



IDP Leadership Update

Mary R. Albert, PhD
IDP P.I. & Executive Director

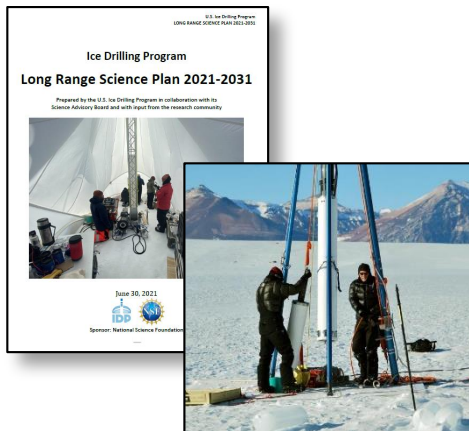
IDP-SAB meeting
May 1, 2023

IDP Vision & Mission



Vision

To enable discoveries about changes in climate and the environment, using evidence from glaciers and ice sheets, to inform environmental policy.



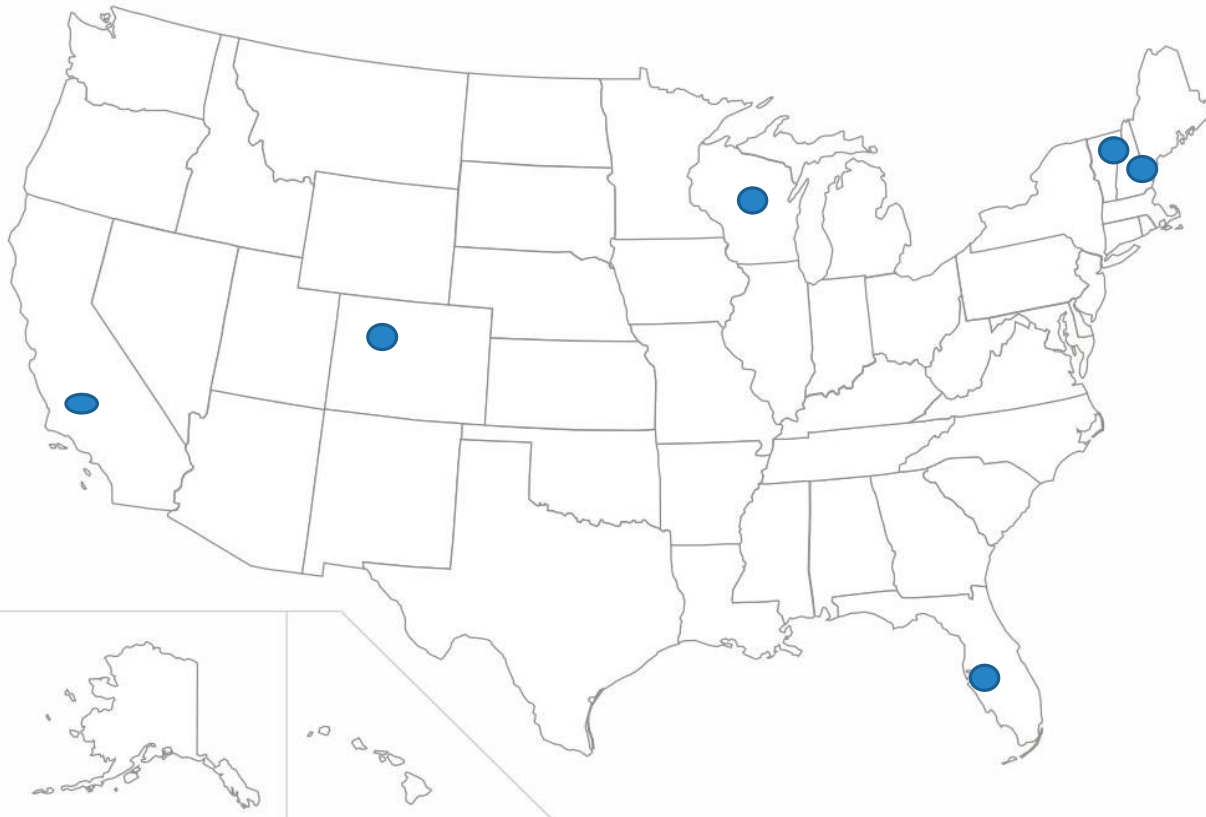
Mission

To conduct **integrated planning** for the ice drilling science and technology communities and to **provide drilling technology and operational support** that will enable the community to advance the frontiers of climate and environmental science.



