**Larry D. Hinzman, Ph.D.**
**Interim Vice Chancellor for Research**
**Professor of Civil and Environmental Engineering**

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## EDUCATION

University of Alaska, Fairbanks, (1990) Ph.D. Soil Physics. Emphasis in Arctic Hydrology.
Purdue University, West Lafayette IN (1981) M.S. Agronomy. Emphasis in Remote Sensing.
South Dakota State University, Brookings (1979) B.S. Soil Science and B.S. General Chemistry.

## AREAS OF EXPERTISE

**Hydrology**: Extensive experience in field research and modeling surface and subsurface flow, emphasis upon permafrost hydrology, arctic and subarctic meteorological processes.
**Soil Science and Permafrost**: Proficiency in thermal analysis through numerical and analytical solutions. Soil Physics and Soil Chemistry.

## EMPLOYMENT/PROFESSIONAL EXPERIENCE

Interim Vice Chancellor for Research, University of Alaska Fairbanks (March 2015 – Present).
Director. International Arctic Research Center, University of Alaska Fairbanks (February 2007 – March 2015).
Deputy Director. International Arctic Research Center, University of Alaska Fairbanks (January 2006 – January 2007).
Research Professor of Water Resources. Water and Environmental Research Center, Institute of Northern Engineering, University of Alaska (July 2001 – January 2006).
Associate Research Professor of Water Resources. Water and Environmental Research Center, Institute of Northern Engineering, University of Alaska (July 1996 - July 2001).
Assistant Research Professor of Water Resources. Water Research Center, Institute of Northern Engineering, University of Alaska (July 1991 - July 1996).
Post-Doctoral Research Associate. Water Research Center, Institute of Northern Engineering, University of Alaska (Jan 1990 - July 1991).
Graduate Research Assistant. Water Research Center, Institute of Northern Engineering, University of Alaska (1983-1989).
Agricultural Assistant. Agricultural Experiment Station, University of Alaska (1982-1983).
Environmental Sciences and Remote Sensing Assistant. Northern Technical Services (1982).
Graduate Research Assistant. Laboratory for Applications of Remote Sensing, Purdue University (1979-1981).

**Membership in Professional Organizations**

US Permafrost Association
Canadian Geophysical Union
Arctic Institute of North America
American Geophysical Union

**Graduate Student Supervision**

1) Major Advisor

David Robinson (M.S. Environ. Quality Science)
Mike Malsom (M.S. Environ. Quality Science)
Matt Wegner (M.S. Environmental Engineering)
Shu Li (M.S. Computer Science)
Johnny Mendez (M.S. Environmental Engineering)
William 'Bob' Bolton (Ph.D. Hydrologic Engineering)
Anne Carr (M.S. Environmental Engineering)
Jeff Oatley (M.S. Water Resources Engineering)
Emily Youcha (M.S. Civil Engineering)
Julie Ahern (M.S. Geohydrology)
Matthew Fraver (M.S. Civil Engineering)
D. Dan Miller (M.S. Civil Engineering)
Kristin Susens (M.S. Hydrology)
Braden Galloway (M.S. Civil Engineering)
Anna Liljedahl (Ph.D. Hydrology)
Robert Busey (M.S. Hydrology)
Rena Bryan (M.S. Hydrology)
Charles Jones (Ph.D. Hydrology)
Katrina Bennett (Ph.D. Hydrology)

**Graduate Student Supervision**

2) Thesis Committee

Bhushan Parikh (M.S. Civil Engineering)
Ronald Rovansek (M.S. Civil Engineering)
James McNamara (Ph.D. Hydrology)
Haofang Yu (M.S. Water Resources)
Ziya Zhang (Ph.D. Hydrology)
Greg Probst (M.S. Natural Resources Management)
Pradeep (M.S. Mechanical Engineering)
Amy Srinivasan (Ph.D. Geophysics)
Lisa Popovics (M.S. Natural Resources Mgmt.)
Amanda Cote (M.S. Environ. Quality Science)
Greg Light (M.S. Environ. Quality Science)
Ann Farris (M.S. Environ. Quality Engineering)
William Coughlin (M.S. Environ. Quality Science)
Bunmi Ogunsola (Ph.D. Environmental Engineering)
Robert MacLean (Ph.D. Biology)
Andrew Balsar (M.S. Natural Resources Mgmt.)
Vivek Mehta (M.S. Environmental Quality Eng.)
Neil Meade (M.S. Environmental Quality Science)
Sharon Richmond (Ph.D. Biology)
Michelle Epp (Ph.D. Marine Science)
Kevin Petrone (Ph.D. Biology)
Tatyana Sorokina (M.S. Environ. Quality Science)
Steve Burns (M.S. Geological Engineering)
Francis Isgrigg (M.S. Civil Engineering)
Craig McCauley (M.S. Environmental Quality Science)
Paul Overduin (Ph.D. Hydrology)
Jon O'Donnell (M.S. Biology)
Galina Yershova (M.S. Geophysics)
Yuanyuan Zhao (M.S. Civil Engineering)
Baozhong Liu (M.S. Hydrology)
Nick Lisuzzo (M.S. Biology)
Trevor White (M.S. Civil Engineering)
Erin Strang (M.S. Civil Engineering)
Amy Rodman (M.S. Geohydrology)
Danielle Kitover (M.S. Hydrology)
Anna Forsstrom (Ph.D. Environmental Engineering)
La'ona DeWilde (Ph.D. Biology)
Joel Homan (Ph.D. Hydrology)
Viacheslav Garayshin (Ph.D. Geophysics)
Abraham M Endalamaw (Ph.D. Hydrology)

**Post Doctorate Fellow Supervision**

Dr. Matt Nolan (now a professor at UAF)
Dr. Kenji Yoshikawa (now a professor at UAF)
Dr. Taro Nakai (now at Hokkaido University)
Dr. W. Robert Bolton (now an assistant professor at UAF)
Dr. Jessica Young (formerly an assistant professor at UAF, now at USGS)
Dr. Hiroki Ikawa (now an assistant professor at Tsukuba University)
Dr. Go Iwahana (still a post-doc at UAF)
Dr. Alessio Gusmeroli (formerly an assistant professor at UAF, now in Italy)
Dr. Ana Aguilar-Islas (now an assistant professor at UAF)
Dr. Andrew Roberts (now an assistant professor at the Naval Post-graduate school)
Dr. Adrienne Tivy (now a staff scientist at the Canadian Ice Center)
Dr. Sebastian Mernild (now at the Center for Scientific Studies, Valdivia, Chile)

