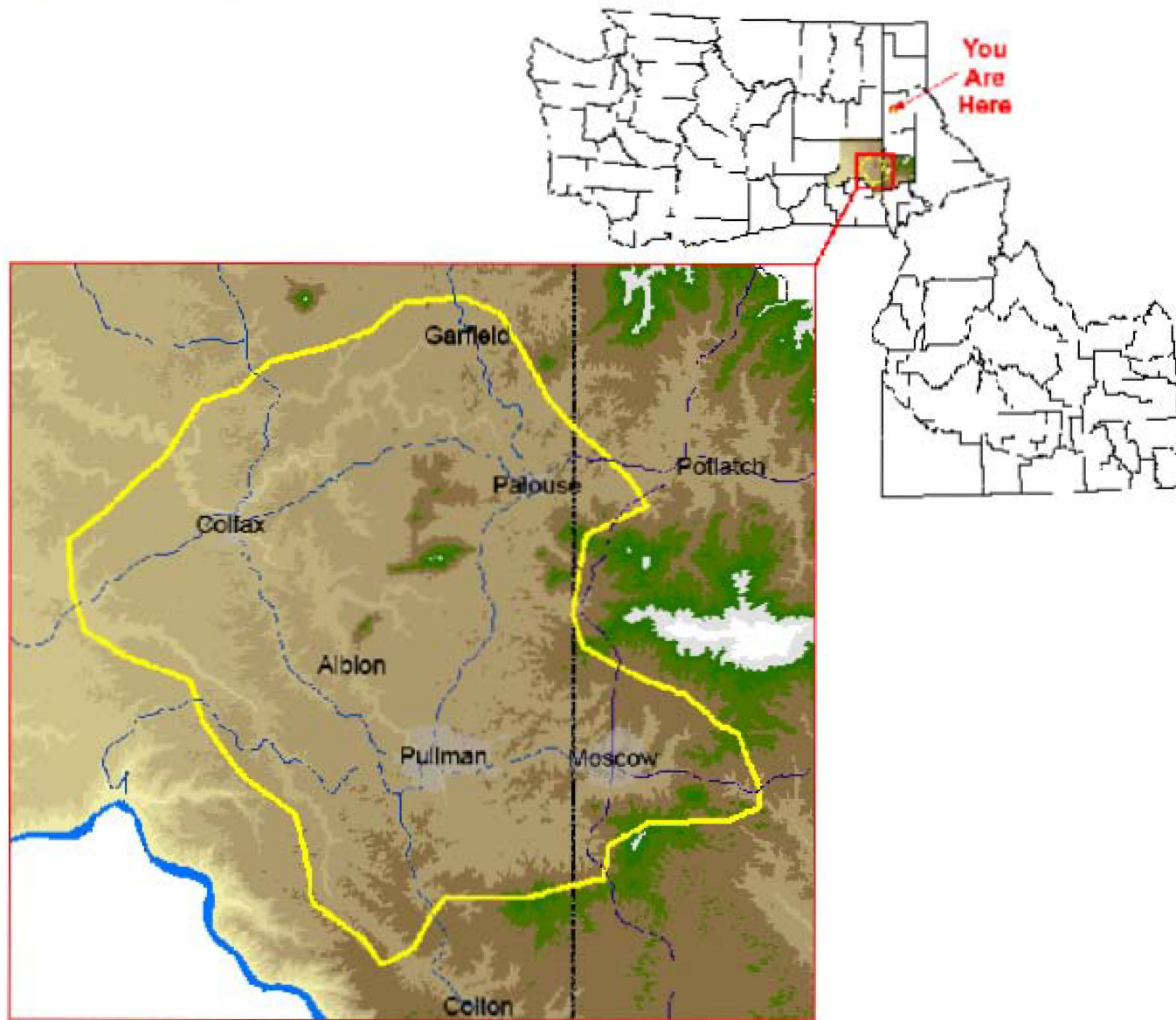


***Ground Water Management on the Palouse
How Does It Work Down There?***

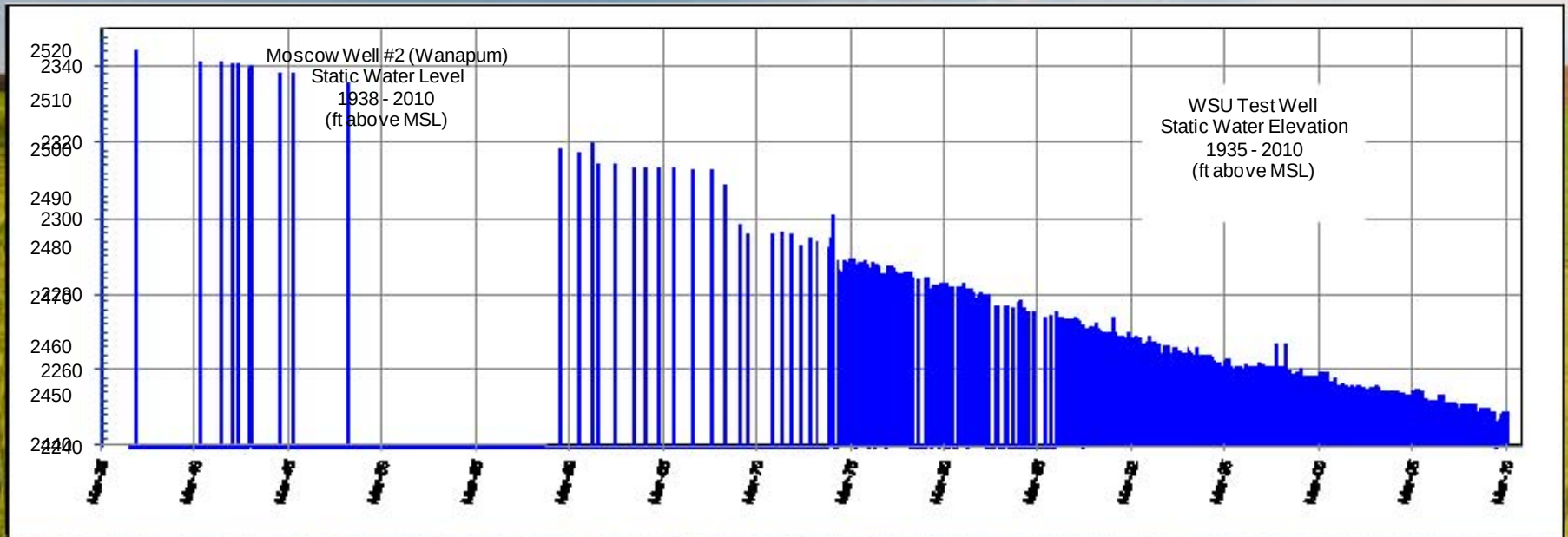
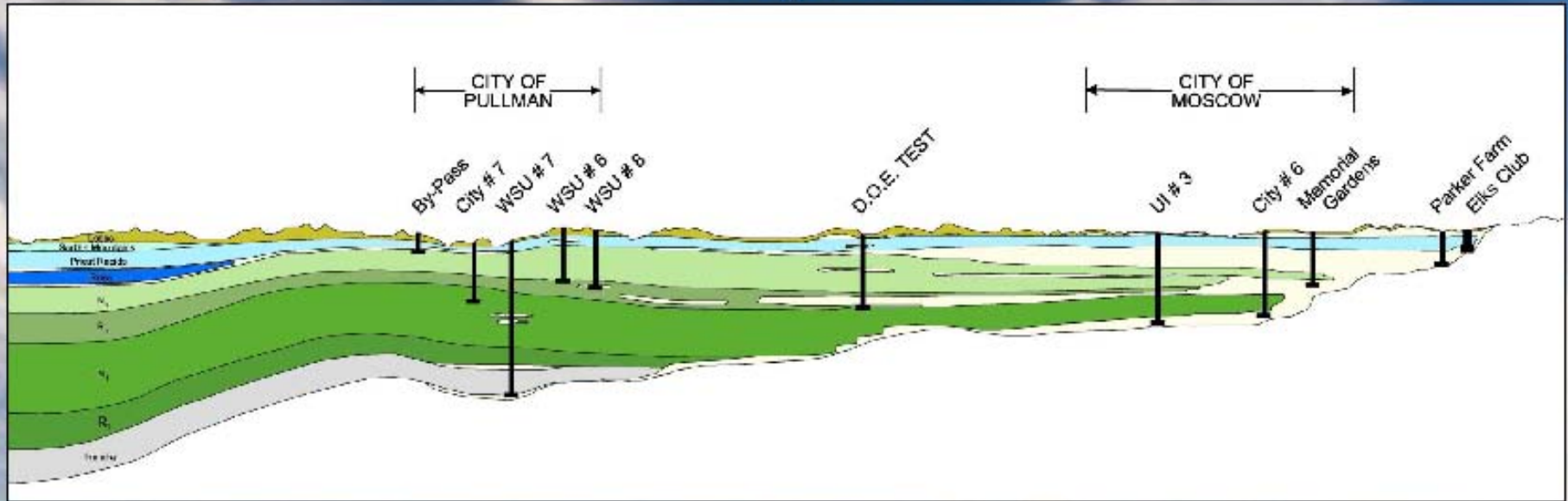
***Rathdrum Prairie CAMP Advisory Committee Meeting
May 7, 2010***

