



EARTHQUAKE

e-Newsletter about what's movin' and shakin' at the Earth Science Museum

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January 2019

WHAT HAPPENED TO THE AZ MINING AND MINERAL MUSEUM? And LEGISLATIVE EFFORTS TO RESTORE THE MINERAL MUSEUM

For a history of why the AZ Mining and Mineral Museum was closed go to Mineral Museum Madness @ blogspot.com, minmumad.blogspot.com

SATURDAY, JUNE 5, 2010

WHAT'S HAPPENING TO THE ARIZONA MINING AND MINERAL MUSEUM

By Richard Zimmermann

<http://minmumad.blogspot.com/2010/06/whats-happening-to-arizona-mineing-and.html>

Legislative Efforts to Restore the Mineral Museum April 2015

SB1200 was overwhelmingly passed by the Senate and House to transfer the responsibility of the closed mining and mineral museum from the Historical Society (AHS) to the AZ Geologic Survey, but the governor vetoed it saying "there was no plan".

May 2016

An initial bill to reopen the mineral museum, Senate Bill 1440, was introduced in February. It passed the Senate by a vote of 24-2 in March. The bill, however, was not voted on by the House since the Appropriations and the Energy, Environment, and Natural Resources Committees did not schedule public hearings. As a result, the measure was later considered as a part of the state budget. Specifically, it was

included as a floor amendment to Senate Bill 1530 (SB 1530) which dealt with the consolidation of state agencies. Both the House and Senate passed this bill on May 4, while the Governor signed the legislation on May 10. Here is a summary of SB1530:

SB1530 transfers authority over the State Geologist and Geological Survey from the Governor to the Arizona Board of Regents and transfers administration of the Mining Mineral and Natural Resources Educational Museum from the Historical Society to the Geological Survey within the University of Arizona.

The bill restructures the Mining Mineral and Natural Resources Educational Museum Advisory Council to:

1. The state geologist or the state geologist's designee.
2. One member representing the livestock industry.
3. Two members representing the mining industry.
4. One member representing the agriculture industry.
5. One member representing the tourism industry.
6. One member representing the timber industry.
7. One member who is knowledgeable in gems and minerals.

8. Two members representing the public.
9. One member of the House of Representatives who is appointed by the speaker of the House of Representatives.
10. One member of the Senate who is appointed by the president of the Senate.

This bill transfers \$428,300 and one FTE from the Historical Society to the Geological Survey for Museum operations.

The bill transfers to AZGS all unspent and unencumbered funds received by the AHS for Mining Museum operations and future revenues of the Centennial Special Plate Fund to the museum account in the AZGS, retroactive to May 1, 2016. *(Note: A proviso in SB1530 called for it to be retroactive to May 1, but it failed to include the emergency statute that would allow that.)*

Requires the Arizona Historical Society to fulfill existing Mining Museum obligations, provide AZGS with a list of inventory and assist in the transfer of the inventory.

Allows the State Geologist to accept and oversee volunteers' services; apply for and accept grants, gifts, donations or other contributions for use in accordance with the direction of the donor or as prescribed by the AZGS; accept restricted and unrestricted monies from federal, state or local governments.

The bill states that the legislature's intent is that the AZGS maintain the current level of service and approximately 15 full time employees.

This bill also stipulates that the Arizona Historical Society regains authority of the Mining Museum if the Museum is unopened by July 1, 2018.

UPDATE

Lee Allison's, AZGS, Blog

Friday, May 20, 2016

AZGS moving to U of A by June 30

The Arizona Geological Survey will move out of our state offices in Tucson by June 30 and move into the office space recently vacated by the Arid Lands Resource Sciences on the east end of the University of Arizona campus. This is a result of the Governor's consolidation of state agencies. AZGS is transferred to UA effective July 1.



The space will be considerably smaller than what we currently occupy so we are looking at moving some library materials to the UA libraries, some into storage in the Phoenix museum we are taking over, and some will likely be given away or tossed. Our Arizona Experience retail store will be closed. We will be sharing the space with other UA programs.

We also are looking at moving the core repository to the museum as well to preserve that material.

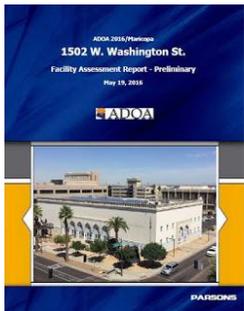
One advantage of the Arid Lands building is that there it is off campus and does have a limited amount of free parking for visitors.

