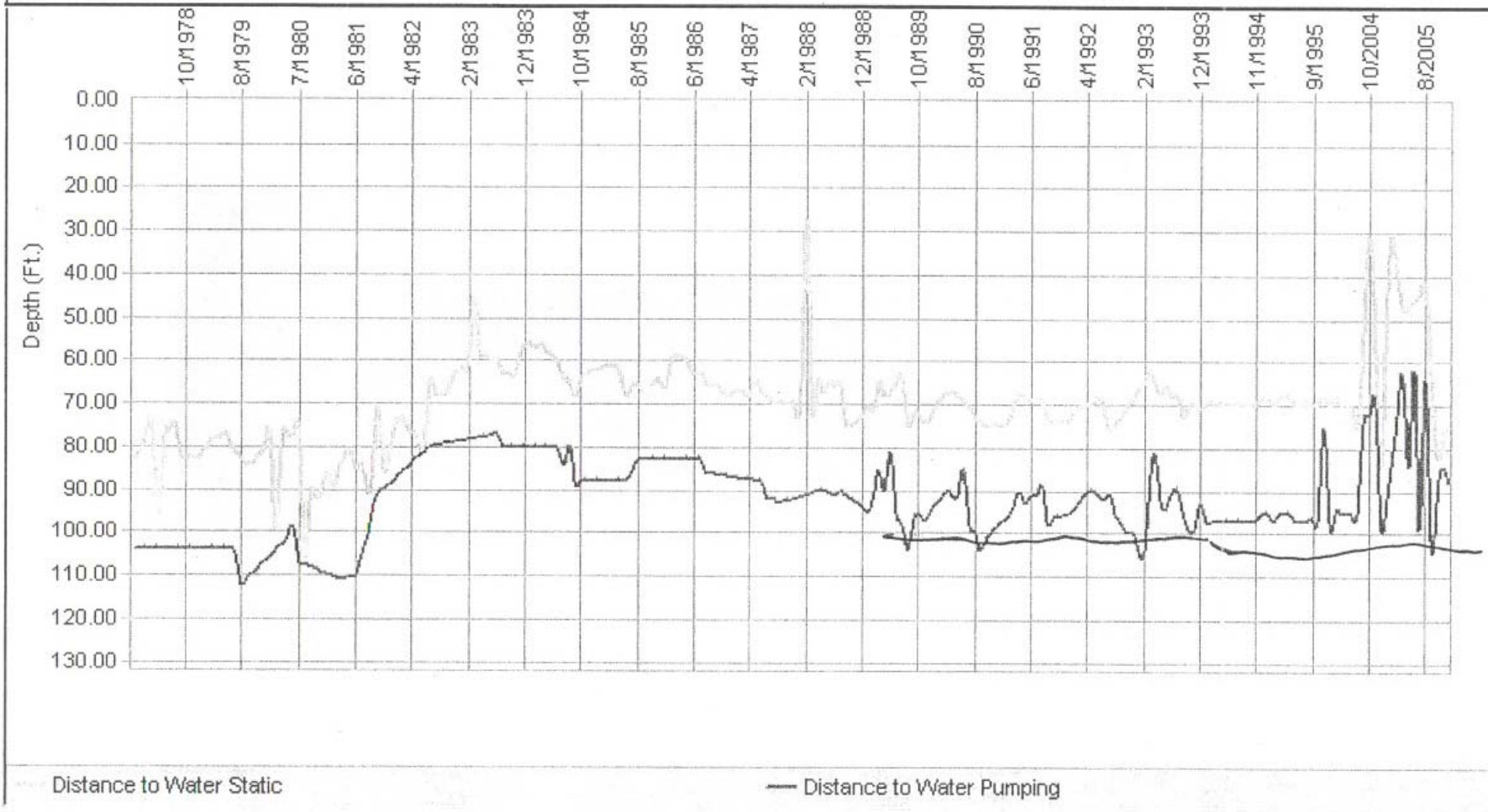
Well Level Readings

(Note: Values Are Interpolated)

