

Civil Source

ASCE Utah Section Newsletter

September 2012



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A MESSAGE FROM THE UTAH SECTION PRESIDENT



David Eckhoff, Ph.D., P.E.

Welcome to the 2012-2013 ASCE Season. This is my first term as President of the Utah Section. Last year was a hurricane here for me as President-Elect; it was an intense learning year. I have to admit that I still have a lot to learn. So please bear with me as I try to do the right thing and advance the causes of ASCE Utah.

My principal objectives for this year are: (1) to continue

the excellent work of Past-President, Matt Roblez. Matt did a herculean job last year in getting our Section organized and reorganized in several areas. I personally know that he worked many hours to fulfill what he believed to be the job of President of the Utah Section; and (2) to further the concept that ASCE should be of service to the community, as well as service to ourselves. In fact, I believe the former is more important than latter.

Last year we broke some new ground in making a major contribution to a local service organization, the Salt Lake Rescue Mission. It was a much needed contribution, used to purchase new heating equipment to replace an extremely dilapidated old system. The contribution was based on what we perceive to be a critical need. Our giving a \$5000 check was also featured in

the local newspaper – including a picture of the event. It was wonderful publicity that hopefully helps to change a predominant public opinion, namely that engineers are just a bunch of geeks.

The Branches also came up with some very creative and meaningful public service programs of their own. Although it was a new concept to all our groups, my understanding is that everyone appreciated the opportunity to serve the community.

This year we expect a continuation of the community service program, but we also have two other activities of importance. The first I would also classify as community service: History and Heritage. Additionally we are funding a Committee that really kicked into gear last year: State and Government

(Continued on page 6)

NORTHERN UTAH BRANCH BY SHAUN DUSTIN

There is no update this month.

SOUTHERN UTAH BRANCH BY JASON WARD

Jason Ward, P.E.

The Southern Utah Branch would like to thank all those that attended the annual Summer Scorchers golf tournament this past July at Red Hills Golf Club. We had a lot of fun. The temperatures were pretty mild this year at 103 degrees. We had one group of die-hards walk the 9 hole course.

As a presidency, we have spent a lot of time this summer working with the local APWA branch in planning the ASCE/APWA annual conference. The conference has changed time and venues this year. The conference will be held at the Abbey Inn on September 26 through the 28. A banquet will be held Wednesday evening, September 26, to honor our members and the work engineers do in our communities. We look forward to seeing everyone there.

The Southern Utah Branch has used the grant from the Utah Section to fund hands on math and science education in the classroom in the Washington County School District. We expect to be receiving and reviewing applications from local teachers soon.

Due to the ASCE/APWA Conference, we will not be having our regular branch meeting in Sep-

tember. October will be our membership drive and social; so come and find out what ASCE can do for you. Bring a non-member friend and enjoy lunch on ASCE.

CENTRAL UTAH BRANCH BY KATIE JACOBSEN



Katie Jacobsen, P.E.

I would again like to thank our outgoing Board members from the 2011-2012 year, Brian Andrew and Ernest Bramwell. Brian has gone on to fill the position of President-Elect on the Section Board. We are appreciative of his many years of service with the Board and look forward to seeing him in action with the Section. Ernest has left for a church mission with his wife, and I will greatly miss his wisdom this

year. John Miller also left the Secretary/Treasurer position due to job change, and I want to thank him so much for his service. All three of these leaders have helped me become acclimated to my new roles and responsibilities.

I would also like to again welcome our new Board members, Stan Klemetson and Marshall Shore. Stan was elected last Spring as Secretary-Treasurer and will be a great asset to the Board. Marshall has bravely stepped in to fill the remainder of this year's Secretary/Treasurer term and we thank him for saying yes.

Our monthly luncheons are off to a great start. The first will be held at the Golden Corral in Orem on Thursday, September 20, at 12:00 pm. Sydne Jacques will speak to us on "Five Reasons to Implement Public Information on Your Construc-

tion Project". I have faithfully attended and enjoyed Sydne's presentations at other conferences each year and look forward to her presentation to our Branch. I encourage all to attend.

