 - 1991)

Pullman

Jim Hudak, Director of Public Works, City of Pullman
Craig Ward, City Council
AL Halvorson, City Council (from 1989 to January 1991)
Louie Sauer, City Council (from February 1991 to present)

Moscow

Gary Presol, City Engineer, City of Moscow
Mardi Baron, City Council

Whitman County

Maggie McGreevy, County Commissioner
Jim Nebel, County Health Department

Latah County

Pam Peterson, County Planner
Nancy Johansen, County Commissioner

Washington State University

Joe Spoonemore, Director, Physical Plant
Ken Abbey, Assistant Vice President, Business (from 1988 to September 1990)
Craig Benjamin, Energy Manager, Physical Plant (from October 1990 to present)

University of Idaho

Kenneth A. Hall, Director, Facilities Management
Larry Kirkland, Energy Engineer, Facilities Management

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Committee Representatives
(2015)

Pullman
Kevin Gardes, Director of Public Works, City of Pullman
Fritz Hughes, City Councilor, City of Pullman
Mark Workman, City Supervisor, City of Pullman

Moscow
Les MacDonald, Public Works Director, City of Moscow
Tom Scallorn, Water/Wastewater Manager, City of Moscow
Walter Steed, City Councilor, City of Moscow

Whitman County
Mark Storey, Public Works Director/County Engineer, Whitman County
Art Swannack, County Commissioner, Whitman County

Latah County
Paul Kimmell, Avista Regional Business Manager, Representing Latah County
Tom Lamar, County Commissioner, Latah County

Washington State University
Steve Potratz, Arch/Engr Project Supervisor, Washington State University
Greg Streva, Water Distribution Manager, Washington State University

University of Idaho
Gene Gussenhoven, Director, Utilities and Engineering Services, University of Idaho
Elmer Johnson, Water Systems Manager, University of Idaho

Ex Oficio Representatives
Keith Franklin, Northern Region Office Manager, Idaho Department of Water Resources
Guy Gregory, Senior Hydrogeologist/Technical Unit Supervisor, Washington State Department of Ecology

Contact Details at http://www.webpages.uidaho.edu/pbac/PBAC_Stuff/members.html

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APPENDIX F

BEFORE THE DEPARTMENT OF ECOLOGY
OF THE
STATE OF WASHINGTON

AND THE

DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO

IN THE MATTER OF THE	**)**	
COORDINATED MANAGEMENT	**)**	**INTERAGENCY AGREEMENT**
OF THE PULLMAN-MOSCOW	**)**	
GROUND WATER AQUIFER	**)**	

WHEREAS, the ground water resource located in the Palouse River/Hangman Creek basins of Latah County, Idaho and Whitman County, Washington, is an important water source for citizens of both Washington and Idaho; and

WHEREAS, the Pullman·Moscow Water Resources Committee (PMWRC), made up of representatives from Whitman County, Latah County, City of Pullman, City of Moscow, Washington State University, and University of Idaho, has been established in recognition of local concerns for the safety and reliability of the ground water resource because of continuing declines in ground water levels in the Pullman-Moscow aquifer; and

WHEREAS, computer-simulated modeling studies sponsored by the PMWRC indicate that the ground water level declines will continue if annual rate of withdrawal from the aquifer increases; and

WHEREAS, applications filed in both Washington and Idaho in recent years for large withdrawals of water from the aquifer indicate the potential exists for substantially increased ground water withdrawals and an associated decline in ground water pumping levels; and

WHEREAS, the PMWRC has adopted a coordinated management plan which sets goals for improved management of the Pullman-Moscow aquifer and action plans aimed at achieving these goals have been adopted by each of the entities belonging to the PMWRC; and

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WHEREAS, the Director of the Department of Ecology of the State of Washington is charged with the administration of ground water resources to maintain a safe sustained yield (Revised Code of Washington 90.l»A.1.30) and is authorized by Washington law to represent the state in matters pertaining to interstate water rights and water development; and

WHEREAS, the Director of the Department of Water Resources of the State of Idaho is charged with the administration of ground water to maintain reasonable pumping levels (Section &2·226. Idaho Code) and is authorized by Section 42-1805, Idaho Code to represent the state in matters pertaining to interstate water rights and water development; and