**Intern Student Supervision**

Stefan Kooman, Netherlands
Imke Schramm, Germany
Anna Liljedahl, Sweden

**Current or Recent Committee Memberships (incomplete list)**

**National**
President, US Permafrost Association
Study of Environmental Arctic Change (SEARCH) Panel on Observing Change
NSF CHAMP Steering Committee Co-Chair
NSF CHAMP Science Management Office Co-Chair
NSF Human Dimensions of the Arctic (HARC) Steering Committee Member
Advisory Panel AGU Virtual Cryospheric Journal
AGU Cryospheric Focus Group Executive Committee, member
AGU Index Term Revision Committee, Member
Universities Council on Water Resources, Member
Polar Research Board, National Academies, Member

**International**
US Representative to the International Permafrost Association
Terrestrial Cryospheric and Hydrologic Systems Working Group, International Conference on Arctic Research Planning (ICARP II), Member
Adaptation Actions for a Changing Arctic, Bering-Chukchi-Beaufort Region, Co-Chair
US Delegate and Vice President, International Arctic Science Committee

**Refereed Journal Papers**

1. Hinzman, L.D., M.E. Bauer, and C.S.T. Daughtry. 1986. Effects of Nitrogen Fertilization on Growth and Reflectance Characteristics of Winter Wheat. Remote Sensing of Environment. 19:47-61.
2. Kane, D.L., L.D. Hinzman, C.S. Benson, and K.R. Everett. 1989. Hydrology of Imnavait Creek, an Arctic Watershed. Holarctic Ecology, 12:262-269.
3. Kane, D.L., R.E. Gieck, and L.D. Hinzman. 1990. Evapotranspiration from a Small Alaskan Arctic Watershed. Nordic Hydrology, 21(4/5):253-272.
4. Kane, D.L., L.D. Hinzman, C.S. Benson and G.E. Liston. 1991. Snow Hydrology of a Headwater Arctic Basin 1, Physical Measurements and Process Studies. Water Resources Research, 27(6):1099-1109.
5. Hinzman, L.D. and D.L. Kane. 1991. Snow Hydrology of a Headwater Arctic Basin 2, Conceptual Analysis and Computer Modeling. Water Resources Research, 27(6):1111-1121.
6. Hinzman, L.D., D.L. Kane, R.E. Gieck, and K.R. Everett. 1991. Hydrologic and Thermal Properties of the Active Layer in the Alaskan Arctic. Cold Regions Science and Technology, 19(2):95-110.
7. Kane, D.L., L.D. Hinzman and J.P. Zarling. 1991. Thermal Response of the Active Layer in a Permafrost Environment to Climatic Warming. Cold Regions Science and Technology, 19(2):111-122.
8. Hinzman, L.D. and D.L. Kane. 1992. Potential Response of an Arctic Watershed During a Period of Global Warming. Journal of Geophysical Research-Atmospheres, 97(D3):2811-2820.
9. Villasenor, J.D., D.R. Fätland and L.D. Hinzman. 1993. Change Detection on Alaska's North Slope Using Repeat-pass ERS-1 SAR Images. IEEE Transactions on Geoscience and Remote Sensing. 31(1):227-236.
10. Cooper, L.W., C. Solis, D.L. Kane and L.D. Hinzman. 1993. Application of Oxygen-18 Tracer Techniques to Arctic Hydrologic Processes. Arctic and Alpine Research. 25(3):247-255.
11. Goering, D. J., H. Chen, L. D. Hinzman and D. L. Kane. 1995. Removal of Terrain Effects from SAR Satellite Imagery of Arctic Tundra, IEEE Transactions on Geoscience and Remote Sensing, 33(1):185-194.
12. Kane, D.L., L.D. Hinzman, H. Yu and D.J. Goering. 1996. The Use of SAR Satellite Imagery to Measure Active Layer Moisture Contents in Arctic Alaska. Nordic Hydrology. 27:25-38.
13. Rovansek, R.J., L.D. Hinzman, and D.L. Kane. 1996. Hydrology of a Tundra Wetland Complex on the Alaskan Arctic Coastal Plain. Arctic and Alpine Research. 28(3):311-317.

14. Kane, D.L., R.E. Gieck, and L.D. Hinzman. 1997. Snowmelt modeling at small Alaskan arctic watershed. ASCE Journal of Hydrologic Engineering. 2(4):204-210.

15. McNamara, J.P., D.L. Kane, L.D. Hinzman. 1997. Hydrograph separations in an arctic watershed using mixing model and graphical techniques. Water Resources Research. 33(7):1707-1719.

16. Lynch, A. H., F. S. Chapin III, L.D. Hinzman, W. Wu, E. Lilly, G. Vourlitis, E. Kim. 1998. Surface Energy Balance on the Arctic Tundra: Measurements and Models. Journal of Climate. 12(8):2585-2606.

17. McNamara, J. P., D. L. Kane, and L. D. Hinzman. 1998. An analysis of streamflow hydrology in the Kuparuk River basin, Arctic Alaska: A nested watershed approach. Journal of Hydrology, 206:39-57.

18. Mendez, J., L.D. Hinzman, D.L. Kane. 1998. Evapotranspiration from a wetland complex on the arctic coastal plain of Alaska. Nordic Hydrology. 29(4/5):303-330.

19. Hinzman, L.D., D.J. Goering and D.L. Kane. 1998. A Distributed Thermal Model for Calculating Temperature Profiles and Depth of Thaw in Permafrost Regions. Journal of Geophysical Research - Atmospheres. 103(D22):28,975-28,991.

20. Kane, D.L., L.D. Hinzman, J.P. McNamara, Z. Zhang, and C.S. Benson. 2000. An Overview of a Nested Watershed Study in Arctic Alaska. Nordic Hydrology, 31 (4/5). Pp. 245-266.

*21.* Zhang, Z. D.L. Kane and L.D. Hinzman, 2000. Development and Application of a Spatially Distributed Arctic Thermal and Hydrologic Process Model. Journal of Hydrologic Processes. 14(6):1017-1044.