Marshall Shore has connected with national ASCE staff and worked with them to start one of only seven charter ASCE high school clubs in the nation at Lone Peak High School. They have already held their first event this week. Marshall needs volunteers from the Branch or Section to help with the club. Please consider reaching out to high school students and helping him with club presentations, activities, field trips, or financial donations. You can reach Marshall at 937-543-9136 or mfshore@msn.com

WASATCH FRONT BRANCH BY PAUL BARNEY

We're excited to be approaching another year. It's been a good summer and we're looking forward to getting back up with ASCE activities and luncheons. I would like to thank Shawna Smith and Brian Warner for their hard work over the past four years. We, very much, appreciate all the work and service they've put into ASCE. We would like to welcome Blake Thomas as this year's new Secretary/Treasurer of the Wasatch Front Branch.

We're planning on having monthly luncheons held on the third Friday of every month at Desert Star Playhouse starting

on September 21st at 11:30 am. Please mark your calendars. As always, we're looking forward to seeing everyone there and having good attendance. We're always looking for good speakers and topics for the luncheons. If you are aware of someone or if there is a topic you would like to see addressed, please contact one of the members of the presidency.

GEOTECHNICAL GROUP BY RYAN COLE



The Utah Geo-Institute is beginning its first year as a local chapter and we are excited to report several events and interesting speakers on the horizon. The year begins this fall with a presentation from Tom Hurley of Nicholson Construction and AEG's 2012 national meeting "Ascending to Greater Heights... Elevating our Profession" here in Salt Lake. The winter heats up with the 2012 William B. Joyner Memorial Lecture in collaboration with EERI on Building Near

Faults, presented by Jonathan D. Bray of the University of California, Berkeley. Details and dates for both events will be forthcoming. We would also like to take the opportunity to congratulate EERI on the formation of a Utah Chapter and we look forward to collaborating with their great people and resources in the future.

The intent of incorporation as a Geo-Institute chapter was to attract and increase member participation through access to G-I speakers (locally and nationally), coordinate meetings and short courses, work with other groups and organizations (AEG, EERI, and others), facilitate networking (students, professors, and practitioners), and increase public perception of the impor-

tance of geo-professionals. As part of the transition, we took the opportunity to survey members in our area to better understand their challenges, expectations, and gain insights into how the Geo-Institute can better serve their needs. We received terrific feedback and valuable insights into what we can do as a geo-professional group to further the state of the practice in Utah. Thanks to all of you for your time and thoughtful consideration; we look forward to the exciting year ahead!

UTAH ENGINEERS COUNCIL BY BRIAN WARNER



Brian Warner, S.E.

The UEC meetings have started up again and I am excited to represent ASCE for another year. As a reminder UEC is a non-profit organization who's purpose is to advance the art and science of engineering for the general welfare of the people of Utah; promote cooperation among the various branches of engineering and science in Utah; develop recommendations regarding public policies wherein the applica-

tion of the art and science of engineering will contribute to the general welfare; foster public recognition of the engineering profession, to name a few.

Part of this is the award-winning UEC Journal; last year's edition can be found on the UEC web site: utahengineerscouncil.org. The UEC Journal is accepting technical articles so if you have a technical article that you would like to publish this is a great avenue; please contact me if you are interested.

Finally, UEC is looking for sponsors for the Engineers Week banquet so if your company is interested, please let me know or you can find additional information as the above-listed web site.

YOUNGER MEMBER FORUM BY JESSICA RICE



Jessica Rice, S.E.

Thanks to all of those who volunteered their time and energy by supporting our **service project** in May. As part of the National Association of Letter Carriers Food Drive, the YMF volunteers help unload bags, boxes and mail cartons full of food donated by the good citizens of Utah to help replenish the Utah Food Bank. Our group unloaded enough food to fill a tractor trailer! It was hard work, but really worth it. This is a favorite service project of ours, so look for details again next year if you'd like to participate.

Worried about missing our ever-popular **Annual Fall Bash**? Don't be, because it isn't until Friday, October 12th, 6pm at Riverfront Park – East Pavilion in South Jordan. We invite all of our fellow YMF members, friends, family, Branch members, and anyone else who

might be interested in finding out about the YMF and ASCE. In case you haven't heard about our Annual Fall Bash, we have games, prizes, pre-cleaned pumpkins for carving, and great food; did I mention it is all **free**? Hope to see you there!

We also hold our officer elections during this activity, as the YMF's service term is from January to December. If you are interested in becoming a **YMF Board Member**, we have the positions of Vice President, Secretary and Treasurer open. Email me, Jessica.Rice@urs.com, for more information or to get your name on the ballot. This is the perfect opportunity to become an active ASCE member. If you would like to get more involved in planning YMF events, want to share your input or ideas for future events but do not want an official title, we will also have various **committee openings**.