WATER LEVEL GRAPHIC

District: OROVILLE Station: STA. CWS-03 from the year 1978 to 2005 As Of: 4/12/2006
Critical Pumping Level: 102



Basin Management Objective
Butte County
Sub Area – PENTZ

To be included in the BMO packet submitted
Calendar Year -2007

Basin Management Objective
Butte County
Sub Area – RICHVALE
Calendar Year -2006

Butte County Water Advisory Committee Member – Gene Harris

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Aquifer Systems Identified In Sub Area:
Basin Deposits
Modesto Formation Aquifer System
Riverbank Formation Aquifer System
Sutter Formation Aquifer System
Upper Tuscan (Formation Unit C) 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

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 & 2Alerts Spring Avg. Elev. (ft)	Stage 3Alerts Lowest Recorded Elev. (ft)
18N01E13A02M	Riverbank/Sutter	Irrigation	73.23	72.8
18N01E15D02M	Riverbank	Domestic	67.89	65
19N01E27Q01M	Upper Tuscan	Monitoring	82.21	80.3
19N01E35B01M	Basin Deposits	Monitoring	83.24	82.6
19N02E15N02M	Basin Deposits	Irrigation	101.25	100.39

* - 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.

State Well Number: 19N/01E-35B01M
Maximum annual inelastic land subsidence shall not exceed 0.01 feet per year.

BMO Alert Stage Definitions:

The Richvale 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 established for the well and still above the lowest recorded spring level for the well.

Stage 2: Stage 2 is reached if spring groundwater levels, for a second consecutive year, remain below the average groundwater level established for the well and still above the lowest record spring level for the well.

Stage 3: Stage 3 is reached if the spring groundwater levels fall below the lowest historic water level on record 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.

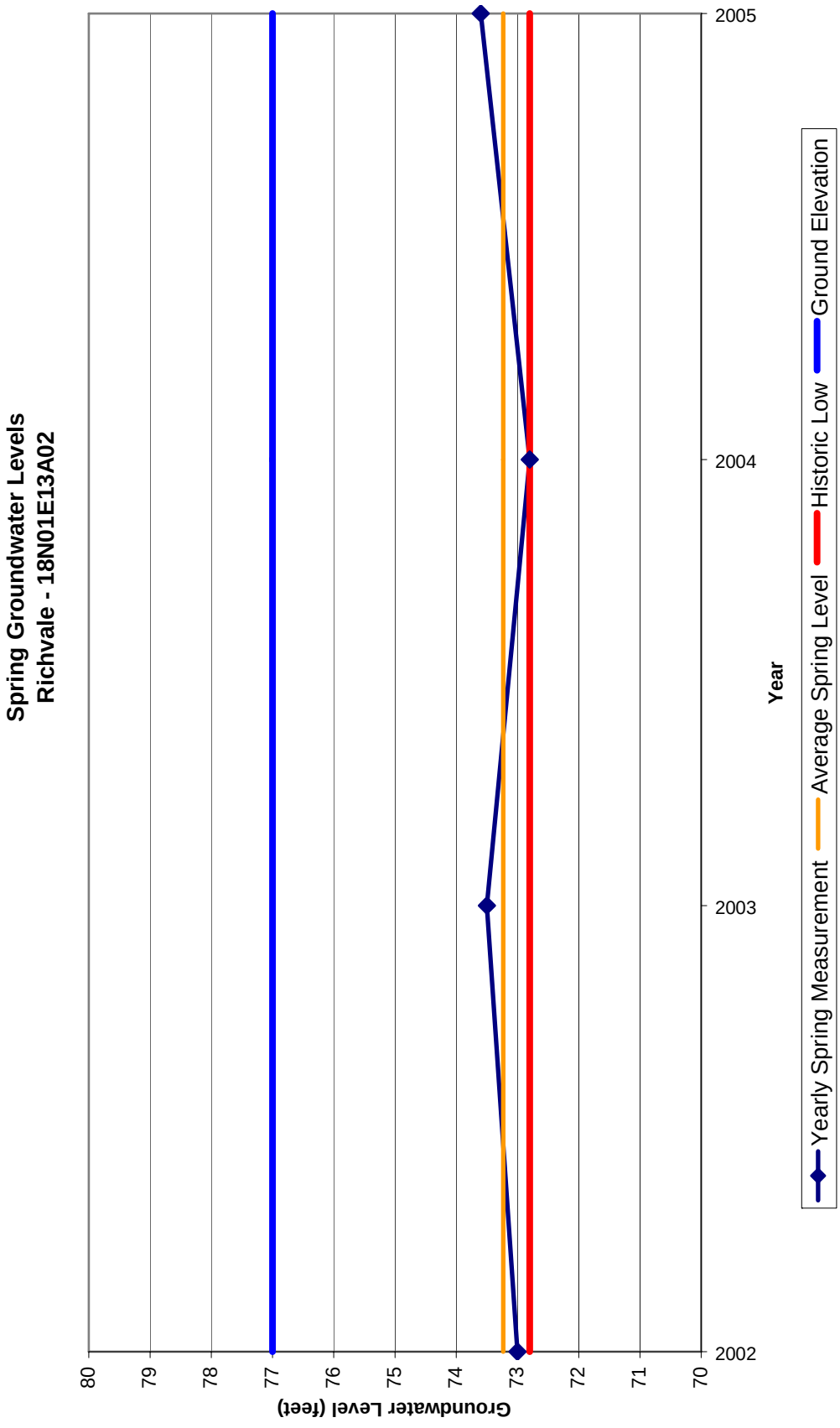
Stage 2. Groundwater management actions to be undertaken following a Stage 2 noncompliance shall be investigational. Upon identification of the Stage 2 noncompliance the noncompliance will be reported to the WAC and the WC. Following review and concurrence, the WAC shall direct the TAC to initiate an 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.