22. Meade, N. L.D. Hinzman and D.L. Kane. 1999. Spatial estimation of soil moisture using synthetic aperture radar in Alaska. Advances in Space Research. 24(7):935-940.

23. McNamara, J. P., D. L. Kane, and L. D. Hinzman. 1999. An analysis of an arctic channel network using a digital elevation model. Geomorphology. 29:339-353.

24. Hinzman, Larry D., Matthew Wegner, and Michael R. Lilly. 2000. Hydrologic Investigations of Ground-water and Surface-water Interactions in Subarctic Alaska. Nordic Hydrology. 4/5:339-356.

25. Oechel, W.C., G.L. Vourlitis, S.J. Hastings, R.C. Zulueta, L.D. Hinzman, D.L. Kane. 2000. Acclimation of ecosystem $CO_2$ exchange in the Alaskan Arctic in response to decadal climate warming. Nature. 406:978-981.

26. Yang, D., D.L. Kane, L.D. Hinzman, B.E. Goodison, J.R. Metcalfe, P.Y.T. Louie, G.H. Leavesley, D.G. Emerson and C.L. Hanson. 2000. An evaluation of the

Wyoming gauge system for snowfall measurement. Water Resources Research. 36(9):2665-2677.

27. Ishikawa, N., Sato, N., Kawauchi, K., Yoshikawa, K., and L. D. Hinzman. 2001. Characteristics of the water cycle in the discontinuous permafrost region in the interior Alaska. Polar Meteorology and Glaciology, 15, 78-90.
28. Kane, D.L., K.M. Hinkel, D.J. Goering, L.D. Hinzman and S.I. Outcalt. 2001. Non-conductive Heat Transfer Associated with Frozen Soils. Global and Planetary Change, 29:275-292.
29. Hinzman Larry, Kenji Yoshikawa, Masami Fukuda, Vladimir Romanovsky, Kevin Petrone and William Bolton. 2001. Wildfire in the Subarctic Boreal Forests, Ecosystem Impacts and Response to a Warming Climate. Tôhoku Geophysical Journal. 36(2):230-232.
30. Kane, D.L., K.M. Hinkel, D.J. Goering, L.D. Hinzman and S.I. Outcalt. 2001. Non-conductive Heat Transfer Associated with Frozen Soils. Global and Planetary Change, 29:275-292.
31. Yoshikawa, K., Hinzman, L. D., and Gogineni, P., 2002 Ground temperature and permafrost mapping using an equivalent latitude/elevation model. Journal of Glaciology and Geocryology. 24. 5. 526-531.
32. Bowling, L. C., D. L. Kane, R. E. Gieck, L. D. Hinzman, and D. P. Lettenmaier. 2003. The role of surface storage in a low-gradient Arctic watershed, Water Resources Research, *39*(4), 1087, doi:10.1029/2002WR001466, 2003.
33. Yang, D., D. L. Kane, L. Hinzman, X. Zhang, T. Zhang, and H. Ye. 2002. Siberian Lena River hydrologic regime and recent change, *J. Geophys. Res.*, *107*(D23), 4694, doi:10.1029/2002JD002542, 2002.
34. Vörösmarty, Charles, Larry Hinzman, Bruce Peterson, David Bromwich, Lawrence Hamilton, James Morison, Vladimir Romanovsky, Matthew Sturm, Robert Webb. 2002. Arctic Hydrology and Its Role in Understanding Global Change: A Call for Synthesis. Eos. 28 May 2002. 83(22) 241, 244-245, 249.
35. McGuire, A.D., C. Wirth, M. Apps, J. Beringer, J. Clein, H. Epstein, D.W. Kicklighter, J. Bhatti, F.S. Chapin III, B. de Groot, D. Efremov, W. Eugster, M. Fukuda, T. Gower, L. Hinzman, B. Huntley, G.J. Jia, E. Kasischke, J. Melillo, V. Romanovsky, A. Shvidenko, E. Vaganov, and D. Walker. 2002. Environmental variation, vegetation distribution, carbon dynamics, and water/energy exchange in high latitudes. *Journal of Vegetation Science* 13:301-314.
36. Huntington, Henry P., Matt Berman, Lee Cooper, Larry Hamilton, Larry Hinzman, Knut Kielland, Elizabeth Kirk, Jack Kruse, Amanda Lynch, David McGuire, David Norton, Astrid Ogilvie. 2003. Human Dimensions of the Arctic System: interdisciplinary approaches to the dynamics of social-environment relationships. Arctic Research of the United States. Special Issue on ARCSS (Spring 2003)

37. Zhang, T., T. Scambos, T. Haran, L.D. Hinzman, R.G. Barry, and D.L. Kane, 2003: Ground-based and satellite-derived measurements of surface albedo on the North Slope of Alaska. Journal of Hydrometeorology. 4:77-91.

38. Shibata. H., Petrone, K.C., Hinzman, L.D. and Boone, R.D. 2003. The effect of fire on dissolved organic carbon and inorganic solutes in spruce forest in the permafrost region of interior Alaska. Soil Science and Plant Nutrition. 49(1):25-29.

39. Lloyd, Andrea H. Kenji Yoshikawa, Christopher L. Fastie, Larry Hinzman, Matthew Fraver. 2003. Effects of permafrost degradation on woody vegetation at arctic treeline on the Seward Peninsula, Alaska. Permafrost and Periglacial Processes. 14(2):93-102.

40. Bowling, L. C., D. L. Kane, R. E. Gieck, L. D. Hinzman, and D. P. Lettenmaier, The role of surface storage in a low-gradient Arctic watershed, *Water Resour. Res.*, *39*(4), 1087, doi:10.1029/2002WR001466, 2003.

41. Walker, D.A., G.J. Jia, H.E. Epstein, M.K. Raynolds, F.S. Chapin III, C. Copass, L.D. Hinzman, J.A. Knudson, H.A. Maier, G.J. Michaelson, F. Nelson, C.L. Ping, V.E. Romanovsky, N. Shiklomanov. 2003. Vegetation-soil-thaw-depth relationships along a Low-Arctic bioclimate gradient, Alaska: Synthesis of information from the ATLAS studies. Permafrost and Periglacial Processes. 14(2):103-124.

