Earth Networks Update on Global Greenhouse Gas (GHG) Monitoring Network

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Earth Networks is collaborating with partner organizations to deploy GHG measuring instruments on a global scale for providing key science data behind carbon emissions and environmental patterns utilizing a top-down methodology for measurement, reporting and verification. Since the launch in January 2011, Earth Networks has begun deployment of the 100 sensor global network and has partnered with key institutions to develop the measurement science and tools necessary for informing the research community, policy-makers and private industry with more precise environmental intelligence of GHG levels and emissions. The following updates on the network deployment and partner activities will be discussed in this presentation:

- **NETWORK DEPLOYMENT:** Current deployment of 20 sensors in the U.S. and plans for future global site installations,
- **NOAA/ESRL:** Partnership between Earth Networks and NOAA/ESRL provides a framework for joint research and future cooperative ventures involving the use of Earth Networks GHG. NOAA/ESRL will use the GHG data collected from this network to complement the data from its existing observation and analysis network to support the environmental research missions of the ESRL Global Monitoring Division. Further, Earth Networks will use gas calibration standards from NOAA/ESRL that ensure compatibility with the World Meteorological Organization scales for GHGs,
- **NIST/INDIANAPOLIS FLUX EXPERIMENT**: Working with the National Institutes of Standards and Technology (NIST) and leading university researchers as part of an ongoing project to develop regional-level and urban-scale top-down methodologies based on extensive measurements of atmospheric GHG for emissions quantification and removals in and around the city of Indianapolis, Indiana (INFLUX),
- **CALIFORNIA MEASUREMENTS:** Collaboration with the State of California and leading atmospheric scientists from Scripps Institution of Oceanography, UC San Diego, and Lawrence Berkeley National Laboratory (Berkeley Lab) to deploy an advanced network of GHG monitoring stations for measuring concentrations of atmospheric carbon dioxide (CO_2) and methane (CH_4) throughout California, which has committed to reducing GHG emissions to 1990 levels by the year 2020. California policy-makers will directly benefit from the findings of this study, which will be applicable to any U.S. state and nationwide,
- **ICOS:** Partnering with ICOS, a European consortium of national climate research institutes from 17 countries, to work closely with ICOS' extensive network of climate scientists to increase the size of Europe's GHG monitoring network and collaborate on data management standards for the measurement, storage, and exchange of atmospheric GHG data,
- **SCRIPPS INSTITUTION OF OCEANOGRAPHY:** Earth Networks and Scripps Institution of Oceanography are working in close collaboration for the deployment of the largest global GHG observation network. Scripps scientists are playing a vital role in advising Earth Networks regarding the network design, methods to ensure data quality, and linking the network data to atmospheric modeling experts at research institutions around the world.

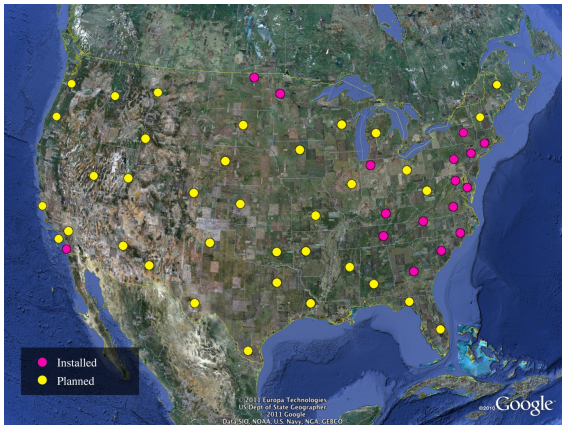

Figure 1. Earth Networks U.S. GHG Monitoring Network.