

**Basin Management Objective
Butte County
Sub Area – BUTTE
Butte Water District
Calendar Year – 2006**

Butte County Water Advisory Committee Member – Vacant (packet prepared by Mark Orme of Butte Water District)

Contact Information

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Aquifer Systems Identified In Sub Area:

Alluvial Aquifer System

Modesto Formation

Riverbank Formation

Sutter Buttes Rampart Aquifer System

Upper Tuscan (Formation Unit C) Aquifer System

Lower Tuscan (Formation Unit B) Aquifer System

Management Objective –

To maintain the groundwater surface elevation at a level that will assure an adequate and affordable irrigation water supply from the Alluvial, Sutter Buttes Rampart, Lower and Upper Tuscan Formations aquifer systems. It is the intent of this management objective to assure a sustainable agricultural groundwater supply of good quality now and into the future, and to assure the water supply can be utilized to the maximum extent possible without injuring groundwater quality or inducing land subsidence. The intent of this management objective is also to assure an adequate supply of groundwater from the alluvial aquifer system of suitable quality for all domestic groundwater users in the sub area.

Location of Basin Management Objective Key Wells:

Groundwater Levels – See attached map of monitoring wells

Groundwater Quality – To be completed in 2007

Land Subsidence – See attached map of monitoring wells

Groundwater Level Monitoring Network(s):

Department of Water Resources

Butte County Department of Water and Resource Conservation

Groundwater Quality Network(s):

To be completed in 2007

Land Subsidence Monitoring Network(s):

Department of Water Resources
Butte County Department of Water and Resource Conservation

Monitoring Frequency:

Groundwater Levels – Department of Water Resources - semiannually (fall and spring). Butte County Department of Water and Resource Conservation – July and August in accordance with Chapter 33 of the Butte County Code.

Groundwater Quality – To be completed in 2007

Land Subsidence – Department of Water Resources – Continuously

Well Numbering System(s):

Groundwater Levels – Department of Water Resources (State Well Numbering System). Butte County Department of Water and Resource Conservation (State Well Numbering System).

Groundwater Quality – To be completed in 2007

Land Subsidence – Department of Water Resources (State Well Numbering System)

Basin Management Objective Key Wells and Compliance Methodology for Groundwater Levels.

Well ID	Aquifer System	Well Type	Stage 1 & 2 Alerts**		Stage 3 Alerts**	
			Elev. (ft)	Depth (ft)	Elev. (ft)	Depth (ft)
17N02E14A01M	Modesto Formation	Irrigation	73.31	9.19	68.31	14.19
17N02E14H01M	Basin Deposits	Domestic	72.55	11.45	67.55	16.45
17N03E05C01M	Unknown	Monitoring	81.40	14.60	76.40	19.60
17N03E08G01M	Unknown	Monitoring	77.78	12.22	72.78	17.22
17N03E16N01M	Riverbank Formation	Domestic	70.74	14.26	65.74	19.26

* - See Staff Report for description of method.

** - See attached hydrographs.

Basin Management Objective Key Wells and Compliance Methodology for Groundwater Quality.

To Be Completed in 2007

Basin Management Objective Key Wells and Compliance Methodology for Land Subsidence.

Land Subsidence is continuously monitored by the Department of Water Resources and Butte County Water and Resource Conservation at the closest extensometers in the Western Canal Water District and M&T Ranch sub units.

BMO Alert Stage Definitions:

The Butte Sub Area will use the following guidelines in the management of the groundwater resources. The groundwater level and land subsidence management objectives are intended to trigger predetermined voluntary Ground Water Management Actions, as defined below, to remedy declining ground water levels that are not recovering to compliance levels for each index well. The groundwater quality BMO management actions will be defined in 2007.

Groundwater Levels:

Stage 1: The first year that spring groundwater levels fall below the average spring groundwater level minus five feet for the well.

Stage 2: Stage 2 is reached if spring groundwater levels, for a second consecutive year, remain below the average minus five feet.

Stage 3: Stage 3 is reached if the spring groundwater levels fall ten feet below the average spring groundwater level established for each respective well.

Groundwater Quality:

To be done in 2007

Land Subsidence:

Stage 1. When the annual elastic subsidence exceeds the average annual elastic subsidence measured over the period of record of the extensometer.

Stage 2. When the annual elastic subsidence exceeds the maximum recorded elastic subsidence over the period of record for the extensometer.

Stage 3. When inelastic subsidence occurs.