42. Hinzman, L., M. Fukuda, D. V. Sandberg, F. S. Chapin, III, and D. Dash, FROSTFIRE: An experimental approach to predicting the climate feedbacks from the changing boreal fire regime, *J. Geophys. Res.*, *108*(D1), 8153, doi:10.1029/2001JD000415, 2003.

43. Yoshikawa, K., W. R. Bolton, V. E. Romanovsky, M. Fukuda, and L. D. Hinzman, Impacts of wildfire on the permafrost in the boreal forests of Interior Alaska, J. Geophys. Res., 107, 8148, doi:10.1029/2001JD000438, 2002. [printed 108(D1), 2003]

44. Yoshikawa, K. and L.D. Hinzman. 2003. Shrinking thermokarst ponds and groundwater dynamics in discontinuous permafrost. Permafrost and Periglacial Processes. 14(2):151-160.

45. Hinzman, L.D., N. Ishikawa, K. Yoshikawa, W.R. Bolton, K.C. Petrone. Hydrologic Studies in Caribou Poker Creeks Research Watershed in Support of Long term Ecological Research. Eurasian Journal of Forest Research. 5-2:67-71.

46. Hinzman, L.D., D.L. Kane, and K. Yoshikawa. 2003. Soil Moisture Response to a changing climate in arctic regions. Tôhoku Geophysical Journal. 36(4):369-373.

47. Nolan, Matt, Dennis R. Fatland, and Larry Hinzman, 2003. DInSAR measurement of soil moisture. IEEE Transactions in Geoscience and Remote Sensing, 41(12), 2802-2813.

48. Kane, D.L. and L.D. Hinzman. 2003. Introduction: Permafrost in a Dynamic Environment. In Kane and Hinzman (eds) Special Issue: Interactions of Permafrost with Climatic, Hydrologic and Ecosystem Processes. Permafrost and Periglacial Processes, 14(2):89-91.

49. Kane, D.L. and L.D. Hinzman. 2004. Monitoring Extreme Environments: Arctic Hydrology in Transition. Water Resources Impact. 6(1):24-27.

50. Hinzman, Larry D. Neil D. Bettez, W. Robert Bolton, F. Stuart Chapin, Mark B. Dyurgerov, Chris L. Fastie, Brad Griffith, Robert D. Hollister, Allen Hope, Henry P. Huntington, Anne M. Jensen, Gensuo J. Jia, Torre Jorgenson, Douglas L. Kane, David R. Klein, Gary Kofinas, Amanda H. Lynch, Andrea H. Lloyd, A. David McGuire, Frederick E. Nelson, Walter C. Oechel, Thomas E. Osterkamp, Charles H. Racine, Vladimir E. Romanovsky, Robert S. Stone, Douglas A. Stow, Matthew Sturm, Craig E. Tweedie, George L. Vourlitis, Marilyn D. Walker, Donald A. Walker, Patrick J. Webber, Jeff Welker, Kevin S. Winker, Kenji Yoshikawa. 2005. Evidence and Implications of Recent Climate Change in Northern Alaska and Other Arctic Regions. *Climatic Change* 72(3):251-298.

51. Jones J.B. Jr., K.C. Petrone, J.C. Finlay, L.D. Hinzman, W.R. Bolton. 2005. Nitrogen loss from watersheds of interior Alaska underlain with discontinuous permafrost, Geophys. Res. Lett., 32, L02401, doi:10.1029/2004GL021734.

52. Huntington, Henry P. Michelle Boyle, Gwenn Flowers, John Weatherly, Larry Hamilton, Larry Hinzman, Craig Gerlach, Rommel Zulueta, Craig Nicolson, Jonathan Overpeck. 2006. The influence of human activity in the Arctic on climate and climate impacts. *Climatic Change*. DOI 10.1007/s10584-006-9162-y.

53. Takashi Hirano, Shin-ichi Urano, Tomotsugu Yazaki, Kazuo Yabe, Kunio Kawauchi, Keiji Okada, Larry Hinzman, Nobuyoshi Ishikawa. 2005. $CO_2$ exchange of a Sphagnum fuscum community in interior Alaska. Journal of Agricultural Meteorology 01/2005; 60(5):785-788.

54. Smith, L. C. Y. Sheng, G. M. MacDonald, L. D. Hinzman. 2005. Disappearing Arctic Lakes. Science, 308:1429. 3 June 2005.

55. Overpeck, J. T. M. Sturm, J. A. Francis, D. K. Perovich, M. C. Serreze, R. Benner, E. C. Carmack, F. S. Chapin III, S. C. Gerlach, L. C. Hamilton, L. D. Hinzman, M. Holland, H. P. Huntington, J. R. Key, A. H. Lloyd, G. M. MacDonald, J. McFadden, D. Noone, T. D. Prowse, P. Schlosser, and C. Vörösmarty. 2005. Arctic System on Trajectory to New, Seasonally Ice-Free State. 86(34): 309, 312–313. 23 August 2005.

56. Berezovskaya, Sveta Daqing Yang, Larry Hinzman. 2005. Long-term annual water balance analysis of the Lena River. Global and Planetary Change 48:84–95.

57. Chapin, F.S. III, M. Sturm, M.C. Serreze, J.P. McFadden, J.R. Key, A.H. Lloyd, A.D. McGuire, T.S. Rupp, A.H. Lynch, J.P. Schimel, J. Beringer, W.L. Chapman,

H.E. Epstein, E.S. Euskirchen, L.D. Hinzman, G. Jia, C.-L. Ping, K.D. Tape, C.D.C. Thompson, D.A. Walker, and J.M. Welker. Role of Land-Surface Changes in Arctic Summer Warming. Science. 28 October 2005: Vol. 310 no. 5748 pp. 657-660 *DOI:* 10.1126/science.1117368.