***Steve Robischon
Palouse Basin Aquifer Committee (PBAC)***

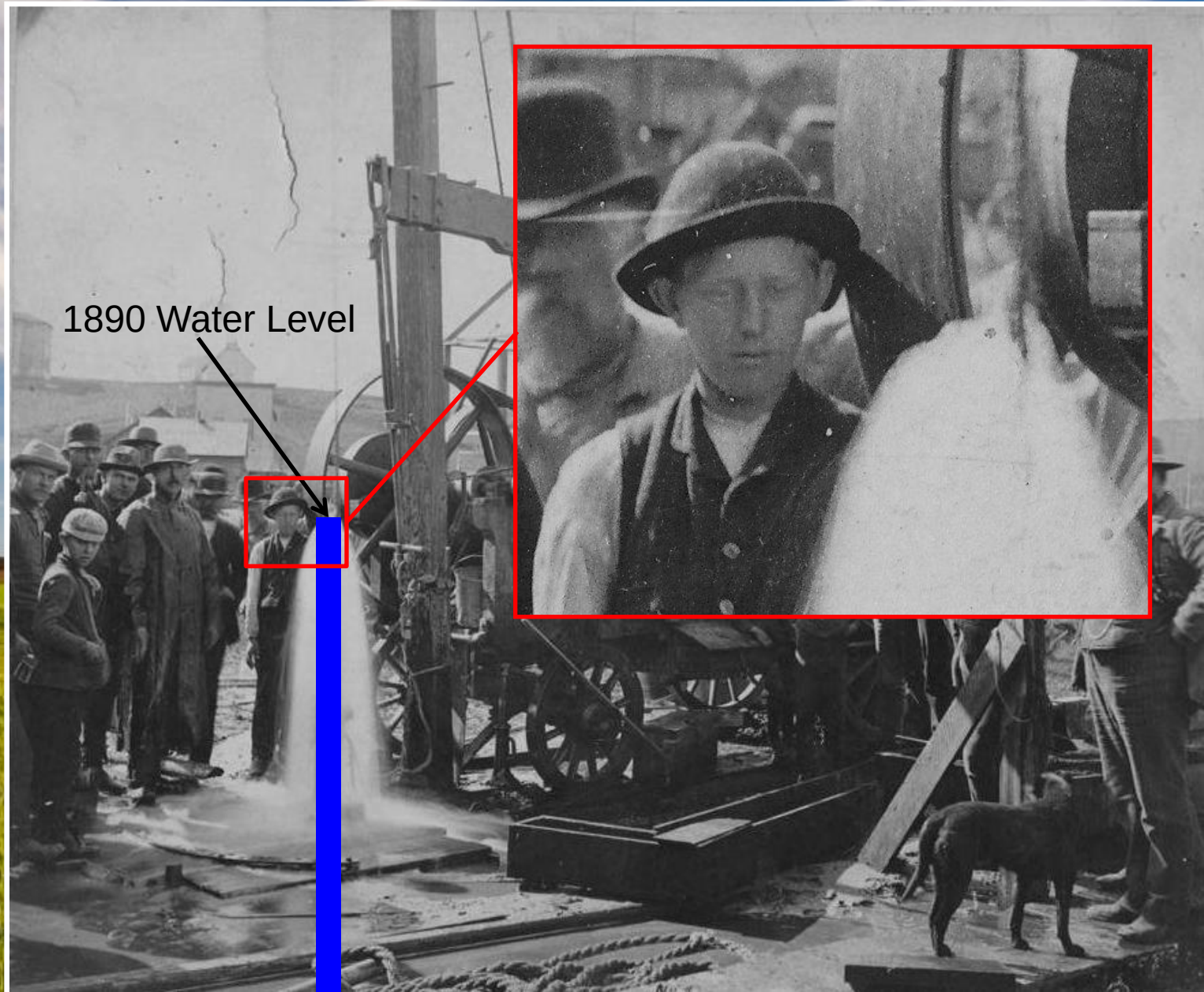
The Setting



The Aquifers

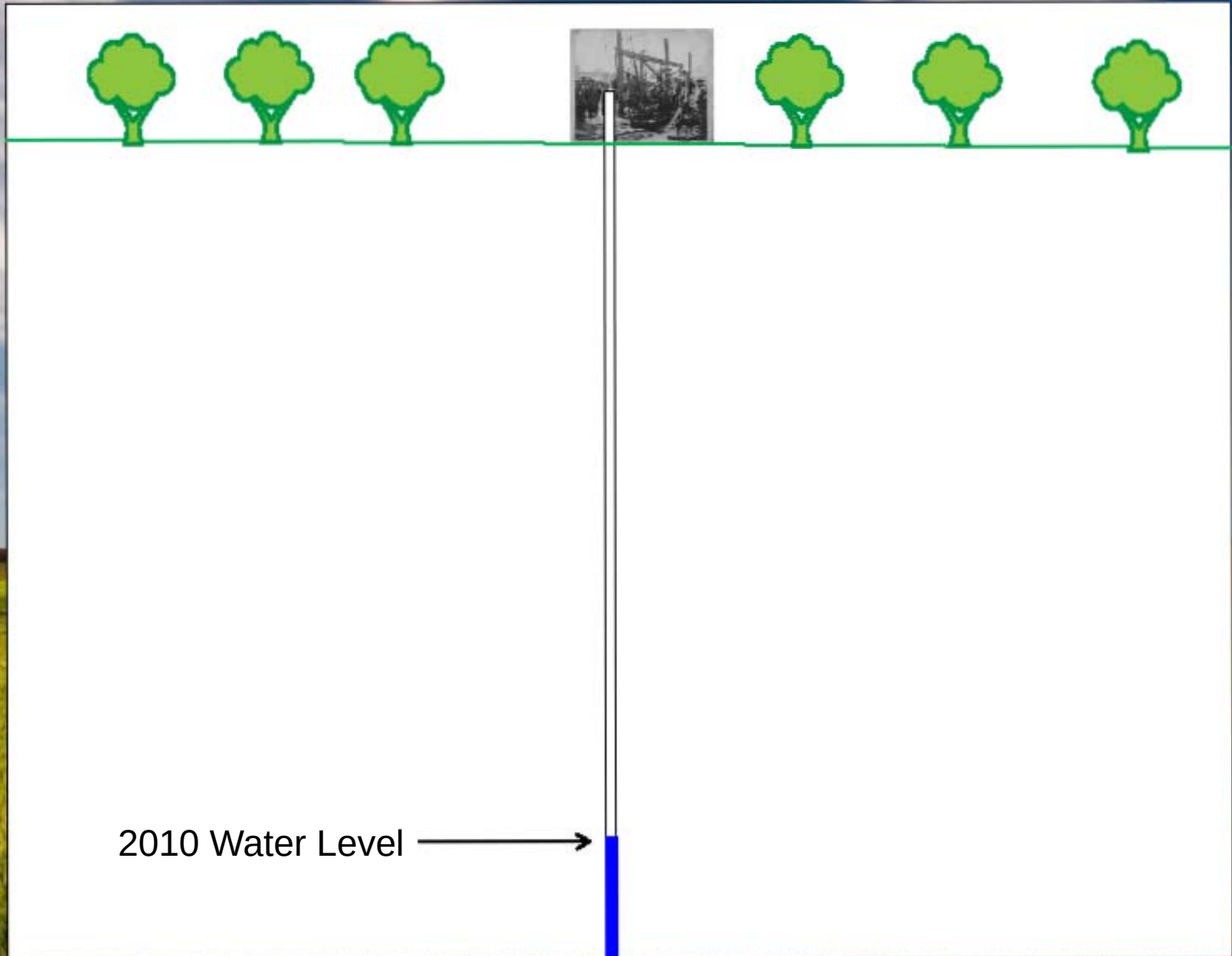


The Water Levels



1890 Water Level

The Water Levels





The History (Pre Management Plan)

