



May 5, 2011

I. OPENING BUSINESS 10:30 a.m.

- Call to Order (John Aho, Chairperson); Roll call: Commission members John Aho, Gary Carver, Laura Kelly, Rich Koehler, Dan Mahalak, David Miller, Mark Roberts, Robert Scher and Gayle White were present all day. Roger Hansen was excused for the first half of the day, and was present for the second half. Gay Dunham was absent and is no longer active on the Commission. His position will be filled once it comes open at the end of June.
- The meeting agenda was approved with the following changes: Roger Hansen's May 5th presentations were moved to the afternoon to coincide with his schedule that day.
- Introductions-Guests: Eric Cannon, Engineering Geologist with Golder Associates in Anchorage; Joanne Bennett with the Alaska Division of Insurance; and Rod Combellick of the Alaska Division of Geological and Geophysical Surveys (DGGS) were present May 5. J. Michael Thompson of RIM Architects was present May 6. April Woolery, Administrative Assistant with DGGS, was present both days.
- Review and Approval of Minutes for the April 7, 2011 meeting: The minutes were approved with amendments.

II. BRIEFINGS 10:45 a.m.

- Briefings by Commissioner Hansen will be listed below, as he was unable to arrive until later in the day.
- Municipality of Anchorage Geotechnical Advisory Commission (MOA/GAC) Activity Update-Scher: The GAC received a letter of response from the Port of Anchorage on their proposal to the Port for the inclusion of seismic instrumentation in the port facility. The Port approves of the idea and will try to find funding. The GAC is preparing a response to emphasize that this instrumentation is a necessity in such an important facility. The total cost for this project is about one billion dollars, and the relatively small cost of adding seismic instrumentation would be negligible. A current lack of funding has delayed the project, which will allow more time for the GAC to further its efforts in making sure that seismic instrumentation is installed in the new port facility. The GAC has reviewed the FEMA-required local hazard mitigation plan for the Municipality of Anchorage and are preparing their response. They will encourage the Municipality to refer to the plan in order to avoid missing opportunities to reduce exposure to hazards when building or upgrading facilities in the future. The GAC is assisting the Municipality's Building Safety Division to prepare specific guidelines for the minimum level of geotechnical investigations for developments in the risk zones associated with significant ground failure in Anchorage. Chairman Aho added that the GAC is continuing to press for a copy of the review of the design and construction of the port facility from the Port of Anchorage. Commissioner Roberts commended the GAC's review of the hazard mitigation plan for the Municipality. He compared it to the ASHSC's review of the state's hazard mitigation plan and pointed out that having these plans in place is a necessary part of securing FEMA funding in a disaster

situation. Chairman Aho would like to see the GAC continue to monitor the plan to make sure that it is being referenced and used by the Municipality.

- State of Alaska Seismic Hazards Safety Commission and Ocean Fury Tsunami Discussion-Kelly: Commissioner Kelly gave this presentation in Kodiak recently, along with Duane Dvorak, Associate Planner with the Kodiak Island Borough Community Development Department. At the presentation in Kodiak, Commissioner Kelly discussed the Seismic Hazards Safety Commission and its role, and tsunami and earthquake risks for Kodiak. She also commended the Kodiak Island Borough for its work on hazard mitigation in the schools, and the Borough's collaboration with the Coast Guard: how agencies can work together to identify problems and prepare for them. She pointed out that people can mitigate hazards before a seismic event occurs, which led to a discussion on retrofitting homes. The attendees were surprised to learn that the federal government does not replace homes destroyed in natural disasters. FEMA provides assistance following a disaster, but not enough to rebuild a house. One of the attendees in Kodiak was Rich Courtney, the local Port Meteorological Officer. Mr. Courtney is also a member of the Kodiak Military Auxiliary Radio System (MARS), a volunteer group of licensed amateur radio operators who can provide emergency communications as an adjunct to normal communications. He was impressed with the information presented and was glad to learn more about those aspects of disaster planning. Commissioner Roberts can supply copies of the video that was shown at the presentation, as well as other safety information, to those interested. He added that Mr. Dvorak is responsible for updating the Kodiak hazard mitigation plan.

IIA. PRESENTATIONS I 11:15 a.m.

