

## **APPENDIX G – MODEL CALIBRATION DATA**

|          |         |            |          |        |         |         | FT#1, 320GPM @ Node 420 |         |         |         |        |       | FT#2, 185GPM @ 246 |         |         |         |        |       | FT#3, 400GPM |         |         |         |        |       | FT#4, 400GPM |         |         |         |        |       | FT#5, 190GPM |         |         |         |        |       |
|----------|---------|------------|----------|--------|---------|---------|-------------------------|---------|---------|---------|--------|-------|--------------------|---------|---------|---------|--------|-------|--------------|---------|---------|---------|--------|-------|--------------|---------|---------|---------|--------|-------|--------------|---------|---------|---------|--------|-------|
| 1997     |         | 1997       | 1997     | 2011   |         |         | 1997                    | 1997    | 97FF-   | 2011    | 97FF - | 97MF- | 1997               | 1997    | 97FF-   | 2011    | 97FF - | 97MF- | 1997         | 1997    | 97FF-   | 2011    | 97FF - | 97MF- | 1997         | 1997    | 97FF-   | 2011    | 97FF - | 97MF- | 1997         | 1997    | 97FF-   | 2011    | 97FF - | 97MF- |
| WHP 2011 | 1997 MP | 1997 Field | Model    | 2011   |         |         | Field                   | Model   | 97MF    | Model   | 11MF   | 11MF- | Field              | Model   | 97MF    | Model   | 11MF   | 11MF- | Field        | Model   | 97MF    | Model   | 11MF   | 11MF- | Field        | Model   | 97MF    | Model   | 11MF   | 11MF- | Field        | Model   | 97MF    | Model   | 11MF   | 11MF- |
| MP Node  | Pt.     | Pressure   | Pressure | Static | 97F-11M | 97M-11M | Flowing                 | Flowing | Flowing | Flowing |        |       | Flowing            | Flowing | Flowing | Flowing |        |       | Flowing      | Flowing | Flowing | Flowing |        |       | Flowing      | Flowing | Flowing | Flowing |        |       | Flowing      | Flowing | Flowing | Flowing |        |       |
| 516      | FT 1    | 85         | 85       | 77     | 8       | 8       | 42                      | 36      | 6       | 38      | 4      | -2    |                    |         |         | 77      |        |       |              |         |         |         |        |       |              |         |         |         |        |       |              |         |         |         |        |       |
| 568      | FT 2    | 51         | 52       | 51     | 0       | 1       |                         |         |         | 51      |        |       | 46                 | 51      | -5      | 49      | -3     | 2     |              |         |         |         |        |       |              |         |         |         |        |       |              |         |         |         |        |       |
| 362      | FT 3    | 51         | 51       | 51     | 0       | 0       |                         |         |         | 51      |        |       |                    |         |         | 50      |        |       | 22           | 19      | 3       | 30      | -8     | -11   |              |         |         |         |        |       |              |         |         |         |        |       |
| 202      | FT 4    | 73         | 77       | 75     | -2      | 2       |                         |         |         | 75      |        |       |                    |         |         | 74      |        |       |              |         |         |         |        |       |              |         |         |         |        |       |              |         |         |         |        |       |
| 562      | FT 5    | 44         | 49       | 44     | 0       | 5       |                         |         |         | 44      |        |       |                    |         |         | 44      |        |       |              |         |         |         |        |       | 62           | 60      | 2       | 68      | -6     | -8    |              |         |         |         |        |       |
| 296      | SG 3    | 42         | 45       | 47     | -5      | -2      | 42                      | 45      | -3      | 47      | -5     | -2    | 39                 | 45      | -6      | 46      | -7     | -1    | 37           | 43      | -6      | 44      | -7     | -1    | 39           | 43      | -4      | 45      | -6     | -2    | 40           | 45      | -5      | 46      | -6     | -1    |
| 566      | SG 2    | 45         | 48       | 47     | -2      | 2       | 45                      | 48      | -3      | 47      | -2     | 2     | 40                 | 47      | -7      | 45      | -5     | 2     | 27           | 36      | -9      | 37      | -10    | -1    | 42           | 36      | 6       | 44      | -2     | -8    | 40           | 47      | -7      | 46      | -6     | 1     |
| 60       | SG 1    | 42         | 41       | 46     | -4      | -5      | 41                      | 41      | 0       | 46      | -5     | -5    | 40                 | 41      | -1      | 45      | -5     | -4    | 40           | 40      | 0       | 44      | -4     | -4    | 39           | 40      | -1      | 44      | -5     | -4    | 40           | 41      | -1      | 45      | -5     | -4    |
| 492      | Cistern | 70         | 58       | 60     | 10      | -2      | 70                      | 56      | 14      | 60      | 10     | -4    | 63                 | 56      | 7       | 59      | 4      | -3    | 30           | 31      | -1      | 39      | -9     | -8    | 62           | 31      | 31      | 58      | 4      | -27   | 59           | 56      | 3       | 59      | 0      | -3    |
| 460      | Well 2  | 109        | 108      | 108    | 1       | 0       | 111                     | 99      | 12      | 98      | 13     | -1    | 111                | 108     | 3       | 108     | 3      | 0     | 110          | 108     | 2       | 108     | 2      | 0     | 110          | 108     | 2       | 108     | 2      | 0     | 111          | 108     | 3       | 108     | 3      | 0     |
| 50       | Well 4  | 72         | 70       | 69     | 3       | 1       | 72                      | 76      | -4      | 69      | 3      | 7     | 73                 | 75      | -2      | 68      | 5      | 7     | 72           | 75      | -3      | 67      | 5      | 8     | 73           | 75      | -2      | 67      | 6      | 8     | 70           | 75      | -5      | 68      | 2      | 7     |

