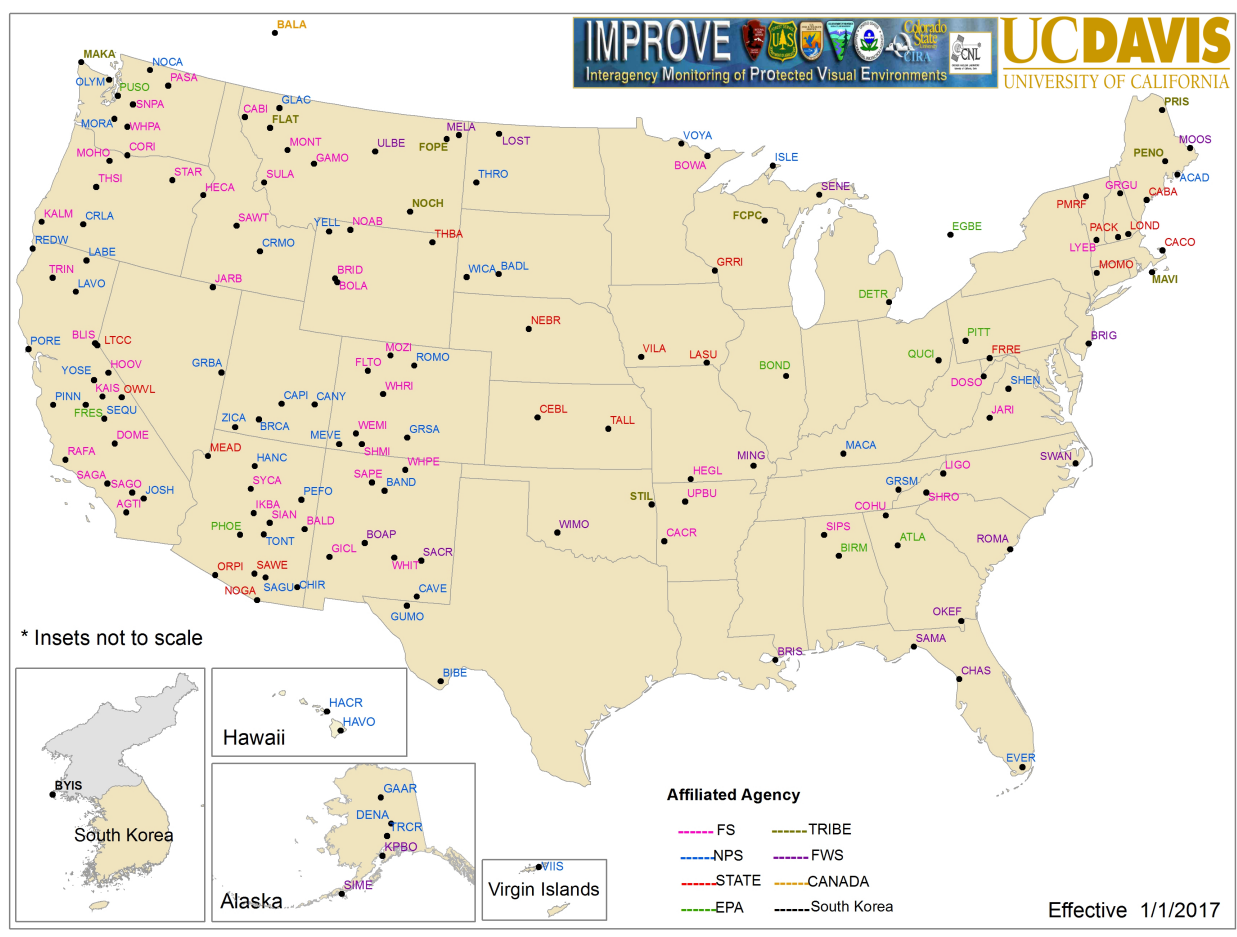




# 2017 | Calendar



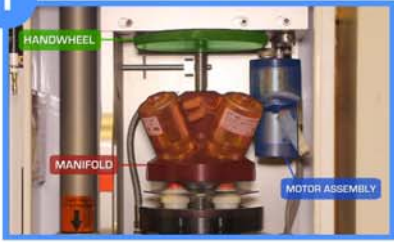
IMPROVE is a collaborative association of state, tribal, and federal agencies, and international partners. US Environmental Protection Agency is the primary funding source, with contracting and research support from the National Park Service. The Air Quality Group (AQG) at the University of California, Davis provides field maintenance and operator support, sample handling, elemental analysis, and data processing; Research Triangle Institute (RTI) performs ions analysis, and Desert Research Institute (DRI) performs carbon analysis. IMPROVE data and documentation are available from the website <<http://vista.cira.colostate.edu/improve/>> maintained by the Cooperative Institute for Research in the Atmosphere (CIRA).


For questions or problems with optical or scene monitoring equipment, contact Mark Tigges, Air Resource Specialists, Ft. Collins, CO at 970-224-9300. For questions or problems with air sampler controllers, filters, or flow checks, contact Air Quality Group, UC Davis at 530-752-1123, or visit <http://airquality.crocker.ucdavis.edu/improve/resources-operators/>

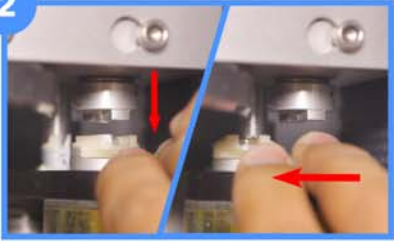
Photographs taken by IMPROVE Field Technicians and Site Operators.  
 Front Cover Photo: El Capitan in Yosemite National Park, CA taken by Josh Grant (UC Davis Technician)  
 Back Cover Photo: Waterfall in Glacier National Park, MT taken by Chris Wallis (UC Davis Technician)





## Disengaging Manifold Motor to Manually Raise/Lower the Manifold


**1**  Locate the motor assembly in the module.


**4**  Spin the hand wheel to the right to lower the manifold.


**2**  Separate the motor assembly from the coupling sliding the assembly down. Then pivot it towards to the hand wheel.

**4.a**  The spinning direction to raise and lower the manifold is opposite for the D module.

**2.a**  A gentle wiggle may be required to slide the assembly up or down.

**5**  If the motor starts to work again it can be reengaged with the hand wheel. Pivot the motor assembly back to its original location.

**3**  For the A, B, and C modules spin the hand wheel to the left to raise the manifold.

**6**  Rotate the hand wheel until the coupling snaps into alignment.

## OPERATOR INVOLVEMENT — THE KEY TO NETWORK SUCCESS

# JANUARY 2017

| Sun  | Mon   | Tue  | Wed  | Thu  | Fri                                 | Sat                                 |
|--|---|--|--|--|-------------------------------------|-------------------------------------|
| 1 <b>New Year's Day</b><br>IMPROVE Particle Sampling Day | 2<br><i>Alternative Sample Change Day</i>                             | 3 3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges   | 4<br>IMPROVE Particle Sampling Day         | 5  | 6                                   | 7<br>IMPROVE Particle Sampling Day  |
| 8<br><i>Alternative Sample Change Day</i>                | 9<br><i>Alternative Sample Change Day</i>                             | 10 3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b> | 11<br><i>Alternative Sample Change Day</i> | 12<br><i>Alternative Sample Change Day</i> | 13<br>IMPROVE Particle Sampling Day | 14                                  |
| 15   | 16 <b>Martin Luther King Jr. Day</b><br>IMPROVE Particle Sampling Day | 17 3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges  | 18<br><i>Alternative Sample Change Day</i> | 19<br>IMPROVE Particle Sampling Day        | 20                                  | 21                                  |
| 22<br>IMPROVE Particle Sampling Day                      | 23<br><i>Alternative Sample Change Day</i>                            | 24 3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges  | 25<br>IMPROVE Particle Sampling Day        | 26   | 27                                  | 28<br>IMPROVE Particle Sampling Day |
| 29<br><i>Alternative Sample Change Day</i>               | 30<br><i>Alternative Sample Change Day</i>                            | 31 3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b> | 1<br><i>Alternative Sample Change Day</i>  | 2<br><i>Alternative Sample Change Day</i>  | 3<br>IMPROVE Particle Sampling Day  | 4                                   |

December 2016

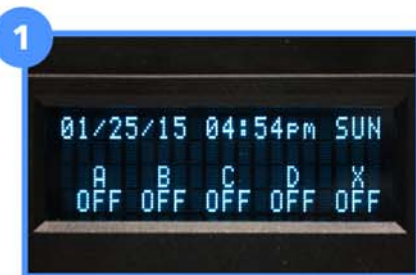
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     |     |     | 1   | 2   | 3   |
| 4   | 5   | 6   | 7   | 8   | 9   | 10  |
| 11  | 12  | 13  | 14  | 15  | 16  | 17  |
| 18  | 19  | 20  | 21  | 22  | 23  | 24  |
| 25  | 26  | 27  | 28  | 29  | 30  | 31  |

February 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     |     | 1   | 2   | 3   | 4   |
| 5   | 6   | 7   | 8   | 9   | 10  | 11  |
| 12  | 13  | 14  | 15  | 16  | 17  | 18  |
| 19  | 20  | 21  | 22  | 23  | 24  | 25  |
| 26  | 27  | 28  |     |     |     |     |

### Change Date / Time on Controller

(If the current time on your site is off by more than 5 minutes please call the Air Quality Group.)