- New Zealand Earthquake Update-Carver: Commissioner Carver's vacation to New Zealand happened to coincide with the magnitude 6.3 earthquake that struck Christchurch. The event occurred five days before he arrived, and he was able to see firsthand some of the results of the quake.

LUNCH BREAK 12:05 p.m.

IIA. PRESENTATIONS I (Continued) 1:10 p.m.

- Social Media Discussion-Roberts: The current generation communicated via social media such as Facebook, Twitter, YouTube, and others. These are used in news coverage, emergency reporting and communication, and information gathering. Facebook alone has 500 million users worldwide. Social media provides a way to quickly get information to a huge number of people. Emergency managers in large cities use Twitter to report traffic accidents and re-routes, for example. Twitter messages are stored in a database and can be searched and sorted for specific topics. Information is posted to the internet in real time and can be accessed instantly, almost anywhere in the world. This has changed the way that the public learns about disasters. Indeed, the public can now report on disasters. Millions of people have watched videos of the Japanese tsunami inundation that were posted on YouTube. Links to these videos were posted on Facebook and Twitter to reach millions more. Social media magnify access to information by an order of magnitude over traditional media. Commissioner Hansen added that the USGS has a system that monitors

Twitter and looks for the word “earthquake” in 150 different languages. They can triangulate the location of an earthquake almost as quickly using Twitter as they can using seismometers. The ASHSC has its own Twitter account, called “akseismic”. If commission members have information to post, they should forward it to Chairman Aho. The commission voted to get a Facebook account, if possible. Rich Koehler will investigate what it will take to do this.

II. BRIEFINGS (continued)

1:20 p.m.

- Recent Seismic Activity of Interest-Hansen: In the past month, there were 2,161 recorded events in Alaska, fifteen of which were felt. Commissioners Carver and Hansen noted that, as commissioner Roberts reported, the YouTube tsunami footage has done a tremendous amount to educate people around the world. Commissioner Hansen reviewed the presentation that he gave to the Senate Community and Regional Affairs Committee on March 22nd of this year. Alaska has more earthquakes and tsunamis than the rest of the United States combined. Seismic events that occur here in Alaska will be local hazards with swift repercussions: tsunamis are likely to hit coastal areas within 30 minutes of a strong earthquake. Sirens work to warn of distant events, but for most tsunami-generating events in Alaska, the ground shaking is the warning to move to high ground immediately. Warning systems must be in place, and the public must be educated ahead of time. There was discussion of the merits of tying siren systems in to local strong motion detectors, so that the sirens would be triggered if the shaking were above a certain level.
- Health of the Weak and Strong Motion Networks-Hansen: The system always gets a boost in the spring and summer months, when increased sunlight sends more power to the solar powered instruments that are off the power grid. The Anchorage strong motion network is in the best condition it has ever been. The Alaska Earthquake Information Center (AEIC), where Commissioner Hansen works, has partnered with the Alaska Volcano Observatory (AVO) to upgrade and maintain the network. He will be working with them to replace the faulty cable for the downhole array located in the Park Strip in Anchorage. The last of the work funded by stimulus program money will be completed this summer. The network will be almost fully digital by the end of this summer or early next summer.
- Shake Map Update-Hansen: Shake Map continues to work well. AEIC is using the latest version of the software.

IIB. PRESENTATIONS II

1:40 p.m.

- Japan Earthquake-Interesting Aspects-Hansen: Commissioner Hansen compared the Japan event to the Alaskan event of 1964, as the two events were similar. The Japan event had an offset of 50 meters, and the dip of the Subduction zone was 30 to 40 degrees, as compared to a dip of 10 to 15 degrees for the 1964 event. The greater offset and dip created a much larger tsunami in Japan than the one that followed the 1964 earthquake. The moment release (the strength of the rupture as a function of time) of the Japan event was about three minutes long; the 1964 event was about four minutes long. Although the tsunami travelled across the Pacific, most of the energy was focused away from Alaska. The largest wave in the state was five feet, in Shemya. Commissioner White, who was in Hawaii when the tsunami reached it, reported that the local authorities did very well in evacuating people in a timely and

orderly way. There was no panic, and everyone was out of harm's way by the time the tsunami arrived.