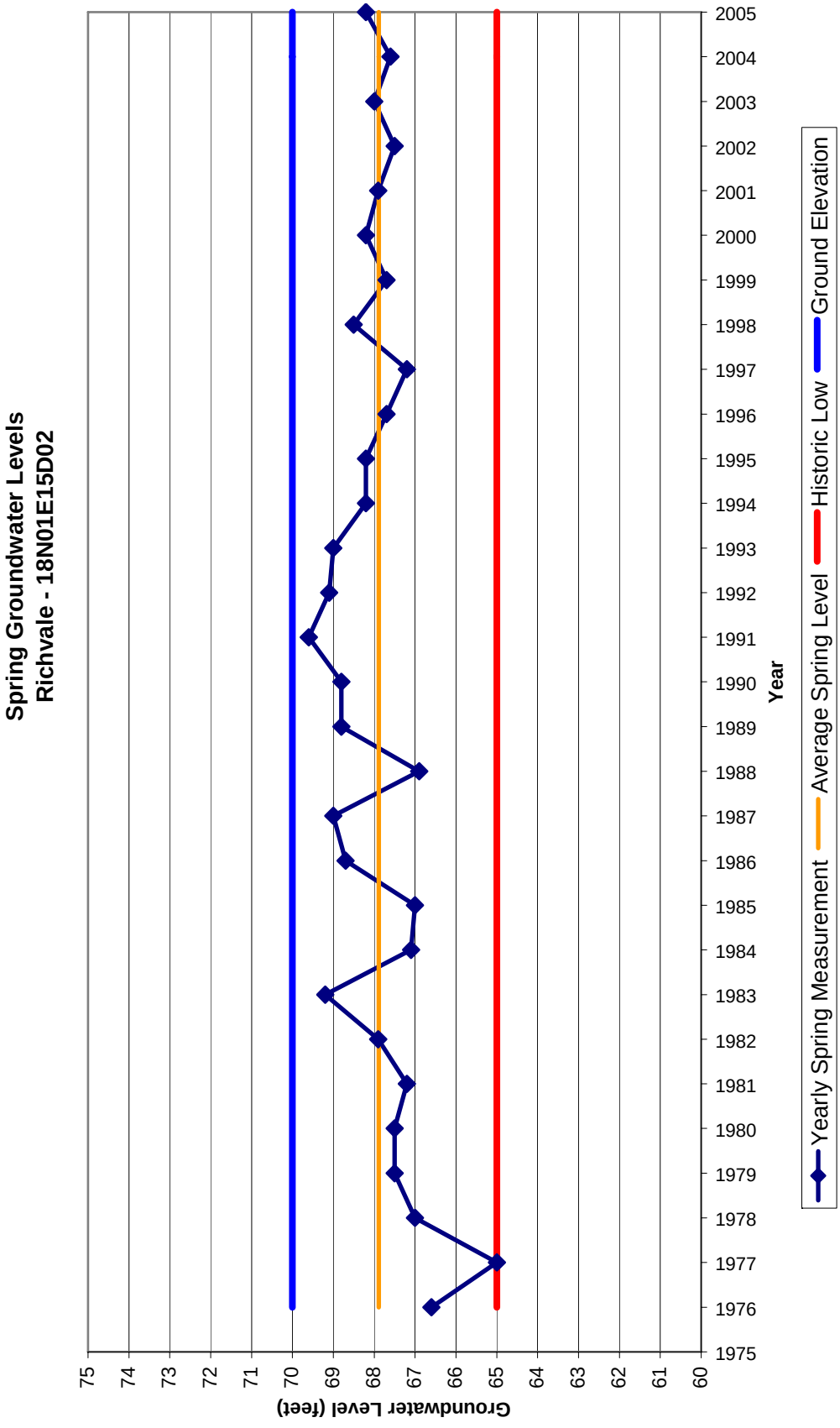
Stage 3. Groundwater management actions to be undertaken following a Stage 3 noncompliance shall be actionable. Upon identification of the Stage 3 noncompliance, the noncompliance will be reported to the WAC and the WC. Following review and concurrence, the WAC shall direct the TAC to initiate an investigation 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.

