

**GLENN COUNTY  
WATER ADVISORY COMMITTEE**

Glenn County Department of Agriculture  
720 North Colusa St., Willows, CA 95988  
Phone: 530.934.6501 FAX: 530.934.6503  
Email: [wateradv@countyofglenn.net](mailto:wateradv@countyofglenn.net)  
Website: <http://www.glenncountywater.org/>

**AGENDA**

**MEETING DATE:** Tuesday June 9, 2009  
**TIME:** 1:30 p.m.  
**PLACE:** Glenn-Colusa Irrigation District  
344 East Laurel Street  
Willows, CA 95988

**I. INTRODUCTIONS:**

**Water Advisory Committee Members:**

David Alves	Princeton-Codora-Glenn Irrigation District
Jack Baber	Reclamation District No. 1004
Mark Lohse	BOS District 5 Private Pumpers
Gene Clark	Reclamation District No. 2106
Ted Trimble	Western Canal Water District
Larry Domenighini	Glenn County Farm Bureau
Leigh McDaniel	Glenn County Supervisor
Wade Danley	Kanawha Water District
Donnan Arbuckle	Resource Conservation District
Ken Sullivan	Orland Unit Water Users Association
Larry Maben	BOS District 3 Private Pumpers
Mike Vereschagin	Orland-Artois Water District
Del Reimers	West Colusa Basin Private Pumpers
James Weber	East Corning Basin Private Pumpers
Thad Bettner	Glenn-Colusa Irrigation District
Bob Coruccini	Willow Creek Mutual Water Company
Jere Schmitke	City of Orland
Elwood Weller	Provident Irrigation District
Vacant	Stony Creek Water District
Vacant	West Corning Basin Private Pumpers
Joel Mann	Glide Water District
Rosanna Marino	City of Willows

**Technical Advisory Committee Members:**

Lance Boyd	South
Kelly Staton	Department of Water Resources
Allen Fulton	UC Cooperative Extension
Randy Murphy	Planning and Public Works Agency
Kevin Backus	Environmental Health
Ben Pennock	Central
Mark Black	Agricultural Commissioner
Andrew Farrar	East
George Wilson	North

**II. APPROVAL OF MINUTES:**

Approval of the Minutes from the meeting of April 14, 2009.

### **III. AGENDA ITEMS:**

#### **A. Public Comment:**

Any person wanting to address the Water Advisory Committee on any item NOT ON TODAY'S AGENDA may do so at this time. The Water Advisory Committee will not be making decisions or determinations on items brought up during Public Comment.

#### **B. Discussion and/or Action Items:**

1. Proposed Bottled Water Facility in the Orland Area
2. Continue Discussion on Strategic Planning for Water Resources.
  - 1) Water Transfer Guidelines: Latest Sub-committee meeting revisions
3. TAC Recommendations on BMO's Sub-area 4 and Sub-area 9.
  - 1) 5 mile radius well locations and land use changes
  - 2) Reevaluate hydrographs of BMO wells using a period of record from 1977 to 2009 to include land use changes
4. Drought Water Bank
  - 1) Fallowing, Substitution, etc
5. Update from DWR, Northern District Land and Water Use Section
6. Update on TC Canal Water Supply, Biological Opinion, and Fish Screen
7. Prop 84 Regional Acceptance Process
  - 1) Four County Effort

#### **C. Communications:**

#### **D. Member Reports:**

At this time WAC members are encouraged to discuss upcoming or ongoing activities that may be of interest to the committee.

### **IV. NEXT MEETINGS:**

The next Water Advisory Committee meeting will be scheduled today.

The next TAC meeting will be scheduled at a later date.

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**MINUTES**

Meeting Date: April 14, 2009

Time: 1:30 pm

Place: Glenn-Colusa Irrigation District  
344 East Laurel Street  
Willows, CA 95988

**Water Advisory Committee Members Present:**

David Alves	Princeton-Codora-Glenn ID
Thad Bettner	Glenn-Colusa Irrigation District
Larry Domenighini	Glenn County Farm Bureau
Leigh McDaniel	Glenn County Supervisor
Mark Lohse	BOS District 5 P P
Larry Maben	BOS District 3 Private Pumpers
Rosanna Marino	City of Willows
Del Reimers	West Colusa Basin P P
Ted Trimble	Western Canal Water District
Mike Vereschagin	Orland-Artois Water District
James Weber	East Corning Basin P P

**Water Advisory Committee Members Absent:**

Donnan Arbuckle	Resource Conservation District
Jack Baber	Reclamation District No. 1004
Gene Clark	Reclamation Dist # 2106 & 1004
Bob Coruccini	Willow Creek Mutual Water Co.
Wade Danley	Kanawha Water District
Joel Mann	Glide Water District
Jere Schmitke	City of Orland
Ken Sullivan	OUWUA
Elwood Weller	Provident Irrigation District

**Technical Advisory Committee Members Present:**

Mark Black	Glenn Co. Dept. of Agriculture
Lance Boyd	PID/PCGID
Andrew Farrar	East Area
Kelly Staton	Department of Water Resources
Ben Pennock	Central Area

**Others in Attendance:**

Tina Brothers	WAC/TAC Secretary
Eugene Massa Jr.	CBDD
Lester Messina	Glenn Co. Dept. of Agriculture
Bill Menke	GCID
Dan Ramos	Capay Rancher
Andrea Schmid	Newfields
Rachelle Valverde	GCID

- I. INTRODUCTIONS: Those in attendance introduced themselves.
  
- II. APPROVAL OF MINUTES: The minutes from February 18, 2009 meeting were approved as mailed.

III. AGENDA ITEMS:

A. **Public Comment:** None.

B. **Discussion & Action Items:**

1. **Continue Discussion on Strategic Planning for Water Resources -**

1) Water Transfer Guidelines Review by TAC. The TAC met and reviewed the guidelines and the only change and recommendation they made is on page 1, ph 2 under Evaluate Water Transfer Guidelines. The TAC recommends considering: Surface water originating in Glenn County. Lester mentioned that the TAC feels that each project needs to be looked at individually as far as a monitoring and/or mitigation program is concerned. Ted Trimble, Western Canal emailed edits and observations that were provided by their counsel regarding this document. Copies were handed out to all present. After review and discussion the WAC decided to send this document back to the sub-committee to review the edits and comments. Thad raised some great questions, however Lester asked that he put them in writing and submit them to the sub-committee for discussion. Mike asked that Ted, Thad and Leigh be present at the next sub-committee also.

2. **Groundwater Levels**

1) Spring DWR Measurements –Lester reviewed the Spring 2009 Groundwater Level measurements spreadsheet along with the corresponding graphs that were provided in the meeting packet. Some Orland/Artois area wells, 21N03W18B02M and 21N03W22H01M (highlighted in red) have been declining for the last two years, now falling below a stage 2. It was recommended for the TAC to start with a review of the 18B02 area and report to the WAC at the next meeting.

Looking at the trends of these two wells, they will decline even more this year and may experience difficulty during the peak of the irrigation season. All yellow highlighted wells are not far from being below the first stages of concern. According to crop reports (1998-2008), Glenn County has had a 30% increase in permanent crops; or an increase of about 18,000 acres. The Department of Agriculture has started gathering all the information we can and compare it with old DWR land and water use surveys along with field visual evaluations. Lester mentioned that he provided this information to see if the WAC wants to have more discussion on land and water use changes as it relates to BMO compliance.

2) Spring BMO Compliance Discussion-Kelly Staton, DWR gave a brief review of a spreadsheet she prepared showing spring 2008 to spring 2009 groundwater elevation change statistics by well depth and well use for Glenn County. There are a total of 136 wells used in the analysis with an average change in groundwater elevation showing a 3.5 feet decrease overall throughout the county. It was suggested to send out a press release regarding this issue.

3) Fall BMO Compliance Discussion-Lester reviewed the previous fall BMO's for groundwater levels in sub-area 9 and 10. Five of the six wells identified as being below the established BMO stage 2 level recovered to being above the average for the period of record for the BMO, taking them out of the stage 2 level. Well #21N02W23G01 did not recover and it was recommended for TAC review and report to the WAC at the next meeting.

3. **Drought Water Bank**

1) Fallowing, Substitution, etc-Ted mentioned that there is a request for up to 80,000 acre feet from the Northern Sacramento Valley. Western Canal may be fallowing ground to provide some water, but if they do not receive answers to their concerns by next week they may consider not participating in the program. Thad does not know what GCID will be doing at this time. Ted mentioned that three environmental groups filed lawsuits against DWR, the BOR, and the Governor yesterday regarding the Drought Water Bank for CEQA violations.

