National Park Service
Visibility Monitoring Network

IMPROVE Steering Committee Meeting
October 13, 2020

Mark Tigges – Air Resource Specialists
Neph Data Collection Statistics in the Pandemic

- No significant change this fiscal year, all sites 85% and above
- NPS operator visits curtailed sharply Spring and Summer 2020
- Big Bend National Park service visit delayed from Spring to December 2020
- Grand Canyon National Park delayed Spring to end of July 2020

WebCam Data Collection Statistics in the Pandemic

- No statistics available - generally down a little from previous years
- NPS Operator visits curtailed sharply Spring and Summer 2020
- Hawaii Volcanoes National Park down July to Present
  - 14 Day Quarantine Required by State for Visitors
  - Volcano House out of Business - Access
Nephelometer Currently In Use
Optec NGN2

- Entered Service in NPS 1991
- Open Air Neph
- Measures Ambient Scattering Without Affecting Sample RH
- Wall Scatter Climbs Rapidly
- Humidity Increases Wall Scatter
- Parts are Increasingly Difficult to Find
Nephelometer Replacement Testing At Christman Field

- Airphoton LN102
- 450 nm, 532 nm and 632 nm
- Multiple particle size cuts achieved with variable flow rate and size selective inlet
Nephelometer Replacement Testing

- Ambilabs 2-WIN
- 450nm, 525nm, and 635nm, only two at any one time
- Can be ordered with Particle Size Cut
Nephelometer Replacement Testing

IMPROVE Samplers at Test Site

Radiance Research Nephelometer
Questions?