58. Yoshikawa, K., C. Leuschen, A. Ikeda, K. Harada, P. Gogineni, P. Hoekstra, L. Hinzman, Y. Sawada, and N. Matsuoka (2006), Comparison of geophysical investigations for detection of massive ground ice (pingo ice), *J. Geophys. Res.*, 111, E06S19, doi:10.1029/2005JE002573.
59. Shutov, V., R. E. Gieck, L. D. Hinzman and D. L. Kane. 2006. Evaporation from Land Surface in High Latitude Areas: A Review of Methods and Study Results. Nordic Hydrology 37(4/5):393-411.
60. White, Daniel, Larry Hinzman, Lilian Alessa, John Cassano, Molly Chambers, Kelly Falkner, Jennifer Francis, William J. Gutowski Jr., Marika Holland, R. Max Holmes, Henry Huntington, Douglas Kane, Andrew Kliskey, Craig Lee, James McClelland, Bruce Peterson, T. Scott Rupp, Fiamma Straneo, Michael Steele and Rebecca Woodgate, Daqing Yang, Kenji Yoshikawa, and Tingjun Zhang. 2007: The Arctic freshwater system: Changes and impacts. J. Geophys. Res., 112, G04S54, doi:10.1029/2006JG000353.
61. Yoshikawa, K., D. L. Kane and L. D. Hinzman. 2007. Spring and Aufeis (Icing) Hydrology in Brooks Range. Journal of Geophysical Research-Biosciences, 112, G04S43, doi:10.1029/2006JG000294.
62. McNamara, J.P., Oatley, J.A., Kane, D.L., and Hinzman, L.D., 2008 Case study of a large summer flood on the North Slope of Alaska: bedload transport. Hydrology Research, 39.4: 299-308, doi:10.2166/nh.2008.006.
63. Kane, D.L., R.E. Gieck and L.D. Hinzman. 2008. Water Balance for a Low-Gradient Watershed in Northern Alaska. In: Proceedings of Ninth International Conference on Permafrost, D.L. Kane and K.M. Hinkel (Eds.), University of Alaska, Institute of Northern Engineering, pp. 883-888.
64. Hinzman, L.D., R.E. Gieck and D.L. Kane. 2008. Spatial and Temporal Variation of Soil Temperatures and Arctic Hydrology in the Kuparuk River Basin, Alaska. D.L. Kane and K.M. Hinkel (Eds.), University of Alaska, Institute of Northern Engineering, pp. 711-716.
65. Kane, D.L., L.D. Hinzman, R.E. Gieck, J.P. McNamara, E. Youcha and J.A. Oatley. 2008. Contrasting Extreme Runoff Events in Areas of Continuous Permafrost, Arctic Alaska. Hydrology Research, 38(4):287-298.
66. Alessa L, Kliskey A, Lammers R, Arp C, White D, Hinzman L, Busey R. 2008. The arctic water resource vulnerability index: an integrated assessment tool for community resilience and vulnerability with respect to freshwater. Environ Manage. 2008 Sep;42(3):523-41. doi: 10.1007/s00267-008-9152-0. Epub 2008 Jun 17.
67. Francis, J.A., D.M. White, J.J. Cassano, W.J. Gutowski Jr., L.D. Hinzman, M.M. Holland, M.A. Steele, and C.J. Vörösmarty (2009), An arctic hydrologic system in

transition: Feedbacks and impacts on terrestrial, marine, and human life. J. Geophys. Res., 114, G04019, doi:10.1029/2008JG000902.
68. Yi S, McGuire AD, Harden J, Kasischke E, Manies K, Hinzman L, Liljedahl A, Randerson J, Liu H, Romanovsky V, Marchenko, S., and Kim, Y. 2009. Interactions between soil thermal and hydrological dynamics in the response of Alaska ecosystems to fire disturbance. *Journal of Geophysical Research – Biogeosciences*, 114, G02015, doi:10.1029/2008JG000841.
69. Michael A. Rawlins, Michael Steele, Marika M. Holland, Jennifer C. Adam, Jessica E. Cherry, Jennifer A. Francis, Pavel Ya Groisman, Larry D. Hinzman, Thomas G. Huntington, Douglas L. Kane, John S. Kimball, Ron Kwok, Richard B. Lammers, Craig M. Lee, Dennis P. Lettenmaier, Kyle C. McDonald, Erika Podest, Jonathan W. Pundsack, Bert Rudels, Mark C. Serreze, Alexander Shiklomanov, Øystein Skagseth, Tara J. Troy, Charles J. Vörösmarty, Mark Wensnahan, Eric F. Wood, Rebecca Woodgate, Daqing Yang, Ke Zhang, Tingjun Zhang. 2010. Analysis of the Arctic System for Freshwater Cycle Intensification: Observations and Expectations. Journal of Climate. 23(21):5715-5737, doi: 10.1175/2010JCLI3421.1.
70. Rowland, J.C., C. E. Jones, G. Altmann, R. Bryan, B. T. Crosby, G. L. Geernaert, L. D. Hinzman, D. L. Kane, D. M. Lawrence, A. Mancino, P. Marsh, J. P. Mcnamara, V. E. Romanovsky, H. Toniolo, B. J. Travis, E. Trochim, and C. J. Wilson, 2010. Arctic Landscapes in Transition: Responses to Thawing Permafrost. EOS, 91(26): 229. doi:10.1029/2010EO260001
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4. Mueller, G.S. and L.D. Hinzman. 1995. Development of a Powerful and User Friendly Soils Database. University of Alaska Transportation Research Center Final Report. INE/TRC 94.15. 42 pp.
5. Johnson, R.A., L.D. Hinzman and D.L. Kane. 1994. Contaminant Transport Processes at Fort Wainwright Alaska, Results of Tracer Studies. Water Research Center Progress Report.
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10. L.D. Hinzman, M.R. Lilly, J.F. Braddock, K.A. McCarthy, S. Richmond and M. Wegner. 1998. Natural Attenuation of Chlorinated-Hydrocarbon Contamination at Fort Wainwright, Alaska, A Hydrogeochemical and Microbiological Investigation.
11. Stephen Burns, Larry Hinzman, and Michael Lilly. 1998. PHREEQC Geochemical Simulation of transient Ground-Water and Surface-Water Conditions at Fort Wainwright, Alaska. INE/WERC Report 99.04. 27 pp.
12. Larry D. Hinzman, Ronald A. Johnson, and Douglas L. Kane. 1998. Ann M. Farris and Greg J. Light Contaminant Transport Processes at Fort Wainwright, Alaska: A Field Research and Computer Modeling Analysis. 241 pp.
13. Vörösmarty, C.J., L.D. Hinzman, B.J. Peterson, D.H. Bromwich, L.C. Hamilton, J. Morison, V.E. Romanovsky, M. Sturm, and R.S. Webb. 2001. *The Hydrologic Cycle and its Role in Arctic and Global Environmental Change: A Rationale and Strategy for Synthesis Study*. Fairbanks, Alaska: Arctic Research Consortium of the U.S., 84 pp.
14. Sato, T., Y. Kamata, O. Abe, K. Kosugi, M. Shimizu, T. Nakamura, K. Yoshikawa, L.D. Hinzman, N. Ishikawa, and A. Sato. 2001. Observation of Air-Snow-Permafrost Interaction at the Inland of Alaska (1) Seasonal and Inter-Annual Variations of Meteorological, Soil and Snow Cover Conditions. Technical Report National Research Institute for Earth Science and Disaster Prevention 61:119-140. (in Japanese).
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16. Peter Q Olsson, Larry D. Hinzman, Matthew, Glen Liston, Douglas L Kane. 2002. Surface Climate and Snow-Weather Relationships of the Kuparuk Basin on Alaska's Arctic Slope. ERDC/CRREL Technical Report TR-02-10. U.S. Army Corps of Engineers. 49 pps.
17. A. Roberts, L.D. Hinzman, J.E. Walsh, M. Holland, J. Cassano, R. Döscher, H. Mitsudera, A. Sumi. 2010. 2010. A Science Plan for Regional Arctic System

