

ALASKA AVALANCHE SPECIALISTS, LLC.

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Bill Glude

Avalanche Specialist

OVERVIEW

Bill Glude is the owner of and lead forecaster/instructor for Alaska Avalanche Specialists in Juneau, AK. He is a Professional Member and certified instructor with the American Avalanche Association, and has served on its Board of Directors. He has 35+ years of professional avalanche experience, including research and publication, forecasting, public and industrial avalanche program development, avalanche mapping, Alaska Department of Transportation and Public Facilities (DOT&PF) projects, and avalanche plan development for the City of Juneau (CBJ). Professional services include comprehensive structural and operational mitigation programs for the A-J and Kensington Mines, and for several power plants and transmission systems.

RECENT PROJECT HIGHLIGHTS

Alaska Avalanche Specialists, LLC. 1990-present. AAS is the largest avalanche consulting business in Alaska. AAS professional staff has experience in all aspects of avalanche work, including consulting, planning, training, artificial release, helicopter and hand blasting, structural mitigation, research, risk analysis, mapping, and project management. Lead forecasters all have at least ten years' experience in the field; assistants go through a rigorous apprenticeship that trains them to the highest standards in the industry. AAS regularly draws on and works closely with Art Mears, Chris Wilbur, and Dave McClung, North America's top avalanche dynamics engineers. Recent project highlights include:

- **Takatz Lake Hydroelectric Project**, field reconnaissance avalanche evaluation and route analysis for east-west power line across Baranof Island to Sitka, study with Commonwealth Associates, Inc. for City of Sitka Electric Department, 2011-12.
- **Constantine Metal Resources Palmer VMS Project**, reconnaissance-level avalanche study for hard rock prospect near Haines, AK, operational hazard evaluation, 2010-present.
- **Alaska Electric Light & Power Snettisham Power Line Avalanche Reconstruction, Redesign, and Prevention Programs**, comprehensive avalanche program for reconstruction; development and operation of long-term mitigation program including mapping, risk assessment, structural mitigation, forecasting, crew training, and avalanche blasting program, 2008-2010; review, support, and emergency response, 2010-11.
- **White Pass and Yukon Railroad avalanche evaluation**, annual spring project, Skagway, AK, 2007 to present.
- **Swan Lake - Tye Lake Intertie Avalanche Evaluation**, field study, dynamics, and recommendations for mitigation for avalanche-affected structures, spring 2008.
- **Coeur Alaska Kensington Mine avalanche program** including program development, mapping, plan, weather instrumentation, observations, crew training and curriculum, forecasting, management, dynamics, hand and helicopter blasting, staff recruitment, Juneau, AK, 2006-07.

- **Chignik Connectors** highway avalanche study, for HDR Inc. and Alaska DOT&PF, Alaska Peninsula, 2007-08.
- **All Juneau Access Environmental Impact Statement (EIS)** highway avalanche studies for Alaska DOT&PF, from preliminary studies to Final EIS, including field studies and observations, Avalanche Hazard Index calculation, risk analysis, mapping and zoning, development of mitigation alternatives and recommendations, avalanche program design, budgets, public hearings, workshops, report writing, graphics, and layout, Juneau, AK 2003 to present.
- **Seward Highway Avalanche Hazard Index evaluation** for Alaska DOT&PF, 2005.
- **Alaska DOT&PF highway avalanche forecasting, Thane Road**, 2003-2006.
- **City and Borough of Juneau Avalanche Response Plan**, wrote first version and participated in community meetings to develop final draft, Juneau, AK 2003-04.
- **Numerous US Forest Service Special Use Permit and private tour operator avalanche hazard studies**, Juneau area, AK, 1998-present.
- **Alaska Mountain and Wilderness Hut Association**, hut sites avalanche study, Kenai Peninsula, AK, 2006.
- **State of Alaska Department of Public Safety, rescue response and avalanche evaluation**, False Troy, one skier, Juneau, AK, 1995; McGinnis Mtn., two snowboarders, Juneau, AK, 1999; Haney Range, one snowmachiner, Cordova, AK, 2001; Devil's Thumb, two climbers, Petersburg, AK, 2003.
- **Chugach Electric jobsite avalanche forecasting**, Southcentral AK, Seward Highway area, repair job for avalanche damage, for Alaska Mountain Safety Center (AMSC), 2000.
- **State of Alaska Division of Emergency Services hazard evaluation and forecasting**, Southcentral Alaska, for AMSC, Cordova and Valdez, 2000.
- **State of Alaska DOT&PF hazard evaluation and helicopter explosive work**, Southcentral AK, Richardson Highway, 2000.
- **Cordova Electric Cooperative Power Creek Hydroelectric Project**, avalanche mapping, program development, risk management plan, crew training, and operational forecasting program, Cordova, AK, 2001-02.
- **University of Alaska Southeast (UAS)**, teaching Level 1 and 2 avalanche and related field courses for the Outdoor Studies and guest lecturer for Environmental Science Programs, 1999-present.
- **Founder and Director, Southeast Alaska Avalanche Center (SAAC)**, Nonprofit providing avalanche education and advisories, 2007 pilot urban forecasting program for CBJ, spurred CBJ to create urban avalanche program that replaced SAAC, 1996-2007.
- **Senior avalanche specialist, Echo Bay A-J Mine, Juneau, Alaska**, operational forecasting, crew training, observations, helicopter blasting, for AMSC, Juneau, AK, 1993-95.