- Japan Earthquake Emergency Response-Roberts: Only a small part of the state was under a tsunami warning following the Japan event, but it was under warning for 34 hours. The rest of the state was under an advisory, which meant that beaches and harbors might be affected, but no significant inundation was expected. He pointed out that the emergency system does not allow for regional tsunami warnings, so a warning goes out to the whole state, which sometimes leads to confusion in areas that are not affected. His division is working to improve this system and prevent confusion. Commissioner Mahalak reported that a substantial number of people in Seward left town for higher ground until the advisory was past.
- Use of Near-Real-Time GPS Seismograms for Identifying Tsunamigenic Earthquakes-Hansen: Postponed until the next day, May 6.

III. OLD BUSINESS

2:15 p.m.

- Action Items
 - 03/07/2011 Action Item List: Chairman Aho would like more feedback on committee participation. Members should let him know what committees they are interested in. Please note that Commissioner Carver is now the chairman of the Earthquake Scenario Committee, and Commissioner Koehler will chair the Hazards Identification Committee.
 - On-going Action Item List
- NIMS Online Training-Roberts: Chairman Aho reminded commission members to take the training if they have not already.

IV. MEETINGS OF INTEREST

2:30 p.m.

- American Association of Petroleum Geologists, Pacific Section, May 8-11, 2011 - Anchorage
- Earthscope National Meeting, Austin, TX, May 16-20, 2011
- GSA Rocky Mountain/Cordilleran Combined Section Meeting, Logan, UT, May 18-20, 2011
- Incident Command Tsunami Training, Kodiak, June 4-5, 2011
- IRIS Seismic Instrumentation Technology Symposium, Albuquerque, NM, June 16-17, 2011 (Hansen)
- Tsunami Operations Workshop for Southeast Alaska, Sitka, September 13-15, 2011
- Assoc. of Engineering & Environmental Geologists, September 19-24, 2011, Anchorage, AK
- Rapid Visual Screening, Fairbanks, October 2011
- 10th U.S. National Conference on Earthquake Engineering, 2014 - Anchorage

VI. CRITICAL DEADLINES

2:50 p.m.

- ASHSC 2011 Annual Report: Chairman Aho will discuss this more tomorrow. This year the Commission is being audited to see if it should be reauthorized or allowed to sunset, so this year's report will be closely scrutinized.
- ASHSC Report to WSSPC: Need date when this is due.
- Legislature Visit: Chairman Aho will do this if possible.

BREAK

VI. COMMITTEE MEETINGS 3:15 p.m.

- Insurance-White, Aho, Carver, Kelly 2:30-3:30 p.m.
- Schools-Kelly, Carver, Aho, Roberts, Cole, Kito-visitor 3:30-4:30 p.m.
- Earthquake Scenario-Combellick, Aho, Carver, Cole, Roberts, Hansen 4:30-5:30 p.m.

(Following Committee Meetings, the meeting was adjourned for the day.)

May 6, 2011

I. OPENING BUSINESS 9:00 a.m.

- Call to Order (John Aho, Chairperson); Roll call: Commission members John Aho, Gary Carver, Roger Hansen, Laura Kelly, Rich Koehler, Dan Mahalak, David Miller, Mark Roberts, Robert Scher and Gayle White were present.
- The May 6, 2011 agenda was approved with no changes.
- Guests: Please see list under May 5.