WHEREAS, the responsible officials of each state desire to achieve coordinated management of the ground water resources of the Pullman—Moscow aquifer in accordance with their respective state laws and in cooperation with the PMWRC and its member entities;

NOW, THEREFORE, IT IS HEREBY AGREED THAT administration of the ground water resources of the Pullman·Moscow aquifer will be in accordance with the adopted "Groundwater Management Plan" of the PMWRC to the extent that such plan can be implemented and administered under the laws of each state. The following specific actions will be taken by the administrative agency of each state to implement the plan:

l. Issuance of new permits to appropriate ground water and approval of applications to change existing ground water rights will be guided by the withdrawal limitations in the PMWRC plan. The state administrative agencies will provide copies of all such applications to the PMWRC for review and evaluation relative to compliance with the PMWRC plan. The decision-making authority rests with the state agency, but the recommendations of the PMWRC will be made part of the official record for each application.

2. Applicants proposing significant (as determined by the director of the state within which the application is filed) increases in withdrawal of ground water from the Pullman—Moscow aquifer will be required to provide information on alternative sources of water, conservation practices to be implemented to reduce the quantity of water withdrawn, and similar information needed to demonstrate compliance with the PMWRC plan.

3. Applications for transfer of ground water rights across the state line will be considered in accordance with the applicable laws of each state and will be guided by the PMWRC plan.

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4. The administrative agency of each state will, within the funding available and the priorities set by the director of each state, endeavor to enforce the applicable laws of each state relative to supervision of construction and maintenance of wells, unauthorized diversion and use of water, and conservation of water to achieve the goals of the PHWRC plan.

5. Within funding specifically available for such purposes, the administrative agency of each state will cooperate in studies necessary to evaluate the ground water resource and improve management of it.

6. A representative of each agency will be designated by the director of each agency as responsible for coordination of the agency's activities with the PMWRC.

IT IS FURTHER UNDERSTOOD that this agreement is effective upon signature by both directors and accomplishment of such filing, notice or approval requirements as may be necessary. This agreement shall remain in effect until terminated by written notice by either party.

DATE: April 8, 1992 **/s/ Fred Olsen**
FOR CHUCK CLARKE
DIRECTOR
WASHINGTON DEPARTMENT OF ECOLOGY

DATE: April 20, 1992 **/s/ R Keith Higginson**
R. KEITH HIGGINSON
DIRECTOR
IDAHO DEPARTMENT OF WATER RESOURCES

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APPENDIX G

RESOLUTION OF ACCEPTANCE
between the parties of the
PULLMAN—MOSCOW WATER RESOURCES COMMITTEE

1992

WHEREAS, the Pullman-Moscow Water Resources Committee (hereinafter "PMWRC") composed of representatives of Pullman, Moscow, University of Idaho, Washington State University, Whitman County and Latah County (hereinafter "PARTIES") has an interest in the protection and management of the ground water resources of the Pullman-Moscow basin (hereinafter "BASIN"); and

WHEREAS, there is evidence to show that the potential exists for the overuse of quality groundwater resources within the basin; and

WHEREAS, a ground water management plan developed and implemented in concert with public needs and interests and in accordance with state and local laws, rules and regulations can serve to avert the overuse of the ground water resources in the basin; and

WHEREAS, a Groundwater Management Plan has been developed by the PMWRC; and

WHEREAS, the parties to this Resolution are desirous of implementing such a groundwater management plan; and

WHEREAS, parties hereto are authorized to enter into this Resolution of Acceptance for the purposes stated herein.

The PMWRC recommends the Groundwater Management Plan to the PARTIES for acceptance and implementation.

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NOW THEREFORE BE IT RESOLVED, this Resolution shall be effective upon execution by all parties and accomplishment of the filing requirements and approvals as may be necessary. This Resolution shall remain in effect until any party to the agreement terminates its participation by written notice of termination to the other parties.