BMO Compliance Evaluation Procedure:

Compliance with the BMO will be determined by the Butte County Water Commission's Technical Advisory Committee following the spring measurement period. The groundwater surface elevation at each monitoring well will be compared against the corresponding compliance graph and stage definition criteria to determine if the groundwater surface elevations are above or below specific alert trigger levels. The Technical Advisory Committee of the Butte County Water Commission will perform this

evaluation and report the results of the evaluation to the Butte County Water Advisory Committee and Water Commission.

Ground Water Management Actions:

Stage 1. Groundwater management actions to be undertaken following a Stage 1 noncompliance shall be informational. The Butte County Water Advisory Committee (WAC) and Water Commission (WC) will be advised of the noncompliance. At the recommendation of the Water Advisory Committee and the Water Commission public notification of the noncompliance may be initiated.

Stage 2. Groundwater management actions to be undertaken following a Stage 2 noncompliance shall be investigational. Upon identification of the Stage 2 noncompliance the noncompliance will be reported to the WAC and the WC. Following review and concurrence, the WAC shall direct the TAC to initiate an investigation to determine the cause(s) of the noncompliance and make recommendations as how to correct the noncompliance. The TAC shall report their findings and recommendations back to the WAC and WC within 30 days.

Stage 3. Groundwater management actions to be undertaken following a Stage 3 noncompliance shall be actionable. Upon identification of the Stage 3 noncompliance, the noncompliance will be reported to the WAC and the WC. Following review and concurrence, the WAC shall direct the TAC to initiate an investigation to determine the cause(s) of the noncompliance and make recommendations as how to correct the noncompliance. The TAC shall report back their findings and recommendations back to the WAC and WC within 30 days. The WAC will then work with the locals in the sub area to implement needed water management activities necessary to correct the problem. Such water management activities shall include, but not limited to, voluntary water conservation measures, redistribution of groundwater extraction, reduction of groundwater extraction, or other measure(s) identified and approved by the WAC, WC, and the Butte County Board of Supervisors.

Future Monitoring Recommendations:

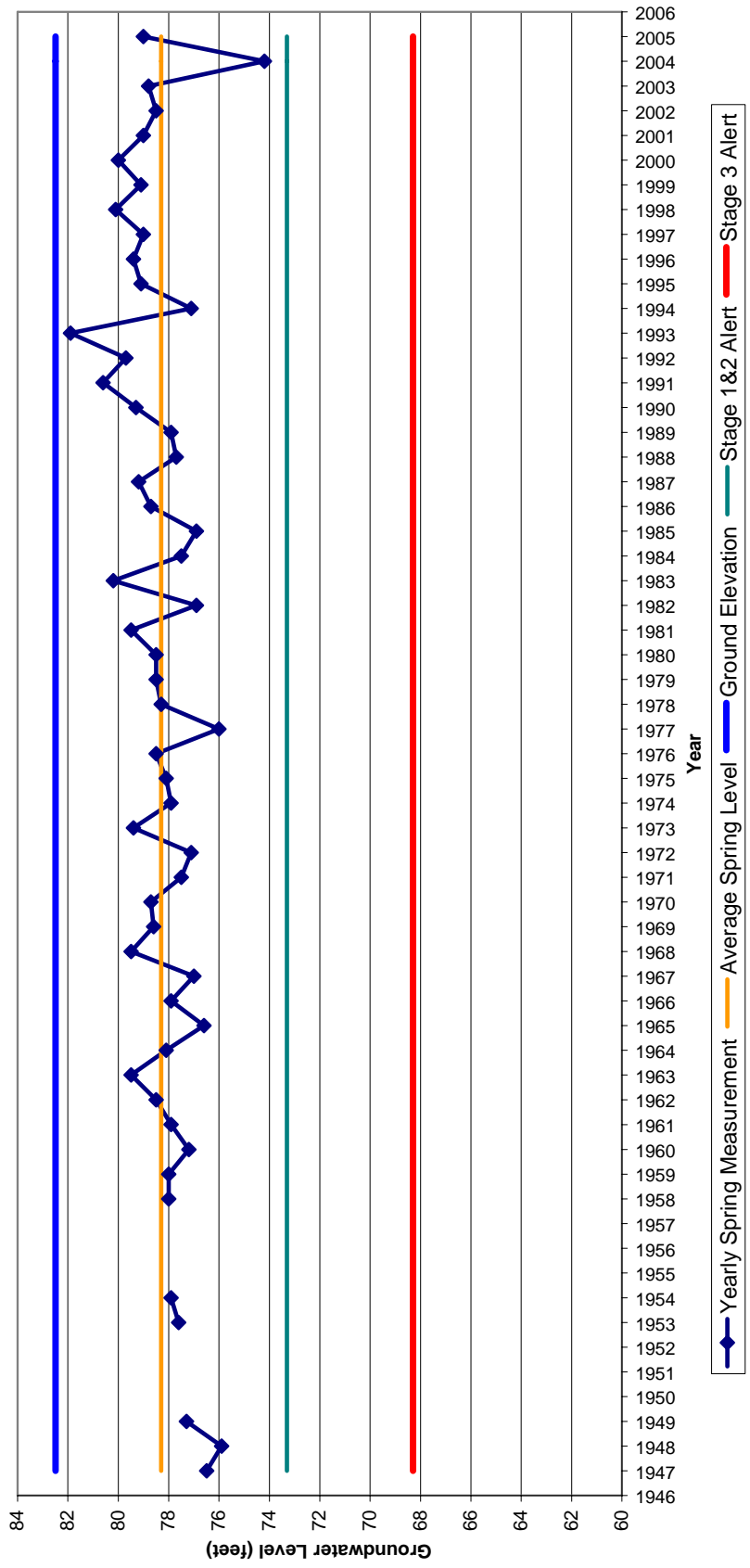
One multi-level monitoring well (up to three depths) will be installed in Butte Water District in 2006. This monitoring well should be included in the monitoring network. Well logs from key DWR monitoring wells will be obtained to determine which aquifers are being monitored. The monitoring network will be reevaluated and adjusted as necessary to monitor groundwater levels in each aquifer at key locations. Data collection will be initiated for the development of groundwater quality management objectives in 2007.