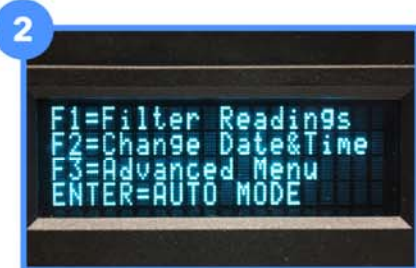
1 Press **'Enter'** on the controller keypad to view the *Main Menu*.



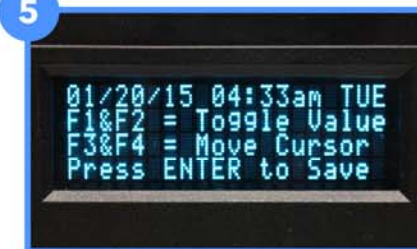
4 If necessary change the *GMT time zone offset* using **'F1'** and **'F2'** to increase and decrease hours.

Press **'F3'** to select plus or minus.

Press **'Enter'** to continue.



2 Press **'F2'** for *Change Date & Time*

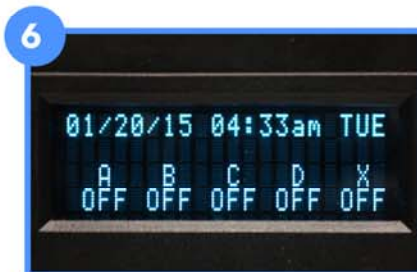


5 Use **'F1'** and **'F2'** to set the current month. Then press **'F4'** to move onto the placeholder value for day, year, and time.

Press **'F3'** to select previous placeholder values and **'Enter'** to save.



3 Look up your time zone on the reference map and note the corresponding GMT offset in **Bold**.



6 Press **'Enter'** once more to return to *Auto Mode*

## OPERATOR INVOLVEMENT — THE KEY TO NETWORK SUCCESS

# FEBRUARY 2017

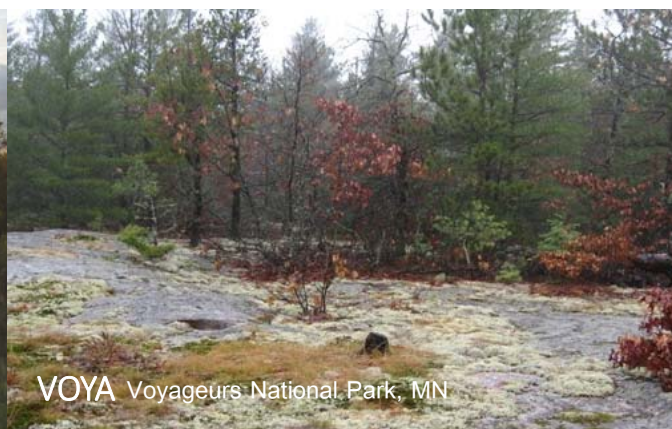
| Sun  | Mon   | Tue   | Wed  | Thu  | Fri                                 | Sat                                 |
|--|---|---|--|--|-------------------------------------|-------------------------------------|
| 29<br><i>Alternative Sample Change Day</i> | 30<br><i>Alternative Sample Change Day</i>                        | 31<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b>                                 | 1<br><i>Alternative Sample Change Day</i>  | 2<br><i>Alternative Sample Change Day</i>  | 3<br>IMPROVE Particle Sampling Day  | 4                                   |
| 5  | 6<br>IMPROVE Particle Sampling Day                                | 7<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges   | 8<br><i>Alternative Sample Change Day</i>  | 9<br>IMPROVE Particle Sampling Day         | 10                                  | 11                                  |
| 12<br>IMPROVE Particle Sampling Day        | 13<br><i>Alternative Sample Change Day</i>                        | 14<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges  | 15<br>IMPROVE Particle Sampling Day        | 16   | 17                                  | 18<br>IMPROVE Particle Sampling Day |
| 19<br><i>Alternative Sample Change Day</i> | 20 <b>President's Day</b><br><i>Alternative Sample Change Day</i> | 21<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b> | 22<br><i>Alternative Sample Change Day</i> | 23<br><i>Alternative Sample Change Day</i> | 24<br>IMPROVE Particle Sampling Day | 25                                  |
| 26   | 27<br>IMPROVE Particle Sampling Day                               | 28<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges  | 1<br><i>Alternative Sample Change Day</i>  | 2<br>IMPROVE Particle Sampling Day         | 3                                   | 4                                   |

January 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
| 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| 8   | 9   | 10  | 11  | 12  | 13  | 14  |
| 15  | 16  | 17  | 18  | 19  | 20  | 21  |
| 22  | 23  | 24  | 25  | 26  | 27  | 28  |
| 29  | 30  | 31  |     |     |     |     |

March 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     |     | 1   | 2   | 3   | 4   |
| 5   | 6   | 7   | 8   | 9   | 10  | 11  |
| 12  | 13  | 14  | 15  | 16  | 17  | 18  |
| 19  | 20  | 21  | 22  | 23  | 24  | 25  |
| 26  | 27  | 28  | 29  | 30  | 31  |     |



VILA Viking Lake State Park, IA

VOYA Voyageurs National Park, MN

WEMI Weminuche Wilderness, CO



WHIT White Mountain, NM

WHPA White Pass, WA

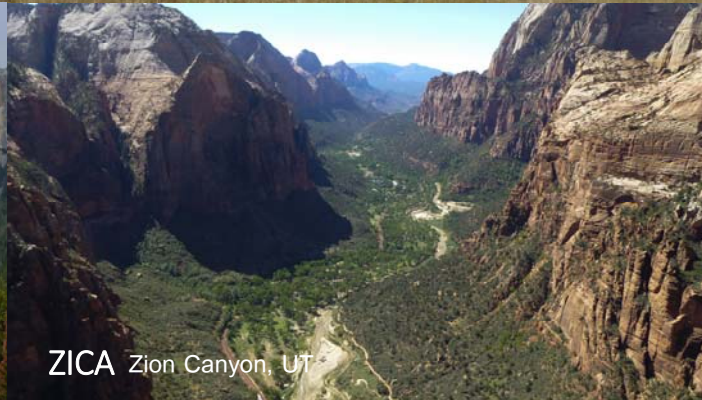
WHPE Wheeler Peak, NM



WHRI White River National Forest, CO

WICA Wind Cave, SD

WIMO Wichita Mountains Nat'l Wildlife Refuge, OK



YELL Yellowstone National Park, WY

YOSE Yosemite National Park, CA

ZICA Zion Canyon, UT

OPERATOR INVOLVEMENT — THE KEY TO NETWORK SUCCESS

MARCH 2017

| Sun   | Mon  | Tue   | Wed  | Thu  | Fri                                 | Sat                                 |
|---|--|---|--|--|-------------------------------------|-------------------------------------|
| 26  | 27<br>IMPROVE Particle Sampling Day        | 28<br>Change IMPROVE particle cartridges  | 1<br><i>Alternative Sample Change Day</i>  | 2<br>IMPROVE Particle Sampling Day         | 3                                   | 4                                   |
| 5<br>IMPROVE Particle Sampling Day  | 6<br><i>Alternative Sample Change Day</i>  | 7<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges   | 8<br>IMPROVE Particle Sampling Day         | 9  | 10                                  | 11<br>IMPROVE Particle Sampling Day |
| 12<br>Daylight Savings Time Begins; Do Not Change Sampler Clock<br><i>Alternative Sample Change Day</i> | 13<br><i>Alternative Sample Change Day</i> | 14<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b> | 15<br><i>Alternative Sample Change Day</i> | 16<br><i>Alternative Sample Change Day</i> | 17<br>IMPROVE Particle Sampling Day | 18                                  |
| 19  | 20<br>IMPROVE Particle Sampling Day        | 21<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges  | 22<br><i>Alternative Sample Change Day</i> | 23<br>IMPROVE Particle Sampling Day        | 24                                  | 25                                  |
| 26<br>IMPROVE Particle Sampling Day   | 27<br><i>Alternative Sample Change Day</i> | 28<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges  | 29<br>IMPROVE Particle Sampling Day        | 30   | 31                                  | 1<br>IMPROVE Particle Sampling Day  |

February 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     |     | 1   | 2   | 3   | 4   |
| 5   | 6   | 7   | 8   | 9   | 10  | 11  |
| 12  | 13  | 14  | 15  | 16  | 17  | 18  |
| 19  | 20  | 21  | 22  | 23  | 24  | 25  |
| 26  | 27  | 28  |     |     |     |     |

April 2017

| Sun   | Mon | Tue | Wed | Thu | Fri | Sat |
|-------|-----|-----|-----|-----|-----|-----|
|       |     |     |     |     |     | 1   |
| 2     | 3   | 4   | 5   | 6   | 7   | 8   |
| 9     | 10  | 11  | 12  | 13  | 14  | 15  |
| 16    | 17  | 18  | 19  | 20  | 21  | 22  |
| 23/30 | 24  | 25  | 26  | 27  | 28  | 29  |