II. PRESENTATIONS III 9:15 a.m.

- American Institute of Architects (AIA) Safety Evaluation of Buildings-J. Michael Thompson of RIM Architects, Anchorage: Mr. Thompson is the Alaska state coordinator for the American Institute of Architects Disaster Assistance Program. This program assists architects in helping communities recover from disaster. Architects are able to assess the stability of damaged structures and advise on repairs. They can also help with the planning and rebuilding of damaged communities.
- Use of Near-Real-Time GPS Seismograms for Identifying Tsunamigenic Earthquakes (held over from May 5)-Hansen: Discussion of instruments used to detect and record information on seismic events. Broadband, strong motion, and GPS sensors all have their strengths and weaknesses. Used together, these instruments can give a comprehensive picture of a large event's magnitude, depth, source extent, and amount and direction of ground motion.
- Paleoseismic Studies in the Region of the M9.0 Tohoku Earthquake-Koehler: The magnitude of the recent earthquake in Japan exceeded the Japanese government's predictions in part because their models were based on individual fault segments, and in this case three fault segments ruptured together. The force released was much greater than expected, and the resulting tsunamis were more destructive. The Paleoseismic record shows that there have been three large tsunamis in the last 3,000 years, with a recurrence interval of about 800 to 1,100 years. Commissioner Carver pointed out that the paleoseismic record for tsunamis in Alaska is only well studied in some areas, mostly near population centers that sustained tsunami damage from the 1964 event. Almost no work on this has been done in the Aleutians, for example. Some take-away lessons from Japan's post-disaster relief efforts include preventing the spread of illness in shelters (influenza has been a problem), ensuring adequate bathroom/waste disposal facilities, allowing for handicap access, and safeguarding the supply chain following a disaster. Shelters did not have enough water, sleeping mats,

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blankets and other supplies for disaster victims, and gasoline was in short supply, making deliveries difficult. Improvements to shelters could include partitions to allow for more privacy: some families had to spend weeks in the shelters because there was nowhere else to go. Keeping people from the same town/area in the shelters helped, as they knew each other and were able to rebuild a sort of community. Thanks to strict building codes, structures fared very well in the earthquake, and most reinforced concrete buildings stood up well to the tsunami. As in the 1964 event in Alaska, most loss of life was from the tsunami, not the earthquake.

- Recent Paleoseismic Results on the Denali Fault-Koehler: Commissioner Koehler gave an overview of the findings of recent work done on the Denali Fault near the Chistochina Glacier. These findings were published in a report released earlier this year, titled "A Paleoseismic Study Along the Central Denali Fault, Chistochina Glacier Area, South-Central Alaska."
- Review of California's Post-Earthquake Clearinghouse-Koehler: This is a web-based tool to facilitate the collection, interpretation and dissemination of critical geological and engineering observations following a significant event. The site can host and archive blogs and updates from the field. It is also a useful way for groups to coordinate their efforts when doing post-event work. Commissioner Carver would like to investigate doing a similar website for Alaska by getting a consortium together to support it. The Partnership and Education and Outreach Committees should work together to prepare a proposal. This would also be a good Legislative recommendation for the next ASHSC annual report.

BREAK 11:25 a.m.

III. COMMITTEE MEETINGS 11:30 a.m.

- Education & Outreach-Aho 11:30am-12:10pm

LUNCH 12:10 p.m.

IIIA. COMMITTEE MEETINGS (continued) 1:10 p.m.

- Hazards Identification-Koehler: 1:10-1:50pm
- Response & Recovery-Roberts: 1:50-2:30pm

BREAK 2:15 p.m.

V. REPORTS 2:30 p.m.

- Chairperson
 - Annual Report: It will be very important to get this completed by the beginning of the Legislative session this year. The final will be due in the first part of January.
 - Legislative Audit: Ongoing. Almost all Commission members have been contacted at this point.
 - Deliverables: Chairman Aho would like to see more visible deliverables from committees, especially by fall/early winter for use in the annual report.
 - 1st Quarter Ethics Report: No violations to report.

- Joyner Lecture: Commissioner Hansen did not feel that this year's Joyner Lecture would pertain to Alaska. Strong ground motion due to nuclear testing does not occur in our state.
- Legislative Trip: This should be planned through the DNR legislative Liaison early in the next session, 2012.
- Agenda in Waiting: This is a list of incentives to improve California's earthquake safety. Chairman Aho will e-mail the list to Commission members.
- New Member: Bud Cassidy of Kodiak is a good possibility.
- Current Members: Commissioners Kelly, Carver and Roberts should send in their letters of intent to continue.
- Partnership Committee: John will step down as chair but continue to serve on this committee. He wants to keep APIP and the 2014 conference as high priorities for this committee.
- Tsunami Committee: It was suggested that, since tsunamis fall under the purview of the hazards Identification and Response and Recovery Committees, these two committees should work on deliverables in this area in lieu of creating a new committee.
- Other:
 - Commissioner Roberts will evaluate the courses available at the Emergency Management Institute in Emmitsburg, MD and let Chairman Aho know which courses are applicable to commission members.