- 2) Local Pumping Programs-That mentioned that the BOR will not allow growers with diesel engines on their wells to be part of a program. Otherwise there are no local pumping programs being considered.
- 
4. **Water Supply Forecast Changes**
    - 1) CVP Settlement Contractors- 100%
    - 2) CVP Service Contractors- 5%
    - 3) State Contractors- 100%

C. **Communications:** None.

D. **Member Reports:** None.

The next WAC Meeting is scheduled for June 9, 2009 at 1:30 pm.

The next TAC Meeting at this date has not been scheduled.

Meeting adjourned at 3:00 pm.

Sincerely submitted by,  
Tina Brothers, WAC/TAC Secretary

## GLENN COUNTY WATER TRANSFER GUIDELINES

### **Part 1: Background**

The Preliminary Plan for Groundwater and Coordinated Water Management (Plan) was approved by the Glenn County Water Advisory Committee (WAC) in 2004 and adopted by the Glenn County Board of Supervisors (Board) in May 2006. Items presented in the Plan identified the “next steps” that should be undertaken as components of a program to facilitate the management of water resources by local entities within Glenn County. Below is the text from the Plan as Item G) Evaluate Water Transfer Guidelines:

#### ***Evaluate Water Transfer Guidelines***

*Glenn County, by virtue on its physical and hydrologic setting and foresight of its residents in the past, enjoys an enviable water supply situation in relation to many counties in California. The fact that water transfers within and/or outside the county can be considered is a fortunate circumstance. As stewards of the water resources available to Glenn County the resource should be managed to meet the needs of Glenn County, the Sacramento Valley, and California, to the extent practicable. Water law and guidelines or parameters for water use exist. It would be helpful to the community to have guidelines documented that represent established water law and water use parameters that represent the basis for particular types of water transfers.*

*Types of water transfers that should be considered include:*

- *Surface water with groundwater substitution.*
- *Surface water with fallowing.*
- *Groundwater.*
- *Surface water originating in Glenn County (Recommended March 10, 2009)*

*To the extent water transfers are configured consistent with adopted guidelines, there should be no need for discussion of a mitigation fund or third party impacts. Having water transfer guidelines in place can facilitate the management of water resources within the county.*

At the March 11, 2008 WAC meeting a motion was made to begin the process of evaluating transfer guidelines with the intent of developing a clear policy that will be agreeable to all parties.

A presentation was made to the Board on August 5, 2008 discussing the need for the development of a strategic planning process. From that meeting the Department was directed to bring forward practical options that would be necessary to achieve the objectives presented. The first goal of this process would be to identify a secure and sustainable funding source.

A proposal was submitted to the Board on November 4, 2008 that provided some background in methods that can be put in place to provide secure funding. As you are aware, this proposal was not popular and did create some level of concern regarding the

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intentions of the Department and staff. The Board decided to revisit the proposal presentation on a later date when all supervisors would be present.

On December 16, 2008 the presentation was brought back to the Board and open discussion followed. As a result of that presentation the Board directed staff to begin the process of developing sustainable funding sources. Of the options identified, two were selected to move forward in the short term that would not require a Proposition 218 "Engineers Report". They are: 1) Additional well permit fees for domestic and agricultural well installation, with consideration for other existing permitted activities, and 2) A per acre foot fee on groundwater substitution and a dollar per acre fee on land fallowing programs associated with out-of-County transfers. Discussion on Option 1 is not relevant to this document and will be addressed at a later date.

At this time, neither of the options currently being considered would provide a sustainable funding source as requested pursuant to Minute Order 31 of the December 16 Board meeting. In the future it is anticipated that a County-wide Benefit Assessment may be recommended to be adopted by the citizens of the County.

The option that discussed placing a fee on transfers was presented as:

Water transfer fees consist of fees that the County imposes on out-of-County groundwater or groundwater substitution transfers. The fees are imposed to offset the County's cost in insuring that the water resources of the County are not transferred in a manner that economically harms other water users or causes harm to the health and safety of the citizens of Glenn County or conflict with existing legal principals of California Water Code. The water transfer fees will provide the following benefits to transferors  
The benefits of water transfer fees are:

1. The County's groundwater management activities include reviewing ~~water transfer~~ environmental documentation for water transfers and assist ongoing monitoring enforcing the Basin Management Objectives during water transfers to effectively enforce the Basin Management Objectives. Consequently, the County incurs significant groundwater management costs as a responsible agency in reviewing proposals, and as a regulatory agency monitoring result of water transfers to ensure, so it is fair that suppliers transfer fees are not harmed by export and water resources needed to protect used to offset these costs.
1. If the health and welfare of the citizens of Glenn County are not jeopardized. Therefore it is necessary that a schedule of fees be imposed to offset these costs and to insure that these costs are not imposed on the general citizenry of Glenn County.
2. The County will use a portion of the proceeds to offer clear transfer guidelines and monitoring oversight services as part of the transfer fee in an effort to, it will simplify transfers for water districts within the County and to not discourage bring business development into the County.
3. Fees collected by the County are not intended to address mitigation of third party impacts or injury, but are intended to be used to offset expenses the County incurs

for document review and additional monitoring during the term of a proposed transfer program.

~~3. Transfer fees should be paid by the buyer, so cost would not be passed on to local participants.~~

The drawbacks of water transfer fees are:

- ~~1. The amount of revenue that could be generated from imposing fees on water transfers is unknown and will probably fluctuate from year to year.~~
- ~~2. Imposing a water transfer fee without providing clear benefits could encourage buyers to seek transfers from other Counties, potentially driving business away from the County.~~

### Current Requirements

Currently the minimum requirements for reporting from County Code 20.03 are:

**20.03.110 (E).** The Water Advisory Committee shall collect the following data from any district (and) or person engaged in a groundwater substitution program or groundwater export program: the weekly amounts of groundwater extracted from each well, the precise location of the wells, all pumping and non-pumping groundwater level measurements made during the groundwater substitution period, the time periods during which the groundwater substitution program will occur, and all required **environmental documentation**. It shall be the responsibility of the district and (or) person involved in the groundwater substitution program to provide this information to the Water Advisory Committee including any monetary costs of providing such data.

These requirements are very basic and they are in place from the efforts of a dedicated group of County citizens committed to preserving their water rights.

### Conflict Resolution

Incorporated in to County Code 20.03 is the procedure for all water users in the county to register abnormal groundwater level reports for the purposes of determining its cause. The process begins when a report is received and reviewed by the Technical Advisory Committee who then prepares an initial investigation report and notifies the local sub-watershed Water Advisory Committee member(s). Local groundwater information is assembled and committee representatives make site visits, collect and assemble additional data, and prepare and present their findings and recommendations to the Water Advisory Committee for action. County Code 20.03 and the adopted Basin Management Objective (BMO) concept have provisions for the County's authority to intervene in a tiered fashion that include the implementation of an adaptive management program or the cessation of pumping from wells involved in substitution programs or other agricultural wells.

### Monitoring

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Incorporated into these water transfer guidelines will be program specific components of the Sacramento Valley Water Resource Monitoring, Data Collection, and Evaluation Framework (developed by the Department of Water Resources, DWR) and the Preliminary Plan Comprehensive Groundwater Monitoring Plan (Glenn County). The Framework document was developed in 2007 by the DWR staff with valuable assistance from a panel of local and regional water resource scientists and engineers that have a vast knowledge of the region. The Comprehensive Groundwater Monitoring Plan was completed in 2007 as part of an AB 303 Local Groundwater Assistance grant with the work performed by Wood Rodgers Inc. Specific monitoring requirements will be identified, discussed, and agreed upon by the County and sellers. Every effort will be made to design program monitoring which is intended to gather information that will be beneficial to overall water resource planning and designed in a manner that promotes sound coordinated water management activities.

### **Mitigation**

All water transfers require a mitigation plan that needs to address factors that may arise as a result of the transfer. The monitoring program required of each transferor is an important component of the mitigation plan. The level of detail in the mitigation plan will be a factor in determining the success of the transfer. The County will assume the lead role for conflict resolution. Specific mitigation factors will be identified, discussed, and agreed upon by the County and sellers. Every effort will be made to design a mitigation plan that is intended to adequately address responsibility, response, finances, and methods of avoiding third party impact or injury.

### **Legal Principles to be Addressed as Part of the Water Transfer**

California laws (Water Code Section 1810 et seq.) contain numerous protections that apply to water transfers. However, there are three fundamental principles that typically apply: (1) no injury to other legal users of water, (2) no unreasonable affects to fish, wildlife or other in-stream beneficial uses of water, and (3) no unreasonable affects on the overall economy or the environment in the counties from which the water is transferred. The Project Agencies will not support or participate in any water transfer where these basic principles have not been adequately addressed.