AZGS will operate as a research center in the UA College of Science. The State appropriation to AZGS is zeroed out June 30. UA is providing one-time funding to cover a portion of our operations for the

next year as part of the transition. After that, it will be up to the Survey to raise all of its own funding. There are plans by UA to develop a fee for services program to help underwrite activities.

Mineral Museum transfer will occur in August

The former Mining & Mineral Museum in Phoenix will transfer to the Arizona Geological Survey sometime in August. A proviso in SB1530, the Agency Consolidation bill, called for it to be retroactive to May 1, but it failed to include the emergency statute that would allow that.



We also got a 65-page preliminary Facility Assessment prepared for the Dept. of Administration describing in detail the status and requirements for opening the building.

The conclusion is that the building will need ~700K in priority 1 remodels and repairs (which is close to the estimates made in 2014) and perhaps another \$200K as the flooring on the main floor needs to be replaced. Over 5 years, they identify a total of \$2.86 million to make the building like new. (It was built in 1921).

At present, the building cannot be occupied.

However, we are able to store materials there, and we plan on moving the extensive mining files and library from our Phoenix branch there in the next 10 days. We have to vacate our current office which is commercial space sublet from AZ Dept. of Water Resources by May 30. In addition, AZGS is being transferred to the University of Arizona which has no space available in Phoenix for our operations.

Similarly, UA has little or no storage space on campus for our Tucson office. So we are looking at moving files, library materials, and cores to the museum in order to preserve them. Otherwise, they would all be disposed.

Relevant section of Lee Allison's Blog Sunday, 5/22/16

SB1530 eliminates state funding for the AZGS and transfers the duties of the Survey to the UA. The Governor's staff said this is part of his efforts to consolidate state government.

There was no additional funding provided to UA, so they are expected to fund the Survey from their own funds. AZGS has been told that the UA will provide one-time funding of \$941,000 which is equal to the last state appropriation. After this coming year, AZGS will be responsible for finding 100% of its funding from grants and contracts.

AZGS will also give up most of its overhead on existing grants to the UA. These funds had been about as much as our state appropriation, and used to support our core mission, so the net result will be a 40-50% reduction in funds for state services. We have started notifying staff members whose jobs will be eliminated as of July due to the loss of funding.

June 2016

AZGS Phoenix Branch Office Packing Day By Harvey Jong

The recent call for help to pack the library materials of the Arizona Geological Survey's (AZGS) Phoenix Branch Office was answered by past and present Survey volunteers along

with a few rock club members. The original plan involved packing books and boxing files over two days, while additional days were scheduled if needed.

The main group of volunteers arrived at the fourth floor office of the AZGS around 8 am on June 13th. Nyal Niemuth, Chief Geologist and Phoenix Branch Manager, explained the “pack, clear, and roll” strategy. Books would be removed from shelves and placed onto carts, and cards labeled with the shelf numbers would be inserted between each group of books. After each bookcase was emptied, the shelves would be removed along with any connecting screws. Fully packed book carts and the disassembled bookcases would be rolled to a staging area for movers.

Teams of two volunteers were formed, and they started working on the first sets of bookcases. Doughnuts, refreshments, and Lee Allison, the State Geologist, later arrived, and everyone stopped for a brief doughnut break and update on the AZGS/UA transition.

Energized by all the doughnut “goodness”, teams fanned out and resumed their work. The entire office hummed with activity as one could hear shelf numbers being called out; books being carefully stacked; short bursts of a cordless screwdriver; and carts and bookcases being rolled away. Before noon, a majority of the bookcases had been emptied and moved.

After a short lunch break, volunteers regrouped and some posed for the following team photo:



Packing Team Volunteers

Photo by Lee Allison - from arizonageology.blogspot.com

Some people continued working on the remaining bookcases, while others focused on the contents of lateral file cabinets. By mid-afternoon, Nyal indicated that all the heavy-lifting tasks had been completed way ahead of schedule! A second day would not be needed.