IDP Organization

IDP is a virtual organization with core expertise located across the U.S.



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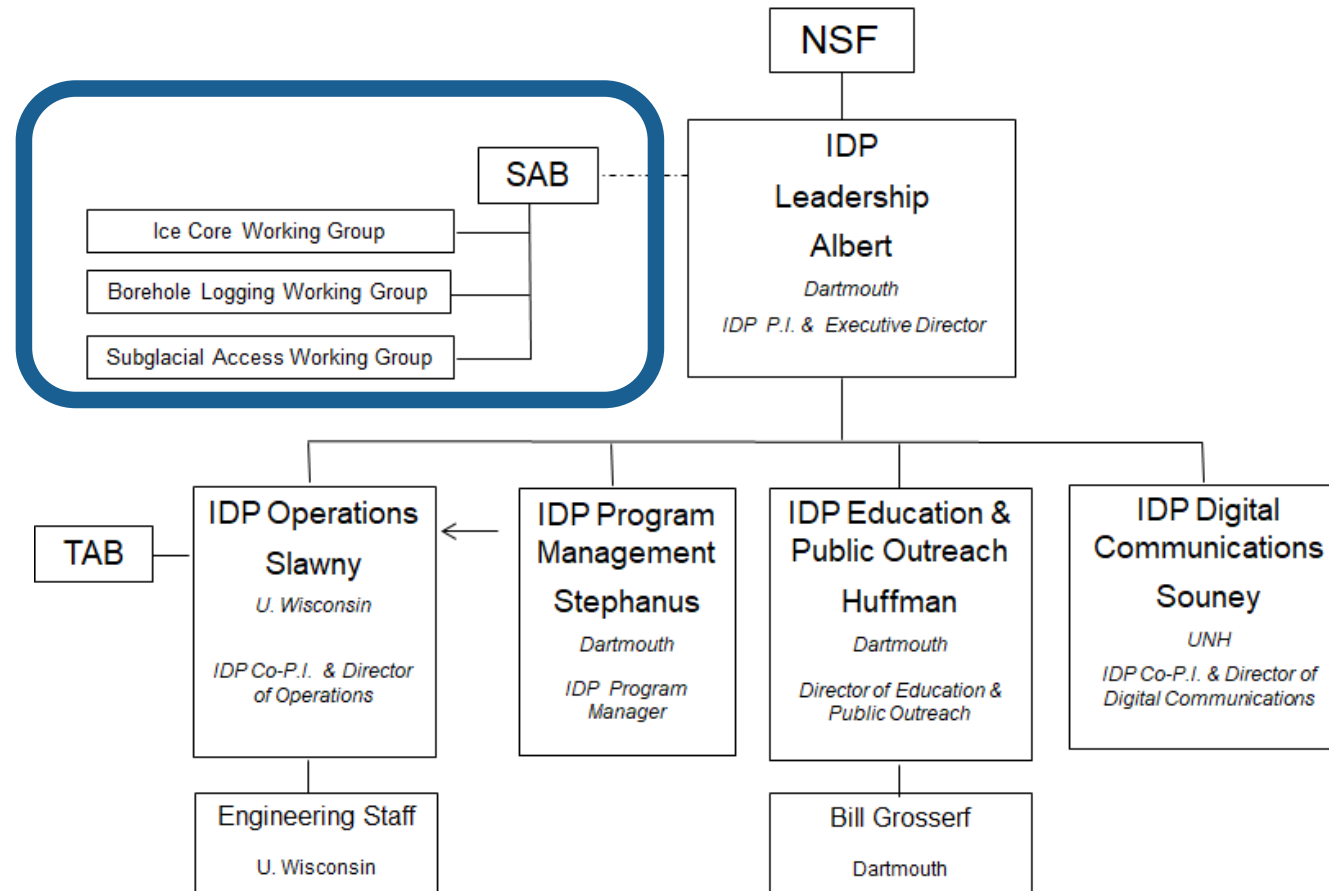
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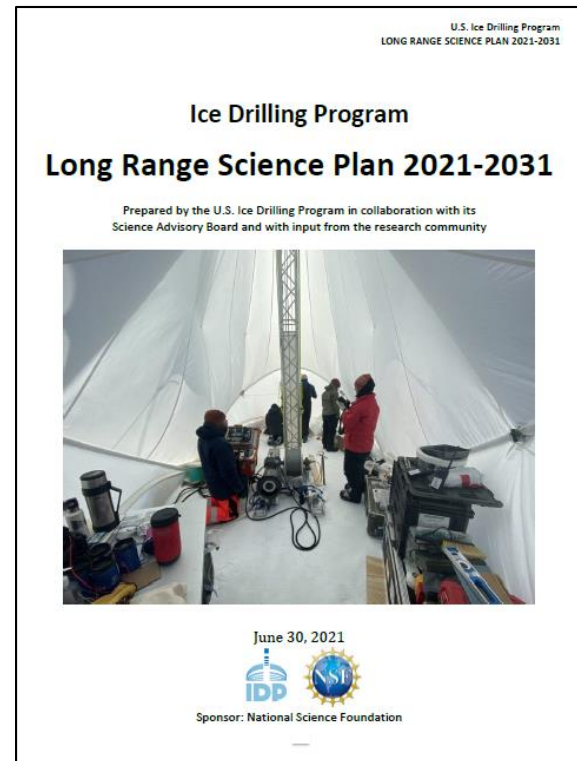
IDP Organization





