Observing requirements for, and design of, a mesoscale monitoring network for
Vancouver 2010
2002 Winter Olympics Background:
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1) Organizational issues
   • Public vs. private sector
     Outcome- joint forecast team (NWS- public safety; Private- venues) + others
     (U/U role for planning and some infrastructure)
     Outcome- funding diffuse and somewhat disorganized (NWS- no direct
     funding at outset; Private- complicated funding through NBC affiliate;
     U/U pork barrel)
     • Olympic Committee expected federal government to cover costs- paid for very
     little in the way of met support- wants sponsor for everything.
     • Lots of other groups providing weather support (military, security, aviation,
     backcountry avalanche, roads)
     • Lots of other groups expect Olympics to be source of R&D $$ (did motivate
     shoestring funded IPEX field program)
     • Disconnect between info provided to media/competitors (defined specifically)
     and the public (At the last moment public web services switched; access to
     forecast info changed)

2) Public safety nowcasting & forecasting needs
   • Spurred development of MesoWest- need observations throughout region for
     monitoring conditions and serving as input to numerical models
   • Relied upon resources of opportunity- working with any group that collects
     weather data and will make it available at no charge
   • Limited deployment of weather stations (half dozen) mainly in the vicinity of
     Great Salt Lake and at a couple of venues (some of the equipment left over from
     Atlanta Games)
   • Forecasting for opening/closing ceremony became a big deal at the (relatively)
     last moment
   • Transportation and security forecasting became big issues

3) Venue planning and forecasting needs
   • Different venues are more weather sensitive and staff are more willing to
     work with met support
   • Can be very conservative/nitpicky requirements for venue weather support
   • In order of level of interest wrt weather data (all interested in wx forecasts):
     • cross country and biathlon- really into wx for waxing. We deployed 1
       station years in advance and added 3 others couple years in advance
     • downhill- mountain was covered with stations: combo of ski area and
       leftover NWS equipment
     • ski jump- Oly Committee purchases equipment years in advance for
       monitoring
     • bob sled- have wind during race limitations
• rest don't care that much as long as a weather station is in the vicinity of all outdoor events (aerials; moguls; slallom, etc.)
• Committee requires basic climo information for planning and PR; in most cases, we cobbled data together
• important to get equipment at venues and other weather sensitive locations out early for MOS development

4) Recommendations:
• Try to nail down the basics as soon as possible
  • What's the budget for wx support?
  • Who's in charge?
  • Who're all the players?
• Get equipment at the venues as soon as possible
  • need data for climatologies/MOS
  • plan on moving equipment around venues as construction takes place
  • plan on equipment/comms at venues getting messed up at very last minute and during the games (television, national security concerns)
• Coordinate collection of existing data
  • overcoming turf issues
  • don't worry as much about standards of reporting, formats, sensor height, etc.
• Identify holes in existing distribution of stations for forecasting needs
• Be creative in requesting resources.
  • We asked for a lot but didn't get much (portable dopplers, rawinsondes, profilers)
• Have fun attempting new things
  • deploying buoy on GSL (failure)
  • snow temperature at cross country venue (limited success)
• Don't expect to be able to stand by your weather station watching competition events