FINAL AGENDA

NASA Ice, Cloud and land Elevation Satellite-2
Inland Water Focus Session
Wednesday, November 18, 2015

2015 AWRA Annual Water Resources Conference
Grand Hyatt Denver, Denver, Colorado

An upcoming NASA satellite mission will measure the height of lakes, reservoirs and other water bodies – and scientists want to ensure that water resource managers get the most useful information possible from the data.

At-A-Glance Agenda	Meeting Room: Mount Elbert A
8:30 am -10:00 am	**PART I: ICESAT-2 MISSION & INLAND WATER DATA PRODUCT OVERVIEW**
10:30 am – 12:00 pm	**PART II: ICESAT-2 INLAND WATER DATA IN-DEPTH**
12:00 pm - 1:30 pm	**LUNCH BREAK**
1:30 pm – 3:00 pm	**PART III: ICESAT-2 PRELAUNCH OPPORTUNITIES FOR THE WATER RESOURCES COMMUNITY**
3:30 pm – 5:00 pm	**PART IV: ICESAT-2 PRELAUNCH DATA OVERVIEW**
4:10 pm – 4:50 pm	**LIVE DEMONSTRATION: USE OF ICESAT-2 PRELAUNCH DATA**
4:50 pm – 5:00 pm	**CLOSING REMARKS**

NASA's Ice, Cloud and land Elevation Satellite-2 (ICESat-2) mission will orbit the planet to measure elevation changes in our Earth's surface. With a target launch in 2017, ICESat-2 will continue important observations of ice sheet elevation change, the above-water height of sea ice, and vegetation canopy height begun by the first ICESat mission, which operated from 2003 to 2009. It will also take height measurements over inland water bodies, including lakes and reservoirs. ICESat-2 will advance our knowledge on key observations for ecosystem, climate, and water applications.

This focus session provides an overview of the ICESat-2 mission and discusses how the measurements of inland water surfaces will be developed into data products the public can use. We invite the water resources community to join us in exploring how the data products will work, and discuss how water managers, conservation groups and others could use these data products to make key decisions. In this focus session, we hope to provide the water resources community with an opportunity to talk to ICESat-2 mission scientists, so that both identify opportunities for using and leveraging the use of the planned data products.

Goals

- Examine the opportunities and challenges related to using ICESat-2 data for inland water studies
- Assess the potential efficacy of ICESat-2 data in operational and decision-making contexts
- Explore possibilities for combining ICESat-2 and other data sources to develop better products for inland water applications
- Provide a demonstration on how to access and use the available ICESat-2 prelaunch data

Part I: Mission Overview and Potential Water Resources Applications

To begin the focus session, NASA ICESat-2 scientists provide an overview of the mission, including details on what the water resources community can expect. The scientists will outline the mission's spatial coverage, the timeline for data product generation, and how the data products developed from the satellite observations work.

The session will include an overview of the mission in the context of the NASA Applied Sciences Program for Water Resources, which aims to discover, demonstrate, and transfer – to the water-resource community – innovative uses and practical benefits of NASA's Earth observations for improved water management. We will also discuss the ICESat-2 Applications Program, which works in conjunction with the ICESat-2 Project Science Office to build a broad and well-defined user community before the satellite's launch.

ICESAT-2 MISSION & INLAND WATER DATA PRODUCT OVERVIEW				
Subject	**Time**		**Topic**	**Speaker**
November 18, 2015	A.M.	8:30-8:35	Logistics	
ICESat-2 MISSION OVERVIEW & APPLICATIONS STRATEGY	A.M.	8:35-8:45	Welcome	John C. Tracy, American Water Resources Association President, Idaho Water Resources Research Institute
		8:45-9:05	Mission Applications Overview and Strategy for Focus Sessions	Molly Brown, ICESat-2 Program Applications Lead, University of Maryland
		9:05-9:30	Mission Design, Orbits Schedule, and Data Products	Tom Neumann, ICESat-2 Mission Deputy Project Scientist, NASA GSFC
		9:30-9:45	ICESat-2 in the context of NASA's Water Resources Applications Area	Christine Lee, Associate Program Manager, NASA Applied Sciences Water Resources, Jet Propulsion Laboratory (JPL)
		9:45-10:00	Q&A	
BREAK	A.M.	10:00-10:30	Morning Break	

Part II - ICESat-2 Inland Water Data Product

Scientists for the ICESat-2 Mission are developing a data product that will help identify global inland water bodies, including lakes and rivers, of various shapes and sizes. This session will review in detail the inland water data product and other ICESat-2 data products that are relevant to the water resources community. It will also describe how ICESat-2 observations and measurements can contribute to current national initiatives that aim to provide the public with high-quality, fine resolution, elevation data.