Chairman — Date: May 8, '92
Pullman-Moscow Water Resources Committee

Pullman — Date: 3 June '92
Moscow — Date: 5/11/92

Washington State University — Date: 7/21/92
University of Idaho — Date: 6/1/92

Whitman County — Date: 7/28/92
Latah County — Date: 5-26-92

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APPENDIX H

PALOUSE BASIN AQUIFER COMMITTEE INTERAGENCY AGREEMENT

I. PARTIES

This agreement (AGREEMENT) is entered into between the city of Pullman, a municipal corporation of the state of Washington (PULLMAN); the city of Moscow, a municipal corporation of the state of Idaho (MOSCOW); Whitman County, a municipal corporation of the state of Washington (WHITMAN); Latah County, a political subdivision of the state of Idaho (LATAH); the University of Idaho, an institution of higher education of the state of Idaho (UI), Washington State University, an institution of higher education of the state of Washington (WSU); and the city of Colfax, a municipal corporation of the state of Washington (COLFAX). In this AGREEMENT, all the above entities are referred to as PARTY or jointly as the PARTIES. Additional governmental entities may be included in this AGREEMENT by addendum executed by all PARTIES existing at that time and the proposed additional PARTY.

II. AUTHORITY AND GOVERNANCE

The PARTIES are authorized to enter into and carry out this AGREEMENT pursuant to the provisions of Idaho Code and Article IX, Section 10 Idaho Constitution, and Chapter 39.34 of the Revised Code of Washington.

In the event of an inconsistency in the terms of this Agreement, or between its terms and any applicable statute or rule, the inconsistency shall be resolved by giving precedence in the following order:

a. applicable state and federal statutes and rules; and
b. provisions of the agreement, including materials incorporated by reference.

III. PURPOSE

The common water supply serving the western portion of Latah County, Idaho in the general vicinity of MOSCOW, and the eastern portion of Whitman County, Washington in the general vicinity of PULLMAN (referred to herein as the Palouse Basin Aquifer), is an important regional concern and maintaining and conserving that resource is of critical importance to each PARTY to this Agreement. The PARTIES deem it to be in the public interest to work jointly and cooperatively on water resource problems and issues, while maintaining a consideration of the benefits of growth activity and economic development.

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IV. ADMINISTRATION OF AGREEMENT AND COMMITTEE

A. Establishment of Committee: In order to carry out the purpose of this AGREEMENT, the PARTIES hereby establish a committee to be known as the Palouse Basin Aquifer Committee (PBAC).

B. Membership: PBAC shall consist of a maximum of two (2) members representing each of the PARTIES. Each member shall serve at the pleasure of the PARTY that appoints that member. It is preferred that each PARTY have one (1) member with a technical background and another member who is in an administrative/ leadership position with that PARTY.

C. Duties of PBAC: PBAC shall:

l. Coordinate planning to assure a long-range supply of water to the PARTIES.

2. Maintain and continue to update and expand the databases developed through previous studies and data acquisition efforts.

3. Encourage conservation to promote the life of the Palouse Basin Aquifer.

4. Investigate supplemental and/or alternate sources of water.

5. Educate and advise the PARTIES on the quantity and quality of the public water supply within the Palouse Basin Aquifer.

6. Act as liaison between the PARTIES on water resource concerns.

7. Promote communication between the PARTIES, the Washington Department of Ecology, and the Idaho Department of Water Resources.

8. Perform such other duties or functions as may be agreed to by the PARTIES in writing and made an addendum to this Agreement.

D. Powers: PBAC shall have the power to:

l. Collect and disseminate statistics and other information.

2. Allocate expenditures of funds contributed by the PARTIES.

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3. Designate one of the PARTIES as a depository for funds and for the administration of those funds.

4. Request that the PARTY designated pursuant to Section IV.D.3. employ an individual to work on PBAC matters. Such personnel shall serve at the pleasure of and under the control of the employing PARTY and PBAC. Such personnel shall be subject to a Work Plan, approved by the employing PARTY and PBAC, which shall include the requirement of regular written progress reports to PBAC and which shall contain measurable criteria upon which job performance may be assessed. The complete salary, benefits, and necessary support, including office supplies and equipment, for any and all such personnel shall be paid by PBAC with the funds deposited pursuant to Section IV.D.3.