SWAN Swanquarter, NC



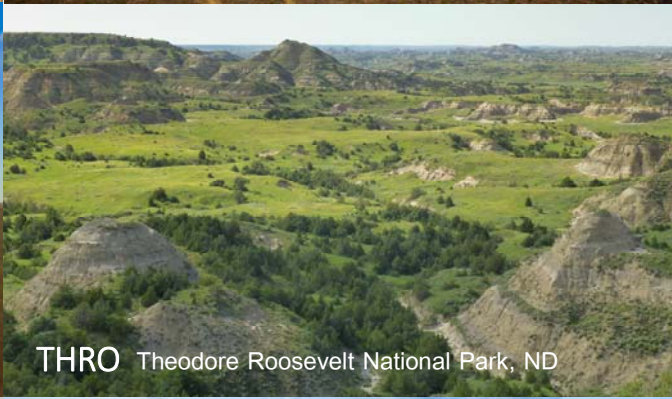
SYCA Sycamore Canyon, AZ



TALL Tallgrass Prairie National Preserve, KS



THBA Thunder Basin National Grassland, WY



THRO Theodore Roosevelt National Park, ND



THSI Three Sisters Wilderness, OR



TONT Tonto National Monument, AZ



TRCR Trapper Creek, AK



TRIN Trinity, CA



ULBE UL Bend, MT



UPBU Upper Buffalo Wilderness, AR



VIIS Virgin Islands Nat'l Park, US Virgin Islands

OPERATOR INVOLVEMENT — THE KEY TO NETWORK SUCCESS

APRIL 2017

| Sun  | Mon  | Tue   | Wed  | Thu  | Fri                                 | Sat                                 |
|--|--|---|--|--|-------------------------------------|-------------------------------------|
| 26<br>IMPROVE Particle Sampling Day        | 27<br><i>Alternative Sample Change Day</i> | 28<br>Change IMPROVE particle cartridges  | 29<br>IMPROVE Particle Sampling Day        | 30   | 31                                  | 1<br>IMPROVE Particle Sampling Day  |
| 2<br><i>Alternative Sample Change Day</i>  | 3<br><i>Alternative Sample Change Day</i>  | 4<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b>  | 5<br><i>Alternative Sample Change Day</i>  | 6<br><i>Alternative Sample Change Day</i>  | 7<br>IMPROVE Particle Sampling Day  | 8                                   |
| 9  | 10<br>IMPROVE Particle Sampling Day        | 11<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges  | 12<br><i>Alternative Sample Change Day</i> | 13<br>IMPROVE Particle Sampling Day        | 14                                  | 15                                  |
| 16<br>IMPROVE Particle Sampling Day        | 17<br><i>Alternative Sample Change Day</i> | 18<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges  | 19<br>IMPROVE Particle Sampling Day        | 20   | 21                                  | 22<br>IMPROVE Particle Sampling Day |
| 23<br><i>Alternative Sample Change Day</i> | 24<br><i>Alternative Sample Change Day</i> | 25<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b> | 26<br><i>Alternative Sample Change Day</i> | 27<br><i>Alternative Sample Change Day</i> | 28<br>IMPROVE Particle Sampling Day | 29                                  |

30

March 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     |     | 1   | 2   | 3   | 4   |
| 5   | 6   | 7   | 8   | 9   | 10  | 11  |
| 12  | 13  | 14  | 15  | 16  | 17  | 18  |
| 19  | 20  | 21  | 22  | 23  | 24  | 25  |
| 26  | 27  | 28  | 29  | 30  | 31  |     |

May 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     | 1   | 2   | 3   | 4   | 5   | 6   |
| 7   | 8   | 9   | 10  | 11  | 12  | 13  |
| 14  | 15  | 16  | 17  | 18  | 19  | 20  |
| 21  | 22  | 23  | 24  | 25  | 26  | 27  |
| 28  | 29  | 30  | 31  |     |     |     |



SENE Seney National Wildlife Refuge, MI



SEQU Sequoia National Park, CA



SHEN Shenandoah National Park, VA



SHMI Shamrock Mines, CO



SHRO Shining Rock Wilderness, NC



SIAN Sierra Ancha, AZ



SIME Simeonof, AK



SIPS Sipsey Wilderness Area, AL



SNPA Snoqualmie Pass, WA



STAR Starkey, OR



STIL Stilwell, OK



SULA Sula Ranger District, MT

OPERATOR INVOLVEMENT — THE KEY TO NETWORK SUCCESS

MAY 2017

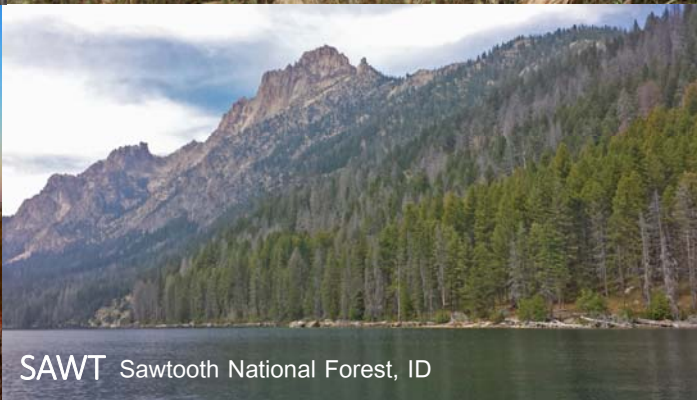
| Sun                                 | Mon  | Tue   | Wed                                 | Thu                                 | Fri                                 | Sat                                 |
|-------------------------------------|--|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 30                                  | 1<br>IMPROVE Particle Sampling Day               | 2<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges   | 3<br>Alternative Sample Change Day  | 4<br>IMPROVE Particle Sampling Day  | 5                                   | 6                                   |
| 7<br>IMPROVE Particle Sampling Day  | 8<br>Alternative Sample Change Day               | 9<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges   | 10<br>IMPROVE Particle Sampling Day | 11                                  | 12                                  | 13<br>IMPROVE Particle Sampling Day |
| 14<br>Alternative Sample Change Day | 15<br>Alternative Sample Change Day              | 16<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change:<br/>move cassette 3 from<br/>old cartridge to new.</b> | 17<br>Alternative Sample Change Day | 18<br>Alternative Sample Change Day | 19<br>IMPROVE Particle Sampling Day | 20                                  |
| 21                                  | 22<br>IMPROVE Particle Sampling Day              | 23<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges  | 24<br>Alternative Sample Change Day | 25<br>IMPROVE Particle Sampling Day | 26                                  | 27                                  |
| 28<br>IMPROVE Particle Sampling Day | 29 Memorial Day<br>Alternative Sample Change Day | 30<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges  | 31<br>IMPROVE Particle Sampling Day | 1                                   | 2                                   | 3<br>IMPROVE Particle Sampling Day  |

April 2017

| Sun   | Mon | Tue | Wed | Thu | Fri | Sat |
|-------|-----|-----|-----|-----|-----|-----|
|       |     |     |     |     |     | 1   |
| 2     | 3   | 4   | 5   | 6   | 7   | 8   |
| 9     | 10  | 11  | 12  | 13  | 14  | 15  |
| 16    | 17  | 18  | 19  | 20  | 21  | 22  |
| 23/30 | 24  | 25  | 26  | 27  | 28  | 29  |

June 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     |     |     | 1   | 2   | 3   |
| 4   | 5   | 6   | 7   | 8   | 9   | 10  |
| 11  | 12  | 13  | 14  | 15  | 16  | 17  |
| 18  | 19  | 20  | 21  | 22  | 23  | 24  |
| 25  | 26  | 27  | 28  | 29  | 30  |     |



OPERATOR INVOLVEMENT — THE KEY TO NETWORK SUCCESS

JUNE 2017

| Sun  | Mon   | Tue   | Wed  | Thu  | Fri                                 | Sat                                 |
|--|---|---|--|--|-------------------------------------|-------------------------------------|
| 28<br>IMPROVE Particle Sampling Day        | 29 Memorial Day<br><i>Alternative Sample Change Day</i> | 30<br>Change IMPROVE particle cartridges  | 31<br>IMPROVE Particle Sampling Day        | 1  | 2                                   | 3<br>IMPROVE Particle Sampling Day  |
| 4<br><i>Alternative Sample Change Day</i>  | 5<br><i>Alternative Sample Change Day</i>               | 6<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b>  | 7<br><i>Alternative Sample Change Day</i>  | 8<br><i>Alternative Sample Change Day</i>  | 9<br>IMPROVE Particle Sampling Day  | 10                                  |
| 11   | 12<br>IMPROVE Particle Sampling Day                     | 13<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges  | 14<br><i>Alternative Sample Change Day</i> | 15<br>IMPROVE Particle Sampling Day        | 16                                  | 17                                  |
| 18<br>IMPROVE Particle Sampling Day        | 19<br><i>Alternative Sample Change Day</i>              | 20<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges  | 21<br>IMPROVE Particle Sampling Day        | 22   | 23                                  | 24<br>IMPROVE Particle Sampling Day |
| 25<br><i>Alternative Sample Change Day</i> | 26<br><i>Alternative Sample Change Day</i>              | 27<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b> | 28<br><i>Alternative Sample Change Day</i> | 29<br><i>Alternative Sample Change Day</i> | 30<br>IMPROVE Particle Sampling Day | 1                                   |