The History (Pre Management Plan)

ALTERNATIVE PLANS

ALTITUDE OF WATER LEVEL,
IN FEET ABOVE MEAN SEA LEVEL

2285

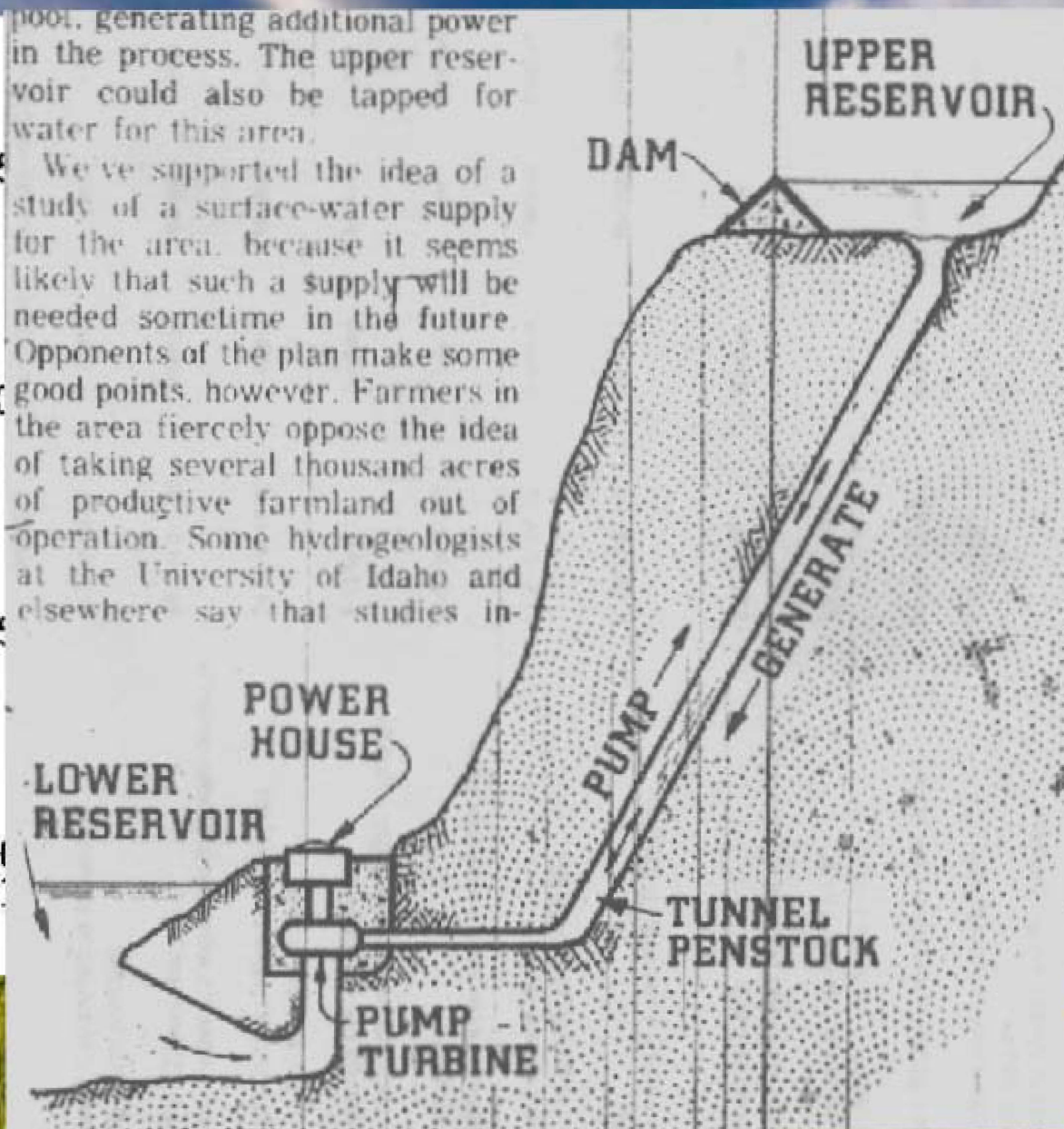
2280

2275

2270

pool, generating additional power in the process. The upper reservoir could also be tapped for water for this area.