### **Part 2: Guidelines and Principles**

The following water transfer principles and guidelines are the most recent version (August 2008) developed by State and Federal Project Agencies, the DWR and the Bureau of Reclamation (USBR). In some instances, transfers can be developed between buyers and sellers outside of an organized program sponsored by DWR and USBR, where they become their own Project Agencies. Glenn County will consider adopting this edited version to be specific to Glenn County based upon thorough review by its WAC and TAC. Their input will be incorporated into the following guidelines prior to adoption:

Glenn County, in collaboration with Project Agencies, recognizes the importance of local leadership in making decisions on how best to manage their local and regional water resources. Accordingly, the County and these agencies will work cooperatively with local water associations, their member agencies, other regional local governments in the Sacramento Valley, and others to assure that local interests have the opportunity to manage their resources in a manner that meets their local objectives. Sellers will be required to contact the County Board of Supervisors and inform them of their intent to sell water for transfer out of the county as soon as discussions on commitments are negotiated.

Before suppliers voluntarily sell and transfer surface water or groundwater out of the county, it is recommended that supplies be made available for others in the county if feasible. There needs to be assurance that critical local public health and safety ~~water~~ needs not be adversely affected by water being ~~are met before~~ ~~water is~~ transferred out of the county. The project agencies will work with local water agencies and associations and other local interests in the Sacramento Valley and other regions to assure that supplies are reasonably available to meet local needs in those regions.

Glenn County believes strategies for making water supplies available need to be locally driven and developed in cooperation with local public leaders. It is expected that the Project Agencies will respect the right of individual local water entities determining the best way in which local water purveyors can make water available for local, regional, and statewide use. Such local programs shall be in compliance with all applicable laws, including local ordinances. California law recognizes transfers as a beneficial use of water and protects the underlying water rights involved in a transfer.

Water transfers in Glenn County are to be made without injuring other legal water users and without unreasonably affecting fish, wildlife, or other in-stream beneficial uses, and shall be designed to avoid unreasonable effects on the overall economy or the environment in the county. No more than 20 percent of the crop land can participate in transfers unless additional evaluations are conducted related to both the economic and environmental impacts. Investment of local income from water transfers typically goes back into normal business operations and improvements of local water supply systems. Coordination with the transferring water district, and, as necessary, county government representatives to help identify actions that may become necessary if the cumulative economic effects of water transfers in those counties appear to the Project Agencies to reach unreasonable levels. Water transfer programs need to establish effective mechanisms to ensure that injury to other legal water users is identified and avoided or mitigated. In addition, evaluations of possible economic and environmental effects of the transfer at the countywide level need to be identified. Real-time monitoring programs will be developed to trigger corrective actions

that help avoid possible impacts as they may develop. This is especially important for groundwater substitution transfers in where a well defined mitigation program is required that specifies the actions the Seller will take, to prevent injury from occurring.

Actions to develop additional supplies for water users need to be implemented in a manner that is compatible with ongoing environmental protection and restoration programs. Examples of such programs include the Ecosystem Restoration Program and the Central Valley Project Improvement Act implementation efforts as well as any local actions to protect environmental resources. In fulfilling its obligations, the Project Agencies recognize that it must represent the interests of all parts of the State, both those areas needing additional supplies and those that can make supplies available.

### **Types of Water in Glenn County That Can Be Transferred**

**Groundwater Substitution** – Reduction in surface water use which is offset with additional groundwater pumping. A groundwater substitution transfer generally consists of the following components:

- The location and characteristics of the wells that will be pumped
- The volume and schedule of transfer-related groundwater pumping
- Monitoring plan designed to assess the effects of the groundwater pumping transfer
- Mitigation measures to alleviate possible injury issues

When developed, Project Agencies will review and evaluate groundwater substitution transfer proposals to determine whether they meet the following objectives:

- Transfer will have no significant unmitigated environmental effects
- Potential adverse effects to other legal users of water are minimized
- Proposal provides a process for review and response to reported third party effects
- Proposal shows that a monitoring and mitigation strategy is in place prior to the transfer
- Transfer operations will result in providing the agreed upon amount of transferable water

Before beginning transfer operations, the water transfer proponent will develop a groundwater substitution transfer proposal and provide it to the Project Agencies and the County. The proposal will include a detailed description of any transfer-related changes to water management operations and a description of the facilities used in the operation. The details of the proposed water management operations will be included as contractual commitments in the water purchase agreement with the seller or agent of the seller. The proposal shall include a description of the following program components:

- Surface water source that will be replaced by groundwater pumping
- Location and construction details of wells that will be pumped
- Schedule and volume of water to be pumped
- Baseline from which the additional pumping will be measured
- Method of measuring and reporting the volume of water pumped
- Monitoring program
- Mitigation measures

The seller will be responsible for assessing and mitigating significant adverse effects resulting from the transfer within the transfer source area. In addition to the details of the water transfer operations, the seller's proposal shall provide an assessment of potential adverse effects due to transfer-related operations.

**Cropland ~~Idling~~/Crop Shifting** – Reduction in surface water use resulting from a reduction in the evapotranspiration (ETAW) of applied water to agricultural crops that would have occurred in the absence of the water transfer. (See section titled “Water Transfers Based on Crop Shifting and Idling for DWR’s 2009 Drought Water Bank and Bureau of Reclamation’s Water Acquisition Program” for ETAW values of crops.)

#### **Types of Water Transfers Not Allowable**

**Direct Pumping of Groundwater** – Water Code Section 1220 establishes significant barriers to the export of groundwater outside the Sacramento Valley. The Project Agencies are not interested in facilitating the direct transfer of groundwater from one area to another.

**Transfers that Injure Legal Users of Water or Cause Unreasonable Effects to the Environment** – Water transfers that simply reclassify existing stream flows from one category to another, making these flows no longer available to historic downstream users, have the potential to injure other legal users of water and cause harm to the environment. Water transfers should focus on either making new surface flows available or reducing

surface water use in such a way as to expand the availability of surface water resources for use by others.

**Long-Term Transfers** - Arrangements for long-term programs related to cropland idling may be developed if the situation arises. This documentation will determine the number of years acceptable for such a program is intended to help protect the local farm economy and to avoid some environmental impacts.

#### **Environmental Documentation**

~~In some water transfer instances, programmatic~~ CEQA/NEPA environmental review will be considered adequate if it meets all the requirements of the Project Agencies legal requirements to the extent they assure that the proposed transfers and related actions are in compliance with applicable federal and state laws to prevent unreasonable environmental impacts. In instances of groundwater substitution, a greater level of site specific review may be required. Glenn County will be a responsible agency for any project under CEQA, and will comment and request mitigation measures as appropriate.

#### **Verification and Reporting**

Verification of the actions taken to make water available in a crop shifting or cropland idling program will be conducted by the Project Agencies and participating districts and provides the information to Glenn County staff. Sellers must allow access to fields by staff for verification purposes. Water transfers are based on estimates of water made available through cropland idling/ shifting. A mutually agreeable program needs to be developed for each proposed transfer that allows for monitoring of appropriate field data that can be used to verify the water that was actually made available by the transfer action(s) and to modify future guidelines if warranted. Accurate reporting of the activities undertaken as part of a crop shifting and cropland idling program is an essential provision of any water transfer program agreement. Reporting is the responsibility of the seller and needs to be acceptable to the Project Agencies. Reporting requirements will be outlined in the contracting process and communicated to Glenn County staff.

### **Part 3: Proposed Water Transfer Fees**

Water transfer fees being developed will be consistent with the adopted Glenn County Groundwater Management Plan (Ordinance 1115) adopted in February 2000 (codified as County Code 20.03) and local irrigation and water district policies. As a result of actions by the Board, it is now necessary for the County to impose fees on out-of-County groundwater substitution transfers and out-of-County land fallowing transfers. **The** benefits of these types of water transfer fees are necessary because the County will incur groundwater management costs as a result of some types of transfers and has an ongoing need to maintain a monitoring infrastructure. The County's groundwater management activities include reviewing environmental documentation, performing additional monitoring, and if necessary, enforcement of the Ordinance. So, as a result, it is only fair that transfer fees cover those costs. It is the County's responsibility to offer clear transfer guidelines and monitoring services to justify any transfer fee. Transfer fees will be paid by the buyer with no added cost to participants. Imposing an excessive water transfer fee

without providing clear benefits could encourage buyers to seek transfers from other Counties, potentially driving business away from the County. These fees are in no way to considered part of any level of mitigation for third party impact or injury.

### **Protection of Water Rights**

California law protects the underlying water rights of those parties who wish to transfer a portion of their surface water supply to others. California Water Code Section 1745 et seq. protects the underlying water rights for forfeiture for water transfers. Any water transfer agreement between the buyer and seller for water purchases needs to expressly recognize the legal protections afforded the seller's underlying water rights in a water transfer.

### **Use of Funds**

#### **Trust Fund**

All funds received by the County from these transfers will be ~~placed in a special trust fund and~~ utilized only for groundwater and coordinated water management activities in the County.

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### **Proposed Fees/Fess Are As Follows:**

#### **Substitution**

For each acre foot of groundwater extracted in the County that is replacing an acre foot of surface supply that is not utilized in the County or District there will be a fee of **\$5.00 per acre foot** surcharge paid to the County by the buyer.