VI. NEW BUSINESS

3:30 p.m.

- Recognition
 - Congratulations to Commissioner Hansen, who was awarded the Usibelli Public Service Award. Thank you to Chairman Aho and Commissioner Roberts for supporting his nomination.
- Future Briefings
 - AIA Document on Damage Assessment-Thompson
 - Alaska Municipal League Risk Control-Dewalt
 - Using Real-Time GPS for Large Earthquake Location and Magnitude-Hansen
 - Christchurch, New Zealand Earthquake-Carver
 - Japan Earthquake-Roberts, others
 - MOA Emergency Operations Center Tour
 - Utilities Risk Mitigation Approaches
 - DOT Seismic
 - DOT inventory of bridges: photo inventory of types and weaknesses
 - Gas Pipeline potential investors: TransCanada, Denali and Enstar all have projects going related to the planned gas pipeline
 - Warning and Coordination Meteorologists from NOAA
 - Alaska Rail Road bridge upgrade
 - Peter Haeussler and/or Rich Koehler on the Denali Fault
 - Carol Olson, Deputy Fire Marshal and Plan Review Bureau

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- Supervisor, regarding the structural aspects of plan reviews
- Other suggestions should be forwarded to Chairman Aho

VIII. ADMINISTRATIVE MATTERS 4:00 p.m.

- Election of Officers: John Aho was re-elected as chair, and Robert Scher was elected as vice-chair.
- Budget Report-Woolery: The current budget is \$4,752.07, pending travel expenses.
- ASHSC Web Site Update Status-Woolery: The web site is up to date.
- Next Meeting Date Face-to-face in Anchorage, June 20-21, 2011.

VII. GENERAL DISCUSSION 4:05 p.m.

- Public: None present.
- Commission Members: Discussion and planning of agenda for the upcoming face-to-face meeting next month.

IX. ADJOURNMENT 4:10 p.m.

Commissioner White moved, and Commissioner Kelly seconded to adjourn. All in favor. Meeting adjourned at 4:05 p.m.

Alaska Seismic Hazard Safety Commission
Scenario Committee Report
May 5, 2011 ASHSC meeting

The ASHSC Scenario Committee held a 45-minute meeting during the May 5, 2011 ASHSC face-to-face meeting in Anchorage.

Two items were on the agenda:

1. The FEMA level 2 HAZUS run for the Kodiak planning scenario
2. Introduction of a proposed assessment of the impacts of a great earthquake and tsunami generated by the Cascadia Subduction zone and/or large earthquake and tsunami generated by the Seattle fault or other crustal fault in the Puget Sound area of Washington.

Kodiak planning scenario:

Consideration by the commission of the FEMA level 2 HAZUS run for the Kodiak planning scenario included a teleconference with the scenario committee, Jennifer Meyers (FEMA) and Bud Cassidy (Kodiak Island Borough) participating. Jennifer Meyers is the FEMA HAZUS expert who will do the HAZUS run, and Bud Cassidy the KIB Director of Community Development who will represent the KIB and serve as a resource to provide data for input into the HAZUS modeling program. During the teleconference discussion covered the nature of input data needed and available and the need to maintain communication between the KIB, FEMA, and the Commission during the HAZUS process. All agreed that it is imperative that communication among the participating parties be maintained. Bud reported that the recent census on Kodiak allowed updating of the borough's records of population, building inventories, and other data needed for the HAZUS analysis. This database is now greatly improved and current.

Cascadia and/or Puget Sound crustal fault earthquake:

Discussion of the potential impacts on Alaska of a great Cascadia megathrust earthquake and resulting tsunami and/or a large earthquake and associated tsunami originating on the Seattle fault or other crustal fault in the Puget Sound area concluded that such events have potential for significant impacts on Alaska. While no major damage or threats to public safety in Alaska are likely from such Pacific Northwest earthquakes, the disruption to supply lines, communications, the Alaska fishing industry and other economic entities and supply lines between Alaska and the lower 48 could be substantial and may persist for a significant period after the event. The commission decided to further research the topic and, if the impacts on Alaska prove to be significant, produce a white paper summarizing the effects and suggest recommendations to mitigate the impacts. This topic will be the subject of a half-day work session at the June face-to-face meeting. Each commissioner has been assigned subject areas to research between now and the June meeting work session.