Are you taking the PE in the fall? Would you like to take the **YMF PE Review Course**, or know someone who would? Email Dave Lehman (Dave.Lehman@urs.com) to get more information or to sign up. The Kickoff Meeting was on August 28, but that was just an opportunity to meet with the other students, have free pizza, and strategize about studying; no study materials

were passed out at this meeting. The first class begins at 6pm Tuesday September 11th. Look for the **Fall 2012 PE Review Flyer** at the end of the Civil Source for more details. The course is open to both members and non-members. The YMF's PE Review Course has proven to be a great resource for those preparing for the PE, and at a really great price!

If you would like to get more involved in planning YMF events or want to share your input or ideas for future events, please email or call me at Jessica.Rice@urs.com or 801-904-4161. Remember, the benefits of your ASCE membership are directly related to your input and participation!

Make sure you are receiving our news and announcements and keeping track of any YMF activities by subscribing to our email list (respond "SUBSCRIBE" to utahascceymf@gmail.com), friend our Facebook page (search "ASCE YMF Utah"), view our webpage (<http://younger.asce.org/utah/>) or link to our calendar (at <https://www.google.com/calendar/ical/utahascceymf%40gmail.com/public/basic.ics>).

PRESIDENT'S MESSAGE (CONTINUED)

(Continued from page 1)

Relations. The focus of the latter was principally letting our elected officials know about the importance of public infrastructure and the need and cost requirements to maintain it. My congratulations to that Committee for having accomplished a great deal, mostly with personal time - a lot of it!

Beginning this month our officers will be attending a series of Regional and National Workshops and Conferences. Towards the end of September are President-Elect, Brian Andrew, will go to Washington DC for an Orientation Workshop. Then, the first week in October he and I will be heading off to the Region 8 Fall Conference—a very exhausting trip (to Honolulu, Hawaii). Somebody's got to do it! October will be by the ASCE National Conference in Montréal. I will be attending that Conference. Each of us will be reporting back, and you should receive information about these conferences and

workshops in upcoming issues of Civil Source.

I am excited to announce two important upcoming conferences/seminars, both dedicated to contemporary civil/structural issues. Please see the special notices elsewhere in this issue.

In conclusion, if any of you would like me to address or report on any problem or issue, just send me an email to dave.eckhoff@mcneileng.com.

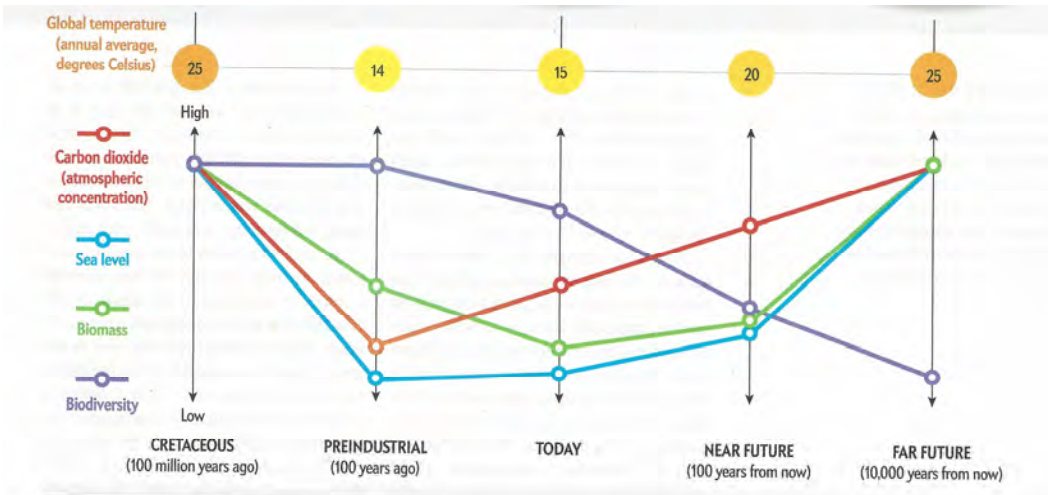
TECHNICAL ARTICLE BY DAVID ECKHOFF

FEEDBACK? YES, BUT IT TAKES A LONG TIME

In the past couple of decades we (the world) have encountered some serious problems, made much more serious by deferred or delayed consequences. One of those is the human disease HIV, which is caused by various forms of human contact. Although the disease is incredibly devastating – in the early years the outcome was certain drawn out and painful death – our getting a scientific understanding of the HIV virus and its modes of infection took a long time. Why? Because the elapsed time between infection, symptoms, and diagnosis could often be measured in decades. Scientific and medical pleas were often met with skepticism by critical decision makers and the public because of the uniqueness of this phenomenon. This skepticism caused further delay, resulting in a roughly 25-year deferral of effective disease control.