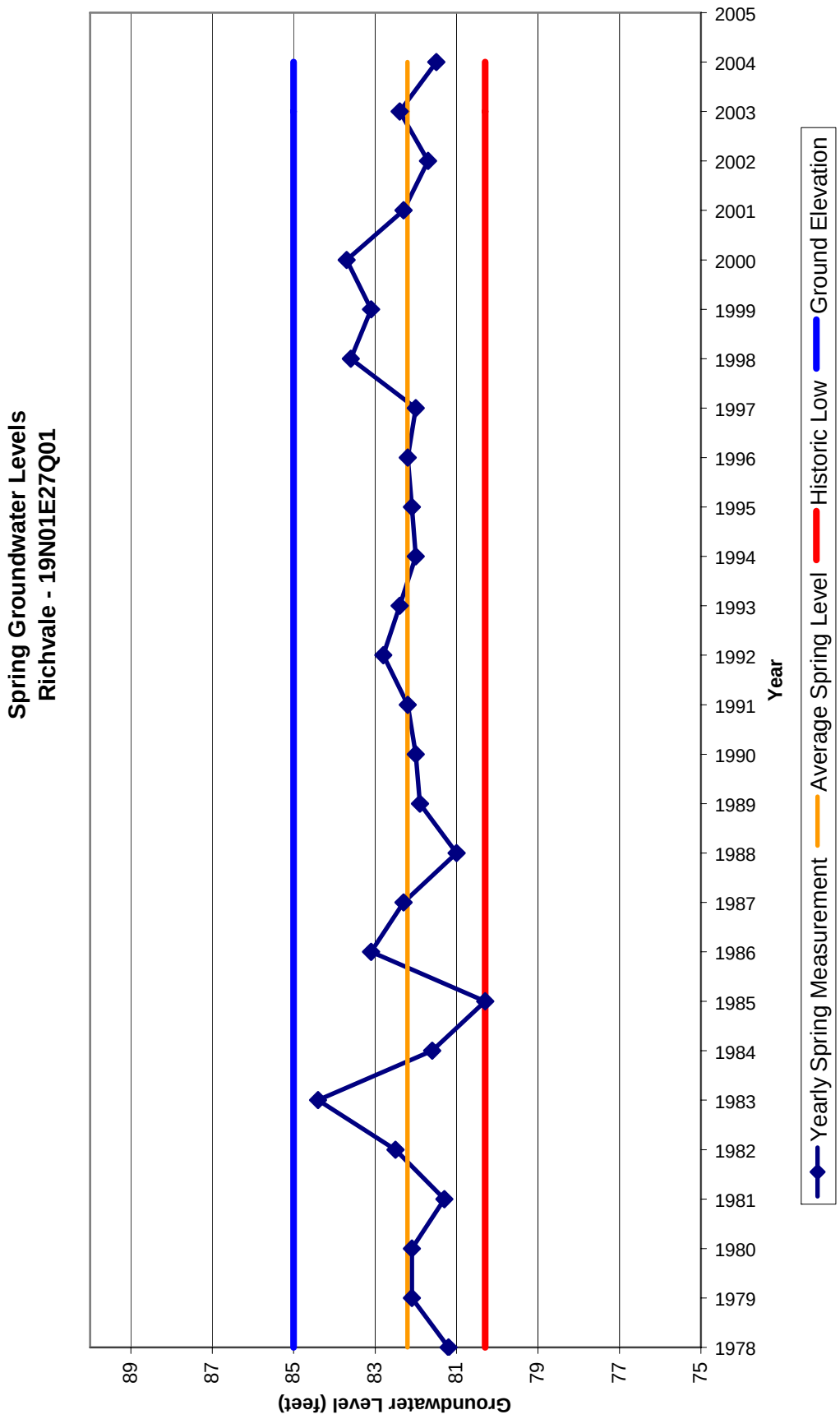
Future Monitoring Recommendations:

