Smart REA Systems

A major component of the project, vital to our experimental plans, is the development of the smart REA sampling system. For Study #2, we will require a total of four systems, all deployed for the entire study. Each smart REA system will require the following equipment and supplies:

|  |  |  |  |
| --- | --- | --- | --- |
| Component | Price | # Required per System | Cost per System |
| *Equipment* |  |  |  |
| Sonic Anemometer | $3,500 | 1 | $3,500 |
| Datalogger | $4,000 | 1 | $4,000 |
| *Supplies* |  |  |  |
| Solar Panels | $1,400 | 2 | $2,800 |
| Tower | $500 | 1 | $500 |
| Flow Controller | $800 | 1 | $800 |
| Temperature/RH Sensors | $800 | 1 | $800 |
| Pressure Sensor | $500 | 2 | $1,000 |
| Fast-Action Valves | $250 | 2 | $500 |
| Critical Orifices | $150 | 2 | $300 |
| Pump | $400 | 1 | $400 |
| Misc. Tubing & Fittings | $200 | 1 | $200 |
| Canisters | $500 | 61 | $3,000 |

1 Two canisters are attached to the REA system at any given time. We have planned for three sets of canisters per system: one pair in use, one pair in transit, and one pair being analyzed at WSU at any given time.