#### **Fallowing**

For each acre of ground fallowed, that is associated with an out-of-County transfer of surface supply that is not utilized in the County, there will be a fee of **\$1.00 per acre foot** surcharge paid to the County by the buyer.

#### **Option Fees**

Option fees and dates are usually developed by the buyer and the seller during their negotiations. When an option date and option fee to purchase water is determined by the buyer and the seller, and the buyer exercises the option, there will be a **\$1.00 per acre foot** surcharge paid to the County by the buyer, regardless of the ability of the buyer to receive the water from a completed transfer.

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# WAC Directive from TAC

- Review 2009 spring BMO levels
- Give further consideration to BMO wells that are in alert stages
  - 22N03W18B01 (18B), sub-area 5
  - 21N02W23G01 (23G), sub-area 9



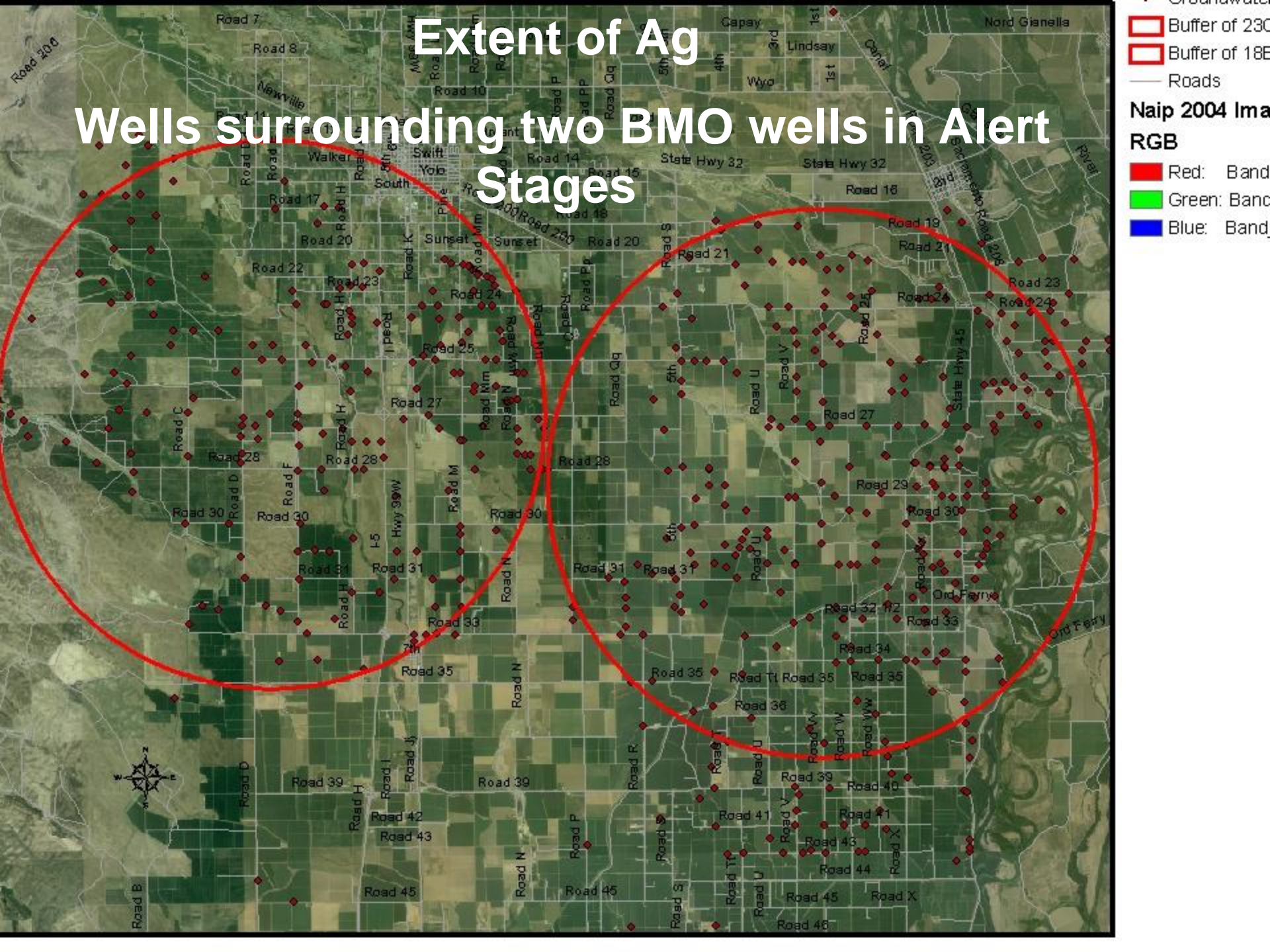
# Questions being considered by TAC

- Are the BMO's alert stages established in 2001 using ~ 20 year history of groundwater levels still relevant for these BMO wells 10 years later?
- Are there technical concerns with the methods used to in 2001 to set BMO alert stages?
- What next?

# TAC Approach to Evaluating BMO Wells in Alert Stages

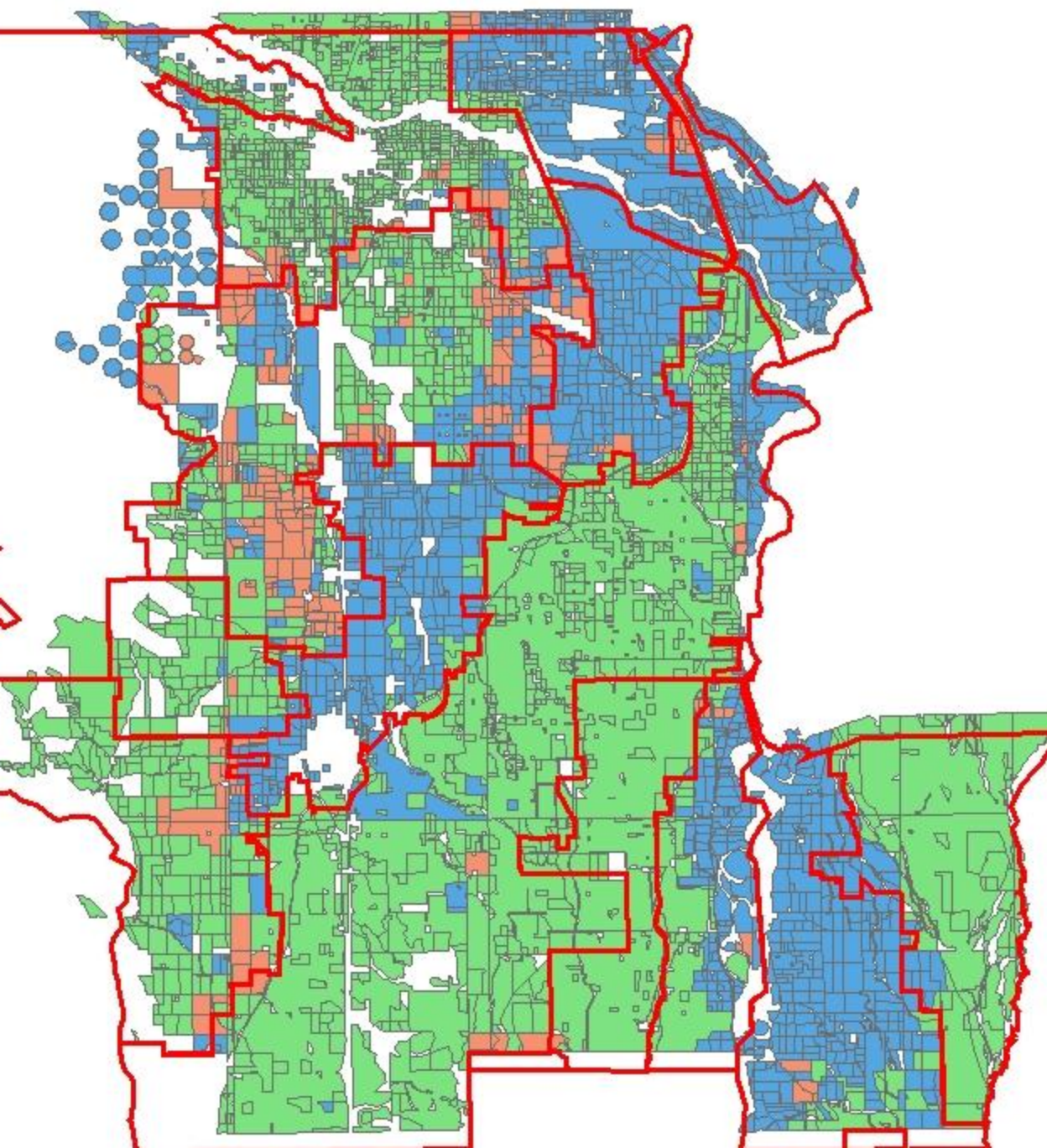
- Focus is on two BMO wells
- Assess extent of groundwater wells within 5 mile radius of BMO well
- Improve understanding of water and land use changes since BMO's were established in 2001
- Re-evaluate water level data for existing BMO wells from 1977 to 2009 in an effort to reflect upon changes in historic land and water use