5. PBAC may enter into legal and financial agreements, such as for research projects, and may purchase and hold personal property, if it is within the financial resources available to PBAC. If real property or an interest therein is to be acquired to support or facilitate a PBAC function or activity, the PARTIES shall determine how said real property or interest therein shall be acquired, held, and ultimately disposed. It is the intent of PBAC that an individual PARTY or combination of PARTIES shall hold said property or property interest. PBAC, per se, shall not hold real property.

6. Apply for and administer grants.

7. Work with the PARTIES in educating the public.

E. Meetings, Officers, and Voting:

l. PBAC shall hold meetings as set forth in its Bylaws.

2. PBAC shall elect officers as set forth in its Bylaws.

3. Voting shall be by members or alternates as set forth in the Bylaws.

F. Annual Report: PBAC shall publish a report of its activities on an annual basis.

G. Bylaws: PBAC may adopt, amend, or repeal Bylaws, in whole or in part, which are consistent with the terms and conditions of this AGREEMENT, by a majority vote at any regular or special meeting of PBAC. A majority vote for the purposes of adopting, amending, or repealing the Bylaws means a majority of all members of PBAC with then-

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existing voting rights as detailed in Section V.D. and not merely a majority of a quorum as defined in the Bylaws.

V. <u>FINANCING</u>

A. Budget: Annually, PBAC shall establish a budget for the ensuing fiscal year (July lst through June 30th of the following year), which budget shall be established in sufficient time to allow each PARTY to budget its contribution for the year. Any such approved budget shall not be exceeded without the express approval of PBAC.

B. PARTY Contributions: Contributions are due July lst of the fiscal year and are past due on February lst of the same fiscal year.

C. Funding: The funding contributions for administration and projects shall be as follows:

l. UI, WSU, MOSCOW, and PULLMAN shall each, as its contribution, pay $8000 annually toward the operating budget of PBAC. For this contribution, said PARTIES shall each have two (2) voting members pursuant to Section IV.B.

2. LATAH, WHITMAN, and COLFAX and any subsequently admitted PARTY shall each, as its contribution, pay $2000 annually toward the operating budget of PBAC. For this contribution, said PARTIES shall each have one (1) voting member pursuant to Section IV.B. Any said PARTY that increases its contribution to $8,000 shall have said voting membership increased to two (2) for the related fiscal year.

3. The amounts established in Sections V.C.l and V.C.2 may only be raised or lowered by a two-thirds (2/3) majority vote of` all members with then-existing voting rights as detailed in Section V.D.

4. Additional funding may be provided for any specific project according to the interests and benefits of each participating PARTY. Said funding shall be approved by each PARTY participating in said project.

D. Voting Rights: Any PARTY past due in the payment of its contribution for the operating budget of PBAC, pursuant to Sections V.B., V.C.l, and V.C.2, shall be encouraged to continue participating in PBAC but shall lose voting rights, until such time as that PARTY pays said contribution for the current fiscal year. Payment of said contribution for previous fiscal years is not required as a condition of reestablishing voting rights. Loss of` voting rights as provided herein shall be the sole consequence of a PARTY'S delinquency in or failure to

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pay its contribution for any fiscal year.

E. Dissolution and Disbursement of Funds and Property;

l. Any PARTY may automatically withdraw from PBAC by submitting to the remaining PARTIES a written statement setting forth its intent to withdraw at least sixty (60) days prior to the effective date of its withdrawal. If a PARTY withdraws, it shall be liable only for performance rendered or costs incurred in accordance with the terms of this Agreement prior to the effective date of its withdrawal. A withdrawing PARTY retains the right to share in the distribution of assets should PBAC be dissolved during the same fiscal year as the PARTY withdrew. A withdrawing PARTY waives any claim to receive a pro—rata share of surplus funds or distribution of personal property if PBAC is dissolved in a subsequent fiscal year.

2. PBAC shall be dissolved through a written agreement approved by a majority of the PARTIES or through the withdrawal of PARTIES to the extent that only three (3) PARTIES remain. If this Agreement is so terminated, the parties shall be liable only for performance rendered or costs incurred in accordance with the terms of this Agreement prior to the effective date of termination.