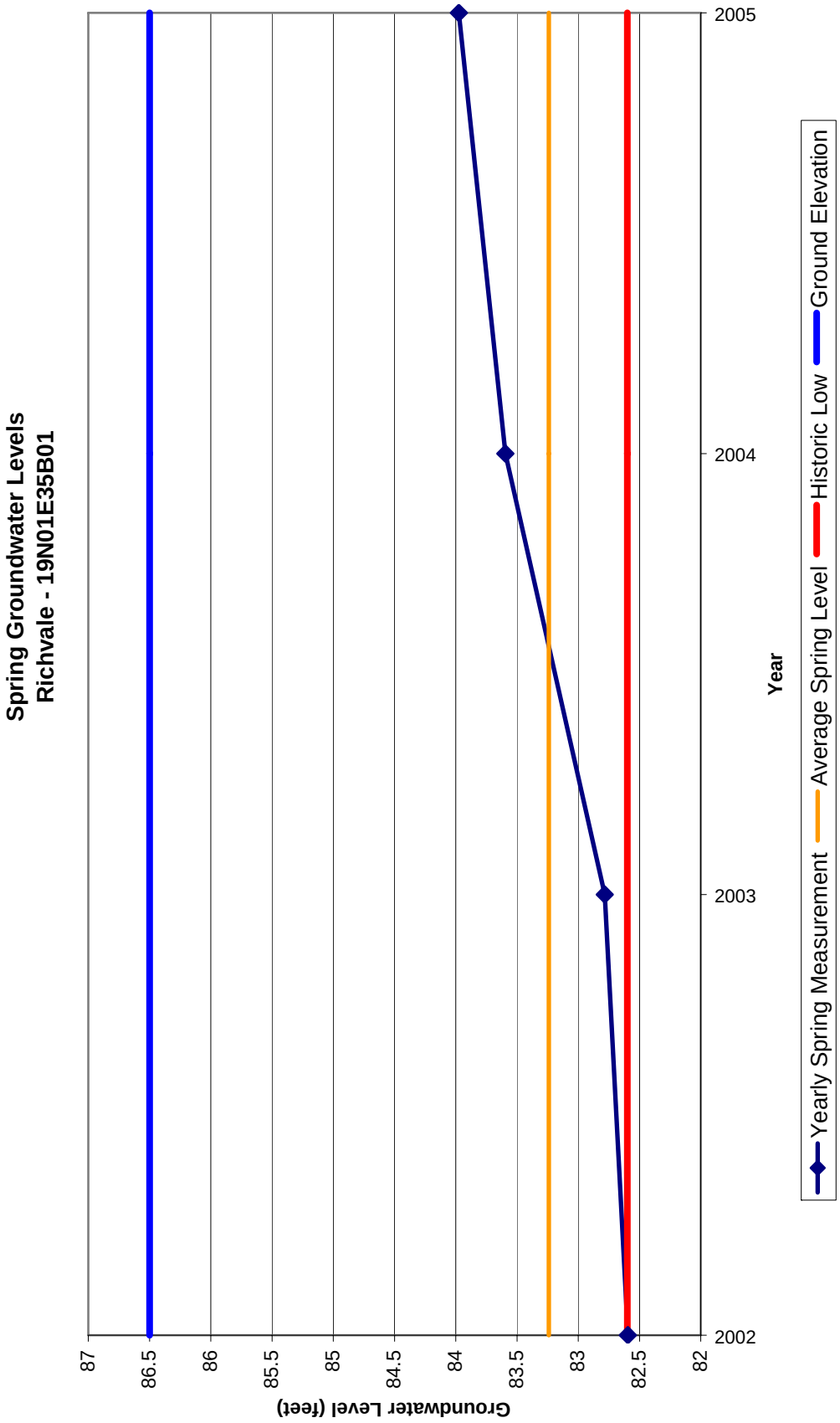
Efforts will be made to identify several domestic wells that could be added to the existing monitoring well network in sub-area to allow development of management objectives for the alluvial aquifer system. Initiate data collection for development of groundwater quality management objective in 2007.