# Extent of Ag Wells surrounding two BMO wells in Alert Stages



# Progressive of Changes in Water Use in Glenn County





- 1993
- 1998
- 2003

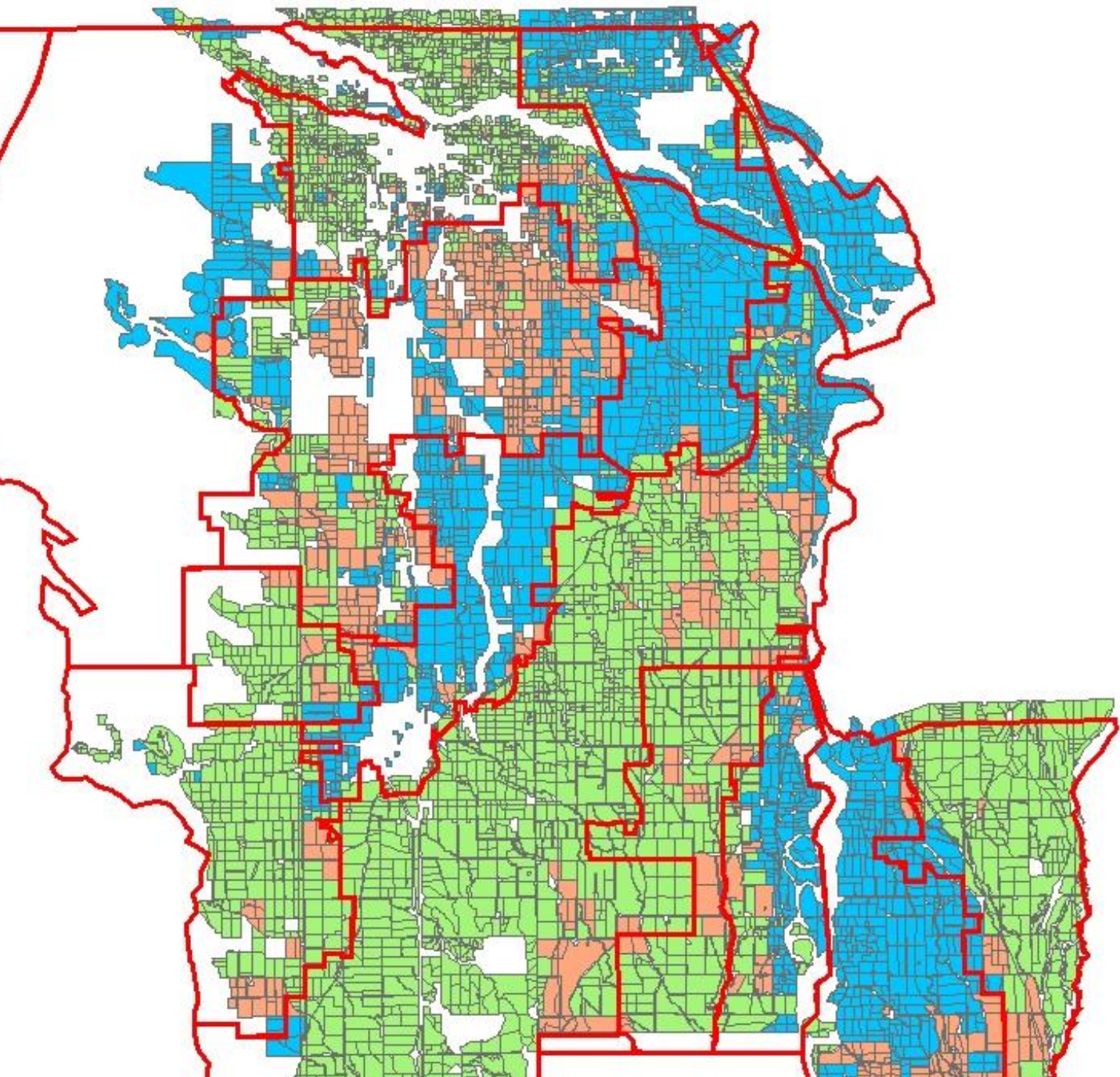


## Legend

### 1993 Land and Water Use

#### WATER SOURCE

-  Surface Water
-  Mixed Surface & Ground Water
-  Ground Water
-  bmo

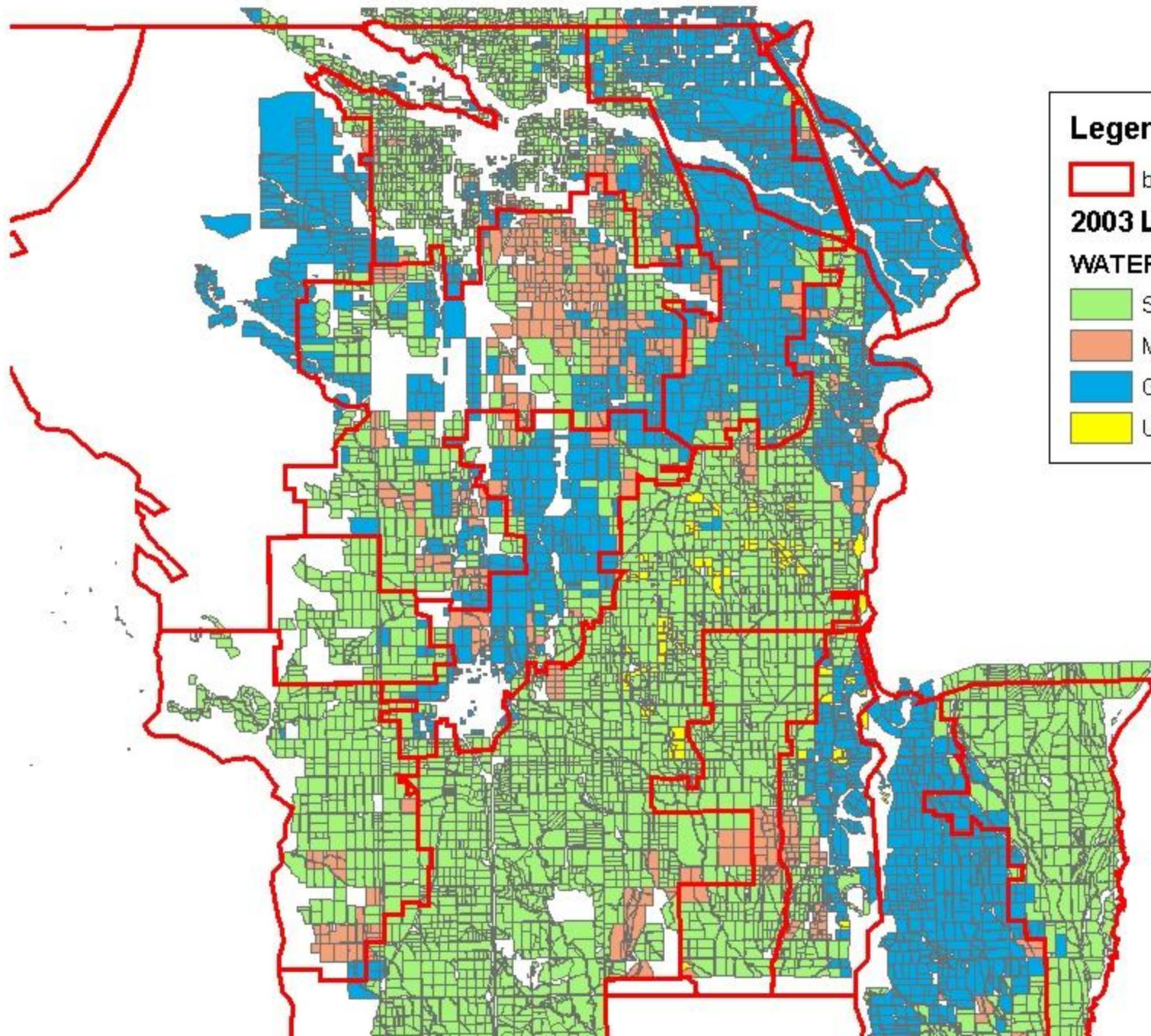


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**1998 Land and Water Use**

**WATER SOURCE**

- Surface Water
- Mixed Surface & Ground Water
- Ground Water
- bmo





### Legend

 bmo

### 2003 Land & Water Use

#### WATER SOURCE

 Surface Water

 Mixed Surface & Ground Water

 Ground Water

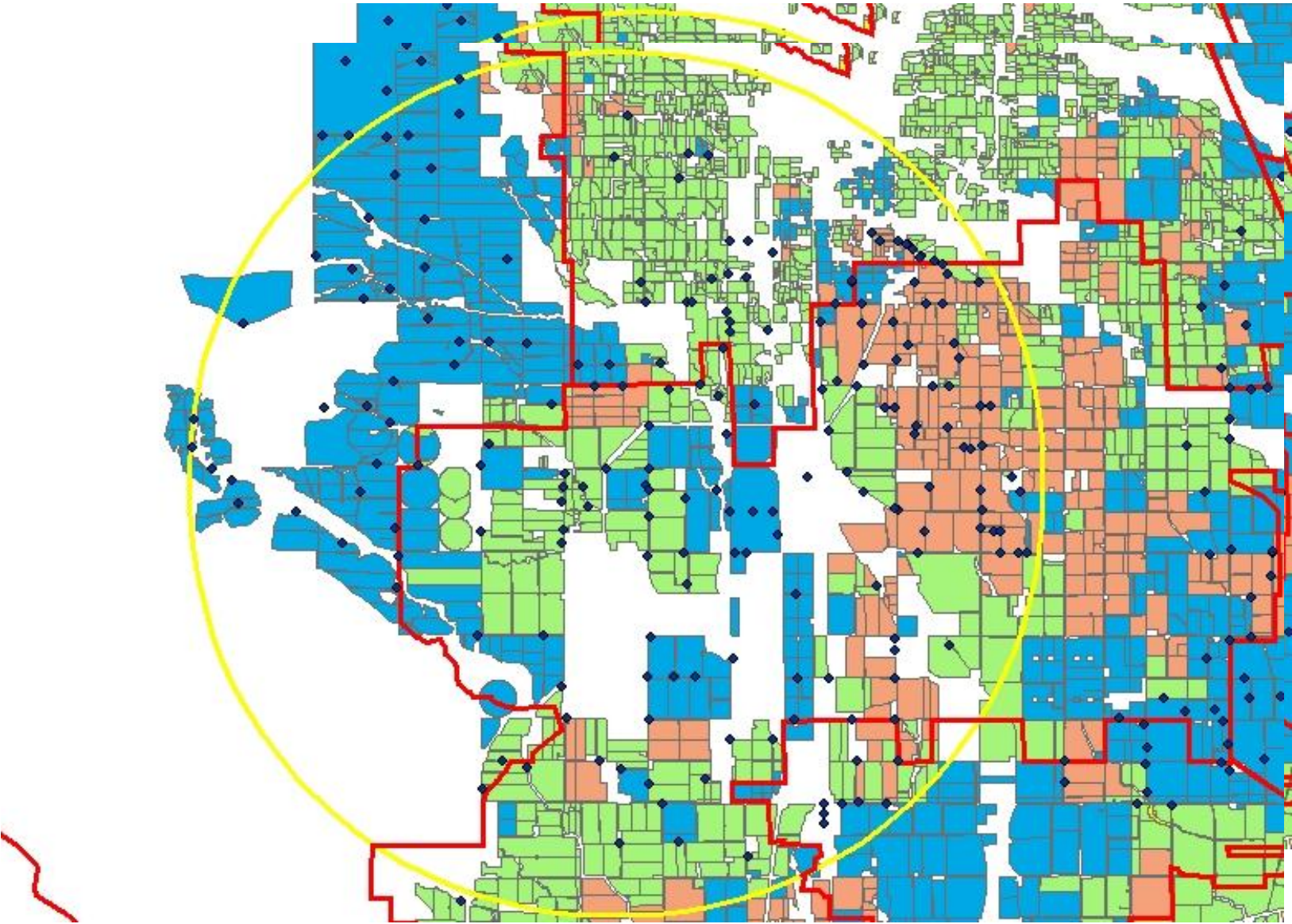
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# Progressive Changes in Land Use in Glenn County

- Changes in sub-areas 5 and 9
- Changes countywide



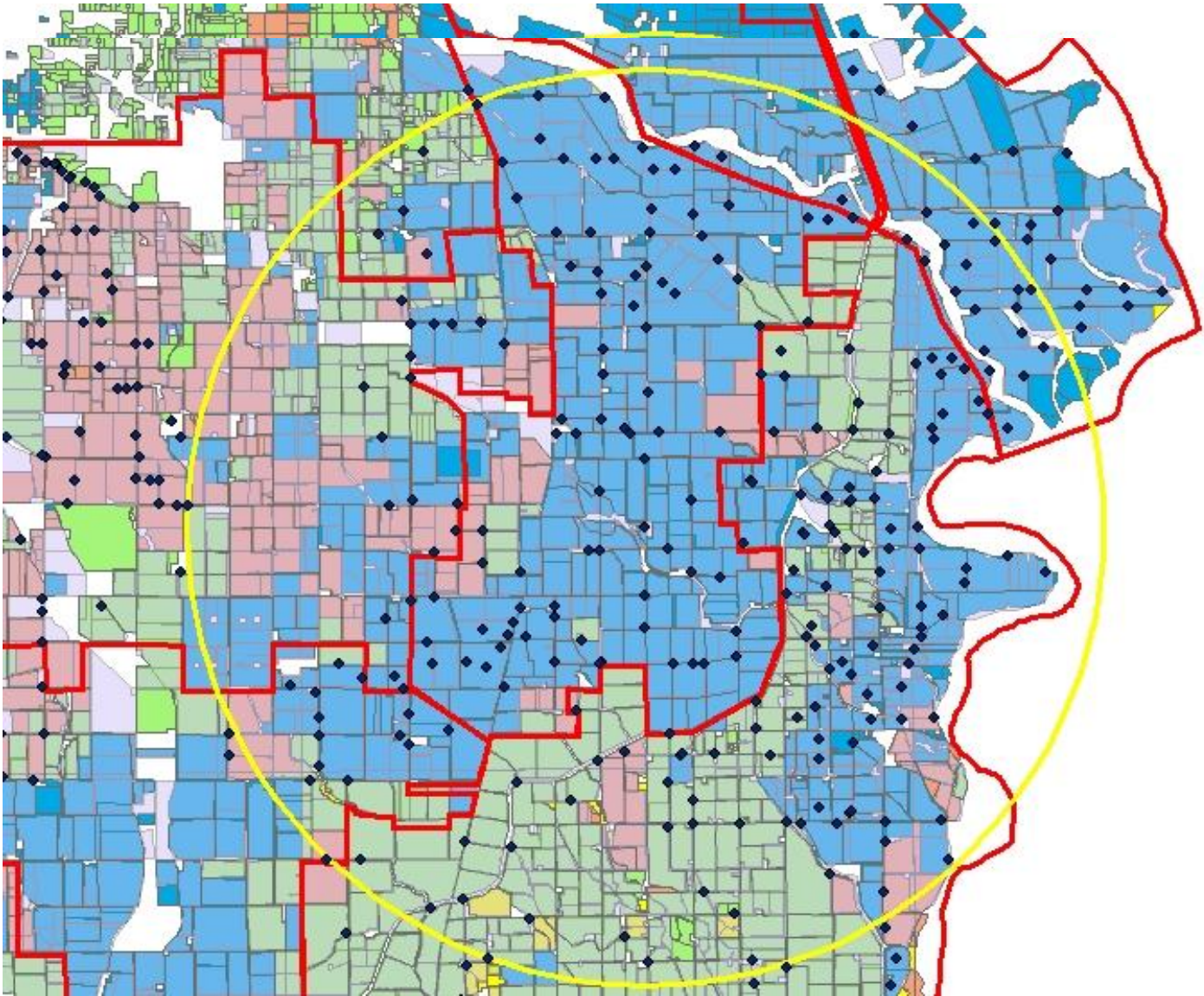