May 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     | 1   | 2   | 3   | 4   | 5   | 6   |
| 7   | 8   | 9   | 10  | 11  | 12  | 13  |
| 14  | 15  | 16  | 17  | 18  | 19  | 20  |
| 21  | 22  | 23  | 24  | 25  | 26  | 27  |
| 28  | 29  | 30  | 31  |     |     |     |

July 2017

| Sun   | Mon   | Tue | Wed | Thu | Fri | Sat |
|-------|-------|-----|-----|-----|-----|-----|
|       |       |     |     |     |     | 1   |
| 2     | 3     | 4   | 5   | 6   | 7   | 8   |
| 9     | 10    | 11  | 12  | 13  | 14  | 15  |
| 16    | 17    | 18  | 19  | 20  | 21  | 22  |
| 23/30 | 24/31 | 25  | 26  | 27  | 28  | 29  |



PACK Pack Monadnock Summit, NH



PASA Pasayten, WA



PEFO Petrified Forest National Park, AZ



PENO Penobscot Indian Nation, ME



PHOE Phoenix, AZ



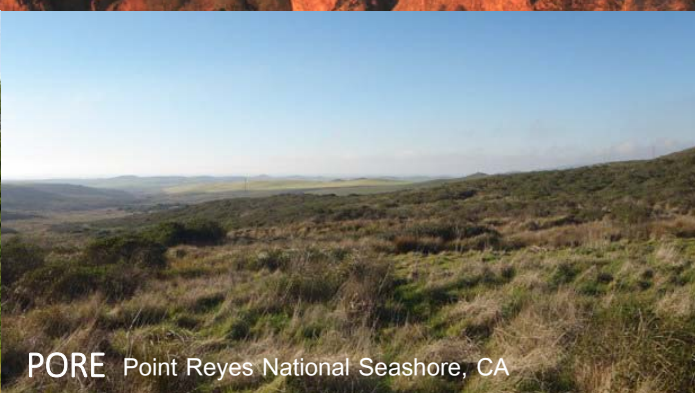
PINN Pinnacles National Monument, CA



PITT Allegheny County Health Department, PA



PMRF Proctor Maple Research Center, VT



PORE Point Reyes National Seashore, CA



PRIS Presque Isle, ME



PUSO Puget Sound, WA



QUCI Quaker City, OH

OPERATOR INVOLVEMENT — THE KEY TO NETWORK SUCCESS

JULY 2017

| Sun  | Mon  | Tue   | Wed  | Thu  | Fri                                 | Sat                                 |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
|--|--|---|--|--|-------------------------------------|-------------------------------------|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|-----|-----|-----|-----|-----|-----|-----|--|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|
| 25<br><i>Alternative Sample Change Day</i> | 26<br><i>Alternative Sample Change Day</i> | 27<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b>   | 28<br><i>Alternative Sample Change Day</i> | 29<br><i>Alternative Sample Change Day</i> | 30<br>IMPROVE Particle Sampling Day | 1                                   |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 2  | 3<br>IMPROVE Particle Sampling Day         | 4 <b>Independence Day</b><br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges   | 5<br><i>Alternative Sample Change Day</i>  | 6<br>IMPROVE Particle Sampling Day         | 7                                   | 8                                   |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 9<br>IMPROVE Particle Sampling Day         | 10<br><i>Alternative Sample Change Day</i> | 11<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges  | 12<br>IMPROVE Particle Sampling Day        | 13   | 14                                  | 15<br>IMPROVE Particle Sampling Day |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 16<br><i>Alternative Sample Change Day</i> | 17<br><i>Alternative Sample Change Day</i> | 18<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b>   | 19<br><i>Alternative Sample Change Day</i> | 20<br><i>Alternative Sample Change Day</i> | 21<br>IMPROVE Particle Sampling Day | 22                                  |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 23   | 24<br>IMPROVE Particle Sampling Day        | 25<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges  | 26<br><i>Alternative Sample Change Day</i> | 27<br>IMPROVE Particle Sampling Day        | 28                                  | 29                                  |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 30<br>IMPROVE Particle Sampling Day        | 31<br><i>Alternative Sample Change Day</i> | <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <p>June 2017</p> <table border="1"> <thead> <tr><th>Sun</th><th>Mon</th><th>Tue</th><th>Wed</th><th>Thu</th><th>Fri</th><th>Sat</th></tr> </thead> <tbody> <tr><td></td><td></td><td></td><td></td><td>1</td><td>2</td><td>3</td></tr> <tr><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr> <tr><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td></tr> <tr><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td></tr> <tr><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td></td></tr> </tbody> </table> </div> <div style="text-align: center;"> <p>August 2017</p> <table border="1"> <thead> <tr><th>Sun</th><th>Mon</th><th>Tue</th><th>Wed</th><th>Thu</th><th>Fri</th><th>Sat</th></tr> </thead> <tbody> <tr><td></td><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td></tr> <tr><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td></tr> <tr><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td></tr> <tr><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td><td></td><td></td></tr> </tbody> </table> </div> </div> |  |  |                                     |                                     | Sun | Mon | Tue | Wed | Thu | Fri | Sat |  |  |  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |  | Sun | Mon | Tue | Wed | Thu | Fri | Sat |  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |  |  |
| Sun  | Mon  | Tue   | Wed  | Thu  | Fri                                 | Sat                                 |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
|  |  |   |  | 1  | 2                                   | 3                                   |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 4  | 5  | 6   | 7  | 8  | 9                                   | 10                                  |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 11   | 12   | 13  | 14   | 15   | 16                                  | 17                                  |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 18   | 19   | 20  | 21   | 22   | 23                                  | 24                                  |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 25   | 26   | 27  | 28   | 29   | 30                                  |                                     |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| Sun  | Mon  | Tue   | Wed  | Thu  | Fri                                 | Sat                                 |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
|  |  | 1   | 2  | 3  | 4                                   | 5                                   |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 6  | 7  | 8   | 9  | 10   | 11                                  | 12                                  |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 13   | 14   | 15  | 16   | 17   | 18                                  | 19                                  |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 20   | 21   | 22  | 23   | 24   | 25                                  | 26                                  |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 27   | 28   | 29  | 30   | 31   |                                     |                                     |     |     |     |     |     |     |     |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |     |     |     |     |     |     |     |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |







MOOS Moosehorn National Wildlife Refuge, ME



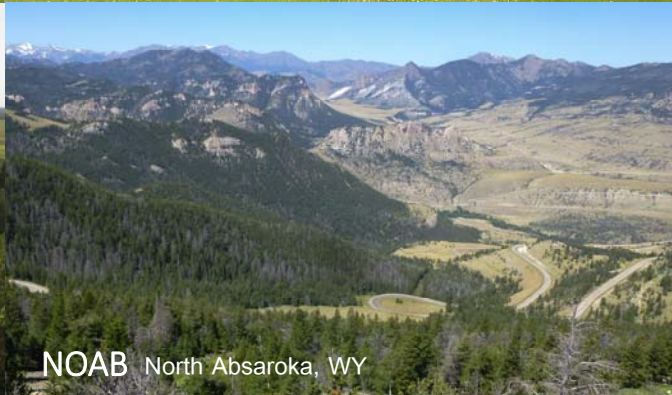
MORA Mount Rainier National Park, WA



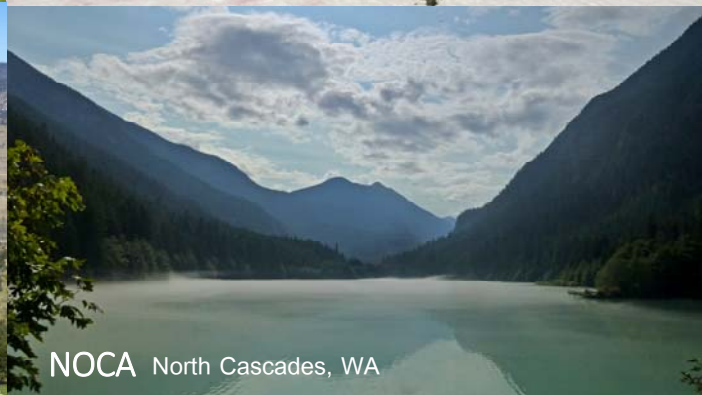
MOZI Mount Zirkel Wilderness Area, CO



NEBR Nebraska National Forest, NE



NOAB North Absaroka, WY



NOCA North Cascades, WA



NOCH Northern Cheyenne Reservation, MT



NOGA Nogales, AZ



OKEF Okefenokee National Wildlife Refuge, GA



OLYM Olympic National Park, WA



ORPI Organ Pipe Cactus National Monument, AZ



OWVL Owens Valley, CA

OPERATOR INVOLVEMENT — THE KEY TO NETWORK SUCCESS

AUGUST 2017

| Sun  | Mon  | Tue   | Wed  | Thu  | Fri                                 | Sat                                 |
|--|--|---|--|--|-------------------------------------|-------------------------------------|
| 30<br>IMPROVE Particle Sampling Day        | 31<br><i>Alternative Sample Change Day</i> | 1<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges   | 2<br>IMPROVE Particle Sampling Day         | 3  | 4                                   | 5<br>IMPROVE Particle Sampling Day  |
| 6<br><i>Alternative Sample Change Day</i>  | 7<br><i>Alternative Sample Change Day</i>  | 8<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b>  | 9<br><i>Alternative Sample Change Day</i>  | 10<br><i>Alternative Sample Change Day</i> | 11<br>IMPROVE Particle Sampling Day | 12                                  |
| 13   | 14<br>IMPROVE Particle Sampling Day        | 15<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges  | 16<br><i>Alternative Sample Change Day</i> | 17<br>IMPROVE Particle Sampling Day        | 18                                  | 19                                  |
| 20<br>IMPROVE Particle Sampling Day        | 21<br><i>Alternative Sample Change Day</i> | 22<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges  | 23<br>IMPROVE Particle Sampling Day        | 24   | 25                                  | 26<br>IMPROVE Particle Sampling Day |
| 27<br><i>Alternative Sample Change Day</i> | 28<br><i>Alternative Sample Change Day</i> | 29<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b> | 30<br><i>Alternative Sample Change Day</i> | 31<br><i>Alternative Sample Change Day</i> | 1<br>IMPROVE Particle Sampling Day  | 2                                   |

July 2017

| Sun   | Mon   | Tue | Wed | Thu | Fri | Sat |
|-------|-------|-----|-----|-----|-----|-----|
|       |       |     |     |     |     | 1   |
| 2     | 3     | 4   | 5   | 6   | 7   | 8   |
| 9     | 10    | 11  | 12  | 13  | 14  | 15  |
| 16    | 17    | 18  | 19  | 20  | 21  | 22  |
| 23/30 | 24/31 | 25  | 26  | 27  | 28  | 29  |

September 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     |     |     |     | 1   | 2   |
| 3   | 4   | 5   | 6   | 7   | 8   | 9   |
| 10  | 11  | 12  | 13  | 14  | 15  | 16  |
| 17  | 18  | 19  | 20  | 21  | 22  | 23  |
| 24  | 25  | 26  | 27  | 28  | 29  | 30  |



LOST Lostwood, ND



LTCC Lake Tahoe Community College, NV



LYEB Lye Brook Wilderness Area, VT



MACA Mammoth Cave National Park, KY



MAKA Makah Indian Reservation, WA



MAVI Martha's Vineyard, MA



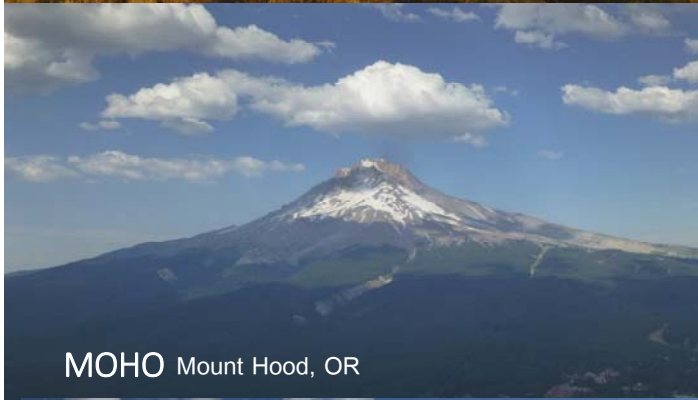
MELA Medicine Lake National Wildlife Refuge, MT



MEVE Mesa Verde National Park, CO



MING Mingo National Wildlife Refuge, MO



MOHO Mount Hood, OR



MOMO Mohawk Mountain, CT



MONT Monture, MT

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SEPTEMBER 2017

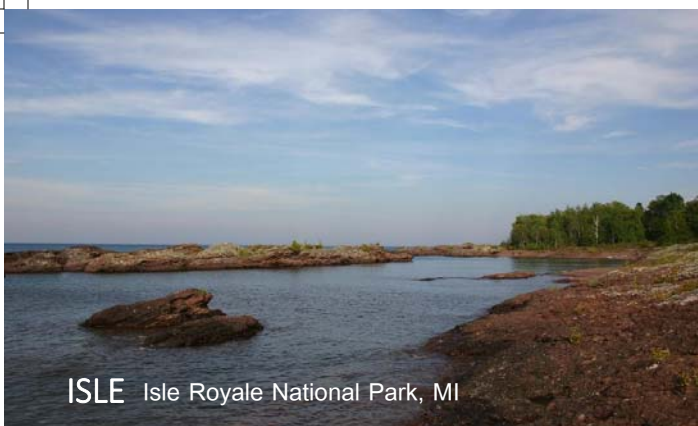
| Sun  | Mon   | Tue  | Wed  | Thu  | Fri                                 | Sat                                 |
|--|---|--|--|--|-------------------------------------|-------------------------------------|
| 27<br><i>Alternative Sample Change Day</i> | 28<br><i>Alternative Sample Change Day</i>          | 29<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b><br><i>Alternative Sample Change Day</i>                              | 30<br><i>Alternative Sample Change Day</i> | 31<br><i>Alternative Sample Change Day</i> | 1<br>IMPROVE Particle Sampling Day  | 2                                   |
| 3  | 4 <b>Labor Day</b><br>IMPROVE Particle Sampling Day | 5 3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges<br><i>Alternative Sample Change Day</i>   | 6<br><i>Alternative Sample Change Day</i>  | 7<br>IMPROVE Particle Sampling Day         | 8                                   | 9                                   |
| 10<br>IMPROVE Particle Sampling Day        | 11<br><i>Alternative Sample Change Day</i>          | 12 3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges  | 13<br>IMPROVE Particle Sampling Day        | 14   | 15                                  | 16<br>IMPROVE Particle Sampling Day |
| 17<br><i>Alternative Sample Change Day</i> | 18<br><i>Alternative Sample Change Day</i>          | 19 3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b><br><i>Alternative Sample Change Day</i> | 20<br><i>Alternative Sample Change Day</i> | 21<br><i>Alternative Sample Change Day</i> | 22<br>IMPROVE Particle Sampling Day | 23                                  |
| 24   | 25<br>IMPROVE Particle Sampling Day                 | 26 3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges<br><i>Alternative Sample Change Day</i>  | 27<br><i>Alternative Sample Change Day</i> | 28<br>IMPROVE Particle Sampling Day        | 29                                  | 30                                  |

August 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     | 1   | 2   | 3   | 4   | 5   |
| 6   | 7   | 8   | 9   | 10  | 11  | 12  |
| 13  | 14  | 15  | 16  | 17  | 18  | 19  |
| 20  | 21  | 22  | 23  | 24  | 25  | 26  |
| 27  | 28  | 29  | 30  | 31  |     |     |

October 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
| 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| 8   | 9   | 10  | 11  | 12  | 13  | 14  |
| 15  | 16  | 17  | 18  | 19  | 20  | 21  |
| 22  | 23  | 24  | 25  | 26  | 27  | 28  |
| 29  | 30  | 31  |     |     |     |     |



