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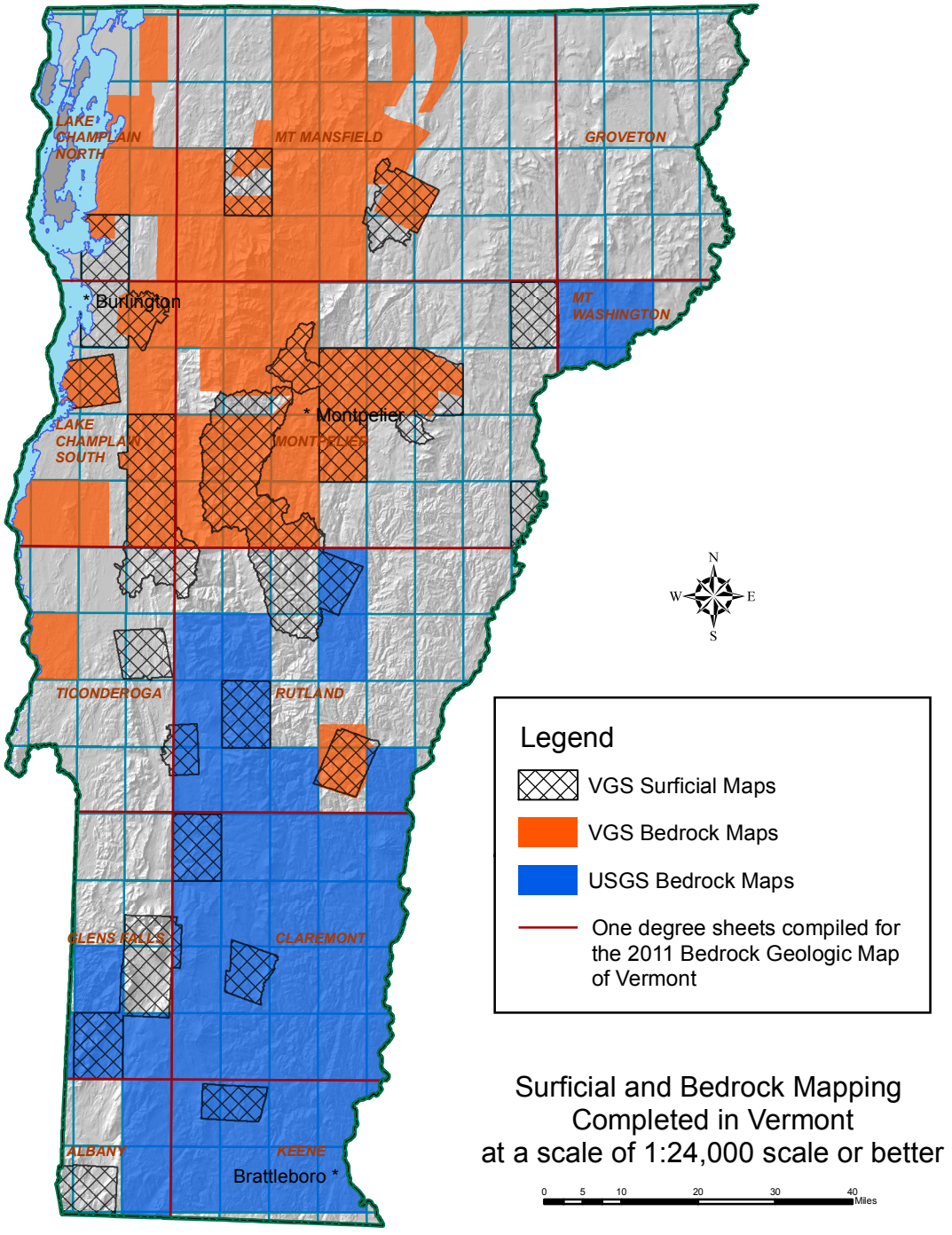
VERMONT
AGENCY OF NATURAL RESOURCES
Vermont Geological Survey

USGS
science for a changing world

National Cooperative Geologic Mapping Program

STATEMAP Component



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Federal Fiscal Year	Vermont Project Title - Scale 1:24,000	State Dollars	Federal Dollars	Total Project Dollars
2009	Surficial & Bedrock Maps –Towns of Randolph and Craftsbury	$79,035	$79,035	$158,070
2010	Surficial& Bedrock Maps – Plainfield Quadrangle Surficial Map - Dover Town	$84,680	$84,680	$169,360
2011	Surficial Map - Pico Peak Quadrangle Bedrock Map – Essex Junction Quadrangle Digital legacy data – NW VT & Northfield Quad	$81,396	$81,396	$162,792
2012	Surficial & Bedrock Maps of the Bristol Quadrangle	$70,223	$70,223	$140,446
2013	Surficial & Bedrock Maps of the South Mountain Quadrangle	$69,131	$69,131	$138,262

As a Division in the Department of Environmental Conservation, the Vermont Geological Survey (VGS) is guided by the mission to protect human health and safety. To match state resources, STATEMAP is a valuable cooperative program. The VGS-USGS joint project to produce the 2011 Bedrock Geologic Map of Vermont drew upon the 1:24,000 scale maps funded through STATEMAP and COGEOMAP. The VGS is currently focused on public service mapping - bringing our science to bear on solutions to Vermont's environmental problems and public health issues. Bedrock and surficial maps have been used to address such issues as radioactivity and arsenic in groundwater, groundwater recharge potential and to mitigate landslide hazards. The VGS seeks to involve communities at a grassroots level and address issues specific to town and state needs. Maps, presentations from professional meetings, and other publications are posted on the VGS web site for easy access by Vermont communities.

Map Uses: As part of National Geothermal Data Program, the VGS partnered with SUNY Plattsburgh to obtain bottom hole temperature and temperature gradients for 16 deep (>500') bedrock wells in Vermont. The well logging program measured temperature, conductivity, natural gamma, and borehole diameter. The data sets allowed us to identify lithologies and planar structures where groundwater was entering a well, and to perform complex hydrogeologic analysis for each well or group of wells. The integration of well logging with bedrock geologic maps and structural analysis allowed us to characterize aquifers. Currently, we are carrying out logging-based hydrogeologic studies on public water supply wells in the towns of Berlin and Hinesburg.

Recently released open file reports:
VG14-1: Kim, J., Gale, M., Chu, K., Cincotta, M. and Cuccio, L., 2014, Bedrock Geologic Map of the northern portion of the South Mountain Quadrangle, Addison County, Vermont.
VG14-2: Springston, G., Thomas, E., and Kim, J., 2014, Surficial Geologic Map of the northern 2/3 of the South Mountain Quadrangle, Vermont.

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