# A Closer Look at Water and Land Use Changes in Sub-areas 3 & 5



# Groundwater Use Increase in the Vicinity of BMO well 18B02:

- 1993 to 2008 – >5,500 acres
- Groundwater source for irrigation

# A Closer Look at Land Use Changes in Sub-area 9



# Groundwater Use in the Vicinity of BMO Well 23G01

- Subarea – 9: 1993 to 2008 – 14,160 acres
- Current 5 mile Radius – 26,000 acres dependant on groundwater
- Increasing reliance on groundwater
- Decreasing availability of surface water

# Countywide Well Numbers

- 1993 to 2008 – 415 Ag Well Permits
- To date 2009 - 66 Ag Well Permits

# COUNTYWIDE LAND USE CHANGES PERMANENT CROPS

<b>CROP</b>	<b>1988</b>	<b>1993</b>	<b>1998</b>	<b>2008</b>
<b>ALMOND</b>	<b>15,285</b>	<b>17,609</b>	<b>27,993</b>	<b>39,205</b>
<b>WALNUT</b>	<b>6,992</b>	<b>6,965</b>	<b>9,335</b>	<b>15,727</b>
<b>OLIVE</b>	<b>2,590</b>	<b>4,073</b>	<b>4,796</b>	<b>8,261</b>