We are now faced with a similar natural problem that has been compounded by the two types of delay discussed above: namely, recognition and active countermeasures. The problem is really composed of several elements, of which global climate change is probably the most apparent to the general public. It is well recognized that IR-radiation inhibitors in the atmosphere are largely composed of carbon dioxide gas. Furthermore, this carbon dioxide is the result of our combustion of fossil fuels and the release of CO₂. What isn't recognized by a large proportion of the public is that this accumulation can be unequivocally shown to be causing major climate-changing events. A lot of the chatter is like, "we've got heat waves before – this is nothing to be concerned about". Part of this can be attributed to the general public's lack of science education, but I'm convinced the large part of the recalcitrance is based on an unwillingness to embrace major change in a lifestyle. Regardless, it's causing serious delay, because our elected officials who must make critical decisions are heavily impacted by the attitudes of their constituents. And, of course there are major industries that would be seriously impacted by a modification in our approach to fossil fuel combustion and CO₂ emission.

Of course some of the delay can be attributed to the fact we haven't had long-term evidence to substantiate initial



conclusions of global climate change. Current observations of serious concern are such things as rapid depletion of the polar ice cap, especially in Greenland and Antarctica. But much of the public seems to think that's just a natural thing to happen in normal cycles. However, recent information has developed concerning atmospheric CO₂ and concurrent global temperatures. This newly available information is based on observations of evidence from the Cretaceous Period, approximately 100,000,000 years ago. See the diagram above.

We engineers are, or should be, old hands at looking at lots of data and making conclusions and decisions based on similar graphs. The correlation that should grab your attention is the single Cretaceous period point which clearly shows high temperatures at a time of high CO₂ concentrations. That conclusion is irrefutable. And even if the correlation is not precise, the implications for future temperature increases are stunning! Furthermore, a calculation of the water content of the glaciers in Greenland and Antarctica results in an estimated rise of sea level by 120-meters. Melting of these glaciers is taking place at a rate faster than has ever been documented or estimated for historic time. What's the logical conclusion? The oceans are going to rise, maybe not 120 m, but certainly high enough to cause devastating consequences to low-lying oceanfront lands.

We engineers really have two obligations. The first is to inform and help convince our public officials that we have a serious problem on our hands. No argument about that. Secondly, we should be learning all we can to help the world deal with inundation of low-lying oceanfront lands. It's already happening, it just hasn't been that observable (the delay period).

ASCE Utah Section Contacts 2012-2013

Date of Elections: April 24, 2012

Date Officers are Installed: June 9, 2012

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* Brian J. Andrew	President-Elect	801-216-8890	801-362-1844	bandrew@hansenallenluce.com	1107 Nathaniel Drive, Pleasant Grove, UT 84062
* Steffanie Rhea, P.E.	Secretary/Treasurer	801-350-5219	801-819-4128	steffanie.rhea@ch2m.com	215 S State Street, Suite 1000, SLC, UT 84111
* Matt Roblez, S.E., SECB	Past-President	801-255-7700 ext - 128	801-631-7009	matt@mcneileng.com	8610 S Sandy Parkway, Suite 200, Sandy, UT 84070
* Brian Warner, S.E.	UEC Representative	801-255-7700 ext - 111	801-631-3732	brian.w@mcneileng.com	8610 S Sandy Parkway, Suite 200, Sandy, UT 84070

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Tyson Knudsen, P.E.	Secretary/Treasurer	208-233-6565		tyson.knudsen@cascade-earth.com	444 Hospital Way, Suite 520, Pocatello, ID 83201
Paul Lindhardt, P.E.	Past-President	435-716-9000		paul.lindhardt@loganutah.org	290 N 100 W, Logan, UT 84321