We've supported the idea of a study of a surface-water supply for the area, because it seems likely that such a supply will be needed sometime in the future. Opponents of the plan make some good points, however. Farmers in the area fiercely oppose the idea of taking several thousand acres of productive farmland out of operation. Some hydrogeologists at the University of Idaho and elsewhere say that studies in-



2000

• UPPER RESERVOIR
• TUNNEL PENSTOCK
• PUMP

FIGURE 1

The History (Pre Management Plan)

Lesson: Make Sure Stakeholders Are At The Table

Idahoan

Wednesday

Mar. 10, 1976

VOL. 83 NO. 83 MOSCOW, IDAHO 10 Cents

Citizens, Officials Rap Corps, Reservoir Plan

By KENTON BIRD

PULLMAN — Col. Nelson Conover of the U.S. Army Corps of Engineers may have felt a little like General Robert E. Lee at Appomattox. And Moscow Mayor Paul Mann said he didn't realize how appropriate his gray coat would be.

It was, though, because with the exception of some muted defense of the Corps by Mann in his "Confederate" role, the evening belonged to what the mayor called "the Union Army," a delegation of more than 900 opponents of a pumped-storage reservoir proposed for the Union Flat Creek area southwest of Pullman.

A four-hour parade of public officials and private citizens told Conover that not only are they against building such a reservoir, there's no

need to even study the proposal. And several suggested a better study would be to determine if there is still a need for the Corps of Engineers.

Before the barrage of testimony, Conover, the district engineer for the Walla Walla District of the Corps, gave a brief summary of the plans for the study, expected to be completed in July, 1978, at a cost of nearly \$300,000.

The study's purpose is not to pick a site for construction of a pumped-storage reservoir, Conover emphasized, but rather to determine if such a facility is economically feasible.

In a pumped-storage system, he explained, water is pumped from a lower reservoir, such as the pool behind Lower Granite Dam, to an up-

per reservoir and then released when needed for power generation and other purposes.

A pumped-storage system makes economic sense when the upper and lower reservoirs are close together horizontally but far apart vertically, Conover said. Because of the difference in elevation between the Palouse and the Snake River, the Union Flat Creek area is ideally suited for such a reservoir system, he said.

Preliminary studies showed the area to be a prime candidate for a pumped-storage reservoir because of the possible use of water for irrigation in the Lacrosse area and for a supplemental water supply for Moscow and Pullman, he said.

Because of the widely fluctuating water levels in the upper reservoir, however, there would be little or no use of it for recreation or fish and wildlife, Conover stated. Earlier literature from the Corps listed recreation, fish and wildlife enhancement as possible benefits from such a project.

The study will address the economic benefits and the environmental impact of building such a reservoir, including the possible

flooding of farmland, he said. After the study is completed it would be up to Congress to authorize the project and appropriate money for it. Actual construction wouldn't start before 1980 and probably not until after 1990, Conover said.

The project must be economically and socially feasible before we would recommend that it be built," he said.

His words fell on deaf ears for most of the crowd, 91 of which expressed a desire to make a statement. By the time 11:30 p.m. rolled around and the last name was called, more than 50 had spoken in opposition; the rest had grown weary and left.

Mayor Mann was the only speaker not to criticize the Corps plan and he drew scattered boos for his defense of the feasibility study as necessary to "provide us with some answers."

Mann said the Moscow City Council didn't feel it knew enough about the plan to take a position prior to the hearing but said the council in the past has been interested in the possible use of a pumped-storage reservoir to provide domestic water supply.

Speaking on his own, however, Mann, a professor of electrical engineering at the University of Idaho, said he was convinced there

was going to be a need for additional electrical generating power in the future. "I hope when the alternatives show up you will be willing to vote down in favor of something," he said, rather than always being "alternative pleaders."

One of those alternatives may be the type of reservoir tied to the Lower Granite pool, Mann said. "But we won't know unless the Corps is permitted to make the study." That study may turn up a location that would have a minimal impact on farmland, he added.

At the conclusion of Mann's remarks, Moscow businessman Art Heibling strode to the podium, grabbed the microphone from Conover and exclaimed, "There are more of us from Moscow than he."

Mann's comments came amid a steady stream of citizens against the plan, who rapped the loss of fertile farmland, harmful effects on fish and wildlife and the displacement of families in the area and the increased tax burden on Whitman County.

James Henning of St. John, chairman of the Whitman County commissioners, urged the Corps to drop the reservoir study and "use the money and efforts to complete pro-

jects that will help people not displace them."

Norman Hatley of Pullman, president of an anti-reservoir group called OPAL, the Organization for the Preservation of Agricultural Land, drew the biggest cheers for his attacks on the reservoir plan, the study and the Corps is general.

Although several other members of the Hatley family spoke in opposition, Hatley didn't want the crowd to think "this was a Hatley vendetta." There used to be a spury in Whitman County, he said. But the squirrels, the Hatleys and the Druffels (another family in the area) would some day take over the county. "That was before the Army Corps of Engineers came along," he quipped.

Hatley called for an immediate halt to the study and suggested instead a feasibility study "on whether it's feasible to have an Army Corps of Engineers."

He said there are only three things the Corps understands: hydroelectric power, political power and people power. "Let's stand up and show the colonel some of that last kind of power," whereby all but 100 of the crowd stood up and applauded.

