**Placer County Water Agency - Middle Fork American River Project**

**REC-4 Contingency Whitewater Flow Study - Rubicon River**

**2011 Online Whitewater Flow Study Data**

**Summary**

**Estimate of “Minimum Acceptable,” “Optimum,” and “Maximum Acceptable Flow”**

**Day 1 Put-in Flow at Ellicott Bridge - 216 cfs (n=1)**

**Rating Scale**:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Much Lower Flow** | **Slightly Lower Flow** | **About the Same Flow** | **Slightly Higher Flow** | **Much Higher Flow** |
| 1 | 2 | 3 | 4 | 5 |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Minimum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 4 |
| **Estimated Minimum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Minimum Acceptable Flow | 600 | |
| Lowest Estimated Minimum Acceptable Flow | 600 | |
| Highest Estimated Minimum Acceptable Flow | 600 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Optimal Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 5 |
| **Estimated Optimum Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Optimum Flow | 1000 | |
| Lowest Estimated Minimum Optimum Flow | 1000 | |
| Highest Estimated Minimum Optimum Flow | 1000 | |

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| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Maximum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 5 |
| **Estimated Maximum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Maximum Acceptable Flow | 1500 | |
| Lowest Estimated Maximum Acceptable Flow | 1500 | |
| Highest Estimated Maximum Acceptable Flow | 1500 | |

**Summary**

**Estimate of “Minimum Acceptable”, “Optimum”, and “Maximum Acceptable Flow”**

**Day 1 Put-in Flow at Ellicott Bridge - 291 - 305 cfs (n=9)**

**Rating Scale**:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Much Lower Flow** | **Slightly Lower Flow** | **About the Same Flow** | **Slightly Higher Flow** | **Much Higher Flow** |
| 1 | 2 | 3 | 4 | 5 |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Minimum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 3.8 |
| **Estimated Minimum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Minimum Acceptable Flow | 616 | |
| Lowest Estimated Minimum Acceptable Flow | 450 | |
| Highest Estimated Minimum Acceptable Flow | 800 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Optimal Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 4.4 |
| **Estimated Optimum Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Optimum Flow | 923 | |
| Lowest Estimated Minimum Optimum Flow | 800 | |
| Highest Estimated Minimum Optimum Flow | 1000 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Maximum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 4.9 |
| **Estimated Maximum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Maximum Acceptable Flow | 1224 | |
| Lowest Estimated Maximum Acceptable Flow | 705 | |
| Highest Estimated Maximum Acceptable Flow | 2000 | |

**Summary**

**Estimate of “Minimum Acceptable”, “Optimum”, and “Maximum Acceptable Flow”**

**Day 1 Put-in Flow at Ellicott Bridge - 575 - 616 cfs (n=7)**

**Rating Scale**:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Much Lower Flow** | **Slightly Lower Flow** | **About the Same Flow** | **Slightly Higher Flow** | **Much Higher Flow** |
| 1 | 2 | 3 | 4 | 5 |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Minimum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 3.3 |
| **Estimated Minimum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Minimum Acceptable Flow | 553 | |
| Lowest Estimated Minimum Acceptable Flow | 350 | |
| Highest Estimated Minimum Acceptable Flow | 750 | |

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| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Optimal Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 4.3 |
| **Estimated Optimum Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Optimum Flow | 811 | |
| Lowest Estimated Minimum Optimum Flow | 700 | |
| Highest Estimated Minimum Optimum Flow | 900 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Maximum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 4.9 |
| **Estimated Maximum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Maximum Acceptable Flow | 1248 | |
| Lowest Estimated Maximum Acceptable Flow | 925 | |
| Highest Estimated Maximum Acceptable Flow | 1500 | |

**Summary**

**Estimate of “Minimum Acceptable”, “Optimum”, and “Maximum Acceptable Flow”**

**Day 1 Put-in Flow at Ellicott Bridge - 634 - 648 cfs (n=7)**

**Rating Scale:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Much Lower Flow** | **Slightly Lower Flow** | **About the Same Flow** | **Slightly Higher Flow** | **Much Higher Flow** |
| 1 | 2 | 3 | 4 | 5 |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Minimum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 3.2 |
| **Estimated Minimum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Minimum Acceptable Flow | 590 | |
| Lowest Estimated Minimum Acceptable Flow | 400 | |
| Highest Estimated Minimum Acceptable Flow | 650 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Optimal Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 4.0 |
| **Estimated Optimum Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Optimum Flow | 871 | |
| Lowest Estimated Minimum Optimum Flow | 700 | |
| Highest Estimated Minimum Optimum Flow | 1000 | |

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| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Maximum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 5.0 |
| **Estimated Maximum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Maximum Acceptable Flow | 1438 | |
| Lowest Estimated Maximum Acceptable Flow | 1140 | |
| Highest Estimated Maximum Acceptable Flow | 1750 | |

**Summary**

**Estimate of “Minimum Acceptable”, “Optimum”, and “Maximum Acceptable Flow”**

**Day 1 Put-in Flow at Ellicott Bridge - 783 -798 cfs (n=2)**

**Rating Scale:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Much Lower Flow** | **Slightly Lower Flow** | **About the Same Flow** | **Slightly Higher Flow** | **Much Higher Flow** |
| 1 | 2 | 3 | 4 | 5 |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Minimum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 1.5 |
| **Estimated Minimum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Minimum Acceptable Flow | 590 | |
| Lowest Estimated Minimum Acceptable Flow | 580 | |
| Highest Estimated Minimum Acceptable Flow | 600 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Optimal Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 2.5 |
| **Estimated Optimum Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Optimum Flow | 740 | |
| Lowest Estimated Minimum Optimum Flow | 680 | |
| Highest Estimated Minimum Optimum Flow | 800 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Maximum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 4.0 |
| **Estimated Maximum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Maximum Acceptable Flow | 983 | |
| Lowest Estimated Maximum Acceptable Flow | 983 | |
| Highest Estimated Maximum Acceptable Flow | 983 | |