Wasatch Front Branch					
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Blake J. Thomas	Secretary/Treasurer	801-359-5565	801-891-8644	blake.thomas@crsengineers.com	4117 Juniper Hills Drive, South Jordan, UT 84095
Shawna Smith, P.E.	Past-President	801-741-8864	801-541-4073	shawnamssmith@gmail.com	

Central Utah Branch					
* Katie Gibson Jacobsen, P.E.	President	801-400-9222	801-374-5771	katie@rbgengineering.com	1435 W 820 N, Provo, UT 84601
Stanley Klemetson	President-Elect	801-368-6476	801-863-8165	sklemetson@uvu.edu	475 E 1960 S, Orem, UT 84058
Marshall Shore	Secretary/Treasurer	937-543-9136		mfshore@msn.com	10622 Bermuda, Cedar Hills, UT 84062
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Southern Utah Branch					
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Younger Member Forum					
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Darren Burton	Treasurer	801-352-5997		dburton@mbakercorp.com	
Jenni Oman, P.E.	Past-President	801-468-2664		jennioman@gmail.com	SLCo Engineering 2001 S State Street, N3100, SLC UT 84190

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* Ryan Cole, Ph.D., P.E.	Chair	801-930-9262	801-849-0055	ryan@gerhartcole.com	

Newsletter Editor					
Kimberly Scholes	Editor			kscholes@pec.us.com	



The Fall 2012 PE Exam is Friday, October 26, 2012.

Are you feeling anxious, overwhelmed, or unsure of where to begin studying? **Prepare yourself for the exam by attending ASCE YMF's PE Review Course.** Local Professional Engineers teach 10 review sessions covering each of the five civil disciplines and will work through problems, give time-saving tips, and answer any questions you may have.

The review course is open to everyone, including non-ASCE members! Feel free to forward this invite to anyone who may be interested in attending.

Location

H.W. Lochner
1245 E. Brickyard Road, Suite 400
Salt Lake City, UT 84106

Course Dates

Tuesdays & Thursdays
6 PM – 8 PM
Sept. 11 – Oct. 11, 2012

Cost of Course (due at kick-off meeting)

ASCE Members – \$150
Non-Members – \$200
Pay via PayPal*, Cash, or Check

* = a \$5.00 convenience fee will be added for payment via PayPal

Kick-off Meeting

Tues. August 28, 2012 at 6 PM
Review course and exam details will be covered.
FREE fresh, hot pizza and soda will be provided.

Course Topics

Construction
Geotechnical
Structural
Transportation
Water Resources and Environmental

ASCE Utah Section Younger Member Forum has teamed up with PPI2PASS. To order study material at a 15% discount, create an account at the following website:

<http://www.ppipartner.com/IF601>

To reserve a seat, or if you are unable to attend the kick-off meeting, please contact Dave Lehman at Dave.Lehman@urs.com or at 801-904-4055.

We look forward to seeing you at the Kick-off Meeting!

SPECIAL STRUCTURAL ENGINEERING CONFERENCES/SEMINARS

EERI, the Earthquake Engineering Research Institute, is planning a day-long technical seminar on *Learning from Recent Major Earthquakes: Lessons for Practice*, to be held in Salt Lake City on October 24. The Utah Section of ASCE is a Co-Sponsor of this timely workshop, because we acknowledge our seismic vulnerability and the need to sharpen our knowledge in this critical area. The primary purpose of the seminar is to convey the many valuable and implementable lessons for U.S. practice that have been learned from the recent major events in Chile, New Zealand, and Japan. Online registration is available now. ASCE Utah members will be afforded EERI membership rates for registration.



All ASCE Utah members are invited to attend the **2012 SEI Local Leadership Conference October 12-13 in Salt Lake City** to share insights from your local group. The program will include (agenda and program details attached):

Friday, October 12: Main session meetings, a technical tour of the Seismic Retrofit to the Mormon Tabernacle and Conference Center, and dinner presentation on Accelerated Bridge Construction in Utah

Saturday, October 13, 8:00am – 3:30pm: Post-Disaster Safety Evaluations (PDSE) Workshop sponsored by SEI and the ASCE Committee on Critical Infrastructure, in cooperation with the California Emergency Management Agency (CalEMA) and the Applied Technology Council (ATC).

Attendance of the entire workshop is required for 6.0 PDH credits and registration as a CalEMA Safety Assessment Program (SAP) Evaluator (Must provide U.S. P.E. license info on-site).