ISLE Isle Royale National Park, MI



JARB Jarbridge Wilderness, NV



JARI James River Face Wilderness, VA



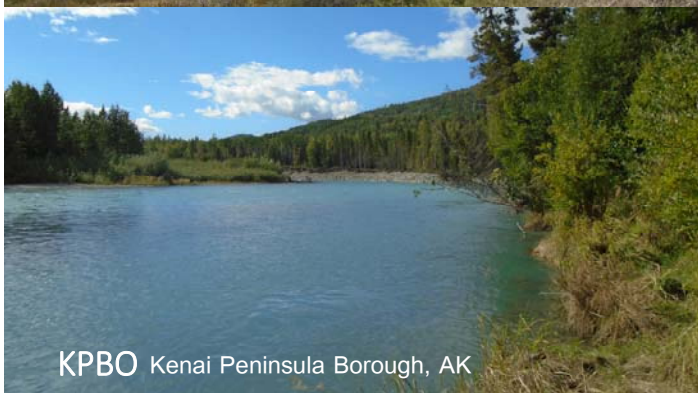
JOSH Joshua Tree, CA



KAIS Kaiser Sierra National Forest, CA



KALM Kalmiopsis, OR



KPBO Kenai Peninsula Borough, AK



LABE Lava Beds National Monument, CA



LASU Lake Sugema, IA



LAVO Lassen Volcanic National Park, CA



LIGO Linville Gorge, NC



LOND Londonderry, NH

OPERATOR INVOLVEMENT — THE KEY TO NETWORK SUCCESS

# OCTOBER 2017

| Sun  | Mon   | Tue   | Wed  | Thu  | Fri                                 | Sat                                 |
|--|---|---|--|--|-------------------------------------|-------------------------------------|
| 1<br>IMPROVE Particle Sampling Day         | 2<br><i>Alternative Sample Change Day</i>                     | 3<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges   | 4<br>IMPROVE Particle Sampling Day         | 5  | 6                                   | 7<br>IMPROVE Particle Sampling Day  |
| 8<br><i>Alternative Sample Change Day</i>  | 9 <b>Columbus Day</b><br><i>Alternative Sample Change Day</i> | 10<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b> | 11<br><i>Alternative Sample Change Day</i> | 12<br><i>Alternative Sample Change Day</i> | 13<br>IMPROVE Particle Sampling Day | 14                                  |
| 15   | 16<br>IMPROVE Particle Sampling Day                           | 17<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges  | 18<br><i>Alternative Sample Change Day</i> | 19<br>IMPROVE Particle Sampling Day        | 20                                  | 21                                  |
| 22<br>IMPROVE Particle Sampling Day        | 23<br><i>Alternative Sample Change Day</i>                    | 24<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges  | 25<br>IMPROVE Particle Sampling Day        | 26   | 27                                  | 28<br>IMPROVE Particle Sampling Day |
| 29<br><i>Alternative Sample Change Day</i> | 30<br><i>Alternative Sample Change Day</i>                    | 31<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b> | 1<br><i>Alternative Sample Change Day</i>  | 2<br><i>Alternative Sample Change Day</i>  | 3<br>IMPROVE Particle Sampling Day  | 4                                   |

September 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     |     |     |     | 1   | 2   |
| 3   | 4   | 5   | 6   | 7   | 8   | 9   |
| 10  | 11  | 12  | 13  | 14  | 15  | 16  |
| 17  | 18  | 19  | 20  | 21  | 22  | 23  |
| 24  | 25  | 26  | 27  | 28  | 29  | 30  |

November 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     |     | 1   | 2   | 3   | 4   |
| 5   | 6   | 7   | 8   | 9   | 10  | 11  |
| 12  | 13  | 14  | 15  | 16  | 17  | 18  |
| 19  | 20  | 21  | 22  | 23  | 24  | 25  |
| 26  | 27  | 28  | 29  | 30  |     |     |



GRGU Great Gulf Wilderness, NH



GRRRI Great River Bluffs State Park, MN



GRSA Great Sand Dunes National Park, CO



GRSM Great Smoky Mountains Nat'l Park, TN



GUMO Guadalupe Mountains Nat'l Park, TX



HACR Haleakala Crater, HI



HANC Hance Camp (Grand Canyon), AZ



HAVO Hawaii Volcanoes National Park, HI



HECA Hells Canyon, OR



HEGL Hercules Glades, MO



HOOV Hoover Wilderness, CA



IKBA Ike's Backbone, AZ

OPERATOR INVOLVEMENT — THE KEY TO NETWORK SUCCESS

NOVEMBER 2017

| Sun   | Mon  | Tue   | Wed  | Thu  | Fri                                 | Sat                                 |
|---|--|---|--|--|-------------------------------------|-------------------------------------|
| 29<br><i>Alternative Sample Change Day</i>                      | 30<br><i>Alternative Sample Change Day</i> | 31<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b>                                 | 1<br><i>Alternative Sample Change Day</i>  | 2<br><i>Alternative Sample Change Day</i>                      | 3<br>IMPROVE Particle Sampling Day  | 4                                   |
| 5<br>Daylight Savings Time Ends;<br>Do not Change Sampler Clock | 6<br>IMPROVE Particle Sampling Day         | 7<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges   | 8<br><i>Alternative Sample Change Day</i>  | 9<br>IMPROVE Particle Sampling Day                             | 10                                  | 11<br>Veteran's Day                 |
| 12<br>IMPROVE Particle Sampling Day                             | 13<br><i>Alternative Sample Change Day</i> | 14<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges  | 15<br>IMPROVE Particle Sampling Day        | 16   | 17                                  | 18<br>IMPROVE Particle Sampling Day |
| 19<br><i>Alternative Sample Change Day</i>                      | 20<br><i>Alternative Sample Change Day</i> | 21<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b> | 22<br><i>Alternative Sample Change Day</i> | 23<br>Thanksgiving Day<br><i>Alternative Sample Change Day</i> | 24<br>IMPROVE Particle Sampling Day | 25                                  |
| 26  | 27<br>IMPROVE Particle Sampling Day        | 28<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges  | 29<br><i>Alternative Sample Change Day</i> | 30<br>IMPROVE Particle Sampling Day                            | 1                                   | 2                                   |

October 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
| 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| 8   | 9   | 10  | 11  | 12  | 13  | 14  |
| 15  | 16  | 17  | 18  | 19  | 20  | 21  |
| 22  | 23  | 24  | 25  | 26  | 27  | 28  |
| 29  | 30  | 31  |     |     |     |     |



December 2017

| Sun   | Mon | Tue | Wed | Thu | Fri | Sat |
|-------|-----|-----|-----|-----|-----|-----|
|       |     |     |     |     | 1   | 2   |
| 3     | 4   | 5   | 6   | 7   | 8   | 9   |
| 10    | 11  | 12  | 13  | 14  | 15  | 16  |
| 17    | 18  | 19  | 20  | 21  | 22  | 23  |
| 24/31 | 25  | 26  | 27  | 28  | 29  | 30  |



EGBE Egbert, ON, Canada



EVER Everglades National Park, FL



FLAT Flathead Indian Reservation, MT



FLTO Flat Top Wilderness Area, CO



FOPE Fort Peck Indian Reservation, MT



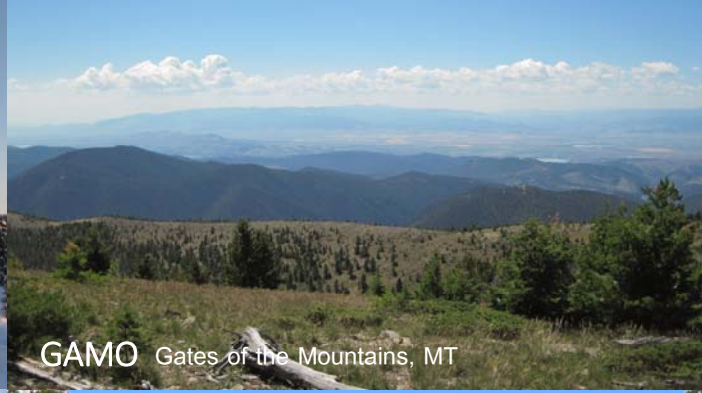
FRES Dept of Environmental Quality, CA



FRRE Frostburg Reservoir, MD



GAAR Gates of the Arctic National Park, AK



GAMO Gates of the Mountains, MT



GICL Gila Cliff Dwellings, NM



GLAC Glacier National Park, MT



GRBA Great Basin National Park, NV

OPERATOR INVOLVEMENT — THE KEY TO NETWORK SUCCESS

DECEMBER 2017

| Sun  | Mon   | Tue   | Wed  | Thu  | Fri                                 | Sat                                 |
|--|---|---|--|--|-------------------------------------|-------------------------------------|
| 26   | 27<br>IMPROVE Particle Sampling Day                             | 28<br>Change IMPROVE particle cartridges  | 29<br><i>Alternative Sample Change Day</i> | 30<br>IMPROVE Particle Sampling Day        | 1                                   | 2                                   |
| 3<br>IMPROVE Particle Sampling Day         | 4<br><i>Alternative Sample Change Day</i>                       | 5<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges   | 6<br>IMPROVE Particle Sampling Day         | 7  | 8                                   | 9<br>IMPROVE Particle Sampling Day  |
| 10<br><i>Alternative Sample Change Day</i> | 11<br><i>Alternative Sample Change Day</i>                      | 12<br>3-2-2 Week 2<br>2-3-2 Week 3<br>IMPROVE Particle Sampling Day:<br><b>Special cartridge change: move cassette 3 from old cartridge to new.</b> | 13<br><i>Alternative Sample Change Day</i> | 14<br><i>Alternative Sample Change Day</i> | 15<br>IMPROVE Particle Sampling Day | 16                                  |
| 17   | 18<br>IMPROVE Particle Sampling Day                             | 19<br>3-2-2 Week 3<br>2-3-2 Week 1<br>Change IMPROVE particle cartridges  | 20<br><i>Alternative Sample Change Day</i> | 21<br>IMPROVE Particle Sampling Day        | 22                                  | 23                                  |
| 24<br>IMPROVE Particle Sampling Day        | 25 <b>Christmas Day</b><br><i>Alternative Sample Change Day</i> | 26<br>3-2-2 Week 1<br>2-3-2 Week 2<br>Change IMPROVE particle cartridges  | 27<br>IMPROVE Particle Sampling Day        | 28   | 29                                  | 30<br>IMPROVE Particle Sampling Day |

