

**Basin Management Objective
Butte County
Sub Area – LLANO SECO
Calendar Year -2006**

Butte County Water Advisory Committee Member – David Sieperda

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Aquifer Systems Identified In Sub Area:

Quaternary Alluvium

Tehama Formation

Upper Tuscan (Formation Unit C) Aquifer System

Lower Tuscan (Formation Unit B) Aquifer System

Management Objective –

Observe and maintain the current and future groundwater surface elevation at a level which will provide an economical and adequate water supply to this area's crops and homes. This basin management objective is intended to be flexible to future land and water uses in this relatively undeveloped portion of Butte County.

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 and Butte County Department of Water and Resource Conservation

Monitoring Frequency:

Groundwater Levels – Department of Water Resources – Spring Measurements

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)

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 Alert Elev. (ft)	Stage 3 Alert Elev. (ft)
20N01E18L01M	Lower Tuscan	Monitoring	104.10	99.10
20N01E18L02M	Upper Tuscan	Monitoring	104.42	99.42
20N01E18L03M	Alluvial	Monitoring	104.56	99.56
21N01W35K02M	Alluvial	Irrigation	101.37	96.37

Well ID	Total Depth (ft)	Top Perf (ft)	Bottom Perf (ft)	Geologic Formation at Top Perf.	Geologic Formation at Bottom Perf.	Aquifer Type
20N01E18L01M	1000	767	894	Tuscan B	Tuscan B	Confined
20N01E18L02M	581	509	562	Tuscan C	Tuscan C	Confined
20N01E18L03M	173	99	109	Basin Dep/Tuscan C	Tuscan C	Semi-Confined
21N01W35K02M	270	75	270	Basin Deposits	Tuscan C	Semi-Confined

* - 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:

BMO Alert Stage Definitions:

The Llano Seco 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 & 2: The Stage 1 & 2 alert levels were determined by taking the average spring groundwater elevation minus five feet.

Stage 3: The Stage 3 alert level is determined by taking the average spring groundwater elevation minus ten feet.

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:

Efforts will be made to identify additional wells that could be added to the existing monitoring well network in the sub-area. Initiate data collection for development of groundwater quality management objective in 2007.

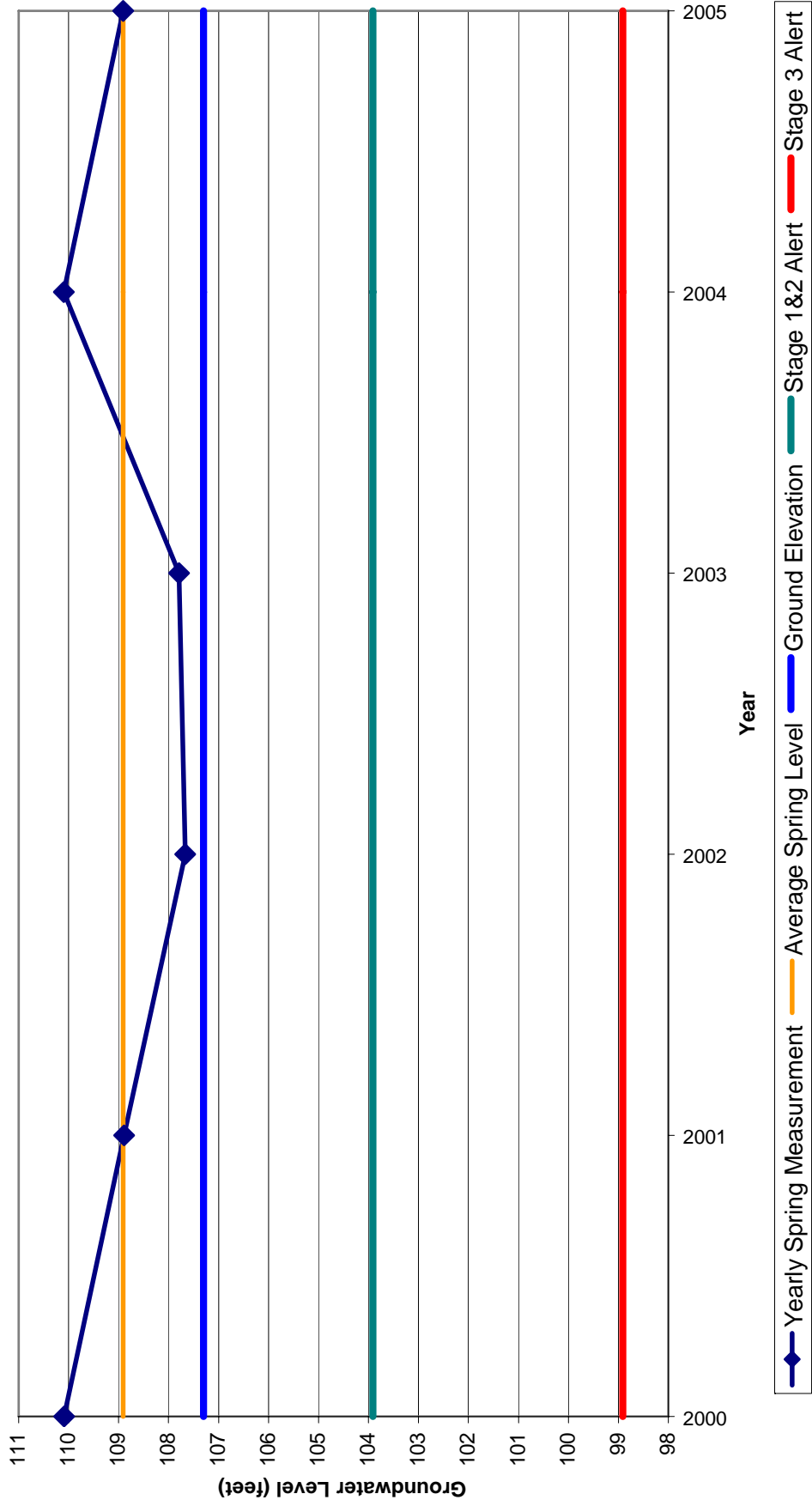
Supporting Data:

See attached hydrographs

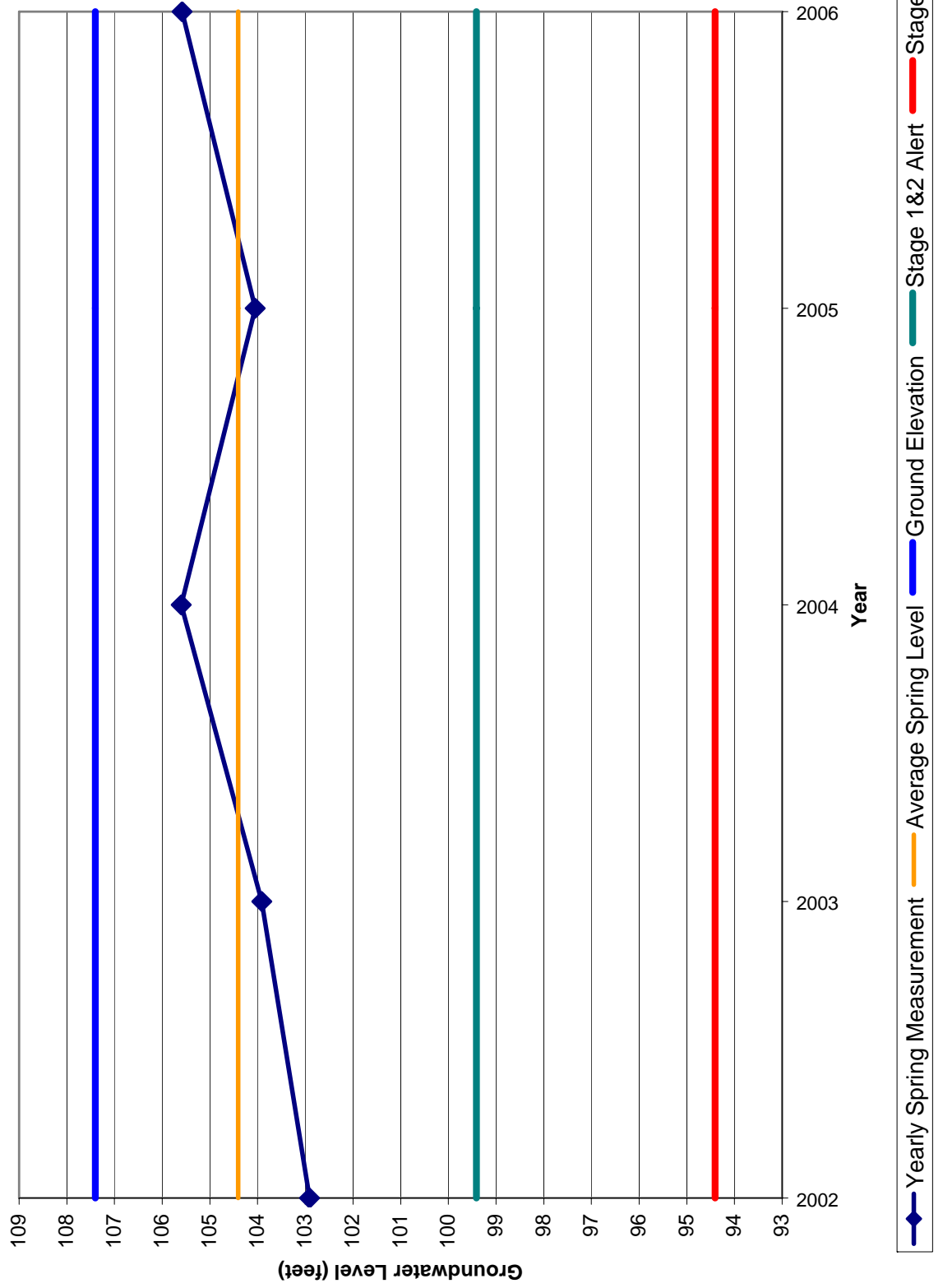
See attached map of existing monitoring wells