Bud Cassidy was appointed as an Ad Hoc member of the scenario committee.

Gary Carver
Chair, ASHSC Scenario Committee

Alaska Seismic Hazards Safety Commission Face-to-Face Meeting, May 5 & 6

School Committee Meeting Minutes
Friday, May 5, 2011

As part of the Face-to-Face meeting by the ASHSC, a 45 minute time period was set aside for the School Committee meeting, of which approximately 30 minutes were used. Nearly all committee members were present, plus other attending members of the commission. Sam Kito, ADEED representative, could not be present and was excused.

Agenda Items Discussed:

- Review of 2011 Plan as stated in the Annual Report, with open discussion of identification and prioritization of specific goals for this year.
- Update on new Kodiak High School project
- Notification of acceptance by Mary Lou Zoback (Vice President, Risk Management Solutions, Newark, CA) to meet with School Committee at later date, with discussion of her background and the recent newspaper coverage of California's disappointing attempt to mitigate schools.
- Open discussion

The 2011 School Committee Plan, as stated in the annual report, was agreed upon as written. Because the plan is general in nature, however, the committee identified and prioritized additional items for the year. The item determined most critical, is the need to obtain an ad hoc Legislative Representative to champion the issues the ASHSC deems important for the state to address legislatively. The primary focus for potential legislation are the two recommendations outlined formally in the 2011 Annual Report and iterated here for reference:

Policy Recommendation 1:

Given that schools in Alaska serve not only as educational facilities but also as gathering places for the general public, and that many are designated as emergency shelters in case of a natural disaster, the Commission recommends that the State appropriate the resources necessary to identify those school facilities most at risk from earthquakes.

Policy Recommendation 2:

The Commission recommends that all future school design, construction, and major renovation project funding include monies allotted for seismic risk mitigation tasks, to include:

- Seismic design by a structural engineer proficient in the design and detailing required for earthquake engineering tasks.
- An independent peer review of seismic design calculations and detailing by a qualified structural engineer.
- On-site observation of as-constructed earthquake engineering details during construction by a qualified inspector to ensure they are constructed in accordance with the contract documents.

Buzz Scher agreed to begin identifying potential Alaska Legislators who might be willing to work with us as an ad hoc School Committee member. They can potentially be contacted through the DGGs liaison later this year.

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Laura Kelly briefly notified the School Committee that Kodiak is proposing a major project for their High School and that general preliminary architectural input does not indicate detailed thought for wind/seismic/emergency shelter considerations. It's in the early phases, so final outcome is not certain, and will hopefully be corrected. It should be watched in light of the new ADEED requirements.

Mary Lou Zoback's credentials were discussed, as well as the articles in which she is quoted, and it was determined that she should be invited to speak (telephonically or in person, if funds available) to the entire Commission for perhaps 1 hour vs an half hour to just the School Committee. She is known by many Commission members, and well respected. Laura Kelly agreed to contact Ms. Zoback to check schedule/availability. This is a follow-up to the original contact call made by Laura Kelly to Ms. Zobac just a few weeks prior to the Face-to-Face meeting, confirming that Ms Zoback was indeed interested in meeting with the ASHSC.

John Aho suggested, and it was agreed, that formal contact be made and maintained with the EERI ad hoc Seismic Safety of Schools Committee. This is also true for all other Seismic Safety Commissions/School Committees in other states, as represented by WSSPC. A print out written by Phillip Gould and submitted by John Aho provides details citing the EERI Committee Portal at <http://www.eeri.org/committees>. Laura Kelly, as School Committee Chair, agreed to make contact.

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Alaska Seismic Hazard Safety Commission
Hazards Identification Committee Report
Rich D. Koehler
May 5, 2011 ASHSC meeting

During the May 5, 2011 ASHSC face-to-face meeting in Anchorage, Alaska, the Hazards Identification Committee held a 45-minute discussion with the entire commission to discuss the following agenda items:

1. A White Paper on tectonic sources in Alaska.
2. Identification of secondary effects of earthquakes (lateral spread, liquefaction, landslide generated tsunamis).
3. Communicating seismic hazard issues to the legislature and the public.
4. Promote research on seismic hazard issues and disseminate research to the legislature and the public.