Professional movers will transport all the packed materials to the mineral museum building around June 24-26. An unpacking session is now re-scheduled for the week of July 5, and again volunteer help will be needed. Please contact Randi Ballassai randi.bellassai@azgs.az.gov our Tucson administrator and me, Nyal Niemuth, nyalniemuth2@gmail.com know of your availability for the week July 5th - 8th if you are interested in participating in the big unpacking event at 1502 W. Washington Street.

History of some of the “Packing Day” Volunteers

By Shirley Cote

A total of eighteen people showed up over the course of the day to help pack up books and disassemble shelving. Some of these individuals are present and past AZGS volunteers and some are past Arizona Mining and Mineral Museum (AMMM) volunteers. Charlie Connell, Morris Jackson and Jeremy Pettengill were part of the “Monday Crew”

at the old museum who helped relocate, rebuild, paint, among other tasks, the mining equipment which still can be seen in front of the closed museum building on 15th Ave. and Washington.



Head frame and 5-stamp stamp mill

Photo: miningmineralmuseum.com

Harvey Jong volunteered for the AMMM at the front desk and in the gift shop a couple of Saturdays a month for many years before it was closed.

Cindy Buckner served as an intern in 2012 and 2013 for the Geological Survey working on the national geologic data preservation project.

The files being moved once belonged to the AZ Dept. of Mines and Mineral Resources (DMMR) and with the move of these files from the AZGS's Phoenix office back to the museum building, the files will have come full circle after two previous relocations.

Another interesting historical fact is that from 1893 to 1915 the AZGS was known as The University of Arizona Bureau of Mines. From 1915 to 1977 its name was shortened to Bureau of Mines, but still run by the UA.

July 2016

The AZ Geological Survey's plight garners local, state, national and even international attention and support!

By Shirley Coté

The Arizona Geological Survey (AZGS) has been in turmoil since January when Gov. Ducey announced his budget proposing the transfer of duties and responsibilities of the

AZGS to the University of Arizona (UA). And, in May 2016, the governor signed SB1530 the agency consolidation; budget reconciliation; 2016-2017, a bill in which the AZGS was defunded and put under the auspices of the UA. With this transfer, the AZGS is no longer a state agency, and therefore required to move from its 10,000+ square foot state office space on Congress St. in Tucson to a 2,500 sq. ft. space at the Arid Lands Studies building at 6th St. and Campbell just east of the UA campus. The AZGS also had to close its Phoenix offices and move its contents to dead storage as there is no office space owned by UA to house them.

Recent articles in both Tucson and Phoenix newspapers and in local and national blogs have highlighted the AZGS's plight.

In Tucson on January 21st, Jonathan Duhamel of the *Arizona Daily Independent* wrote an article entitled "Governor Proposes Transferring Arizona Geological Survey to University of Arizona-Bad Idea." Jonathan's article can be read at:

<https://arizonadailyindependent.com/2016/01/21/governor-proposes-transferring-arizona-geological-survey-to-university-of-arizona-bad-idea/>.

Also in Tucson on May 26th, Tom Beale of the *Arizona Daily Star* wrote an article entitled "State geologists moving to UA, facing layoffs" The full article can be found at:

http://tucson.com/business/local/state-geologists-moving-to-ua-facing-layoffs/article_25c05d6d-2b00-529b-a774-0bb8cadd701a.html.

A similar article was printed in the *Arizona Capitol Times* in their May 31st edition at:

<http://azcapitoltimes.com/news/2016/05/31/state-geologists-face-financial-crunch-with-move-to-ua/>.

In Phoenix, a letter to the editor from David Briggs of the AZ Geological Society was published in the June 16th *Arizona Republic*. In his letter he states: "The governor's efforts to consolidate state government have placed this healthy, productive state agency on life

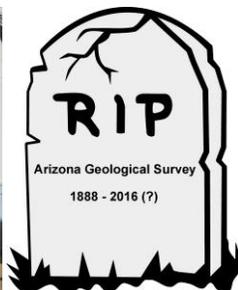
support, and its prognosis is grim. The Arizona Geological Survey's supporters do not understand how the decision to eviscerate this agency best serves the needs of Arizonans."

David's full letter can be read at:

<http://www.azcentral.com/story/opinion/op-ed/2016/06/15/my-turn-arizona-geological-survey-life-support-and-needs-publics-help/85848418/>.

Additionally, the Arizona Geological Society's website has an informative article on the former AZ Mining and Mineral Museum and on the uncertain future that the Arizona Geological Survey is currently facing. To view the both articles go to:

<http://www.arizonageologicalsoc.org/>.