PART II: ICESAT-2 INLAND WATER DATA IN-DEPTH				
Subject	**Time**		**Topic**	**Speaker**
November 18, 2015	A.M.	10:30-10:35	Logistics	
ICESAT-2 INLAND WATER DATA PRODUCTS & OPPORTUNITIES FOR CROSS-MISSION DEVELOPMENT	A.M.	10:35-11:05	The ICESat-2 Inland Water Body Height Data Product: Description and anticipated results	Mike Jasinski, ICESat-2 Science Definition Team Member, NASA GSFC
		11:05-11:20	The 3D Elevation Program: Overview	Jeff Simley, National Geospatial Program, U.S. Geological Survey
		11:20-11:35	Development opportunities between NASA's SWOT, GRACE and ICESat-2 missions	Margaret Srinivasan, Deputy Program Applications Lead for NASA SWOT, JPL
		11:35-12:00	Q&A Panel Discussion: ICESat-2 altimetry opportunities for the water resources community	
BREAK	P.M.	12:00-1:30	LUNCH BREAK	

Part III - ICESat-2 Prelaunch Opportunities for the Water Resources Community

The ICESat-2 Early Adopter Program (http://icesat.gsfc.nasa.gov/icesat2/apps-ea.php) is an initiative of the ICESat-2 Applications Team that encourages potential data users to become familiar with the ICESat-2 products, and demonstrates how it could be useful within different decision-making contexts. Latency, spatial and temporal resolutions are key data characteristics that vary with individual decision processes and operations; the ICESat-2 Early Adopter program facilitates the necessary communication between the mission and user communities to clarify these characteristics for particular applications. The program helps redefine the paths for how the mission products can become actively relevant. This session highlights the research being conducted by Early Adopters focusing on inland water applications and provides an opportunity for attendees to share what would be most useful for them.

PART III: ICESat-2 Prelaunch Opportunities for the Water Resources Community				
Subject	**Time**		**Topic**	**Speaker**
November 18, 2015	P.M.	1:30-1:35	Logistics	
ICESAT-2 EARLY ADOPTERS & POTENTIAL WATER RESOURCES APPLICATIONS	P.M.	1:35-1:45	Early Adopter Program Strategy	Sabrina Delgado Arias, ICESat-2 Applications Coordinator & POC, SSAI/NASA GSFC
		1:45-2:00	Assessing the value of the ICESat-2 inland water level product for the Global Flood Partnership	Guy J-P. Schumann [University of California, Los Angeles (UCLA), Joint Institute for Regional Earth System Science & Engineering]
		2:00-2:15	Operational Applications of Multiple Satellite Sensors to Map Ice Types and Wind Vectors Across the Great Lakes	George Leshkevich, Great Lakes Environmental Research Laboratory, National Oceanic and Atmospheric Administration
		2:15-2:30	Remote sensing of reservoir storage using altimetry data and satellite imagery	Huilin Gao, Texas A&M University
		2:30-3:00	Q&A and Panel Discussion	
BREAK	P.M.	3:00-3:30	AFTERNOON BREAK	

Part IV - ICESat-2 Prelaunch Data with Live Demonstration

We conclude the ICESat-2 Inland Water focus session with a discussion by the ICESat-2 Mission on prelaunch data access and use. ICESat-2's instrument will collect data that is different from its predecessor, so the mission has collected documentation, product readers, camera images, and prelaunch data files to demonstrate how the ICESat-2 data may function. All this is currently available to the water resources community for analysis. This session will also cover current plans for user services by the NASA Distributed Active Archive Center at the National Snow and Ice Data Center, and includes a live interactive demonstration of how to access and use the data for a particular case example.

PART IV: ICESAT-2 PRELAUNCH DATA WITH LIVE DEMONSTRATION				
Subject	**Time**		**Topic**	**Speaker**
November 18, 2015	P.M.	3:30-3:35	Logistics	
ICESAT-2 PRELAUNCH DATA: DISCOVER, ACCESS AND USE	P.M.	3:35-4:00	ICESat-2 pre-launch airborne data for Inland Water: Early results from the Multiple Altimeter Beam Experimental Lidar (MABEL)	Mike Jasinski, ICESat-2 Science Definition Team Member, NASA GSFC
		4:00-4:15	User Data Services provided by the National Snow and Ice Data Center (NSIDC)	Steve Tanner, ICESat-2 Data Management Lead, NSIDC
		4:15-4:50	Interactive Live Demonstration: Use of ICESat-2 Prelaunch Data	Tom Neumann, ICESat-2 Mission Deputy Project Scientist, NASA GSFC
CLOSING	P.M.	4:50-5:00	CLOSING REMARKS	