3. Any surplus funds remaining at the time of dissolution shall be distributed to the PARTIES in proportion to the amount of money each PARTY contributed to the PBAC budget during the current fiscal year.

4. Any personal property remaining at the time of dissolution shall be equitably distributed among the PARTIES or, at the discretion of the PARTIES with then-existing voting rights, surplused with the proceeds distributed pursuant to Section V.E.3. Ownership of real property or property interest vested in a PARTY or PARTIES at the time of dissolution shall continue to be held by said PARTY or PARTIES.

VI. <u>RECORDS MAINTENANCE</u>

PBAC shall maintain books, records, documents and other evidence that sufficiently and properly reflect all direct and indirect costs expended in the performance of the activities described herein. These records shall be subject to inspection, review or audit by personnel of all PARTIES, other personnel duly authorized by either party, Washington State's Office of the State Auditor, and other state and federal officials so authorized by law. All books, records, documents, and other material relevant to this Agreement will be retained for six years after expiration and Washington State's Office of the State Auditor, other state and federal auditors

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authorized by law, and any persons duly authorized by the PARTIES shall have full access to and the right to examine any of these materials during this period.

Records and other documents, in any medium, furnished by one PARTY to this agreement to another PARTY, will remain the property of the furnishing PARTY, unless otherwise agreed. The receiving PARTY will not disclose or make available this material to any third parties without first giving notice to the furnishing PARTY and giving it a reasonable opportunity to respond, which shall be deemed to be five (5) working days from actual notice. Each PARTY will utilize reasonable security procedures and protections to assure that records and documents provided by the other PARTY are not erroneously disclosed to third parties. However, nothing herein shall affect the disclosure or availability of records or other information pursuant to the applicable provisions of the Washington and/or Idaho public records laws.

VII. RIGHTS IN DATA

Unless otherwise provided, data that originates from this Agreement shall be "works for hire" as defined by the U.S. Copyright Act of 1976 and shall be owned by PBAC. Each PARTY shall have the right to use such data. Data shall include, but not be limited to, reports, documents, pamphlets, advertisements, books, magazines, surveys, studies, computer programs within licensing limitations, films, tapes, and sound reproductions. Ownership includes the right to copyright, patent, register, and the ability to transfer these rights.

VIII. LIABILITY

Each PARTY to this AGREEMENT shall be responsible for its own acts and the acts of its officers, employees and agents. No PARTY to this AGREEMENT shall be responsible for the acts of others. For the purpose of this AGREEMENT, the officers, employees, or agents of each PARTY who are engaged in the performance of activities under this AGREEMENT will continue to be officers, employees, or agents of that PARTY and shall not be considered for any purpose to be officers, employees, or agents of any other PARTY. Each PARTY agrees to indemnify any other PARTY for any liability resulting from the actions of itself or its employees.

IX. DISPUTE RESOLUTION

In the event that a dispute arises under this AGREEMENT, it shall be resolved in the following manner: Each PARTY to this AGREEMENT shall appoint a member to resolve the dispute. If necessary, the members so appointed shall jointly appoint an additional member to resolve the dispute so that at all times there shall be an uneven number of dispute resolvers. The dispute resolvers shall determine the process to use, evaluate the facts and contract terms, review applicable statutes, regulations and rules, and resolve/decide the dispute. The determination of

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the dispute resolvers shall be final and binding on the PARTIES. There shall be no cost to the PARTIES for this service. The PARTIES may enforce the decision, if necessary, in an applicable state court.

X. EFFECTIVE DATE AND DURATION

A. Effective Date: This AGREEMENT shall be effective when the last signatory approves or ratifies and executes this AGREEMENT.

B. Filing: Copies of this AGREEMENT shall be filed with the Pullman City Clerk, Whitman County Auditor, the Secretary of State of the state of Washington, the Moscow City Clerk, the Latah County Auditor, the Secretary of State of the state of Idaho, and the Colfax City Clerk prior to its entry into force.

C. Duration: This AGREEMENT shall have a term of twenty (20) years from and after the effective date, unless PBAC is sooner dissolved as set forth in Section V.E.2.