The History (Pre Management Plan)

Lesson: A Model Is Just A Model

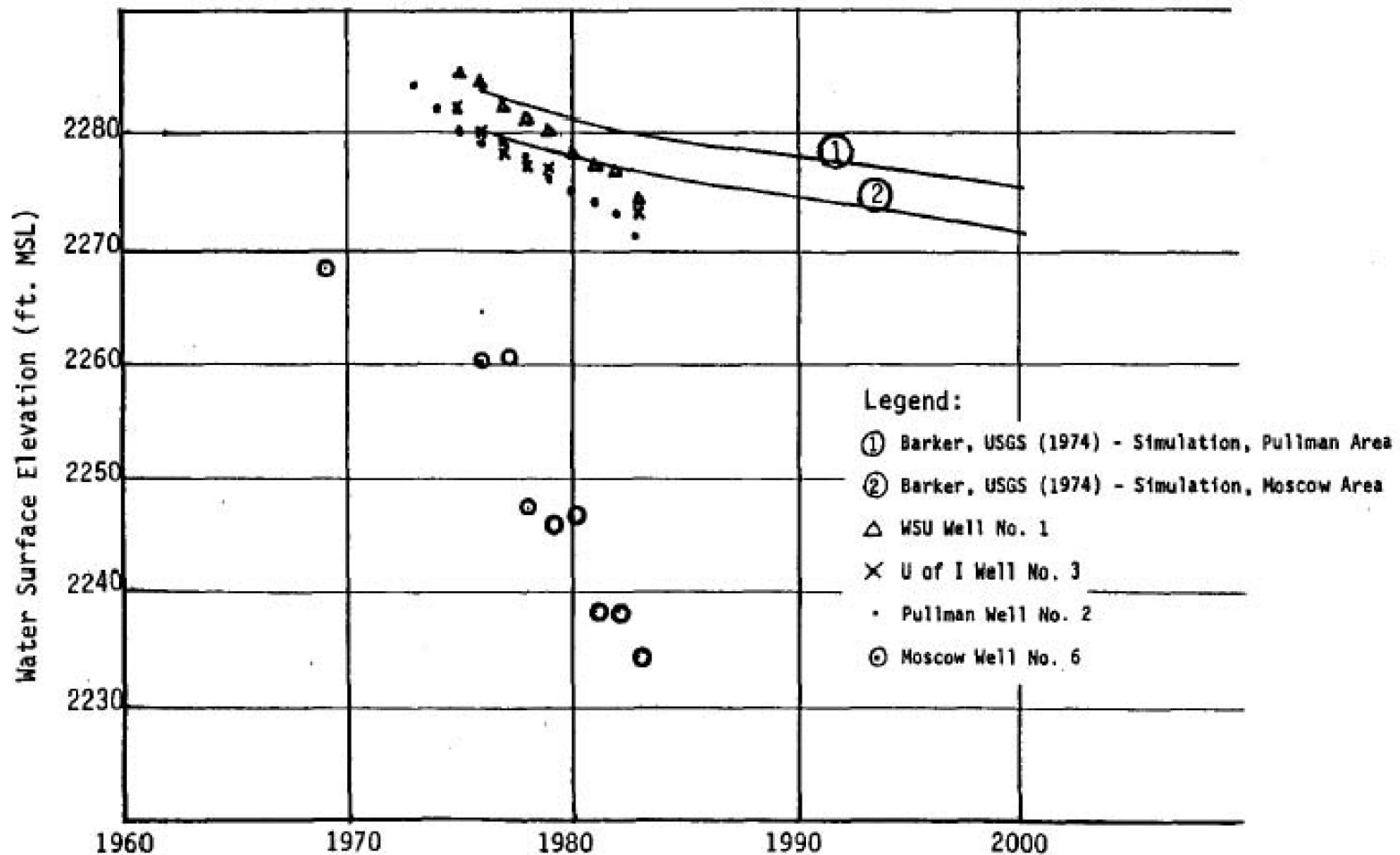
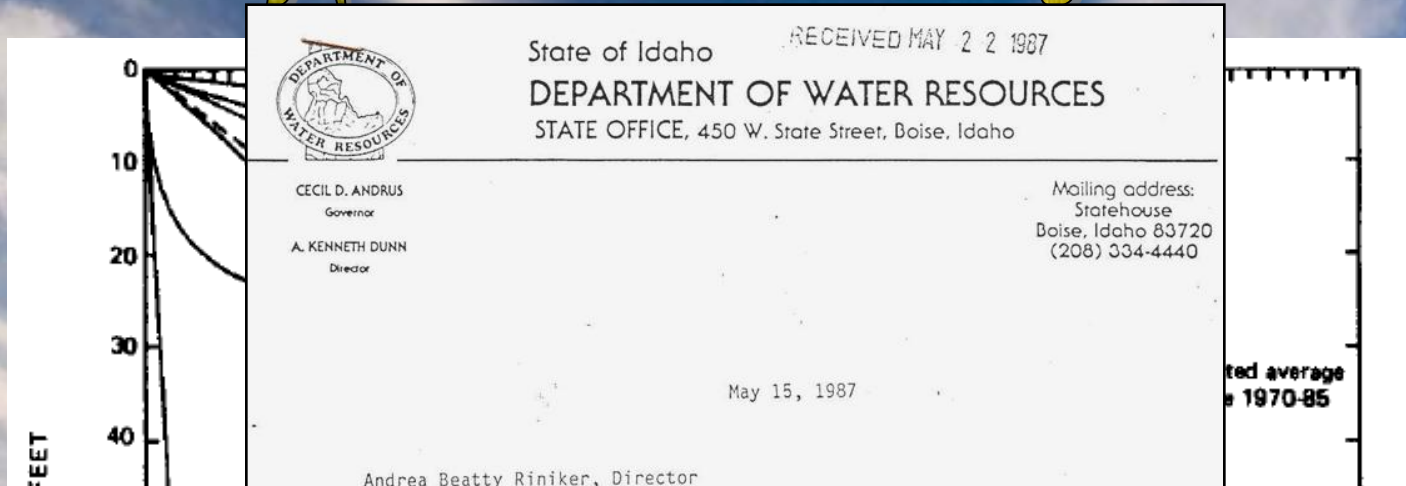


Figure 5. Comparison of Actual and Projected Decline of Water Levels in Wells of Moscow-Pullman Basin.

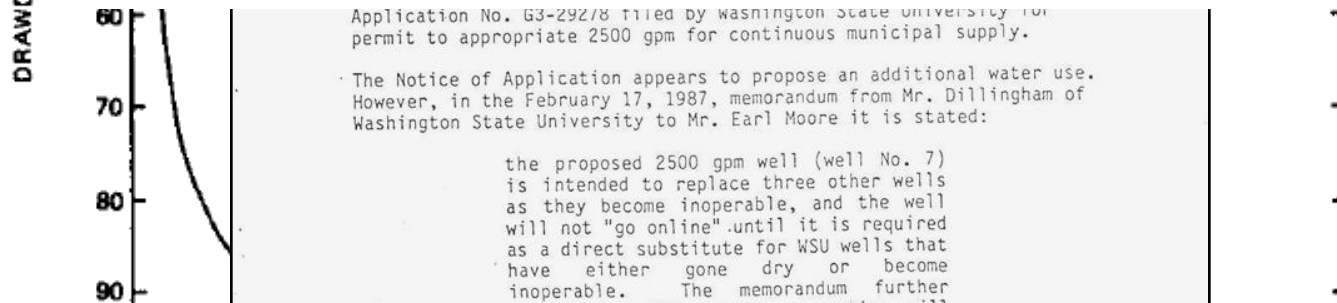
The background of the slide is a scenic landscape featuring rolling hills. The foreground is a lush green field, possibly a wheat field, with some yellowing at the edges. In the middle ground, there are rolling green hills with some brown patches, suggesting different types of vegetation or soil. The sky is a deep blue with wispy white clouds. The sun is visible in the upper right, creating a bright glow and casting long, soft shadows across the landscape.