Modeling, A report to the National Science Foundation from the International Arctic Science Community. International Arctic Research Center Technical Papers 10-0001. International Arctic Research Center, University of Alaska Fairbanks. 47 pp.

**Funded Research Projects**

This list of funded projects was compiled from several sources, so it may be incomplete, but is accurate in terms of the projects listed here. While at UAF, Hinzman served as PI on at least 59 projects totaling about $58.9M and co-investigator on 19 others totaling approximately $14.9M.

1. IARC - Cooperative Agreement Year 4. NSF. 1-Jan-06-31-Jul-13 $13,872,981. Hinzman (PI) Walsh (Co-I)
2. "Creating a Regime-level Understanding and Predictive Capability of the Inter-connections among Arctic Terrestrial, Atmospheric and Marine Systems" San Diego State University. 26-Sep-05 - 31-Jul-11. $50,049. Hinzman (PI)
3. Current climate changes over Eastern Siberia and their impact on permafrost landscapes, ecosystem dynamics, and hydrological regime NASA 15-Apr-06 - 21-Oct-12 - $207,091. Hinzman (PI), Romanovsky (Co-I) and Yoshikawa (Co-I).
4. Subcontract to UNH in support of Arctic CHAMP University of New Hampshire 1-Jun-06 - 31-Jul-09 $65,000. Hinzman (PI)
5. IJIS Science 2007 Japan Aerospace Exploration Agency. 1-Apr-07 - 1-Dec-09 $362,863. Hinzman (PI)
6. JAMSTEC JFY2007 Research. 20-Apr-07 - 2-Jul-15. $2,975,288. Hinzman (PI)
7. JAMSTEC JFY 2008. 1-Apr-08 - 8-Mar-11. $2,975,287. Hinzman (PI)
8. JAXA JFY2008. 7-Apr-08 - 18-Apr-11. $562,486. Hinzman (PI)
9. JAMSTEC JFY2009 1-Apr-09 - 14-Feb-12 $2,915,000. Hinzman (PI)
10. JAXA FY2009. 1-Apr-09 - 31-May-11. $587,878. Hinzman (PI)
11. CHAMPS City College of New York 30-Jun-08 - 30-Sep-09. $10,106. Hinzman (PI)
12. Biocomplexity Tundra Carbon Balance San Diego State University 22-Jul-08 - 20-Nov-10. $22,500. Hinzman (PI)
13. JAXA JFY2010. 27-Mar-10 22-Nov-11. $1,750,000. Hinzman (PI)
14. JAMSTEC JFY2010. 27-Mar-10 - 14-Feb-12. $1,575,899. Hinzman (PI)
15. DOE October 2010 Workshop Battelle Oak Ridge National Laboratory 13-Sep-10 - 31-Jul-14 $222,997. Hinzman (PI)
16. Alaska Climate Data Center US DoE. 1-Mar-11 - 31-Oct-13. $963,285. Hinzman (PI)
17. Jamstec JFY2011. 1-Apr 11 - 31-Jul-14. $2,406,054. Hinzman (PI)
18. JAXA JFY11. 1-Apr-11 - 31-Jul-14. $730,336. Hinzman (PI)

19. Hinzman-DEV of Cold Regional Scale US Department of Energy 15-Sep-11 1-Nov-15 $786,267. Hinzman (PI), Bolton (Co-I) and Cable (Young) (Co-I).
20. JAMSTEC JFY2012. 1-Apr-12 - 2-Sep-14 $2,201,544. Hinzman (PI)
21. JAXA JFY12. 1-Apr-12 - 23-Oct-14. $802,469. Hinzman (PI)
22. Climate Dev Arctic Pred Models IARC Los Alamos National Laboratory 21-Aug-12 18-Mar-15 $99,826. Hinzman (PI) Liljedahl (Co-I)
23. NGEE (Taxable) Battelle Oak Ridge National Laboratory. 29-Oct-12 - 2-Jul-15. $49,259. Hinzman (PI), Romanovski (Co-I)
24. NGEE (Non-taxable) Battelle Oak Ridge National Laboratory 1-Jan-12 15-Feb-16 $3,441,462. Hinzman (PI), Romanovski (Co-I)
25. JAXA JFY13. 1-Apr-13 - 10-Nov-14 $792,682. Hinzman (PI)
26. JAMSTEC JFY2013. 1-Apr-13 - 31-Jul-14 $1,871,312. Hinzman (PI)
27. ArcSEES - IARC NSF 1-Sep-13 15-Oct-16 $1,227,445. Loring (PI), Walsh (Co-I), Gerlach (Co-I), Hinzman (Co-I).
28. DOE Support AACA - BBC Department of Energy 15-Jun-14 30-Sep-16 $314,338. Hinzman (PI)
29. Arctic Collaborative Environment - Arctic Today. NASA. 18-Sep-14 - 15-Jul-15 $95,000. Hinzman (PI)
30. NSF Award Number1533726 03/15/2015 02/29/2016