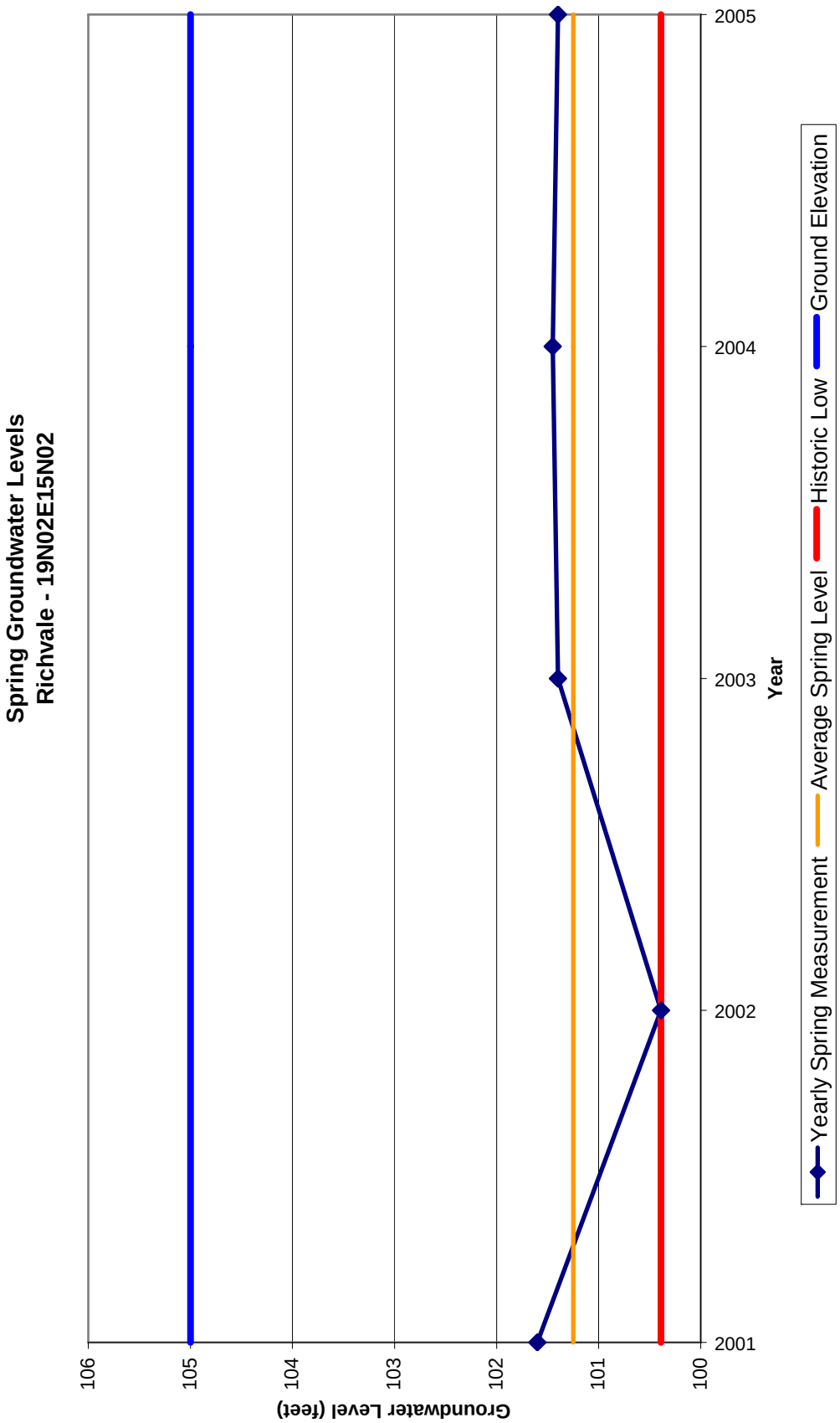
Supporting Data:
See attached hydrographs
See attached map of existing monitoring wells
See attached map of Sub-Unit Boundaries


