

**Basin Management Objective
Butte County
Sub Area – M & T RANCH
Calendar Year -2006**

Butte County Water Advisory Committee Member – Les Heringer

Contact Information

ADDRESS: 3694 Chico River Road, Chico, CA 95928

PHONE NUMBER:

MOBILE - (530) 518-9954

WORK - (530) 342-2954

EMAIL ADDRESS – lsheringer@sunset.net

Aquifer Systems Identified In Sub Area:

Quaternary Alluvium

Basin Deposits

Modesto Formation Aquifer System

Upper Tuscan (Formation Unit C) Aquifer System

Lower Tuscan (Formation Unit B) Aquifer System

Management Objective –

To maintain the groundwater surface elevation during the peak summer irrigation season (July and August) in all aquifer systems at a level that will assure an adequate and affordable irrigation groundwater supply. It is the intent of this management objective to assure a sustainable agricultural supply of good quality water now and into the future, and to assure the water supply can be utilized without injuring groundwater quality or inducing land subsidence. The management objective is also to assure an adequate groundwater supply of adequate quality from the alluvial aquifer system for all domestic 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
State Well number 21N01W24B01M

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, 21N01W24B01M (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 Spring Avg. Elev. (ft)	Stage 3 Alerts Lowest Recorded Elev. (ft)
21N01W24B01M	Lower Tuscan (B)	Monitoring	115.0	110.0
22N01E29R01M	Upper Tuscan (C)	Irrigation	130.0	125.0
22N01E32E04M	Modesto Formation	Domestic	125.0	120.0

* - See Staff Report for description of method.

** - See attached hydrographs.

The Stage 1, 2, and 3 Alerts were set from long-term experience in the area. The elevations correspond to groundwater levels that are problematic to existing pump bowl settings.

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

To Be Initiated 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 Department of Water and Resource Conservation from State Well number 21N01W24B01M, which is within this sub area.

BMO Alert Stage Definitions:

The M & T Ranch 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 initiated in 2007.

Groundwater Levels:

Stage 1: A Stage 1 alert shall occur the first year that spring groundwater elevations are below the Stage 1 & 2 elevation, but remain above the Stage 3 Alert elevation.

Stage 2: A Stage 2 alert shall occur when spring groundwater elevations for a second, or subsequent, consecutive year, are below the Stage 1 & 2 elevation but remain above the Stage 3 Alert elevation.

Stage 3: A Stage 3 Alert shall occur when the spring groundwater levels fall below the Stage 3 Alert elevation as identified on the hydrograph.

Groundwater Quality:

To be initiated 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:

Efforts will be made to identify several domestic wells that could be added to the existing monitoring well network in the sub-area to allow development of management objectives for the alluvial aquifer system. Initiate data collection for development of groundwater quality management objective will begin in 2007.