REGISTRATION DEADLINE: Thursday, September 20, 2012

Registration is **REQUIRED** in advance. There will be **NO** On-site Registration.

Please contact Matt Roblez matt@mcneileng.com if you are interested in attending.



AEG's 2012 Annual Meeting

"Ascending to Greater Heights... Elevating Our Profession"

September 15–23, 2012

Hilton Salt Lake City Center Hotel, Salt Lake City, Utah

*The AEG Intermountain Section warmly invites you to join us in Salt Lake City,
the heart of the Intermountain West, for the 55th Annual Meeting
of the Association of Environmental & Engineering Geologists.*

The 55th Annual Meeting of the Association of Environmental & Engineering Geologists (AEG) will be held at the Hilton Salt Lake City Center Hotel, in the center of beautiful downtown Salt Lake City.

Salt Lake City lies in a spectacular geologic and geomorphic setting at the base of the Wasatch Mountain Range, with the Great Salt Lake visible to the northwest and the Great Salt Lake Desert to the west. The following pages provide an abridged geologic and natural history of Salt Lake City and provides details on the spectacular field trips, educational short courses, engaging symposium, and magnificent guest tours that are being offered at AEG's 55th Annual Meeting.

The Intermountain Section looks forward to visiting with one and all.

Visit www.aegweb.org for more details.

New UGS Geologic-Hazard Information Resources

The Utah Geological Survey (UGS), Geologic Hazards Program (<http://geology.utah.gov/ghp>) has recently completed three new geologic-hazard related datasets that are available to the public: 1) the UGS GeoData Archive System containing a variety of scanned geotechnical and geologic-hazard reports and other documents, 2) seamless historical 1936-1952 Soil Conservation Service (SCS) orthophotomaps of Utah, and 3) seamless historical 1900-1966 15- and 30-minute U.S. Geological Survey (USGS) topographic maps of Utah.

The UGS GeoData Archive System (<https://geodata.geology.utah.gov>) contains geologic-related scanned documents (mainly geotechnical and geologic-hazard reports), photographs (except aerial), and other digital materials (resources) of Utah from our files and those gathered from other agencies or organizations in one easy-to-use web-based system. Resources available to general users are all in the public domain and may contain reports submitted to state and local governments as part of permit reviews. Metadata describing each resource is searchable, along with spatial searching for resources that are local or site-specific in nature. Currently, reports are mainly from the Salt Lake Valley area, but the UGS anticipates adding other areas in the future. Consultants should find these resources particularly helpful in a variety of projects and investigations.

Historical (1936-1952) SCS semi-controlled orthophoto maps (generally 15-minute quadrangle size), scanned and georeferenced by the UGS, are available from the Utah Automated Geographic Reference Center (AGRC) Image Server using the AerialPhotography_BlackWhite/SCS_HistoricImagery service (see <http://gis.utah.gov/sgid-image-server/image-server-how-to-install-the-image-server-client>) as a seamless product. This dataset represents the earliest known orthophoto data of Utah.

Historical (1900-1966) 15- and 30-minute USGS topographic maps, scanned and georeferenced by the UGS, are available from the AGRC Image Server using the ScannedMaps/USGSVintageTopographic_62K and ScannedMaps/USGSVintageTopographic_125K services (see <http://gis.utah.gov/sgid-image-server/image-server-how-to-install-the-image-server-client>) as seamless products. This map series represents the earliest comprehensive topographic data for Utah and contains features not shown on later maps; however, the USGS no longer publishes or has these maps available for sale.

Additionally, the UGS web page for consultants and design professionals (<http://geology.utah.gov/ghp/consultants/>) includes information on recommended report guidelines, UGS publications (geologic-hazard maps and reports, geologic maps, and groundwater reports), historical aerial photography, and other sources of useful information.

The Utah Geological Survey (<http://geology.utah.gov/>), a division of the Utah Department of Natural Resources (<http://naturalresources.utah.gov/>), provides timely scientific information about Utah's geologic environment, resources, and hazards.



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Aggregate Qualifications Tests

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CBR (California Bearing Ratio)

Concrete and Masonry Design and Compressive Strength Testing

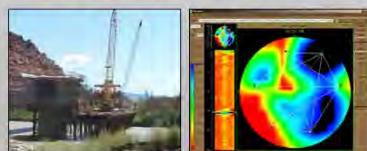
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