Photos courtesy of the AZ Geological Society website

Vanessa Barchfield of *Arizona Public Media* ran a short piece on the AZ Geological Survey at <https://news.azpm.org/p/sci-tech-azpm/2016/7/1/91133-arizona-geological-survey-folds-into-ua-campus/>.

On Richard Zimmermann's blog, Mineral Museum Madness (minmumad@blogspot.com) a guest post entitled "*The so-called agency consolidation of the Arizona Geological Survey (AZGS) is a SHAM*" was posted and introduced as follows: A condensed version of the following guest post was also published as a letter to the editor in the June 17th paper copy of the *Arizona Republic*. In the newspaper, the title of the letter was "*Arizona Geological Survey saddled with impossible tasks.*" The full letter to the editor can be read at: <http://minmumad.blogspot.com/2016/06/azgs-challenges.html>.

On the national level, *Scientific American* magazine blogger Dana Hunter posted a piece on the *SciAM* blog Rosetta Stone, entitled, "Help Save the Arizona Geological Survey," with the subtitle "The Arizona Geological Survey's budget has been slashed by the state's short-sighted government." The full article can be read at: <http://blogs.scientificamerican.com/rosetta-stones/help-save-the-arizona-geological-survey/>.

Also on the national level, the American Geophysical Union's *Eos Earth & Space Science News* reported "New Law Puts the Squeeze on the Arizona Geological Survey" <https://eos.org/articles/new-law-puts-the-squeeze-on-the-arizona-geological-survey>.

And, on the international level, Matthew Loader, a geologist from the Natural History Museum in London, copied the AZGS on a letter he sent to Gov. Ducey opposing the defunding of this valued agency. A copy of his letter is posted with the June 26th Arizona geology blog at: <http://arizonageology.blogspot.com/2016/06/letters-op-eds-and-blogs-express.html>.

It's not too late to add your voice of support for the AZGS, write a letter to the governor; to your state legislators; to your local editor; or put your thoughts on social media and share, share, share. Those who may be interested in supporting the AZGS financially are encouraged to contact the Arizona Geological Survey at 520-621-2470 to see how they can help.

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The Book Brigade

The Great Library Shelving Project

Over two dozen volunteers joined Mike Conway of the AZ Geological Survey (AZGS) Tuesday, July 5, 2016, to help unload thousands of volumes of the AZGS's library holdings onto temporary shelving at the former mining and mineral museum building at 15th Ave. and Washington in Phoenix. Some of these volunteers were former AZGS employees forced to either retire or be laid

off due to the transfer of the agency to the University of Arizona. (Now that is dedication!)

As one person removed books from a gondola, two, three, or more volunteers formed a book brigade passing the books along the stacks for the last person to shelve them. The volunteers made short work of re-shelving the estimated 10,000 volumes finishing up in less than 2½ hours.



Diane Bain, retired AZGS employee, suggests that taller volunteers man the stacks as others pass books along to be shelved.

Shirley Coté photo



Members of the book brigade take a break to pose at the former AZ mining and mineral museum building.

Mike Conway photo

YOUR SUPPORT FOR THE AZGS REQUESTED

The Arizona Geological Survey (AZGS) is pulling together a list of individuals and groups with an interest or stake in the opening of the Mining, Mineral and Natural Resources Educational Museum. As you may know, possession of the Mining and Mineral museum building and mineral collection passes from the AZ Historical Society to the AZGS on August 6th. The AZGS is strategizing now and identifying stakeholders in advance. If you are interested in receiving regular updates, please contact Michael Conway directly by phone (520-621-2352) or e-mail fmconway@email.arizona.edu.

Michael Conway | Chief, Geologic Extension Service
Arizona Geological Survey

The following is from AZGS's Lee Allison's blog dated August 6, 2016.

Centennial Museum transfers to AZGS today



The Arizona Centennial Museum, which was never opened, transfers today to the Arizona Geological Survey, to be

reconfigured as the Arizona Mining, Mineral, and Natural Resource Educational Museum.

The facility operated for decades as the Arizona Mining and Mineral Museum but was transferred to the Arizona Historical Society in 2010 to be revamped as the “Arizona Experience” museum in celebration of the 2012 Centennial. However, funds were never raised to make the conversion and the museum has been vacant and empty since 2011.