Glenn County Crop Reports, Agricultural Permit Programs, and DWR Data

# Reflection Upon Historic Groundwater Levels and BMO Alert Stages

- Specifically in BMO's sub-areas 5 and 9
- In relationship to changes in land and water use



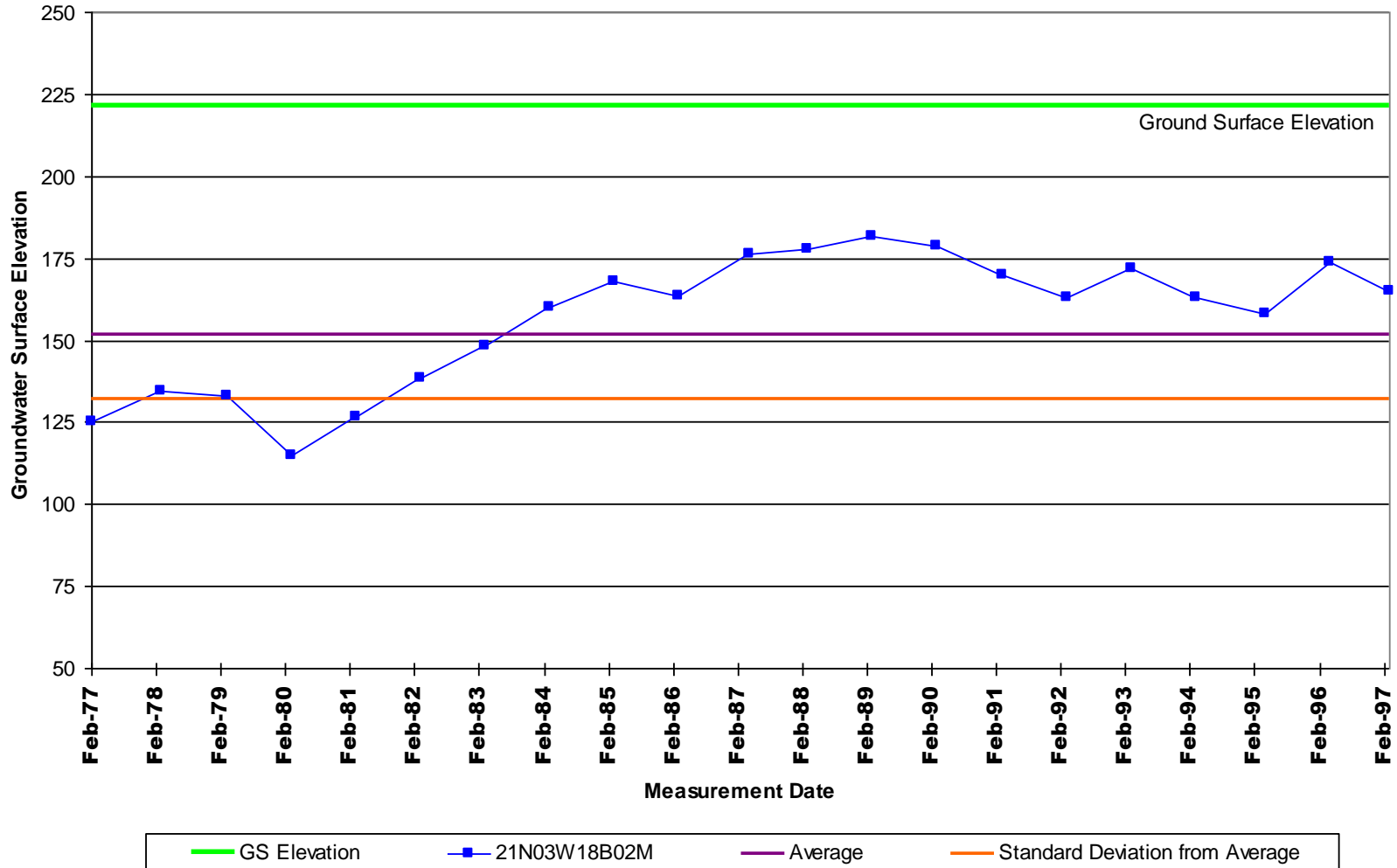
- ◆ Groundwater
  - Buffer of 18E
  - Roads
- Naip 2004 Image**
- RGB**
- Red: Band
  - Green: Band
  - Blue: Band





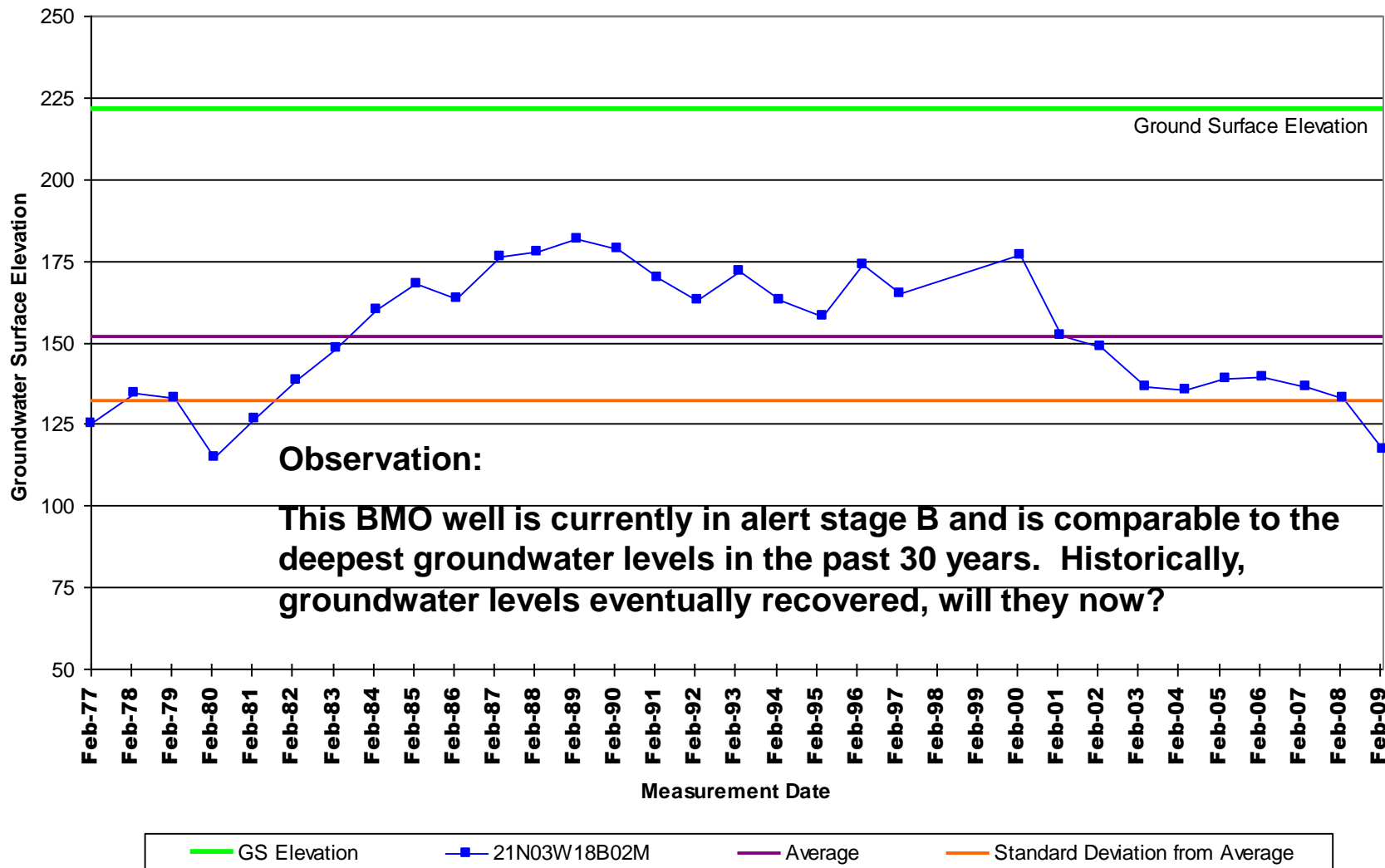
# Historic Spring Groundwater Levels from 1977 to 1997, BMO Well 18B