XI. ASSIGNMENT

The activities to be provided under this Agreement, and any claim arising hereunder, are not assignable or delegable by any PARTY in whole or in part, without the express prior written consent of all other PARTIES, which consent shall not be unreasonably withheld.

XII. WAIVER

A failure by a PARTY to exercise its rights under this agreement shall not preclude that PARTY from subsequent exercise of such rights and shall not constitute a waiver of any other rights under this Agreement unless stated to be such in writing, signed by an authorized representative of the PARTY and attached to the original Agreement.

XIII. NOTICES

All notices, demands, requests, or other communications required to be given or sent to the PARTIES under this Agreement will be in writing and will be mailed by first-class mail, postage prepaid, addressed as noted below, or transmitted by hand delivery, facsimile, or internet e-mail;

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CITY OF PULLMAN
Attn: Public Works Director
325 SE Paradise Street
Pullman, WA 99163

CITY OF MOSCOW
Attn: Public Works Director/City Engineer
P.O. Box 9203
Moscow, ID 83843

WHITMAN COUNTY
Board of County Commissioners
Whitman County
404 North Main
Colfax, WA 99111

LATAH COUNTY
Board of County Commissioners
P.O. Box 8068
Moscow, ID 83843

UNIVERSITY OF IDAHO
Assistant Director, Utilities &
Engineering Facilities
875 Perimeter Drive
University of Idaho
Moscow, ID 83844-2281

WASHINGTON STATE UNIVERSITY
Attn: Assistant Director; Architectural,
Engineering, and Construction Services
Facilities Operations
P.O. Box 641150
Pullman, WA 99164-1150

CITY OF COLFAX
Attn: City Administrator
P.O. Box 229
Colfax, WA 99111

Each PARTY may designate a change of address by notice in writing. All notices, demands, requests, or communications that are not hand-delivered will be deemed received three (3) days after deposit in the U.S. mail, postage prepaid; or upon confirmation of successful facsimile or internet e-mail transmission.

XIV. <u>AMENDMENTS, SEVERABILITY, AND COMPLETE AGREEMENT</u>

A. This AGREEMENT may be amended by mutual agreement of the PARTIES. Such amendments shall not be binding unless they are in writing and signed by personnel authorized to bind each of the PARTIES.

B. If any provision of this AGREEMENT or any provision of any document incorporated by reference shall be held invalid, such invalidity shall not affect the other provisions of this AGREEMENT which can be given effect without the invalid provision, if such remainder conforms to the requirements of applicable law and the fundamental purpose of this AGREEMENT, and to this end the provisions of this AGREEMENT are declared to be severable.

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C. This AGREEMENT contains all the terms and conditions agreed upon by the PARTIES. No other understandings, oral or otherwise, regarding the subject matter of this AGREEMENT shall be deemed to exist or to bind any of the PARTIES hereto.

XV. SIGNATURES

IN WITNESS WHEREOF, the undersigned parties to this AGREEMENT affirm that they have been granted the authority t0 sign this document 0n behalf 0f their respective entities.

CITY OF PULLMAN
Name: Mitchell D. Chandler
Title: Mayor
Date: June 19, 2003

CITY OF MOSCOW
Name: Marshall H. Comstock
Title: Mayor
Date: 8/21/03

WHITMAN COUNTY
Name: G.R. Finch
Title: Chairman of BOCC
Name: Greg Partch
Title: Commissioner
Name: Les Wigen
Title: Commissioner
Date: 05-12-03

LATAH COUNTY
Name: Paul J. Kimmell
Title: Chairman BOCC
Name: Tom S. Stroschein
Title: Commissioner
Name: John A. Nelson
Title: Commissioner
Date: 5-19-03

UNIVERSITY OF IDAHO
Name: Laura E. Hubbard
Title: VP Finance & Admin
Date: 6/18/03

WASHINGTON STATE UNIVERSITY
Name: Gregory P. Royer
Title: VP for Business Affairs
Date: 5/21/03

CITY OF COLFAX
Name: Emily Adams for Norma Becker, Mayor
Title: City Administrator
Date: 6/23/03