The History (Ground Water Management Plan)

The History (Ground Water Management Plan)



This is to advise you of the reason Idaho has protested Application . . . filed by Washington State University . . .



The model predicts that should withdrawals increase even at a rate as low as one percent per year the aquifer will not reach a recharge/discharge equilibrium and water level declines will continue . . .

withdrawals increase even at a rate as low as one percent per year the aquifer will not reach a recharge/discharge equilibrium and water level declines will continue. The Pullman/Moscow water supply problem has been subjected to numerous studies over the years and clearly it

The History (Ground Water Management Plan)

ANDREA BEATTY RINIKER
Director



RECEIVED JUL 10 1987

15, 1987

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

to seek a

July 7, 1987

I propose
the two agencies
the conditions
would be a

Mr. A. Kenneth Dunn, Director
State of Idaho
Department of Water Resources
450 West State Street
Boise, Idaho 83720

ing between
early identify
development
which would be

The Department of Ecology has a great deal of interest . . . I concur that a meeting between the two agencies should take place to initiate the plan.

I would suggest that a representative from each of the two cities and universities . . . attend the meeting.

Please contact Hedia Adelsman, our Water Resources Program Manager in Olympia, telephone (206) 459-6056 or George Krill, telephone (206) 459-6119 to set up the meeting agenda, place and time.

Sincerely,

Andrea Beatty Riniker
Director

cc: Hedia Adelsman
John Arnquist
U.S. Geological Survey
City of Moscow, Idaho
City of Pullman, Washington
Washington State University
University of Idaho
Clearwater RC&D

The History (Ground Water Management Plan)

Key Phrase: "serves as the forum for input from local governments, interest groups and private citizens"

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

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

WHEREAS, the representatives of the University, Whitman County, and management

WHEREAS, the Idaho Department of Ecology have the authority to regulate water to participate

WHEREAS, there are quality ground water resources within the basin; and

WHEREAS, a ground water management plan developed and implemented in concert with public need rules and regulations in the

WHEREAS, the plan implementing su

WHEREAS, the parties to the Understanding f

NOW, THEREFORE the following:

The Idaho Department of Water Resources (IDWR) 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.

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:

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.

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.

/s/ John Henley 5-30-89
Whitman County Date

/s/ Nancy Johansen 5-30-89
Latah County Date

/s/ Fred Olsen 5-30-89
Washington Department Date
of Ecology

/s/ Wayne Haas 5-30-89
Idaho Water Resources Date

The History (Ground Water Management Plan)

Keywords: Funding, Quantity, Quality, Facilitate

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

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- pursue and administer funding to conduct and promote studies

WHEREAS, there is a quality ground

- prepare a management plan for the basin . . which will address both water quantity and water quality issues

WHEREAS, a group with public need rules and regulations in the

WHEREAS, the implementing su

- facilitate the implementation of the ground water management plan in concert with the member entities

WHEREAS, the parties to this Understanding f

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university

/s/ John Henley 5-30-89
Whitman County Date

/s/ Nancy Johansen 5-30-89
Latah County Date

/s/ Fred Olsen 5-30-89
Washington Department of Ecology Date

/s/ Wayne Haas 5-30-89
Idaho Water Resources Date

The History (Ground Water Management Plan)

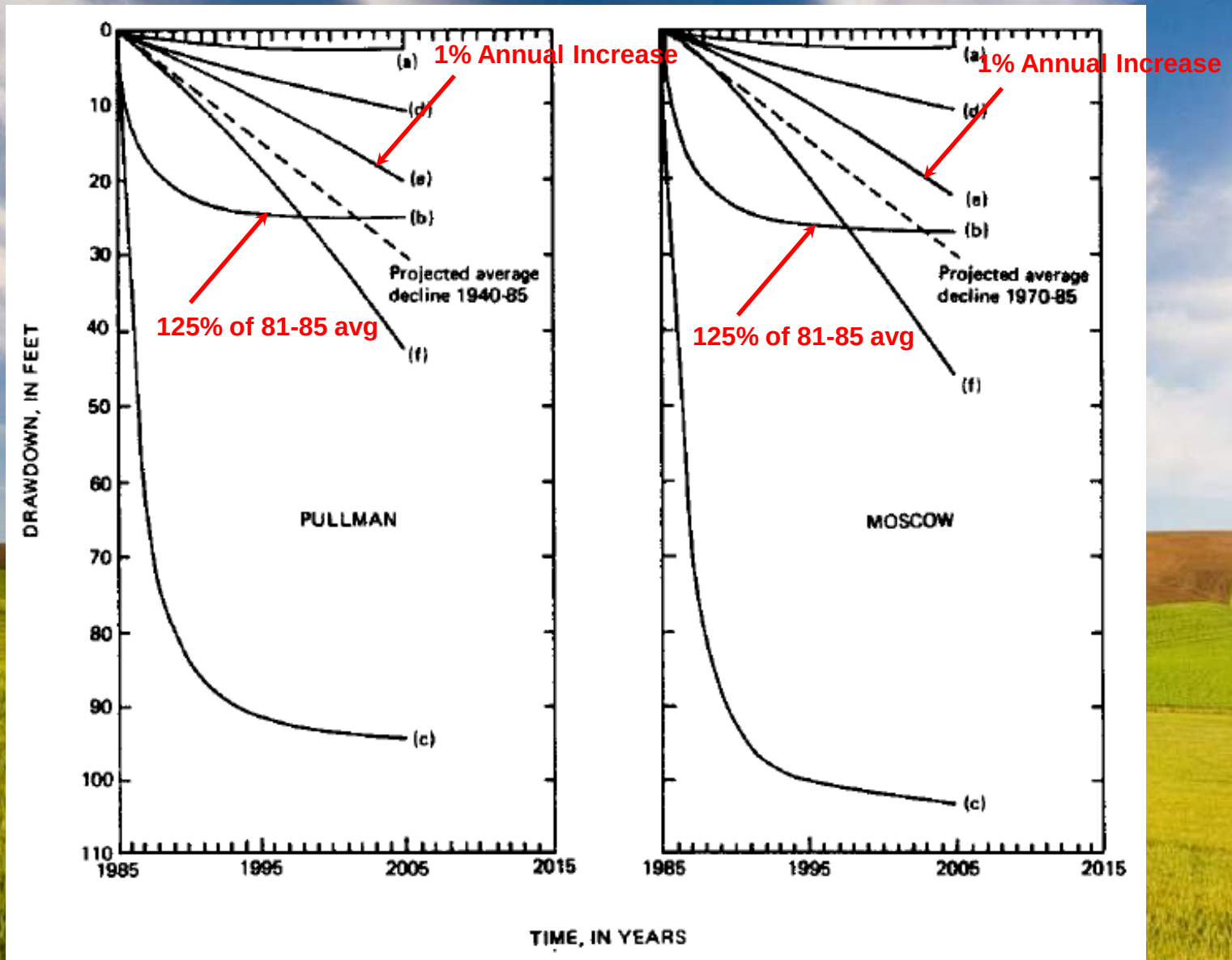
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Ground Water Management Plan