Long Range Planning with the Community

Long Range Science Plan: inclusive planning to articulate the future vision



Past Climate

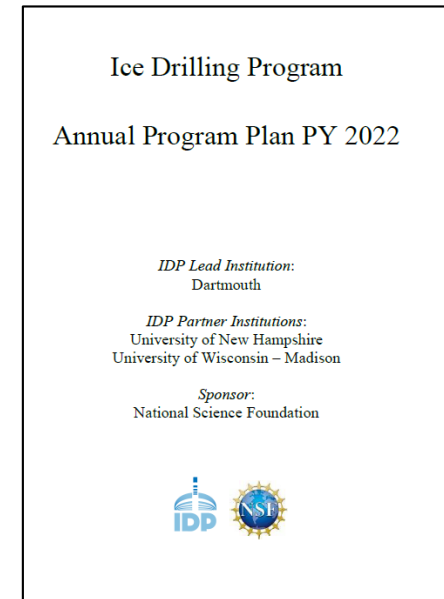
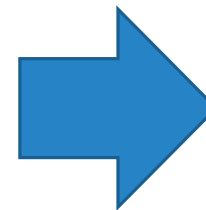
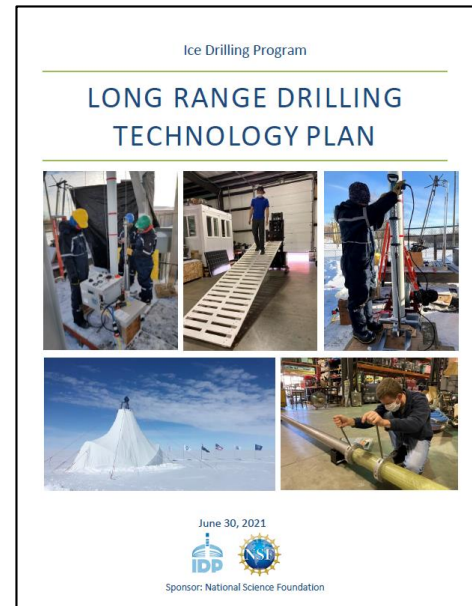
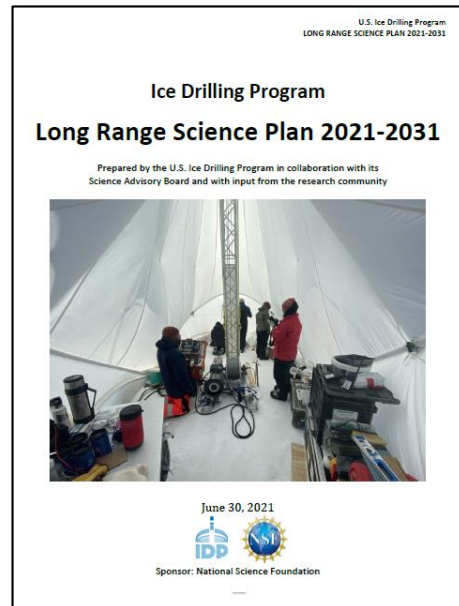
Ice Dynamics and Glacial History