EDUCATION

- Bachelor of Science in Geology, University of Washington, Seattle, WA 1973. Specialty in glaciology and glacial geology, including avalanche studies.

- Started formal Avalanche training in 1970 under glaciologist Dr. Ed LaChappelle, pioneer avalanche researcher, University of Washington; under his guidance and review until death in 2007. Attended American Avalanche Institute Level 1 in 1976; mentored for next 12 years under most top avalanche specialists from US, Canada, and Europe while teaching full-time for Alaska Avalanche School. Annual continuing education at international workshop and conferences. Work frequently with top avalanche specialists worldwide.

PROFESSIONAL CERTIFICATION

- **American Avalanche Association (AAA) Professional Member since 1998.**
- **AAA Certified Avalanche Instructor.** Master certification that requires 10 years' teaching experience; strong scientific background. Other franchise-style instructor-training programs award "certification" in the US, but AAA certification is the only recognition by all peers.
- **US Bureau of Alcohol, Tobacco, and Firearms (ATF) Explosives License, Responsible Person and permit holder.** AAS field staffers have at least ATF Employee Possessor status.
- **Medical: Wilderness First Responder (WFR) and CPR - current;** Emergency Trauma Technician (ETT), Emergency Trauma Technician (EMT), National Ski Patrol Outdoor Emergency Care (OEC), and Wilderness First Aid and Survival - all lapsed.
- **National Ski Patrol (NSP) Avalanche Instructor training,** Levels 1 and 2, 2006. Taught NSP courses 2007. Eaglecrest Pro Patrol trainings and joint rescue exercises, 1996-present. Invited to review new NSP avalanche curriculum, 2007-08.
- **Languages:** Functional German and Spanish; learning Japanese.

RESEARCH AND PUBLICATIONS

- **AK Block snow test,** 2003-present. Papers presented and published at International Snow Science Workshops, 2004, 2006, and 2008; Swiss SLF Federal Institute for Snow and Avalanche Research colloquium, 2008. See AAS website's research page.
- **Faceted melt forms weak layer studies,** 1995-present, paper presented and published at International Snow Science Workshop, Davos, 2009. See AAS website's research page.
- **Arctic snow studies,** US Geological Survey, published two Open File Reports, 1976-79.
- Published **numerous *Avalanche Review* articles and photos** on topics ranging from meeting reports to education and research.

REFERENCES

- **Rod Newcombe, former owner of the American Avalanche Institute,** Box 308, Wilson, WY 83104; 307-733-3315, newcomb@wyoming.com
- **Jack Beedle, PE, former Design Group Chief, Southeast Regional Office, Alaska Department of Transportation & Public Facilities,** 6860 Glacier Highway, Juneau, AK 99801; 907-465-4446 phone; home 907-789-7597, jackbeedle@acsalaska.net
- **Doug Fesler, Alaska Mountain Safety Center,** 9140 Brewsters Drive, Anchorage, AK 99516; 907-345-3566, fes@pobox.alaska.net
- **Art Mears, PE, Natural Hazards Consultant,** 555 County Road 16, Gunnison, CO 81230; 970-641-3236, artmears1@mindspring.com