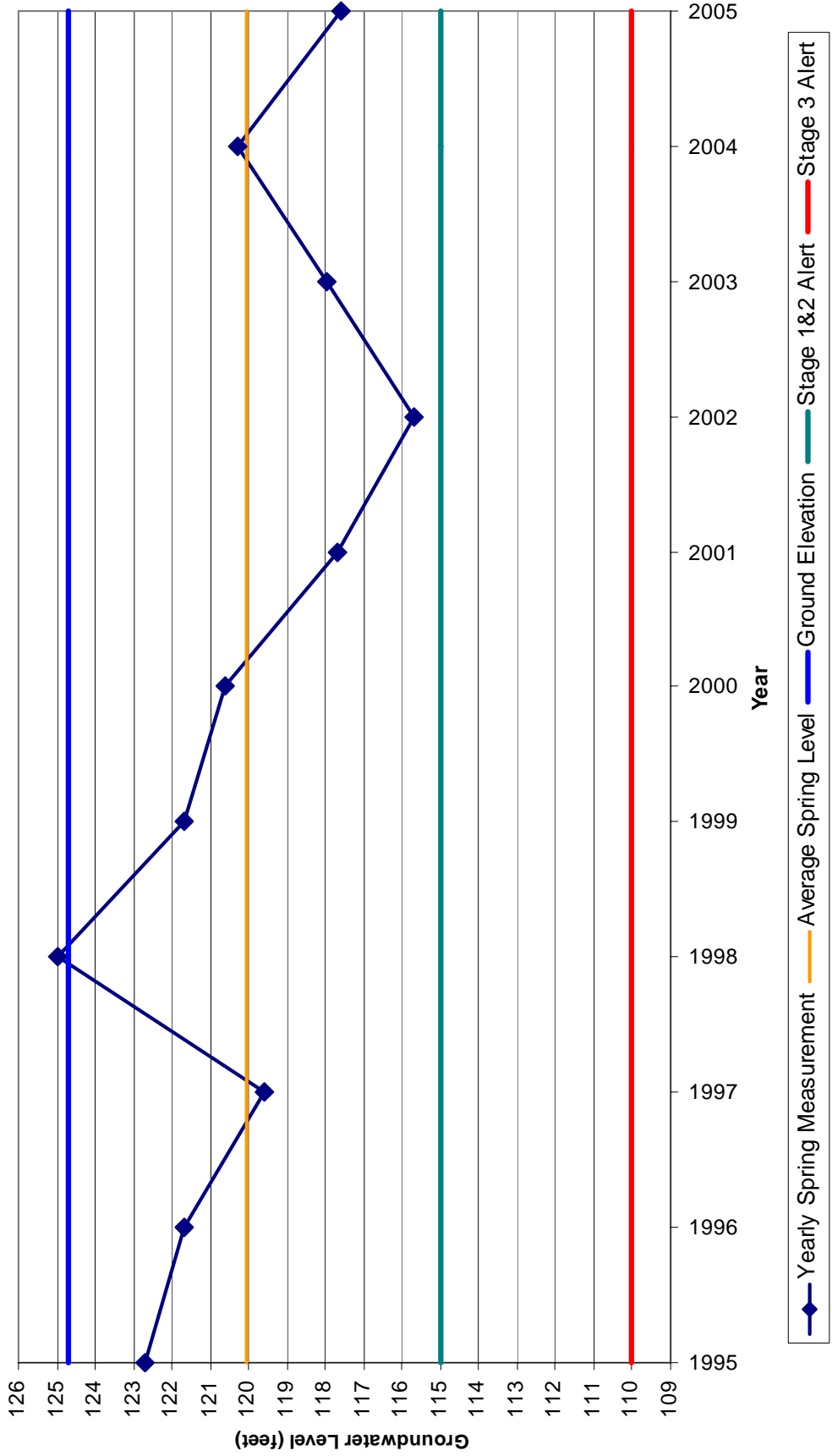
Supporting Data

See attached hydrographs

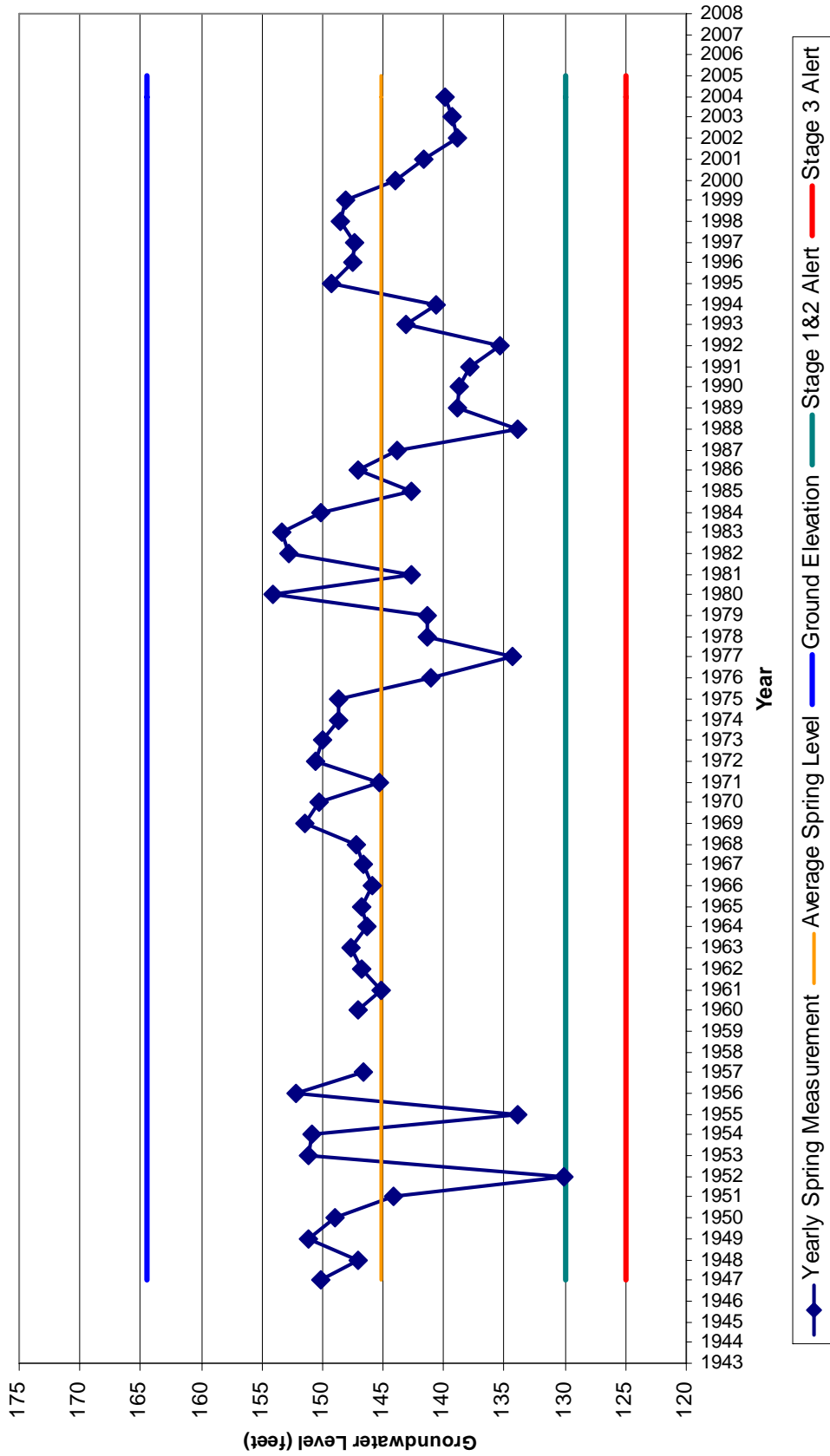
See attached map of monitoring wells

See attached map of Sub Unit Boundaries

**Spring Groundwater Levels
M & T Ranch - 21N01W24B01**



**Spring Groundwater Levels
M & T Ranch - 22N01E29R01**



Spring Groundwater Levels
M & T Ranch- 22N01E32E04