Subglacial Geology, Sediments & Ecosystems

Ice as a Scientific Observatory

Integrated Science & Technology Planning

IDP conducts integrated science and technology planning, from long range vision with the community to planning next year's program plan with NSF.



Science planning drives drilling technology planning, development & use



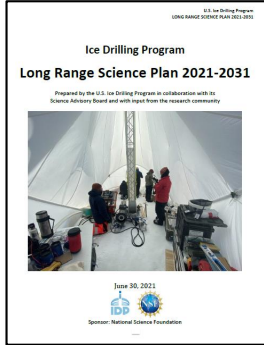
What's the process for new drill development?

- Scientific need for technology articulated in the **IDP Long Range Science Plan**
- IDP works with scientists to create the IDP Science Requirements
- IDP seeks NSF approval to create the Conceptual Design
< NSF Decision Point; if approved, the **Conceptual Design is created** >
- IDP holds Conceptual Design review with science reps & invited engineers
- IDP seeks NSF approval to create the Detailed Engineering Design
< NSF Decision Point; if approved, **Engineering Design is created** >
- IDP holds Engineering Design review with science reps & invited engineers
- IDP seeks NSF approval for Construction of the drill
< NSF Decision Point; if approved, **new drill is created** >
- IDP holds drill test review with invited engineers & science reps
- When possible, new tech is field tested before deployment for science



Planning Future Community Science

Past climate science planning matrix



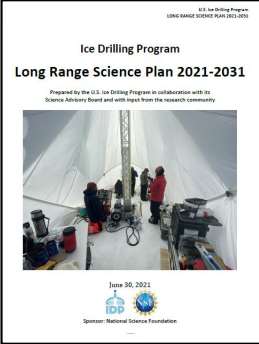
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AON Greenland firn ¹	x	x			x	x			x	x			x	x																																		
Biogenic sulfur Greenland ²	x	x																																														
Biogenic CO, CH4 Greenland ³	B	B																																														
Greenland outflow chem bio ⁵	x	x																																														
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Taylor Dome H2 ⁷									7	7																																						
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Guest Peninsula ⁴									f	f																																						
Dome C - past cosmic ray flux ¹⁰									4	4																																						
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Planning Future Community Science



Ice dynamics & glacial history planning matrix



	2023				2024				2025				2026				2027				2028				2029				2030				2031				2032				2033											
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WAIS interglacial ⁴			w	w																																																
Thwaites - seismic sounding ⁵			x	x			x	x																																												
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Northern Victoria Land ⁸							w	w					A	A																																						
Continental RAID drilling Antarctica ⁹															R	R			R	R			R	R																												

Point of Contact for projects in Table 5: ¹Kingslake; ²Pettit; ³Schaeffer; ⁴Mitrovika; ⁵Anandakrsihnan; ⁶Campbell; ⁷Mikucki; ⁸Balco; ⁹Goode.