Sen. Gail Griffin spearheaded the drive to transfer the museum to AZGS with the expanded vision. The 26,000 square foot facility was originally built in 1929 as the Masonic Temple. It is a dominant fixture on the State Capitol Mall in Phoenix.

AZGS and AHS are collaborating on the transfer which includes the museum curator becoming an AZGS employee. An inventory of all the museum assets is underway. We expect to renew all of the loans of museum specimens and displays currently in place around the state.

The state Dept. of Administration estimates \$700,000 - \$900,000 in repairs and updates are needed before the building can be reoccupied. AZGS is responsible as the building tenant for all repairs and remodeling.

The legislation transferring the museum also established an Advisory Council to be appointed by the Governor.

The University of Arizona Foundation has set up an account to accept donations for the new museum.

We’ll be posting information on how to nominate yourself or others to the Advisory Council, updates on the museum inventory, progress towards reopening the building, and plans for the new museum design. A museum website is in development.



We are deeply saddened in having to announce that Dr. M. Lee Allison, Director of the Arizona Geological Survey and State Geologist, passed away Tuesday, August 16, 2016, after suffering a critical head injury from a fall at his home the previous Saturday.

We would like to express our deepest sympathy to his wife Ann, family, staff, friends, colleagues and all who have had the privilege to know him. His passing is a tragic loss to everyone and Lee will be greatly missed.

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Arizona Mining and Mineral Museum now in the hands of the Arizona Geological Survey
By Michael Conway

On August 6, 2016, the Arizona Geological Survey (AZGS) received custodianship of the Polly Rosenbaum Building on the State Government Mall, Phoenix. The Rosenbaum building was the former home of the Arizona Mining and Mineral Museum.

The building transfer is a component of S.B. 1530, which also transferred the AZGS to the College of Sciences at the University of Arizona. This bill charges AZGS with designing, opening and operating the facility as the *Arizona Mining, Mineral & Natural Resource Education Museum* (MM&NRE Museum). The focus of the new museum is on the historical, cultural, economic and social contributions made by the mining,

mineral, natural resources, timber, livestock and agricultural industries of Arizona.

Along with the facility, AZGS receives: \$428,300 including funding for one full time employee—a mineral curator; approximately 21,000 minerals with an estimated value of \$3 million; all unencumbered balances (~\$305,000) and future revenues of the Centennial Special Plate Fund. The Arizona Historical Society will continue to curate the mineral collection, until such time as the museum renovation is complete.

By statute, the Arizona State Geologist and Director of AZGS is the chief administrator of the new MM&NRE Museum. The State Geologist's responsibilities include operating and maintaining a museum for collecting, cataloging, and displaying mining, mineral and natural resources artifacts and specimens. Other tasks by statute include:

- Establishing a funding stream of grants and financial gifts;
- Procuring financial assistance from federal, state and local governments;
- Establishing and collecting entrance fees;
- Operating a retail gift shop;
- Developing and managing volunteer services;
- Paying maintenance and operation expenses.

First Steps - AZGS staffers, Mike Conway, Rowena Irene Davis, and Catie Carter, are now on task and moving forward. Steps taken so far include:

- ✓ Joining the Museum Association of Arizona

- ✓ Identifying stakeholders, colleagues, and potential collaborators for regular progress updates;
- ✓ Deploying an MMNRE Museum web environment for rapid sharing of information & images;
- ✓ Reaching out to the local, national and international museum community for their advice and recommendations;
- ✓ Notifying the Arizona museum community, Arizona Office of Tourism and other groups of plans to open MMNRE;
- ✓ Establishing MMNRE's first traveling exhibit at the Patagonia Museum in Patagonia, Arizona;
- ✓ Initiating partnership with Arizona Capitol Museum staff to establish "Minerals from Historic Mining Towns of Arizona" exhibit;
- ✓ Notifying borrowers of minerals and hardware that AZGS has replaced Arizona Historical Society as the agent of record.

Timeframe & Challenges - According to the Arizona Dept. of Administration, the building requires an estimated \$700,000 to \$900,000 in structural and cosmetic repairs before it can be occupied. In addition to producing monies for these repairs, the search for adequate and sustainable funds to create innovative and engaging exhibits depicting the fascinating development of Arizona's natural resources is anticipated to be the museum's biggest challenge.