***Fulham-McCoy
Water Resources
Committee***

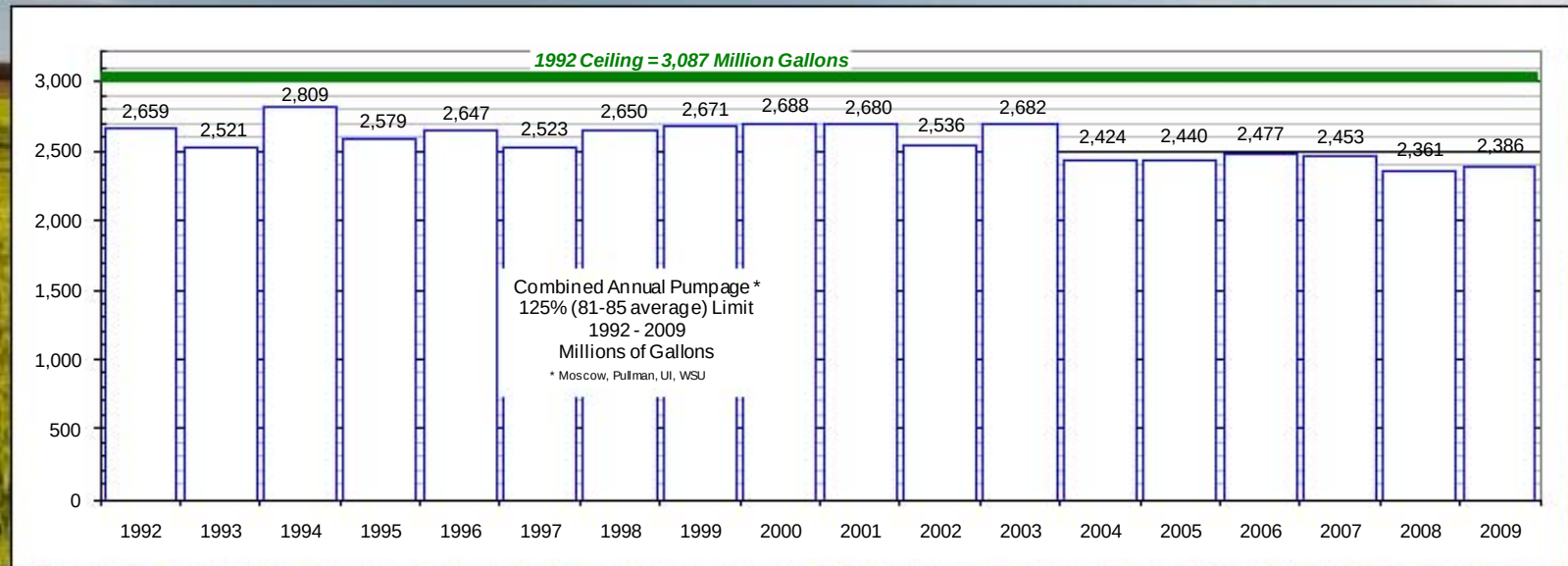
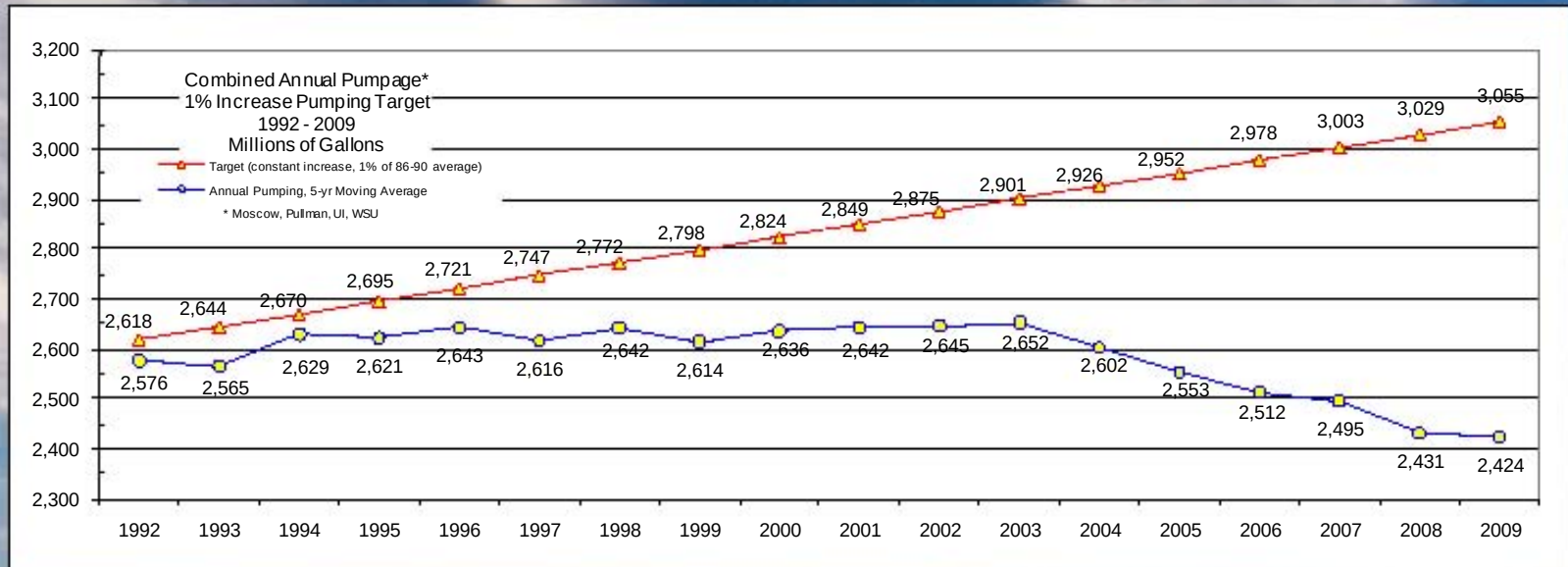
September 1992

The History (Ground Water Management Plan)