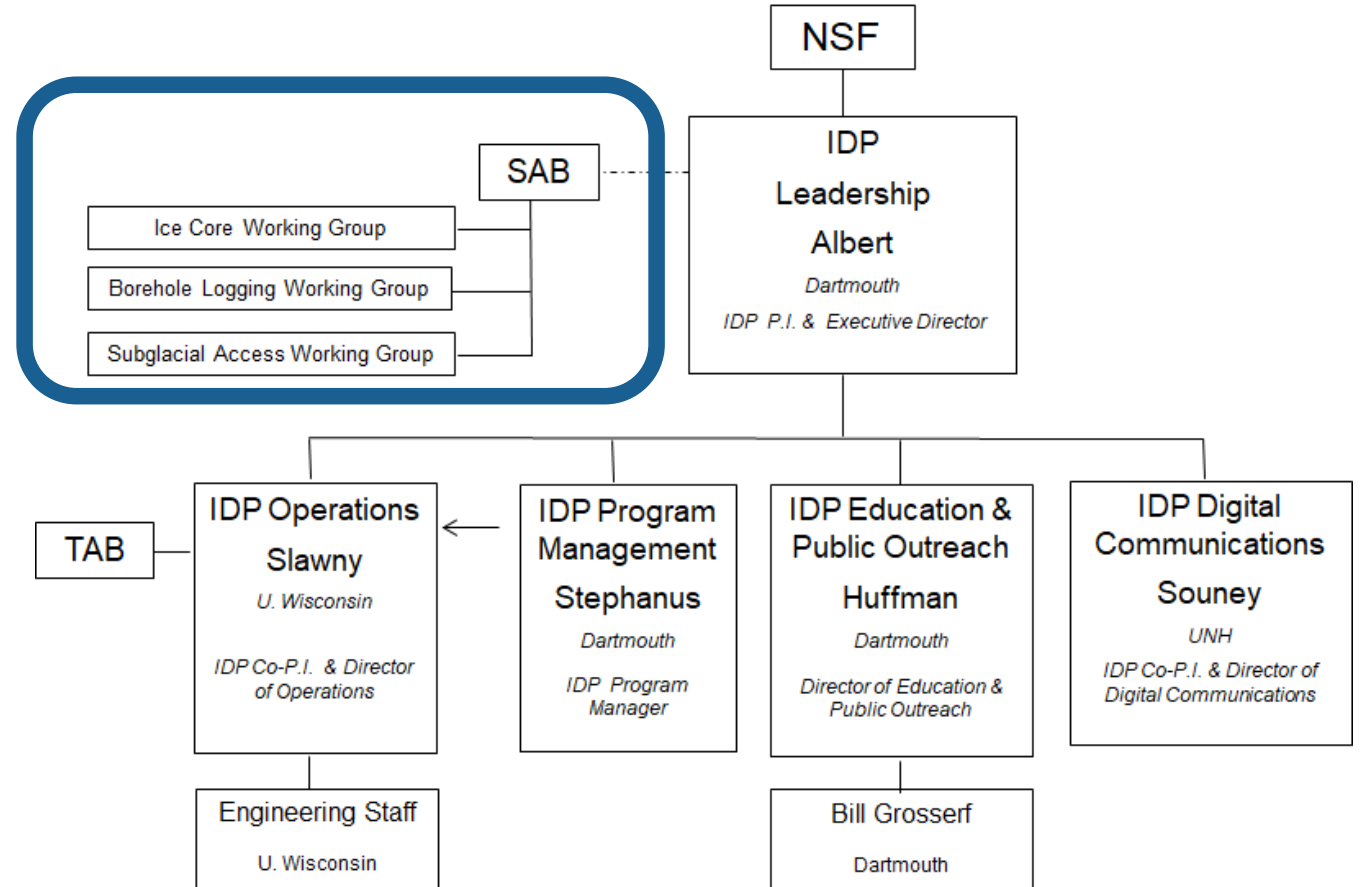


Questions for the SAB

Should the SAWG & BLWG be combined?

What is the best way to engage ongoing dialog & information exchange between the IDP Working Groups?

When should in-person and/or virtual Working Group Meetings occur in the coming 5 years?





IDP 2023-2028

Our renewal IDP proposal is pending at NSF
Fingers crossed!



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Questions?