As a research institute the College of Sciences at the University of Arizona, we have access to resources and personnel with years of experience in fundraising, museum management and displays, and logistics. We intend to leverage these resources to speed the process of opening the MMNRE Museum along.

Moving forward - Moving forward our near term chief objectives are to:

- Identify fundraising partners and champions
- Glean knowledge of existing museums and current thoughts on the role of museums as part of the social landscape in urban settings.
- Identify innovative, cost effective, and engaging exhibit opportunities
- Establish strong two-way communications stream to engage stakeholders and the public.

We'll be calling on you for your ideas and support.

We are setting up a dedicated MMNRE e-mail (MMNRE-Info@email.arizona.edu), but until it is operational, please use fmconway@email.arizona.edu.

Acknowledgements

We thank Senator Gail Griffin and her staff for their tireless efforts in doing the political groundwork to transform the MMNRE Museum concept into reality. We thank, too, the volunteers of the Arizona Mining and Mineral Museum who kept the fires of hope burning through some dark, dark days.

Last, especial thanks to Lee Allison, friend, colleague, and former Arizona State Geologist and Director of the Arizona Geological Survey, from 2006 until his death on Tuesday, August 16, 2016. Lee left a hole in the Survey that you could drive a Mack truck through. But we carry on and we rededicate ourselves to making his dream of reopening a world-class mineral and natural resources museum on the Capitol Mall in Phoenix a reality.

The MMNRE Team - Mike Conway , Rowena Davis, Catie Carter (curator)



Arizona Mining, Mineral and Natural Resources Educational Museum

AZGS Update 9-30-16

By Michael Conway

AZGS' Mining, Mineral and Natural Resource Education Museum (MMNRE) team has been hard at work in September. We are now meeting regularly with leadership at the Univ. of Arizona's College of Science to share ideas and strategize ways to best leverage existing resources. (By way of reminder, AZGS was transferred to the Univ. of Arizona on July 1, 2016.)

In mid-September, we hosted our first MMNRE exhibit booth at the 6th Annual Arizona SciTech Festival kick off. Hundreds of attendees stopped by to pocket a piece of quartz or calcite and talk about the role mission, and timing of this re-imagined museum.

A number of teachers shared their excitement about bringing their students back to the museum. We are meeting soon with the education team from South Mountain Park to discuss the potential for an MMNRE traveling exhibit there. Along the same lines, we hope to establish traveling exhibits at the Arizona Capitol Museum and the River of Time Museum in Fountains Hills, AZ.

Catie Carter (AZGS-MMNRE Curator) staffed the Association of American State Geologists (AASG) booth at MINExpo-2016 in Las Vegas this week. Most of the discussion revolved around Arizona mining data and the National Geothermal Data System (a joint product of AZGS and AASG), but she informed people of the rebirth of a mineral and natural resource museum in downtown Phoenix.

Mike Conway attended the Western Museum Association Annual Conference in Phoenix from September 25-28. The event focused on issues surrounding museum funding sources, identifying and connecting to your audience(s), using social media and crowd sourced content to expand your influence and share resources well beyond the walls of the museum, and personnel training. This was an eye-opening event into the ongoing challenges to sustain a museum in a time of generally diminishing resources.

Works in progress

- Crafting a vision/mission statement to pitch the museum to a broad audience;
- Building relationships and trust with our College of Science colleagues;
- Exploring database structures for curating the mineral collection;
- Refining aspects of a MMNRE business plan;
- Drafting and vetting a strategic plan;
- Outreach to our stakeholders.

Social Media Front

We are pivoting our ArizonaExperience.org Facebook page to engage an audience interested in mineral, mining, sustainable land use, agriculture, rangelands, forestry and water. So follow us there <https://www.facebook.com/AZExperience/>. (Watch for this shift in content and tone next week, and please let us know how we are doing.)

Or, join the conversation with our new twitter feed @ <https://twitter.com/MMNREMuseum>.

Questions? Comments? Ideas to share? Send them on.