Explore avenues to install an extensometer within the District to monitor for subsidence.

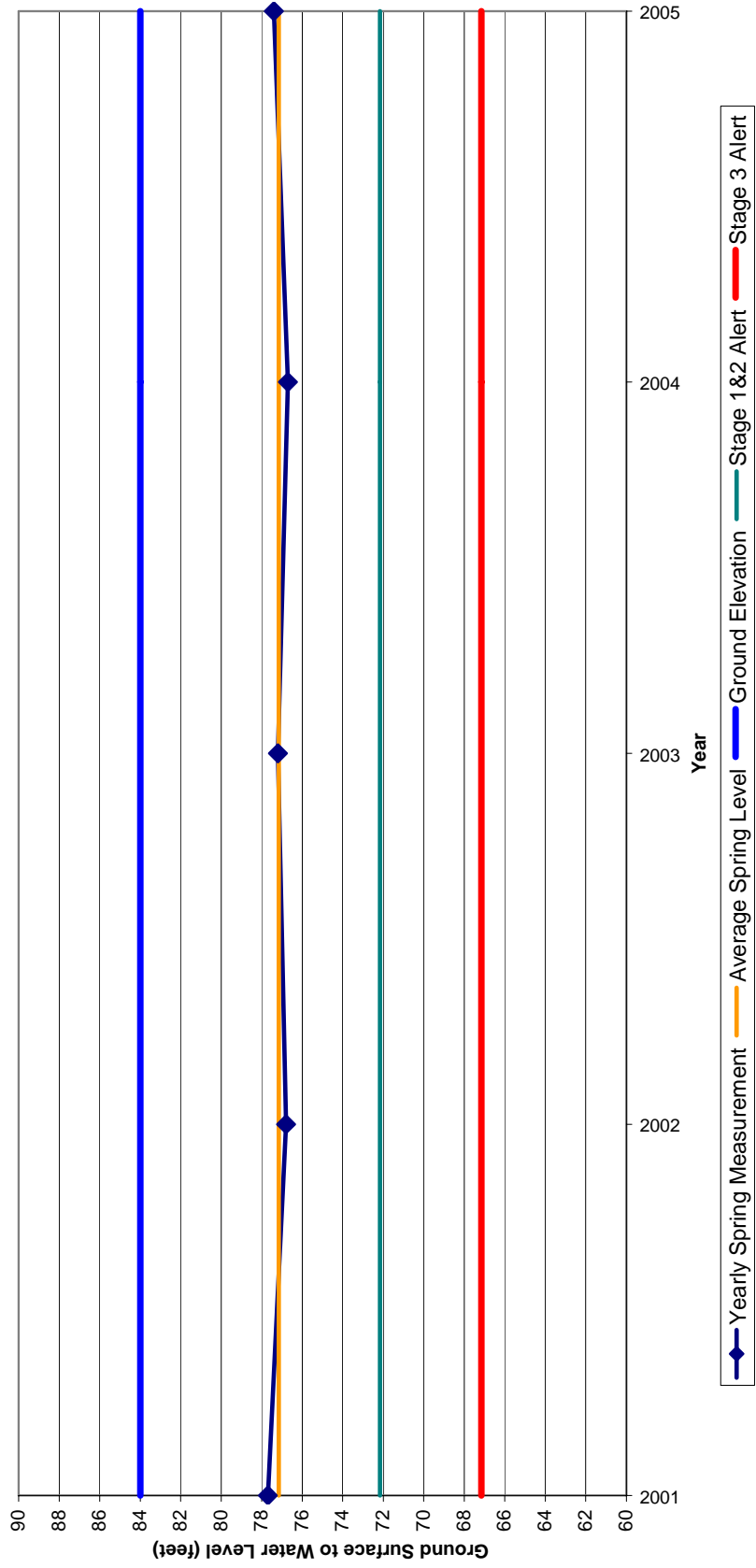
Supporting Data:

- See attached hydrographs
- See attached map of monitoring wells
- See attached map of Sub Unit Boundaries

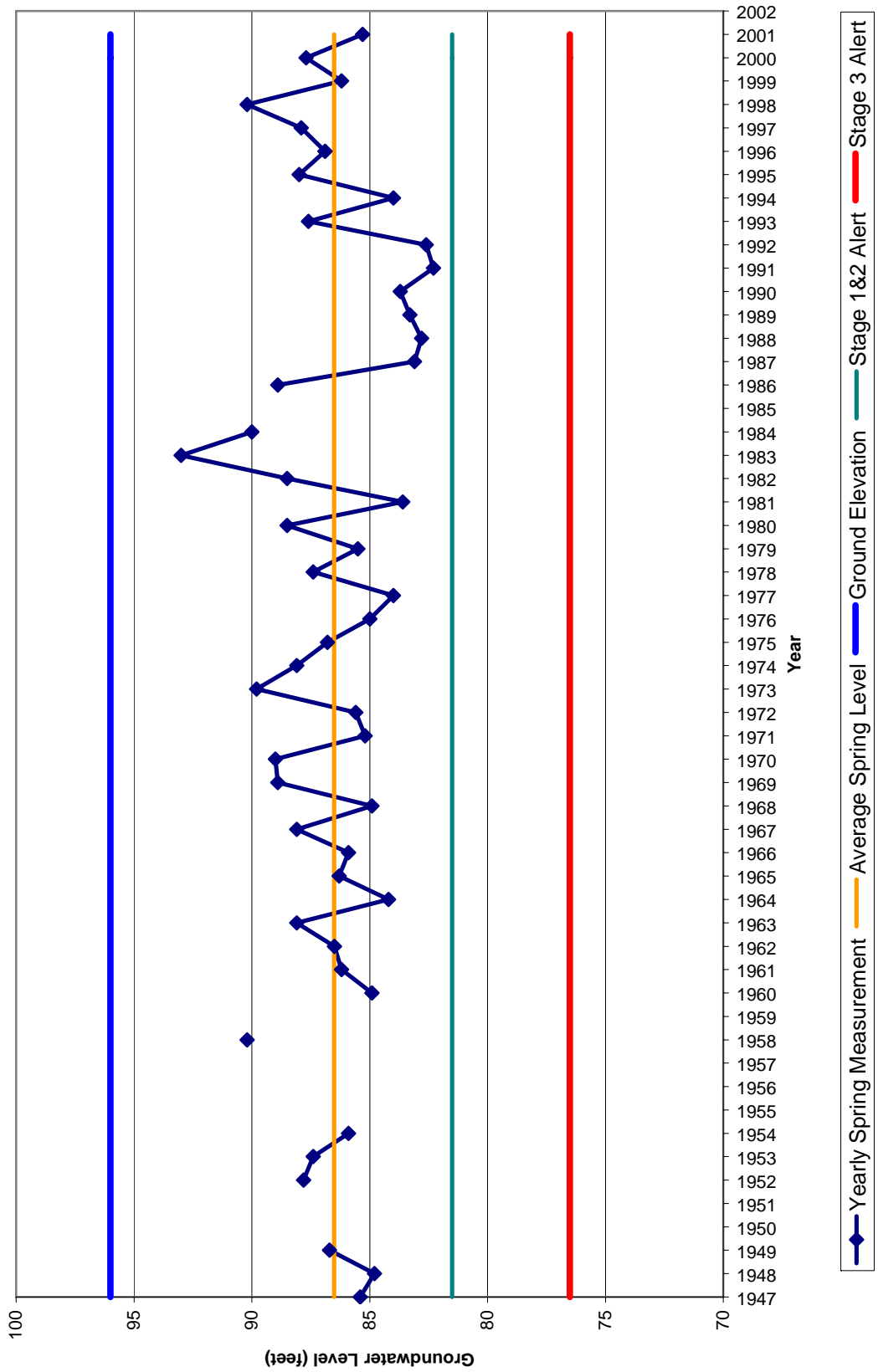
**Spring Groundwater Levels
Butte - 17N02E14A01**