**Summary**

**Estimate of “Minimum Acceptable”, “Optimum”, and “Maximum Acceptable Flow”**

**Day 1 Put-in Flow at Ellicott Bridge - 860 - 888 cfs (n=9)**

**Rating Scale:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Much Lower Flow** | **Slightly Lower Flow** | **About the Same Flow** | **Slightly Higher Flow** | **Much Higher Flow** |
| 1 | 2 | 3 | 4 | 5 |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Minimum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 2.1 |
| **Estimated Minimum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Minimum Acceptable Flow | 775 | |
| Lowest Estimated Minimum Acceptable Flow | 560 | |
| Highest Estimated Minimum Acceptable Flow | 865 | |

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| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Optimal Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 3.0 |
| **Estimated Optimum Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Optimum Flow | 854 | |
| Lowest Estimated Minimum Optimum Flow | 800 | |
| Highest Estimated Minimum Optimum Flow | 865 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Maximum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 3.9 |
| **Estimated Maximum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Maximum Acceptable Flow | 1364 | |
| Lowest Estimated Maximum Acceptable Flow | 860 | |
| Highest Estimated Maximum Acceptable Flow | 2000 | |

**Summary**

**Estimate of “Minimum Acceptable”, “Optimum”, and “Maximum Acceptable Flow”**

**Day 1 Put-in Flow at Ellicott Bridge - 907 - 945 cfs (n=15)**

**Rating Scale:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Much Lower Flow** | **Slightly Lower Flow** | **About the Same Flow** | **Slightly Higher Flow** | **Much Higher Flow** |
| 1 | 2 | 3 | 4 | 5 |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Minimum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 2.0 |
| **Estimated Minimum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Minimum Acceptable Flow | 735 | |
| Lowest Estimated Minimum Acceptable Flow | 500 | |
| Highest Estimated Minimum Acceptable Flow | 926 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Optimal Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 2.8 |
| **Estimated Optimum Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Optimum Flow | 923 | |
| Lowest Estimated Minimum Optimum Flow | 800 | |
| Highest Estimated Minimum Optimum Flow | 1026 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Maximum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 3.7 |
| **Estimated Maximum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Maximum Acceptable Flow | 1223 | |
| Lowest Estimated Maximum Acceptable Flow | 807 | |
| Highest Estimated Maximum Acceptable Flow | 1721 | |

**Summary**

**Estimate of “Minimum Acceptable”, “Optimum”, and “Maximum Acceptable Flow”**

**Day 1 Put-in Flow at Ellicott Bridge - 989 - 994 cfs (n=2)**

**Rating Scale:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Much Lower Flow** | **Slightly Lower Flow** | **About the Same Flow** | **Slightly Higher Flow** | **Much Higher Flow** |
| 1 | 2 | 3 | 4 | 5 |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Minimum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 2.5 |
| **Estimated Minimum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Minimum Acceptable Flow | 990 | |
| Lowest Estimated Minimum Acceptable Flow | 990 | |
| Highest Estimated Minimum Acceptable Flow | 990 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Optimal Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 2.5 |
| **Estimated Optimum Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Optimum Flow | 895 | |
| Lowest Estimated Minimum Optimum Flow | 800 | |
| Highest Estimated Minimum Optimum Flow | 990 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Maximum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 3.5 |
| **Estimated Maximum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Maximum Acceptable Flow | 1345 | |
| Lowest Estimated Maximum Acceptable Flow | 1300 | |
| Highest Estimated Maximum Acceptable Flow | 1389 | |

**Summary**

**Estimate of “Minimum Acceptable”, “Optimum”, and “Maximum Acceptable Flow”**

**Day 1 Put-in Flow at Ellicott Bridge - 1044 - 1416 cfs (n=6)**

**Rating Scale:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Much Lower Flow** | **Slightly Lower Flow** | **About the Same Flow** | **Slightly Higher Flow** | **Much Higher Flow** |
| 1 | 2 | 3 | 4 | 5 |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Minimum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 2.5 |
| **Estimated Minimum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Minimum Acceptable Flow | 1100 | |
| Lowest Estimated Minimum Acceptable Flow | 700 | |
| Highest Estimated Minimum Acceptable Flow | 1616 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Optimal Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 3.2 |
| **Estimated Optimum Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Optimum Flow | 1211 | |
| Lowest Estimated Minimum Optimum Flow | 950 | |
| Highest Estimated Minimum Optimum Flow | 1616 | |

|  |  |  |
| --- | --- | --- |
| **Based on the flow boated during this trip, what is your estimate of the "Maximum Acceptable Flow" - the lowest flow at which you would be willing to return to boat this reach** | | **Average Rating** |
|  | | 4.0 |
| **Estimated Maximum Acceptable Flow**  **Based on actual flow at day-1 put-in time, or stated flow on the survey form.** | **Estimated Minimum Acceptable Flow (CFS)** | |
| Average Estimated Maximum Acceptable Flow | 1721 | |
| Lowest Estimated Maximum Acceptable Flow | 1200 | |
| Highest Estimated Maximum Acceptable Flow | 2290 | |