Thanks!
MMNRE Team

Mike Conway, Rowena Davis and Catie Carter
fmconway@email.arizona.edu



Mike Conway at AZ SciTech Festival in September
Photo by C. Carter, AZGS



Arizona SciTech Festival in September
Photo by C. Carter, AZGS



Arizona Mining, Mineral and Natural Resources Educational Museum Advisory Board

Arizona Boards and Commissions

The Arizona Boards and Commissions has opened the application process for the MM&NRE Museum Advisory Board. To learn more about that or to apply, visit: <http://bc.azgovernor.gov/bc/form/boards-and-commissions-application>

Once at Boards and Commissions, drop below the fold to “Board/Commission Interests” to select for MM&NRE.

From the Senate, Senator Gail Griffin was nominated, from the House, Rep. Vince Leach. AZGS interim director Dr. Phil Pearthree will represent AZGS. Dr. Bob Downs, curator of the Univ. of Arizona Mineral Museum, has thrown his hat in the ring for the Minerals position. With the exception of Griffin, Leach, and Pearthree, selection is made by Governor Ducey or his designee for board membership - see the list below.

Senator Griffin is reaching out to prominent individuals in the forestry, mining, and agriculture communities for potential candidates.

Board Membership

1	Livestock
1	"Agriculture"
1	Timber
1	Tourism
2	Public
2	Mining
1	Minerals
1	Senate
1	House
1	State Geologist

Please let us know if you have any questions.

AZGS MM&NRE Team

Mike Conway, Rowena Davis, Catie Carter
Phil Pearthree - Interim Director of AZGS
fmconway@email.arizona.edu



Image of the Boards and Commissions page



AZ Mining, Mineral & Natural Resources Educational Museum Update Nov. 8, 2016

By Michael Conway

Part I: Revisiting & summarizing Saturday's Stakeholder Meeting at the Polly Rosenbaum Bldg. – Nov. 5th.

Part II: Status of the MMNRE Advisory Board

Stakeholders posted note comments Page 5

Part I. Saturday's stakeholders meeting (11/5/2016) went well with 30+ stakeholders attending. Thanks again to all who participated – it was a pleasure to interact with you face to face. Senator Griffin kicked off the meeting by describing the natural resources concept model of the museum. She then opened the floor to questions – and there were no shortage of those. Sen. Griffin, Rowena Davis, Catie Carter and I did our best to address questions honestly and forthrightly. At this juncture, of course, we all have more questions than answers.

Here is a tidy rundown of some of the questions addressed by Sen. Griffin or MMNRE Team, with our responses bulleted.

- How much will it cost to bring the Museum up to code and allow us to occupy it?
 - » A recent (2014-2015) ADOA report indicates ~ \$900,000 for basic structural, electrical and plumbing repairs. To get the museum and museum property in 'mint' condition - \$2,100,000.
- Can the museum do justice to the broad science of sustainability of natural resources approach?

» We believe that it can and state statute S.B. 1530 mandates that it must.

- Are we concerned about competing processes if the Univ. of Arizona becomes involved in building out space for the UA Mineral Museum at the Pima County Courthouse, while supporting our efforts to fund and build out MMNRE Museum?

» Yes! It's a concern, but those are the circumstances we find ourselves in and we have to address them as best we can. On a positive note, the curators and staff of various museums associated with the University are proving to be a tremendous resource, generous with their connections, time, and knowledge.

- Are there plans afoot to revisit the language of S.B. 1530 and excise language returning the museum and its assets to the Arizona Historical Society (AHS) in the event the museum is not opened and operating prior to 1 July 2018?

» Sen. Griffin indicated that she was working on legislation to excise the language returning the museum to AHS. (We should note AHS has strongly indicated to UA administrators that they have no desire to reacquire the museum or its assets.)

- How much will it cost to build and deploy museum exhibits consistent with the natural resources concept?

» We can't answer that definitively, but we have reached out to museum experts at the University of Arizona, Tellus Museum and A.E. Seaman Museum at Michigan Tech University in Houghton, Michigan, regarding the cost of science museums. On the basis of those discussions, it appears that building a science museum can run well over \$300 a square foot of exhibit space. MMNRE

Museum includes 15,000 to 16,000 sq. ft. of exhibit space.

- Are public monies available to build and sustain the museum?

» Sen. Griffin pointed out that Arizona's state budget is climbing out of a large deficit and it's unlikely that there will be sufficient state funds available.

- Where will the money to repair and build out the museum come from?