Additionally, committee chair Koehler summarized the following items for the commission.

5. Quaternary fault and fold database update
6. DGGs publication of results from a paleoseismic investigation along the Denali fault.
7. A summary of the California Earthquake Clearinghouse mission.

The White Paper on tectonic sources in Alaska was initially started by the former chair of the Hazards Identification Committee, Gary Carver, in 2010. This initial effort resulted in a substantial draft. The committee discussed the best way to finalize the initial draft. It was determined that the best course of action was to complete the initial draft focusing on summarizing the state of knowledge on tectonic sources in the various regions of Alaska. Additional topics such as "Effects of hazards to the built environment" and "Secondary effects of earthquakes" were determined to be better suited for subsequent white papers. A "secondary effects of earthquakes" white paper will focus on the description of the various geologic processes caused by earthquakes, and their general geologic environments. The "Effects of hazards to the built environment" white paper will enlist committee member Buzz Shear for his engineering expertise. Each white paper will build upon the results of the previous white papers. It was determined that the best course of action to complete the white paper on tectonic sources was to hold a focused work meeting at the next face-to-face meeting scheduled for June, 20, 2011. Koehler will review the existing draft and assign tasks for each committee member to prepare in advance of the work meeting

In regards to the agenda item on better communicating seismic hazards to the legislature and the public, it was decided that an internet search of senators and legislators could provide information on their backgrounds and interests. Senators and legislators with interests in public safety and geologic hazards could be targeted for dissemination of commission activities and results. The thought is that if certain senators with specific interests are versed in what the commission is doing, they may spread that information to the legislature. We also discussed the possibility of holding a face-to-face meeting in Juneau in order to provide the opportunity to knock on some doors to disseminate information and look for possible "Champions" to help further our agenda.

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To promote seismic hazard research being conducted by commission members, Koehler volunteered to keep a running list of publications and to produce this list for the annual report. The announcement of publications on the commission web site was briefly discussed.

Commission Chair, John Aho, brought up the possibility of creating a new sub-commission to address tsunami hazards. The consensus was to merge tsunami hazards into the existing Hazards Identification committee.

At the request of John Aho, Koehler summarized the status of the Quaternary fault and fold database for the state. A draft map was passed around the meeting for review and comment. Commission member Dave Miller requested a copy of the map, which was subsequently emailed to his office. The digital files for the majority of the Quaternary faults in Alaska are now complete. Koehler plans to publish a digital database through DGGs later this year. The only hold on publication at this point is completion of the metadata. This task is in the hands of the Geologist I who completed the digitizing from the paper maps. Presently, she is on medical leave but will complete the metadata upon her return. The new digital Quaternary fault map for the state of California was viewed by the commission over the web. Koehler suggested that California map may provide a good model for how to display the Alaska database on the web.

Also at the request of John Aho, Koehler discussed recent results from a study along the Denali fault published by DGGs this year. The study provides evidence of the age of the penultimate earthquake at the site and an estimate of slip rate based on field measurements of offset glacial moraines. The results are consistent with other paleoseismic results from nearby sites investigated by the U.S. Geological Survey. It is Koehler's understanding that the results from the USGS studies are being written and will hopefully be available soon.

Finally, Koehler shared the web site of the California Earthquake Clearinghouse and discussed their mission. The main purpose of the California Earthquake Clearinghouse is to provide a platform for communication during a major earthquake, to be used in coordinating rescue and science investigations. The site is also useful for posting daily observations and photographs and keeping track of the locations of post-earthquake reconnaissance workers. People with various backgrounds can sign up to be a member of the clearinghouse and participate in various subgroups (i.e. geotechnical, overflight, geologic, media, etc.). The commission discussed whether or not a similar clearinghouse could be set up for Alaska. Although this will be discussed further at subsequent meetings, it was determined that the commission must have a plan in place for a course of action during a major earthquake.

Rich D. Koehler
Chair, ASHSC Hazards Identification Committee