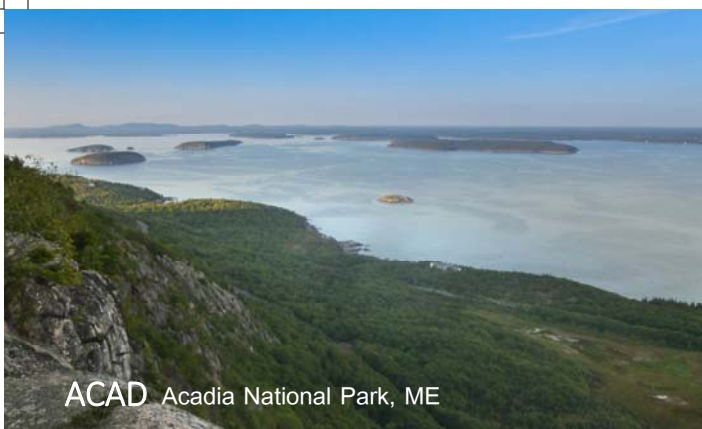
31  
*Alternative Sample Change Day*

November 2017

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     |     | 1   | 2   | 3   | 4   |
| 5   | 6   | 7   | 8   | 9   | 10  | 11  |
| 12  | 13  | 14  | 15  | 16  | 17  | 18  |
| 19  | 20  | 21  | 22  | 23  | 24  | 25  |
| 26  | 27  | 28  | 29  | 30  |     |     |

January 2018

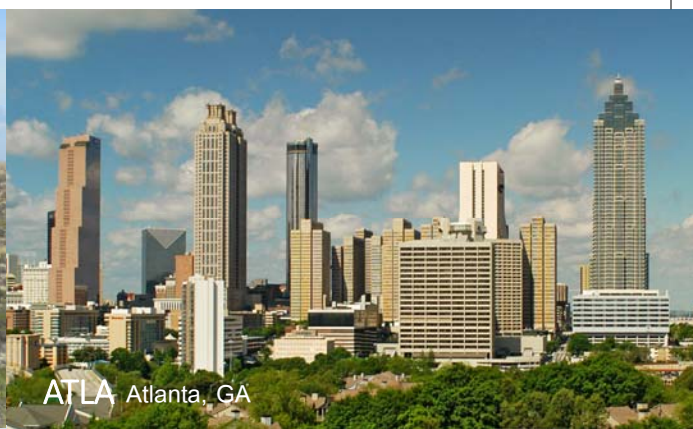
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     | 1   | 2   | 3   | 4   | 5   | 6   |
| 7   | 8   | 9   | 10  | 11  | 12  | 13  |
| 14  | 15  | 16  | 17  | 18  | 19  | 20  |
| 21  | 22  | 23  | 24  | 25  | 26  | 27  |
| 28  | 29  | 30  | 31  |     |     |     |



ACAD Acadia National Park, ME



AGTI Agua Tibia, CA



ATLA Atlanta, GA



BADL Badlands National Park, SD



BALA Barrier Lake, AB Canada



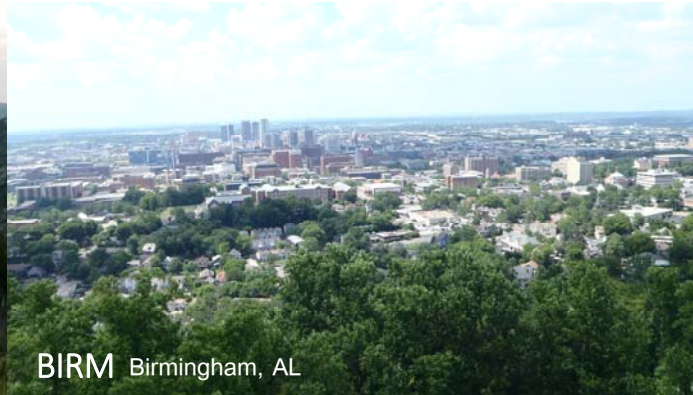
BALD Mount Baldy, AZ



BAND Bandelier, NM



BIBE Big Bend National Park, TX



BIRM Birmingham, AL



BLIS Lake Tahoe, CA



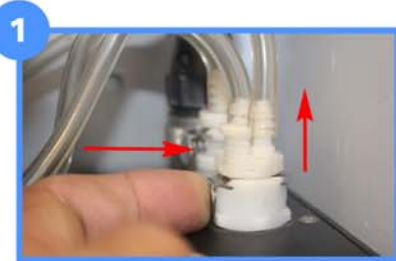
BOAP Bosque del Apache, NM



BOLA Boulder Lake, WY

## Electronics-Box Replacement

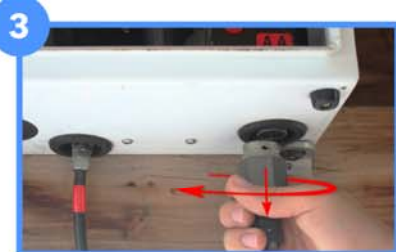
(For A,B, and C modules. For the D module skip steps 3 and 9)



1 Disconnect the Orifice (ORI) and Cyclone (CYC) hoses by depressing the metal clasp and pulling on the hose.



2 Disconnect the grey cable located on top of the box by turning the metal collar counter-clockwise.



3 Disconnect the grey module cable at the bottom of the module, by turning the connector body counter-clockwise.



4 Loosen the brass knobs located on the black electronics box.



5 Remove old electronics box and insert the new box.



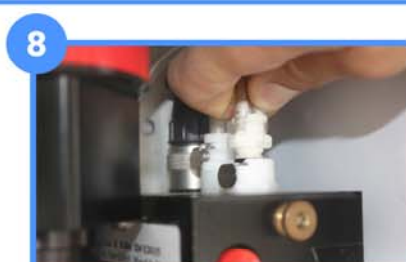
6 Tighten the brass knobs.



7 Re-connect grey cable on the top of the box.



(line up the key and keyway when connecting the electronic connectors)



8 Re-connect the hoses to the electronics box.

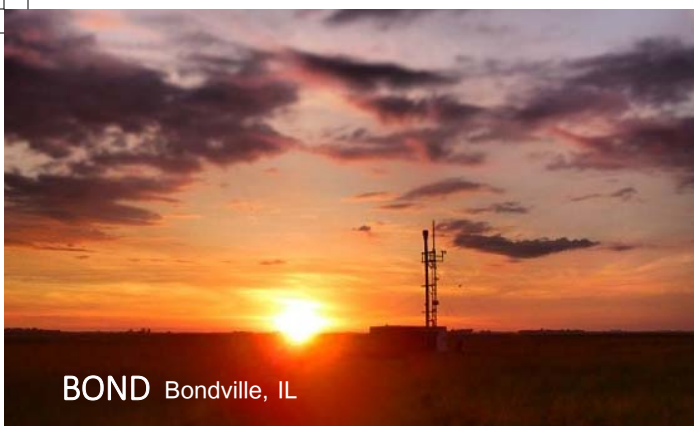


9 Re-connect the bottom grey module cable.

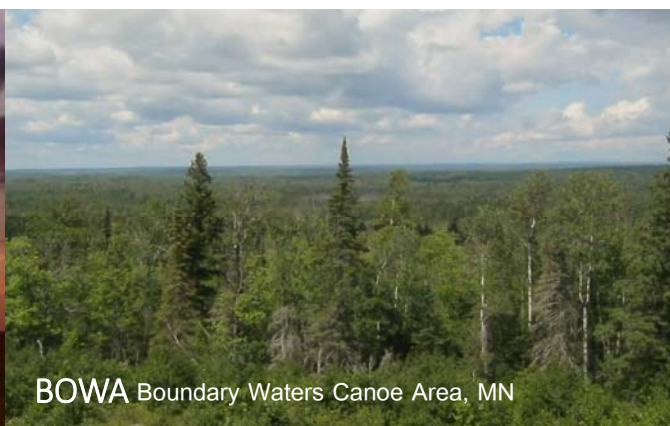
## IMPROVE operator training videos:

<http://airquality.crocker.ucdavis.edu/improve/resources-operators/>

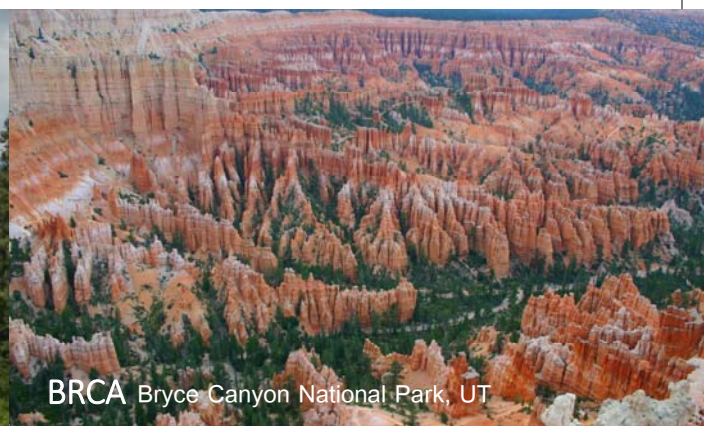
UC Davis:  
General Lab  
(530) 752-1123



**BOND** Bondville, IL



**BOWA** Boundary Waters Canoe Area, MN



**BRCA** Bryce Canyon National Park, UT



**BRID** Bridger Wilderness, WY



**BRIG** Brigantine National Wildlife Refuge, NJ



**BRIS** Breton Island, LA



**BYIS** National Institute of Environmental Research, South Korea



**CABA** Casco Bay, ME



**CABI** Cabinet Mountains, MT



**CACO** Cape Cod National Seashore, MA



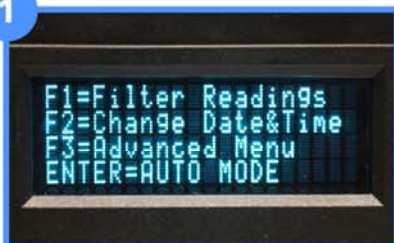
**CACR** Caney Creek, AR



**CANY** Canyonlands National Park, UT

## Change Operator Initials on Controller

1



Press **'Enter'** on the controller keypad to view the *Main Menu*.