Spring Groundwater Levels
Richvale - 18N01E13A02
Groundwater Level (feet)
80
79
78
77
76
75
74
73
72
71
70
2002
2003
2004
2005
Year
Yearly Spring Measurement
Average Spring Level
Historic Low
Ground Elevation


Spring Groundwater Levels
Richvale - 18N01E15D02
Groundwater Level (feet)
75
74
73
72
71
70
69
68
67
66
65
64
63
62
61
60
Year
2005
2004
2003
2002
2001
2000
1999
1998
1997
1996
1995
1994
1993
1992
1991
1990
1989
1988
1987
1986
1985
1984
1983
1982
1981
1980
1979
1978
1977
1976
1975
Yearly Spring Measurement
Average Spring Level
Historic Low
Ground Elevation


Spring Groundwater Levels
Richvale - 19N01E27Q01
Groundwater Level (feet)
89
87
85
83
81
79
77
75
Year
2005
2004
2003
2002
2001
2000
1999
1998
1997
1996
1995
1994
1993
1992
1991
1990
1989
1988
1987
1986
1985
1984
1983
1982
1981
1980
1979
1978
Yearly Spring Measurement
Average Spring Level
Historic Low
Ground Elevation


Spring Groundwater Levels
Richvale - 19N01E35B01
Groundwater Level (feet)
87
86.5
86
85.5
85
84.5
84
83.5
83
82.5
82
2002
2003
2004
2005
Year
Yearly Spring Measurement
Average Spring Level
Historic Low
Ground Elevation


Spring Groundwater Levels
Richvale - 19N02E15N02
Groundwater Level (feet)
106
105
104
103
102
101
100
2001
2002
2003
2004
2005
Year
Yearly Spring Measurement
Average Spring Level
Historic Low
Ground Elevation