See attached map of Sub-Unit Boundaries

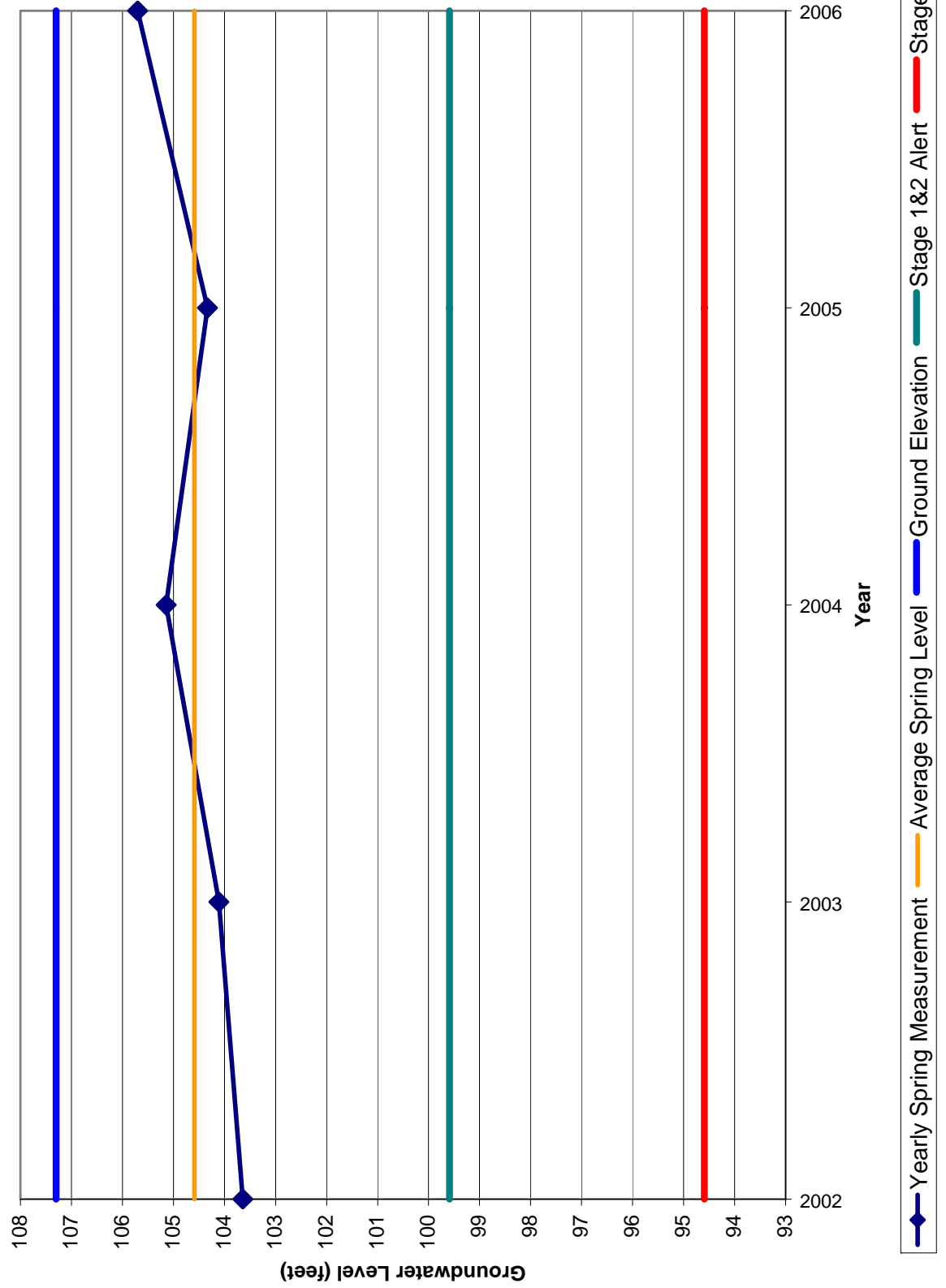
Spring Groundwater Levels
Llano Seco- 20N01E18L01



Spring Groundwater Levels
 Llano Seco- 20N01E18L02



**Spring Groundwater Levels
Liano Seco- 20N01E18L03**



Spring Groundwater Levels
Llano Seco- 21N01W35K02

