*1.4.1 Targets and Metrics Table*

|  | Need | Metric | Target | Improvement Direction |
|---|---|---|---|---|
| 1 | Contains debris | Percent volume of debris lost | Contains 80-90% of debris | Increase |
| 2 | Achieve supersonic jet | Jet Speed | Supersonic Mach N. > 2 | Increase |
| 3 | Holds sensors fixed | Position deviation while testing | Holds sensors to within 1 mm | Decrease |
| 4 | Holds jet fixed | Position deviation while testing | Holds jet within 1 mm | Decrease |
| 5 | Change nozzle | Variation in possible nozzle sizes | Changes to a nozzle with ten times output diameter | Increase |
| 6 | Change height | Variation in possible jet heights | Changes height 30 cm | Increase |
| 7 | Start jet | Time to start jet | Less than 10 sec | Decrease |
| 8 | Shut off jet | Time to stop jet | Less than 1 sec | Decrease |
| 9 | Measure crater width and depth | Accuracy of measurements | Within 0.5% of total measurement | Decrease |
| 10 | Time the experiment | Accuracy of timing | Within 1% of total experiment time | Decrease |
| 11 | Correlate data | Statistical significance | Create scaling laws that are accurate to 5% | Decrease |
| 12 | Display time readout | Accuracy of readout | Displays time to the millisecond | Decrease |
| 13 | Display sensor readout | Accuracy of readout | Displays sensor data every second | Decrease |
| 14 | Ensure minimal enclosure effects | Back Pressure | Minimize back pressure to 0 psi | Decrease |
| 15 | Experimental ease of use | Time to change nozzle/height | Less than 15 minutes | Decrease |
| 16 | Quality of the nozzle | Machined to certain tolerance | Machined to ±0.127mm of design spec | Decrease |