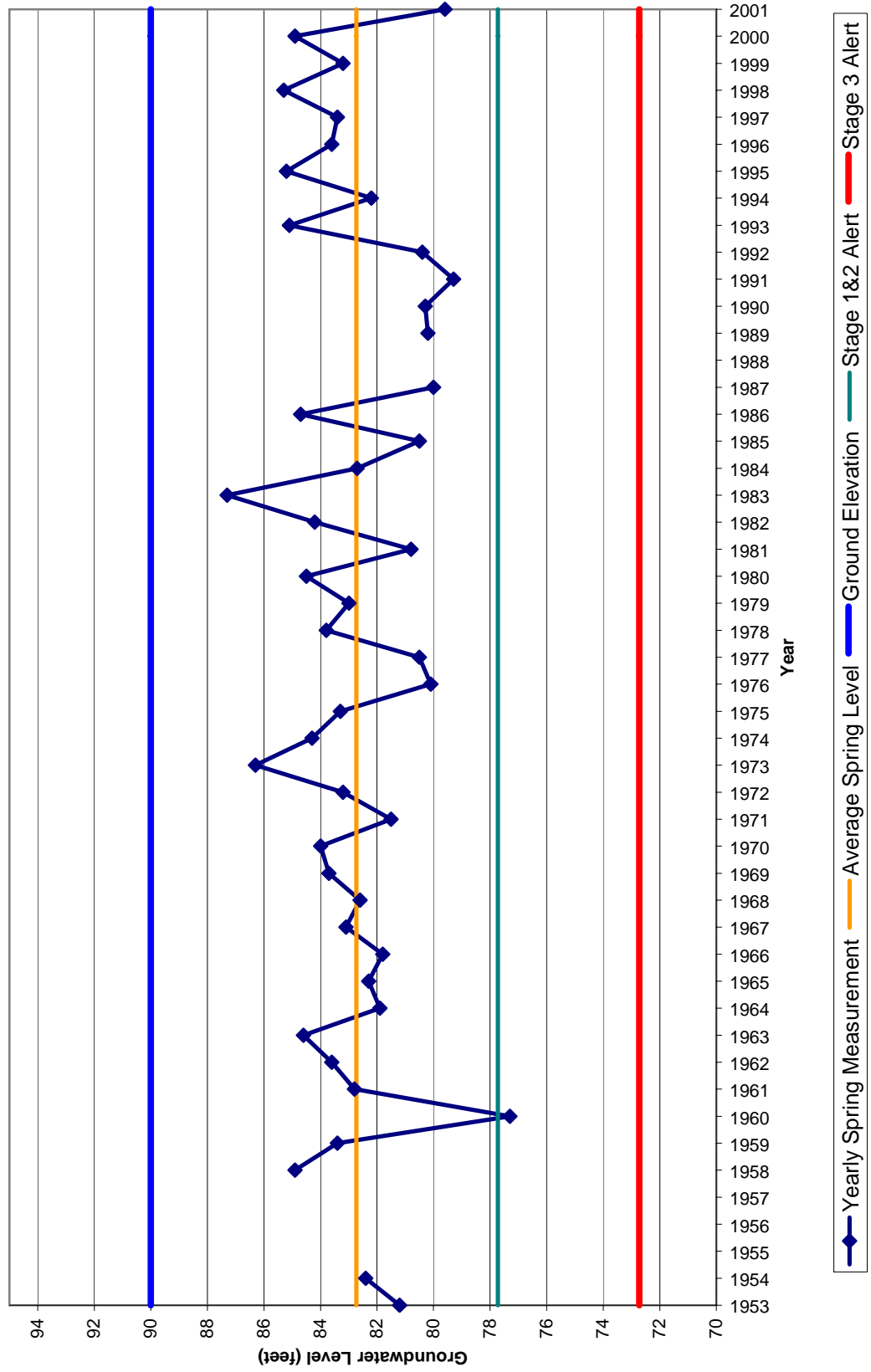
Spring Groundwater Levels Butte - 17N02E14H01