| Hydrant | WHP 2011<br>MP Node | 2011 Field<br>Static<br>Pressure | 2011<br>Model<br>Static | 2011 Field<br>Pitot<br>Pressure | Flow<br>based on<br>Pitot | Model<br>Pressure<br>with Field<br>Demand | Model<br>Flow with<br>Field<br>Pressure | Pressure<br>Difference -<br>static | Pressure<br>Difference -<br>flowing |
|---------|---------------------|----------------------------------|-------------------------|---------------------------------|---------------------------|-------------------------------------------|-----------------------------------------|------------------------------------|-------------------------------------|
| 1       | 224                 | 66                               | 52                      | 14                              | 493                       | 15.68                                     | 507.24                                  | 14                                 | -1.68                               |
| 2       | 198                 | 78                               | 63                      | 22                              | 624                       | 40.83                                     | 894.71                                  | 15                                 | -18.83                              |
| 3       | 228                 | 64                               | 66                      | 30                              | 729                       | 52.01                                     | 1289.52                                 | -2                                 | -22.01                              |
| 4       | 296                 | 48                               | 47                      | 28                              | 704                       | 36.99                                     | 1039.06                                 | 1                                  | -8.99                               |
| 5       | 310                 | 64                               | 59                      | 44                              | 883                       | 40.17                                     | 769.22                                  | 5                                  | 3.83                                |
| 6       | 392                 | 64                               | 54                      | 36                              | 799                       | 40.96                                     | 972.02                                  | 10                                 | -4.96                               |
| 7       | 308                 | 56                               | 54                      | 26                              | 678                       | 38.53                                     | 960.01                                  | 2                                  | -12.53                              |
| 8       | 278                 | 48                               | 43                      | 18                              | 565                       | 35.61                                     | 1232.81                                 | 5                                  | -17.61                              |
| 9       | 314                 | 58                               | 49                      | 32                              | 753                       | 5.86                                      | 440.23                                  | 9                                  | 26.14                               |
| 10      | 564                 | 64                               | 57                      | 28                              | 704                       | 23.51                                     | 647.03                                  | 7                                  | 4.49                                |
| 11      | 282                 | 37                               | 47                      | 23                              | 652                       | 32.72                                     | 897.50                                  | -10                                | -9.72                               |
| 12      |                     | 39                               |                         | 24                              | 652                       |                                           |                                         |                                    |                                     |
| 13      | 376                 | 55                               | 54                      | 14                              | 493                       | 8.17                                      | 457.05                                  | 1                                  | 5.83                                |
| 14      | 416                 | 53                               | 50                      | 10                              | 421                       | 2.67                                      | 383.43                                  | 3                                  | 7.33                                |
| 15      | 370                 | 35                               | 51                      | 7                               | 352                       | 20.14                                     | 435.82                                  | -16                                | -13.14                              |
| 16      | 378                 | 53                               | 51                      | 5                               | 297                       | 31.55                                     | 494.48                                  | 2                                  | -26.55                              |
| 17      | 430                 | 130                              | 134                     | 43                              | 883                       | 54.98                                     | 958.03                                  | -4                                 | -11.98                              |
| 18      |                     | 130                              |                         | 45                              | 902                       |                                           |                                         |                                    |                                     |
| 19      | 530                 | 134                              | 130                     | 40                              | 841                       | 64.50                                     | 1008.72                                 | 4                                  | -24.5                               |
| 20      |                     |                                  |                         |                                 |                           |                                           |                                         |                                    |                                     |
| 21      | 532                 | 134                              | 122                     | 48                              | 921                       | 51.31                                     | 946.75                                  | 12                                 | -3.31                               |
| 22      |                     | 130                              |                         | 45                              | 902                       |                                           |                                         |                                    |                                     |
| 23      |                     | 118                              |                         | 42                              | 862                       |                                           |                                         |                                    |                                     |
| 24      | 432                 | 108                              | 105                     | 40                              | 841                       | 53.73                                     | 964.49                                  | 3                                  | -13.73                              |
| 25      | 526                 | 100                              | 103                     | 36                              | 799                       | 51.46                                     | 928.11                                  | -3                                 | -15.46                              |
| 26      |                     |                                  |                         |                                 |                           |                                           |                                         |                                    |                                     |
| 27      |                     | 120                              |                         | 40                              | 841                       |                                           |                                         |                                    |                                     |
| 28      |                     | 104                              |                         | 28                              | 704                       |                                           |                                         |                                    |                                     |
| 29      |                     | 110                              | 100                     | 36                              | 799                       |                                           |                                         | 10                                 |                                     |
| 30      |                     | 102                              | 102                     | 42                              | 862                       |                                           |                                         | 0                                  |                                     |
| 31      | 534                 | 110                              | 105                     | 45                              | 902                       | 59.35                                     | 1054.88                                 | 5                                  | -14.35                              |
| 32      |                     | 80                               |                         | 42                              | 862                       |                                           |                                         |                                    |                                     |
| 33      | 488                 | 90                               | 80                      | 47                              | 921                       | 52.35                                     | 1019.73                                 | 10                                 |                                     |
| 34      | 444                 |                                  | 81                      |                                 |                           |                                           |                                         |                                    |                                     |
| 35      | 544                 | 84                               | 83                      | 52                              | 960                       | 63.79                                     | 1256.04                                 | 1                                  | -11.79                              |