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ADDENDUM TO PALOUSE BASIN AQUIFER COMMITTEE INTERAGENCY AGREEMENT BETWEEN CITY OF MOSCOW, IDAHO, CITY OF PULLMAN, WASHINGTON, UNIVERSITY OF IDAHO AND WASHINGTON STATE UNIVERSITY RELATING TO ADDITIONAL FUNDING CONTRIBUTIONS FOR SPECIFIC RESEARCH PROJECTS

WHEREAS, Section V.C.4 of the Palouse Basin Aquifer Committee Interagency Agreement (PBAC Agreement) provides: "Additional funding may be provided for any specific project according to the interests and benefits of each participating PARTY. Said funding shall be approved by each PARTY participating in said project;" and,

WHEREAS, the City of Pullman, City of Moscow, Washington State University, and University of Idaho desire to contribute annually additional funds for specific research projects relating to the Palouse Basin Aquifer; and,

WHEREAS, it is in the best interests of the four parties to this Addendum to determine the specific research projects for which these additional contributions shall be utilized.

Now, therefore, the City of Pullman, City of Moscow, Washington State University, and University of Idaho agree:

1. *To contribute an additional sum of $20,000 per year to PBAC,*
2. *That these additional contributions may be expended by PBAC on a specific project or projects only as approved by a unanimous vote of the PBAC members representing the City of Pullman, City of Moscow, Washington State University, and University of Idaho. Noncontributing PBAC members are not entitled to vote on the expenditure of these additional contributions.*

Dated this _1st__ day of _October_ , 2007.

IN WITNESS THEREOF, the undersigned parties to this ADDENDUM affirm that they have been granted the authority to sign this document on behalf of their respective entities.

CITY OF PULLMAN
Name: Glenn A. Johnson
Title: Mayor
Date: June 20, 2007

CITY OF MOSCOW
Name: Nancy Chaney
Title: Mayor
Date: 10-8-07

WASHINGTON STATE UNIVERSITY
Name: Gregory P. Royer
Title: VP Business Affairs
Date:

UNIVERSITY OF IDAHO
Name: Lloyd E. Mues
Title: VP (F&A) UI
Date: 10 Sep 07

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A RESOLUTION INCREASING FUNDING CONTRIBUTIONS FOR THE PARTIES COMPRISING THE PALOUSE BASIN AQUIFER COMMITTEE

Whereas, the PARTIES comprising the Palouse Basin Aquifer Committee (PBAC) currently consist of the City of Pullman, the City of Moscow, Whitman County, Latah County, the University of Idaho, Washington State University, and the City of Colfax; and,

Whereas, the PARTIES have entered into an Interagency Agreement through which they operate as the Palouse Basin Aquifer Committee; and,

Whereas, Section V.C of said Interagency Agreement establishes funding contributions for the PARTIES and related voting rights for members of PBAC; and,

Whereas, Section V.C.3 of said Interagency Agreement provides that said funding contributions may be raised or lowered by a two-thirds (2/3) majority vote of all members of PBAC with voting rights; and,

Whereas, Section V.C.4. of said Interagency Agreement provides that additional funding may be provided for projects by PARTIES according to the interests and benefits of each participating PARTY and upon approval by each PARTY participating in the project; and,

Whereas, the members desire to increase the operating funding contributions of all PARTIES of the Palouse Basin Aquifer Committee; and,

Whereas, the City of Pullman, the City of Moscow, Washington State University, and University of Idaho each desire to provide ongoing funding for projects; now, therefore;

IT IS HEREBY RESOLVED that Section V.C.1 of the Palouse Basin Aquifer Committee Interagency Agreement is revised to read as follows:

> *"UI, WSU, MOSCOW, and PULLMAN shall each, as its contribution, pay $20,000 annually toward the operating budget of PBAC. For this contribution, said PARTIES shall each have two (2) voting members pursuant to Section IV.B".*

BE IT FURTHER RESOLVED that Section V.C.2. of the Palouse Basin Aquifer Committee Interagency Agreement is revised to read as follows:

> *"LATAH, WHITMAN, and COLFAX and any subsequently admitted PARTY shall each, as its contribution, pay $5,000 annually toward the operating budget of PBAC. For this contribution, said PARTIES shall each have one (1) voting member pursuant to Section*

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IV.B. Any said PARTY that increases its contribution to $20,000 shall have said voting membership increased to two (2) for the related fiscal year".