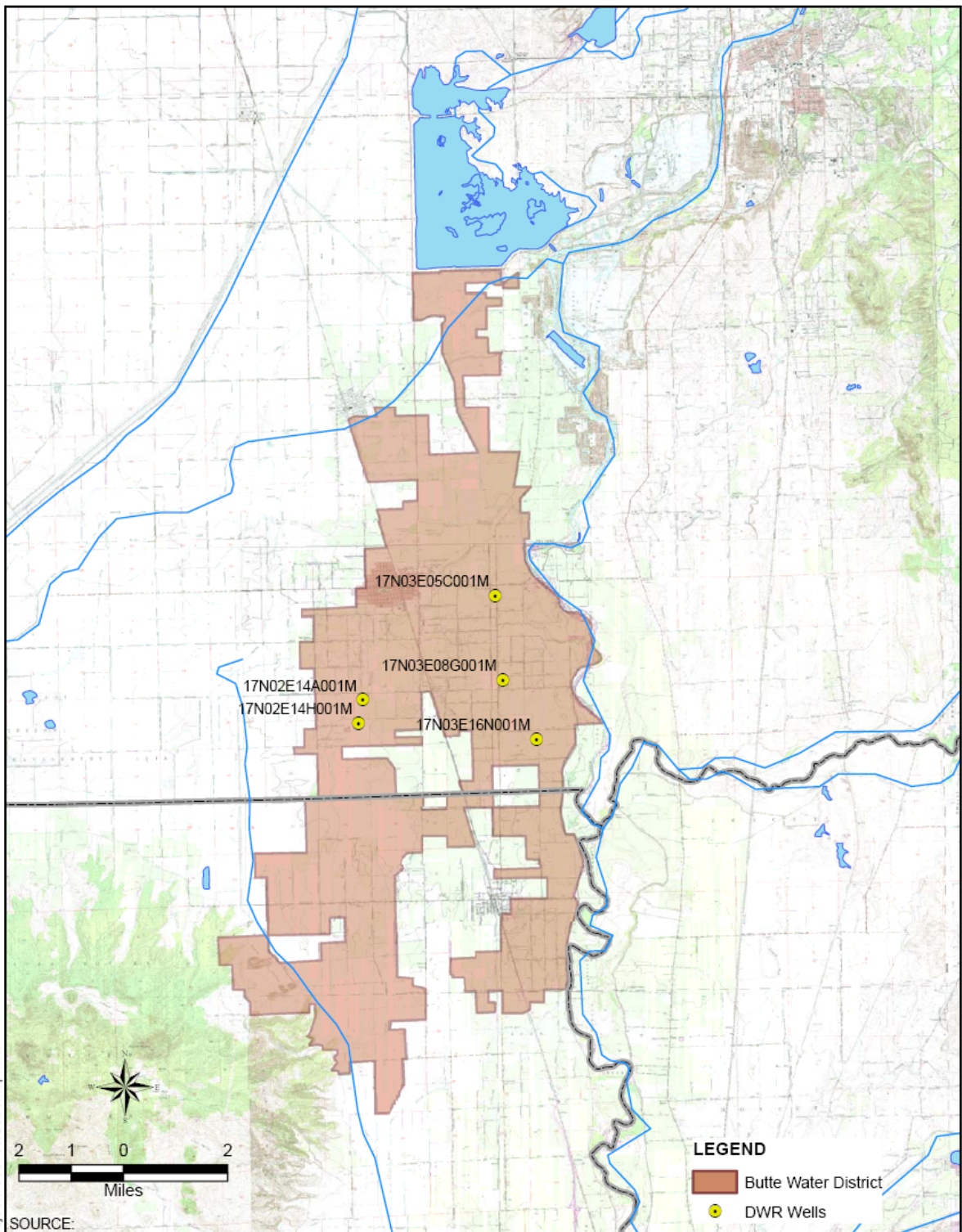


Spring Groundwater Levels
Butte - 17N03E05C01M



Spring Groundwater Levels
Butte - 17N03E08G01M





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Butte Water District	 Bookman-Edmonston A Division of GEI Consultants	BASEMAP
Butte County, California		APRIL 2006 FIGURE 1

Butte Water District Base map