2



Press **'F3'** for *Advanced Menu* and type the code **'1123'**.

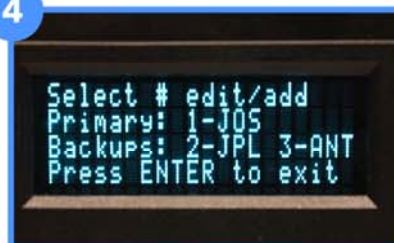
(Do not press **'enter'** after putting in the code as this will return to the *Main Menu*)

3



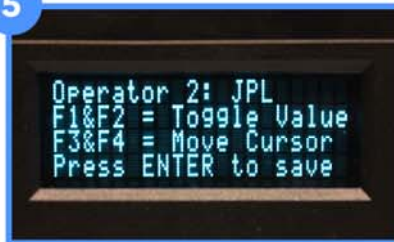
Press **'F3'** to select *Operator Initials*

4



Select which operator initial to edit or add. (1, 2, or 3)

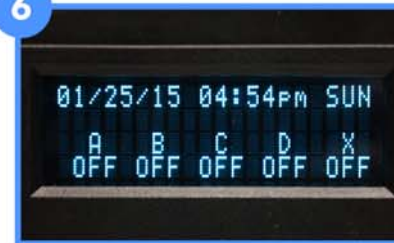
5



Use **'F1'** and **'F2'** to set the first character. Press **'F4'** to select the next character placeholder and adjust accordingly with **'F1'** and **'F2'**.

Press **'Enter'** to save.

6



Press **'Enter'** twice more to return to *Auto Mode*.

**UC Davis:**  
General Lab  
(530) 752-1123

**IMPROVE operator training videos:**

<http://airquality.crocker.ucdavis.edu/improve/resources-operators/>



CAPI Capitol Reef, UT



CEBL Cedar Bluff State Park, KS



CHAS Chassahowitzka Nat'l Wildlife Refuge, FL



CHIR Chiricahua National Monument, AZ



COHU Cohutta Ranger District, GA



CORI Columbia River Gorge Nat'l Scenic Area, OR



CRLA Crater Lake National Park, OR



CRMO Craters of the Moon Nat'l Monument, ID



DENA Denali National Park, AK



DETR Michigan DEQ/AQG, MI



DOME Dome Land Wilderness, CA



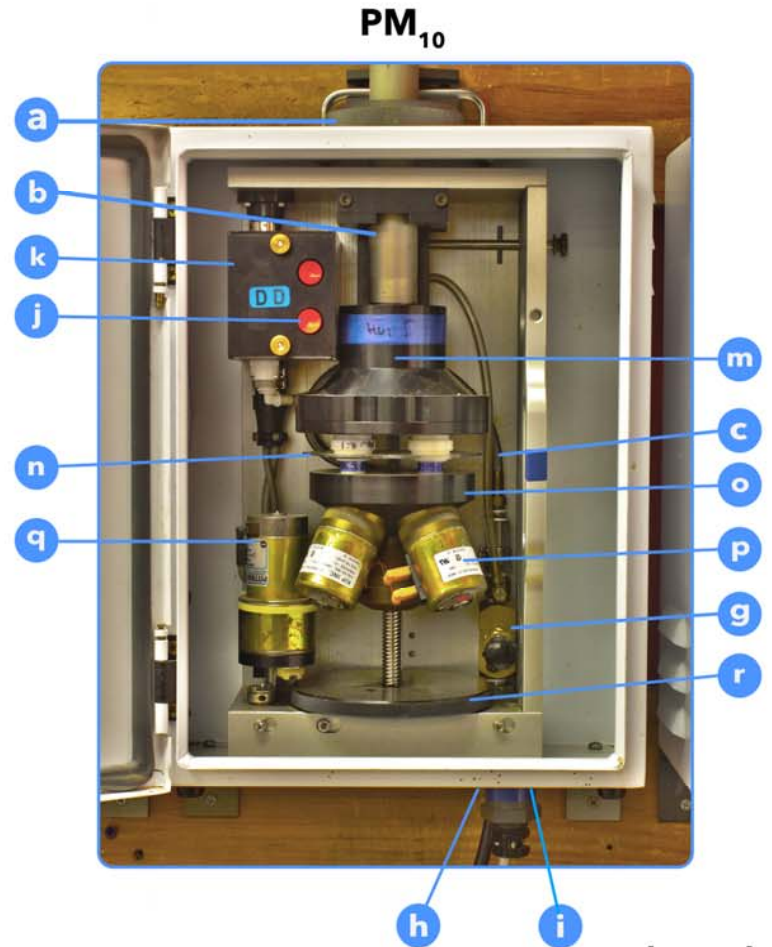
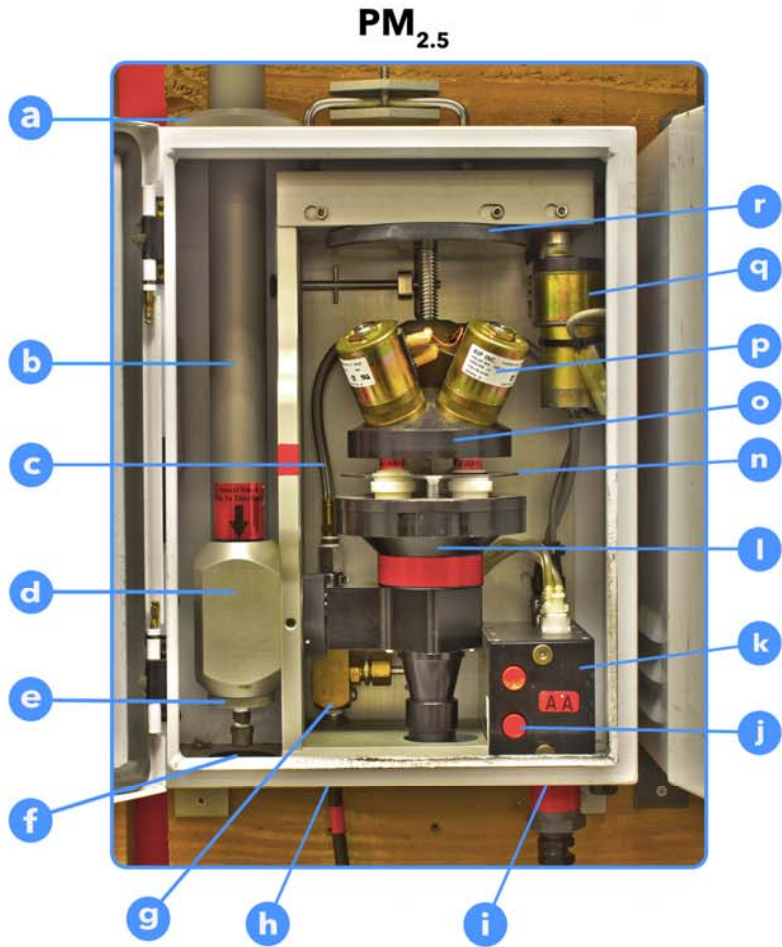
DOSO Dolly Sods Wilderness, WV

INTERAGENCY MONITORING OF PROTECTED VISUAL ENVIRONMENTS

# IMPROVE

Module Schematic

**UC Davis:**  
General Lab  
(530) 752-1123



- legend**
- |                                    |                                  |   |   |
|------------------------------------|----------------------------------|---|---|
| <b>a.</b> stack compression sleeve | <b>e.</b> tee plug               | <b>j.</b> motor control buttons             | <b>o.</b> solenoid manifold                         |
| <b>b.</b> inlet stack              | <b>f.</b> black cap              | <b>k.</b> electronics box (E-Box)           | <b>p.</b> solenoid valve (4)                        |
| <b>c.</b> braided hose             | <b>g.</b> flow control valve     | <b>l.</b> cyclone                           | <b>q.</b> motor assembly to raise solenoid manifold |
| <b>d.</b> inlet tee                | <b>h.</b> pump hose connector    | <b>m.</b> funnel                            | <b>r.</b> handwheel to raise solenoid manifold      |
| <b>e.</b> tee plug                 | <b>i.</b> module cable connector | <b>n.</b> cartridge with 4 filter cassettes |   |

IMPROVE operator training videos:  
<http://airquality.crocker.ucdavis.edu/improve/resources-operators/>