    $65,386 "Arctic Science Summit Week 2015 Travel Support," Larry D. Hinzman (PI).
31. NSF Award Number1448734 08/01/2014 07/31/2016

    $99,995 "Coordination and Participation: Writing Workshops - Adaptation Actions for a Changing Arctic - Bering Beaufort Chukchi Region," Larry D. Hinzman (PI), John E. Walsh (Co-I).
32. NSF Award Number1203987 02/01/2012 01/31/2013

    $80,667 "IPY Montreal 2012 ~ (April 22-27, 2012, Montreal, Canada)," Larry D. Hinzman (PI).
33. NSF Award Number1237438 06/01/2012 05/31/2013

    $109,436 "Coordination and Participation: US-UK Joint Workshop on Arctic Research," Larry D. Hinzman (PI).
34. NSF Award Number1161526 05/15/2012 04/30/2013

    $73,068 "TICOP: Tenth International Conference on Permafrost (June 2012 / Russia)," Larry D. Hinzman (PI).
35. NSF Award Number0919608 09/01/2009 08/31/2012

$3,000,000 Collaborative Research: PACMAN - Cyberinfrastructure for Discovering Climate Change Impacts on Water Resources across Alaska and the Hawaiian Islands. Gregory Newby (PI), Lilian Alessa (Co-I), Larry D. Hinzman (Co-I), and Jessica E. Cherry (Co-I).

36. NSF Award Number0652838 07/01/2008 06/30/2011

    $7,309,483 International Collaboration to Achieve Circumpolar Synthesis and Integration . Larry D. Hinzman (PI) and John Walsh (Co-I)

37. NSF Award Number0710441 07/15/2008 06/30/2009

    $25,000 "Support for the Ninth International Conference on Permafrost (NICOP), Fairbanks, Alaska," Douglas L. Kane (PI) and Larry D. Hinzman (Co-I).

38. NSF Award Number0610357 06/01/2006 10/31/2008

    $703,381. "Arctic-CHAMP Project Office: The Arctic Community-Wide Hydrological Analysis and Monitoring Program," Charles J. Vörösmarty (PI), Larry D. Hinzman (Co-I).

39. NSF Award Number1032352 05/15/2010 10/31/2010

    $76,000 "Group Travel Award: IPY 2010 Oslo Science Conference," Larry D. Hinzman (PI), Elena B. Sparrow (Co-I).

40. NSF Award Number0328686 01/01/2004 12/31/2009

    $1,646,687 Daniel M. White (PI), Larry D. Hinzman (Co-I), Lilian Alessa (Co-I), Peter P. Schweitzer (Co-I), "The Intersection between climate change water resources and humans in the Arctic."

41. Water Resources Investigations to Guide Industrial Water Use on Alaska's North Slope. D. White (PI), Larry Hinzman Co-PI. $1,313,443. 30 September 2005 – 1 October, 2008.

42. Developing an Understanding and Predictive Capability of the Interconnections Among Arctic Terrestrial, Atmospheric, and Marine Systems. W. Oechel (PI), L. Hinzman (Co-PI), W. Maslowski (Co-PI), J. Kimball (Co-PI), J. Cassano (Co-PI). $530,327. Sept 15, 2004 – Sept 14, 2007.

43. Collaborative Research: Detection and attribution of changes in the hydrologic regimes of the Mackenzie, the Kuparuk and the Lena River Basins. L. Hinzman (PI) K. Yoshikawa (Co-PI), M. Nolan (Co-PI), D. Kane (Co-PI). $2,371,353 January 1, 2003-December 31 2007.

44. The Arctic Community-wide Hydrological Analysis and Monitoring Program (Arctic-CHAMP) Science Management Office. Vörösmarty (PI) Hinzman (Co-PI). NSF. $844,000 1 September 2002- 31 August 2007.

45. Quantifying the Thermal and Permafrost Impacts of a Tundra Wildfire. NSF Small Grants for Exploratory Research (SGER) Proposal. July 1, 2003 – June 31, 2005. Year 1 $50,000 Year 2 $50,000. Hinzman (PI)

46. Physical, Biological and Chemical Implications of Mid-Winter Pumping of Tundra Ponds. L. Hinzman (PI) and D.L. Kane (Co-PI). U.S. Department of Energy. Year 1 $200,000 Year 2 $300,000 Year 3 $400,000. 30 September 2002 – 1 October, 2005.
47. Tundra Lake Study. L. Hinzman (PI). British Petroleum Exploration, Inc. Year 1 $35,000.
48. Toward improved process-based pan-Arctic prediction of land surface moisture and energy fluxes. L.D. Hinzman (PI), D. Lettenmaier and D. Yang. NASA 2004 $225,000 1, 2002 – January 31, 2005.
49. SAR Analysis of soil moisture in multiple watersheds using multiple techniques. Matt Nolan (PI)and Larry Hinzman (Co-PI). TRW. Jan 2001 – Jan 2002. $255,854.
50. Investigating the Capability to Estimate Soil Surface Moisture Level and Trafficability in Multiple Landscape Types. L.D. Hinzman (PI) and Matt Nolan (Co-PI). TRW Systems Integration Group, Joint National Test Facility. $210,128. July 1, 2000 - Jan 31, 2001.
51. Methods of Defining Geohydrologic Systems for Sustainable Development in Interior Alaska Mining Districts. M.R. Lilly and L.D. Hinzman. Alaska Science and Technology Foundation. July 1, 2000 - December 1, 2002. $196,500.
52. Improving Predictive Capability of Boreal Forest Response to Forest Fires. L.D. Hinzman (PI), Masami Fukuda (Co-PI), F.Stuart Chapin (Co-PI), Vladimir Romanovsky (Co-PI). Japanese Innovative Technology for the Earth. $450,000. Nov 1998 – April 2001.
53. Temporal Variation of Hydrology in the Alaskan Arctic. D.L. Kane (PI), L.D. Hinzman (Co-PI), C.S. Benson (Co-PI) and J.P. McNamara (Co-PI). NSF. $959,954. 1999 - 2003.
54. Hydrologic Response and Feedbacks to a Warmer Climate in Arctic Regions. L.D. Hinzman (PI), Douglas L. Kane (Co-PI), Douglas J. Goering (Co-PI). NSF. $1,656,190. 1999 - 2002.
55. Developing a Capability to Estimate Soil Surface Moisture Level in Multiple Landscape Types. L.D. Hinzman (PI) and Matt Nolan (Co-PI). TRW Systems Integration Group, Joint National Test Facility. $256,000 and ARSC $143,000. June 15, 1999 – June 14, 2000.
56. Geomorphological Controls on Hydrological Processes in the Alaskan Arctic. L.D. Hinzman (PI). U.S. Geological Survey. State Water Resources Research Institute Program. $35,300. June 1999- May 2001.
57. Fort Wainwright Hydrologic Monitoring Network. L.D. Hinzman (PI) and M.R. Lilly (Co-PI). ENSR International Consulting. $431,713. March 16, 1998 – December 31, 2000.