BE IT FURTHER RESOLVED that this resolution shall become effective with the contributions that will be due from the PARTIES on July 1, 2007 and shall remain effective thereafter until amended by subsequent action.

Adopted by at least a two-thirds (2/3) majority of all members of the Palouse Basin Aquifer Committee with voting rights on the 16th day of August, 2007.

Dated this 16th day of August, 2007

Mike Holthaus
Chairperson

Attest:

Mark D. Workman
Vice Chairperson

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Voting Record

Member	***Aye***	***Nay***	***Abstain***	***Absent***
Barney Waldrop	*X*			
Mark Workman	*X*			
Aaron Ament	*X*			
Les MacDonald	*X*			
Joe Kline	*X*			
Mike Holthaus	*X*			
Rob Corcoran	*X*			
Keith Bloom				*X*
Mark Storey				*X*
Paul Kimmell	*X*			
Carl Thompson	*X*			

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BYLAWS
of the
PALOUSE BASIN AQUIFER COMMITTEE

ARTICLE I
Name

A. The name of this association shall be Palouse Basin Aquifer Committee (PBAC)

ARTICLE II
Membership

A. PBAC shall consist of up to two members from each PARTY as defined and detailed in the Palouse Basin Aquifer Committee Interagency Agreement (Agreement).

B. Each member shall be appointed by and serve at the pleasure of the respective PARTY.

C. Members may appoint an alternate to serve on their behalf.

ARTICLE III
Officers and Voting

A. A voting member is a member with voting rights as determined by the status of the member's PARTY'S dues being current, as further detailed in the Agreement.

B. One member shall serve as Chairperson, one member shall serve as Vice Chairperson. An Executive Secretary may be selected and appointed by a majority vote of voting members at a regular meeting.

C. Each member shall have one (1) vote. Members, or their designated alternate, must be in attendance to vote. A simple majority vote, except as specifically provided elsewhere in these Bylaws and the Agreement, is required for a motion to pass. In the event of a tie vote, the motion shall fail.

D. The term of officers shall be from July 1 through June 30.

E. A quorum necessary to elect officers or transact business, except as specifically provided elsewhere in these Bylaws and the Agreement, shall be constituted when a majority of all PARTIES with at least one voting member is represented by at least one member at a meeting.

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ARTICLE IV
Meetings and Elections

A. PBAC shall hold one regular meeting per month on a day approved by majority vote of a quorum. Special meetings may be called when determined necessary by the Chairperson. A special meeting requires that a specific agenda be prepared and properly noticed. Meetings may be cancelled when determined appropriate by the Chairperson.

B. Officers shall be elected each year at the regular June meeting.

C. The budget year for PBAC shall be from July 1 through June 30.

D. All meetings shall be conducted in accordance with the current edition of Robert's Rules of Order, including keeping minutes of all meetings.

E. All meetings of PBAC shall be open to the public in accordance with the provisions of the Washington Open Meetings Act (Chapter 42.30 RCW) and Section 67-2341 Idaho Code as those provisions now exist or may be hereafter amended.

ARTICLE V
Special Committees

A. Special committees may be created from time to time as the need arises to carry out a specified task. The creation and purpose of a special committee shall be established by a majority vote of all voting members. A special committee may similarly be disbanded by majority vote of all voting members.

ARTICLE VI
Agreements

A. Contracts, agreements, and other documents approved by PBAC as detailed herein shall be executed by the Chairperson on behalf of PBAC. In the Chairperson's absence, PBAC may authorize the Vice Chairperson or the Executive Secretary to execute such contracts, agreements, or other documents.

ARTICLE VII
Amendments

A. These Bylaws may be amended or repealed, in whole or in part, by a majority vote of all voting members.

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ADOPTED by a majority of all members of PBAC this 19th day of May, 2005.

Robert F. Corcoran
Chairperson

ATTEST:

Larry Kirkland
Executive Secretary

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PALOUSE BASIN

AQUIFER

committee