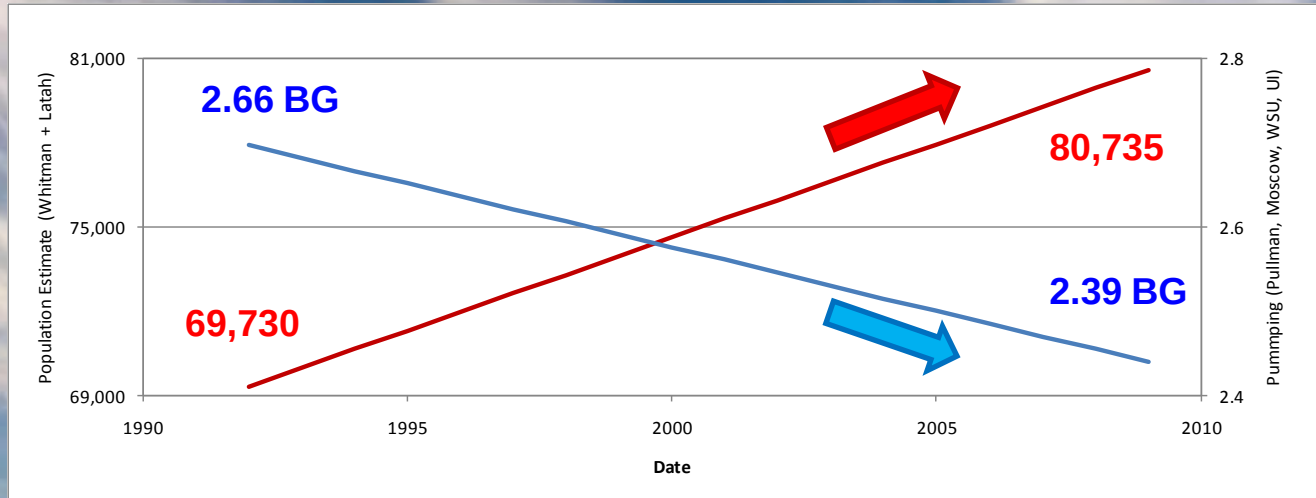
The History (Post Management Plan)

The History (Post Management Plan)

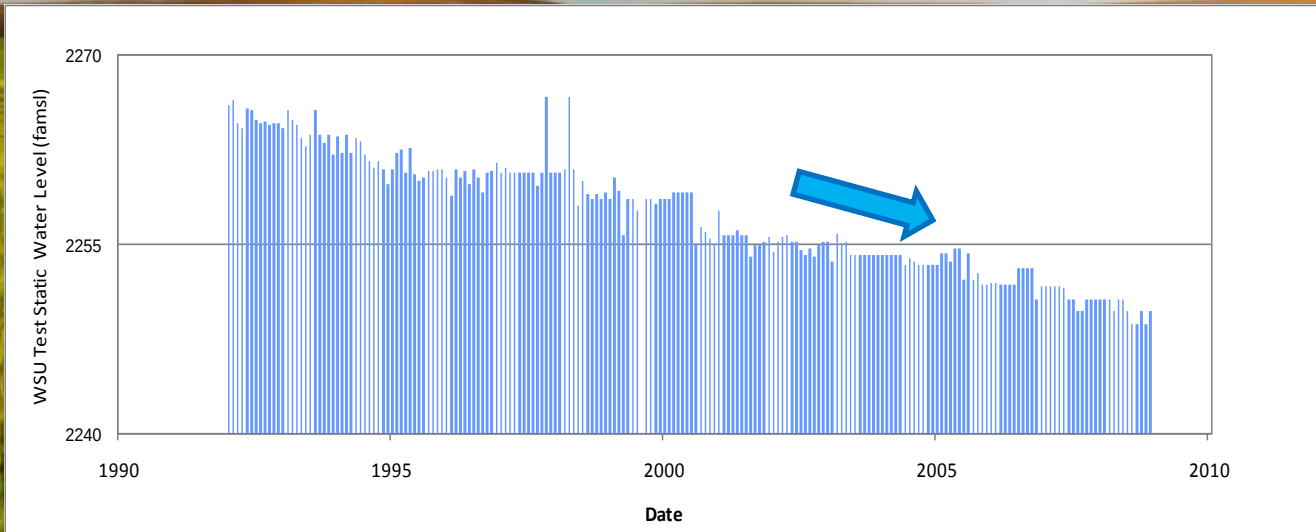


The History (Post Management Plan)

Lesson: A Model Is Just A Model



Population  16% Pumping  10% Water Levels  17 ft



The Organizational Structure

PBAC Entities/Members:

- ✓ IDWR/WDOE (ex officio)
- ✓ Moscow
- ✓ Pullman
- ✓ Latah County
- ✓ Whitman County
- ✓ UI
- ✓ WSU
- ✓ Colfax
- ✓ Palouse*

PBAC Citizens Advisory Group (CAG) Representation:

- ✓ IDWR/WDOE (ex officio)
- ✓ Petitioning Organizations and/or Other Environmental Groups
- ✓ Non-PBAC Community/Municipal Water Systems
- ✓ County/Rural Interests (WA, ID)
- ✓ Developer/Business Interests (WA, ID)
- ✓ Technical
- ✓ Others

The Organizational Structure

- PBAC Officers/Members/Administrators
 - Officers: Chair / Vice-chair
 - One year terms (July – June)
 - (Generally) rotated between Idaho and Washington entities
 - Members: Up to two voting members per entity
 - Number of votes dependent upon entity administrative funding level
 - For multiple-member entities, generally encourage mix of elected/technical backgrounds
 - Administrator(s): Executive Manager / Technical Advisor
 - Paid through entity administrative funding assessments

The Funding

- Annual Entity Assessments
 - Administrative Assessments (total \$95K annually)
 - Single member (one vote) - \$5K
 - Two members (two votes) - \$20K
 - Funding applied toward: Executive Manager/Technical Advisor, water level monitoring program, annual water use report, administrative overhead
 - Research Assessment (total \$80K annually)
 - Larger entities (Moscow, Pullman, UI, WSU) - \$20K each
 - Funding applied toward ground water research projects

What Does PBAC Do / Not Do?

PBAC Does	PBAC Does Not
• Encourage Member Entities to Implement GWMP • Recognize Importance of Ground/Surface Water Quality • Consider (quantity) implications of proposed development and provide recommendations to IDWR/DOE • Encourage member entities to conserve/reuse water • Promote public education outreach and awareness efforts	• Enforce Adherence to Goals/Targets in GWMP • Actively Engage in Water Quality Issues • Approve/disapprove water/land use proposals • Dictate specific programs for conservation/reuse • Directly fund public education outreach and awareness efforts

Pro's and Con's

- Broad Stakeholder Representation
- Mix of Elected / Technical Representation
- Advisory vs. Enforcement Charter
- Exclusion of Water Quality / Land Use Issues





Thank You!