58. Long Term Ecological Research, Caribou Poker Creeks Research Watershed. F.S. Chapin (PI) L.D. Hinzman and numerous others. (Co-PI) NSF. On-going. $76,509/yr. (Reflects only the portion of Hinzman's research) January 1997 December 2005.

59. Vertical moisture and energy fluxes and soil moisture dynamics in Western Alaska. L.D. Hinzman (PI) and D.L. Kane (Co-PI). Subcontract to Chapin. $25,000. May 1998 – April 1999.

60. Hydrologic Linkages with Arctic Freshwater and Terrestrial Systems. D.L. Kane (PI), L.D. Hinzman (Co-PI), D.J. Goering (Co-PI) and C.S. Benson (Co-PI). NSF. $1,233,000 March 1994 – December 1998.

61. FROSTFIRE, Caribou Poker Creeks Research Watershed. F.S. Chapin (PI), L.D. Hinzman (Co-PI), S. Sandberg (Co-PI). NSF/Department of Energy TECO Program. $1,200,000. March 1997 - Feb 2000.

62. Natural Attenuation of Contamination at Fort Wainwright, Alaska: A hydrogeochemical and microbiological investigation of surface-water/ground-water interactions, their influence on the fate of organic contaminants in ground water, and implications for site remediation. L.D. Hinzman (PI), M.R. Lilly (Co-PI), J.F. Braddock (Co-PI), S.A. Leake (Co-PI). U.S. Army Alaska, U.S. Army Environmental Center. September 1996 – August 1998. $396,000.

63. Research Experience for Undergraduate Students in association with Hydrologic Response and Feedbacks to a Warmer Climate in Arctic Regions. . L.D. Hinzman (PI). NSF. $8,778. Funded.

64. Amendment: Natural Attenuation of Contamination at Fort Wainwright, Alaska. L.D. Hinzman (PI), M.R. Lilly (Co-PI), J.F. Braddock (Co-PI). U.S. Army Corps of Engineers. September 1997 – August 1998. $150,000.

65. Hydrologic Analyses of Nested Watersheds in the Siberian Arctic. L.D. Hinzman (PI) and Y. Kodama (Co-PI). NSF- Earth Sciences-Hydrology & OPP-ARCSS. March 1997 – December 1999. $238,814.

66. Hydrologic Analyses of Nested Watersheds in the Siberian Arctic. Supplemental Vegetation Analyses. L.D. Hinzman (PI). NSF- Earth Sciences-Hydrology & OPP-ARCSS. March 1997 – December 1999. $10,000.

67. Estimation of Soil Moisture From SAR Imagery. D.L. Kane (PI), L.D. Hinzman (Co-PI), C. Hartman (Co-PI). TRW, Joint Test Facility. Jan 1998 - June 1998. $150,000.

68. Estimation of Soil Moisture From SAR Imagery – Phase II. D.L. Kane (PI), L.D. Hinzman (Co-PI), C. Hartman (Co-PI). TRW, Joint Test Facility. 15 June 1998 – 14 June 1999. $288,148.

69. Water and Energy Cycles in the Yukon River Basin, Alaska, Post-Doctorate Research Associate Support. L.D. Hinzman (PI). Earth Science and Technology

Organization, Japan Marine Science & Technology Center. $135,000. October 1, 1997 - April 1, 1999.

70. Demonstration of Hydrologic Analysis Visualization. L.D. Hinzman (PI). Pacific Disaster Center, NRaD. $24, 939. Feb 1997 – Oct 1997.
71. Patterns and Controls of Temporal Variation in $CO_2$ Sequestration and Loss from Arctic Ecosystems. D.L. Kane (PI) and L.D. Hinzman (Co-PI). Sub-contract to Department of Biology, San Diego State University. September 1997- August 2000. $75,000.
72. Numeric Simulation of Thermokarst Formation. L.D. Hinzman (PI) and D.J. Goering (Co-PI). Environmental Protection Agency. $134,142. September 1993 – Jan 1996.
73. Investigating Groundwater Contaminant Transport Processes on Fort Wainwright, Alaska. L.D. Hinzman (PI), R. Johnson (Co-PI), D.L. Kane (Co-PI) and D.J. Goering (Co-PI). U.S. Army Cold Regions Research and Engineering Laboratory Broad Agency Announcement. $246,542. October 1993- December 1995.
74. Groundwater Contamination Investigation on Fort Wainwright Alaska. L.D. Hinzman (PI), R. Johnson (Co-PI), D.L. Kane (Co-PI) and D.J. Goering (Co-PI). Department of Defense Broad Agency Announcement. U.S. Army Environmental Quality Basic Research Initiative. Seed Money $25,000. July 1993 – September 1993.
75. Utilization of SAR Data in Arctic Hydrologic Modeling. D.L. Kane (PI) and L.D. Hinzman (Co-PI). October 1990. National Aeronautics and Space Administration. $323,616. March 1991 – February 1994.
76. Determination of Hydrologic Properties Using Biological Tracers. L.D. Hinzman (PI) and H.V. Luong (Co-PI). U.S. Geological Survey. $18,401. 1993-1994.
77. Arctic Wetlands: Physical, Chemical and Biologic Processes. L.D. Hinzman (PI). U.S. Geologic Survey. $152,000. May 1991 – Sept 1994.
78. Development of a Powerful and User Friendly Soils Database. G.S. Mueller (PI) and L.D. Hinzman (Co-PI). Alaska Cooperative Transportation and Public Facilities Research Program. $35,809. 1994.