21N03W18B02M



# Historic Spring Groundwater Levels from 1977 to 2009, BMO Well 18B

21N03W18B02M

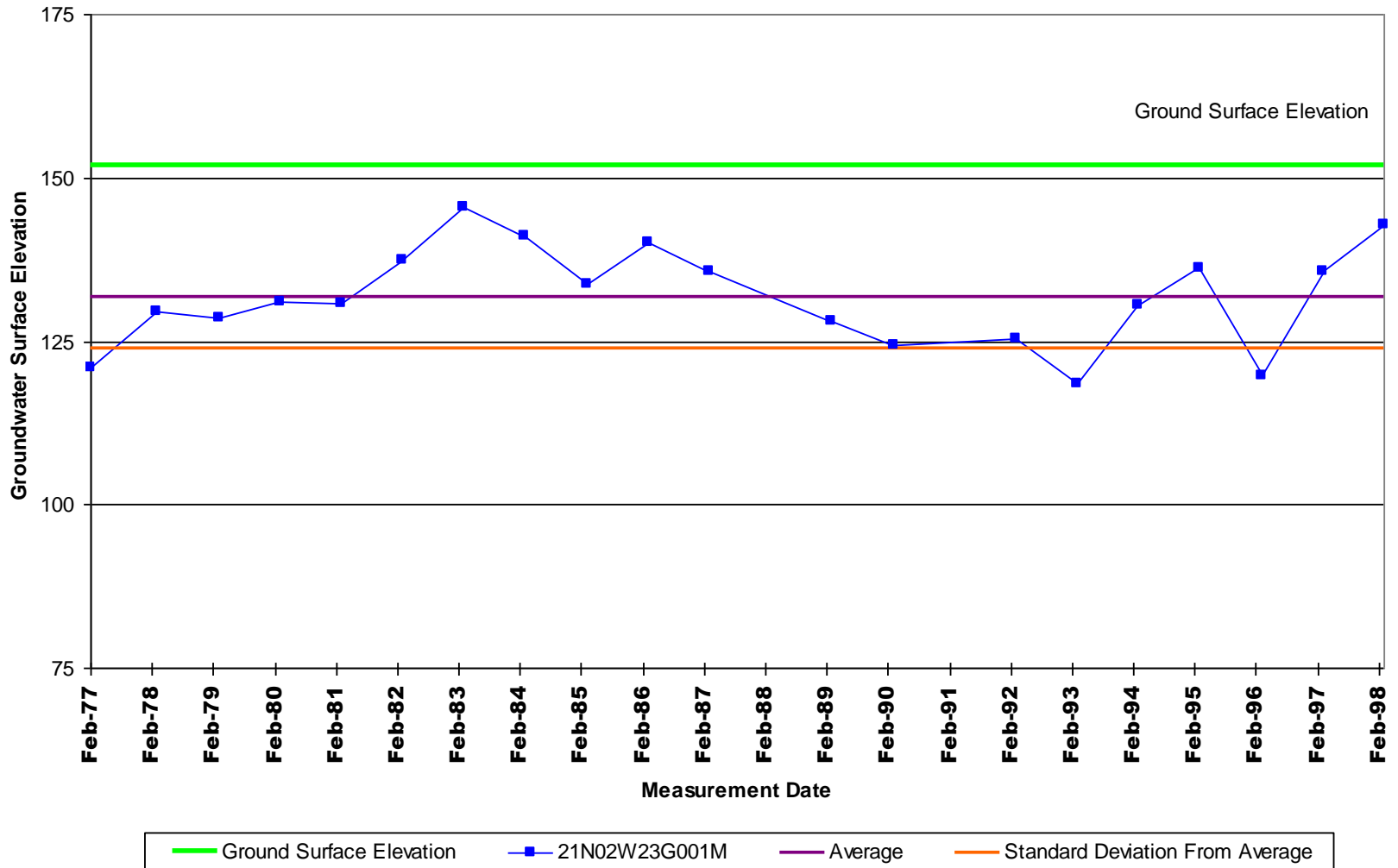




- ◆ Groundwater
  - Buffer of 230
  - Roads
- Naip 2004 Im**
- RGB**
- Red: Band
  - Green: Band
  - Blue: Band

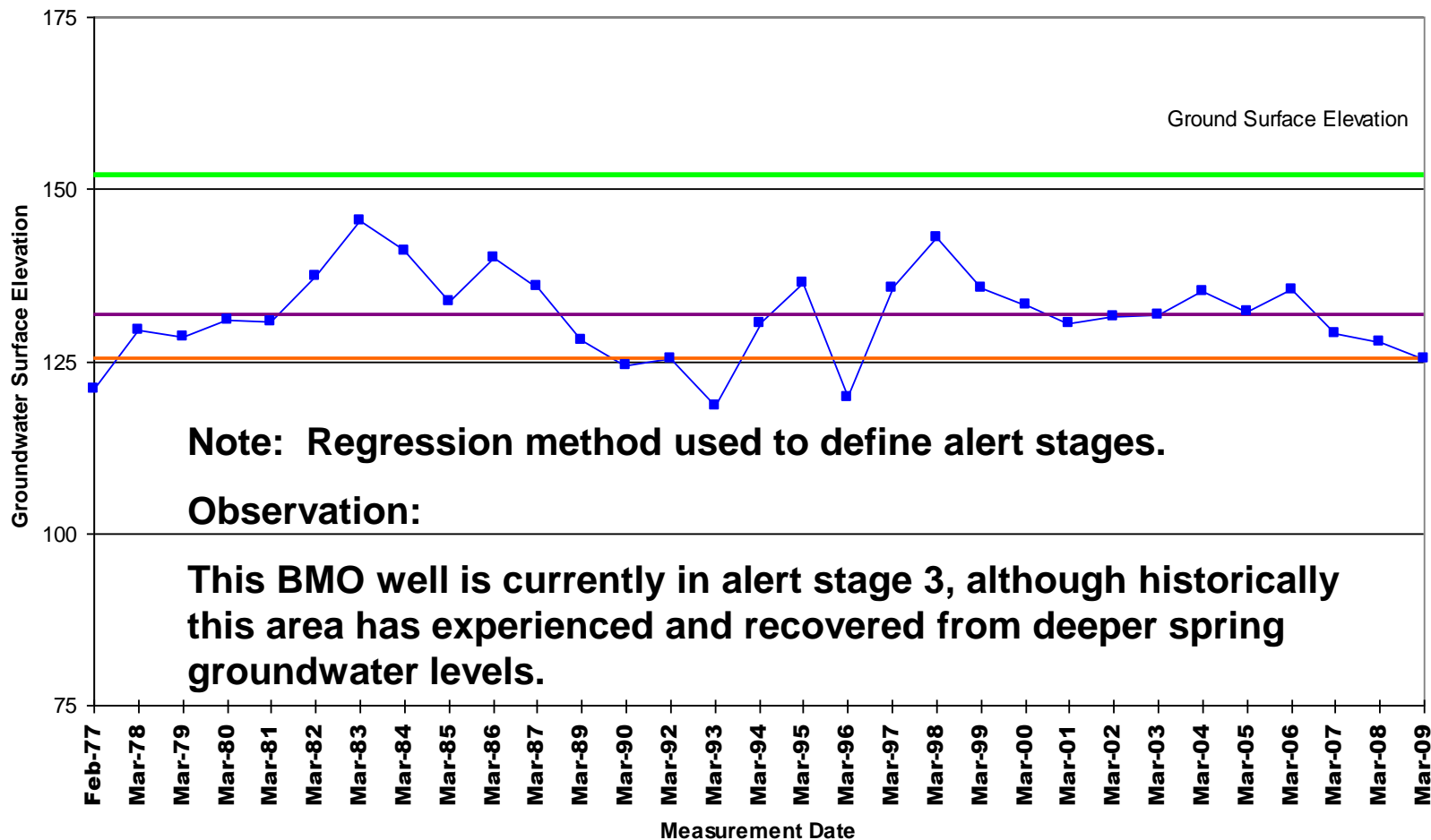
# Historic Spring Groundwater Levels from 1977 to 1988, BMO Well 23G

21N02W23G001M



# Historic Spring Groundwater Levels from 1977 to 2009, BMO Well 23G

21N02W23G001M



Ground Surface Elevation    21N02W23G001M    Average    Standard Deviation From Average

# Wrap-up

## TAC Conclusions and Recommendations:

### ***Sub-area 5, BMO Well 18B:***

- Important changes in land and water use has occurred and is continuing to occur
- 2009, spring groundwater levels are ~ equal to 30-year historic lows.
- History has shown that these deeper groundwater levels have recovered before.
- Suggest being patient to see if the 2009 levels eventually recover during a wetter hydrological cycle
- Important to note that current land and water uses have occurred and it may result in less recovery
- If this becomes more substantiated, additional steps may need to be revisited to manage the groundwater resource in this sub-area

# Wrap-up

## TAC Conclusions and Recommendations:

### ***Sub-area 9, BMO Well 23G:***

- Important changes in land and water use has occurred and is continuing to occur
- Even though these changes have occurred, current groundwater levels are not yet at the historic low which have recovered in the past
- As a first step, the regression method used to define the BMO Alert Stages in 2001 for this BMO Well might be re-considered in favor of a different BMO method for defining and setting alert stages