» We hope to strategize and deploy a fund-raising program drawing funds from public entities (city, county, state and federal), grants, private gifts, and corporate donations. Sen. Griffin led the way in establishing an account for the museum at the University of Arizona Foundation. This link is available for sharing at: <http://tinyurl.com/SupportMM-NREMuseum>.

- At this time, what can stakeholders do?

» You as stakeholders have deep knowledge of the community, local mineral community, educators, and financial and in-kind resources that the MMNRE Museum team lack. We need to work closely with you to fund and build out a museum that meets the need of the Phoenix community – teachers, students, clubs and associations.

Part 2. ADVISORY BOARD UPDATE – 7 Nov 2016

As of today, the Arizona Boards and Commissions has four (4) general applicants for the MM&NRE Museum Advisory Board. Counting Senator Griffin, Representative Leach and AZGS Interim Director Phil Pearthree, that brings the total of board applicants to seven (7). According to state statute S.B. 1530, the board should include twelve (12) applicants.

To apply for a position on the MMNRE Advisory Board, visit:

<http://bc.azgovernor.gov/bc/form/boards-and-commissions-application>

Once at Boards and Commissions, drop below the fold to “**Board/Commission Interests**” to select for MM&NRE.

Please let us know if you have any questions.

AZGS MM&NRE Team

Mike Conway, Rowena Davis, Catie Carter
Phil Pearthree – Interim Director of AZGS

Board Membership

1	Livestock
1	"Agriculture"
1	Timber
1	Tourism
2	Public
2	Mining
1	Minerals
1	Senate
1	House
1	State Geologist

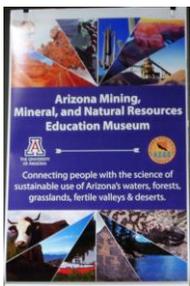
The MMNRE Team

Mike Conway

Rowena Davis

Catie Carter (curator)

Michael Conway, Chief, Geologic Extension
Service, AZGS



AZ Mining, Mineral & Natural Resources Educational Museum Update Dec. 2016

By Michael Conway

AZGS staff continues to work diligently to repurpose the Polly Rosenbaum Building on the Government Mall in Phoenix into the Arizona Mining, Mineral and Natural

Resources Education Museum. With the help of Charlie Connell and the Monday Morning Crew, we returned some Arizona Mining and Mineral Museum materials to the Polly Rosenbaum Building from temporary storage at the Arizona Historical Museum, Tempe.

Staff from the University of Arizona facilities visited the building in Nov. 2016. They determined that the building is in ‘Average Condition’ and in need of repairs throughout. They noted, too, that the building is not ADA compliant and improvements are needed to assure full accessibility. According to the report, ‘it would be most cost-effective to continue to utilize the building as a ... museum’. UA facilities estimates it will cost several millions of dollars for repairs, renovation, and to make the facility ADA compliant. At the start of the New Year, AZGS staff will aggressively pursue a timeframe for repairs.

In the meantime, we just opened our second traveling mineral exhibit at the Arizona Capitol Museum, 1700 W. Washington St., Phoenix. This exhibit focuses on ore minerals of historic mining communities, such as Bisbee, Ajo, Jerome, Morenci, and Miami-Globe. Also included are three B&W images showing classic mining scenes taken during the height of copper mining in Bisbee, Arizona. A shaded relief map that accompanies the exhibit shows the viewer the location of the select mining communities. Some further work on the exhibit is required, but it is open for viewing.

The exhibit purpose and design was a team effort by Rowena Davis, Catie Carter and Mike Conway. Catie built out the exhibit with help from Bill Yedowitz (Flagg Mineral Foundation). We thank the staff of the Arizona Capitol Museum for providing guidance and logistical support - they provided the cabinet. The exhibit will run through most of 2017.



AZ Capitol Museum, Arizona Mine Inspector's Office, 2nd floor

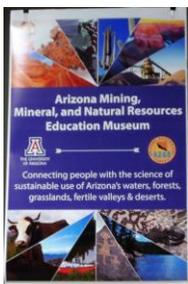
On 19 Nov., Senator Gail Griffin addressed a memorial service for AZGS's Lee Allison and shared her deep interest in seeing the museum reopened to benefit the next generation of Arizona engineers and scientists.

The MMNRE Team

Mike Conway, Chief, Geologic Extension Service

Rowena Davis

Catie Carter (curator)



AZ Mining, Mineral & Natural Resources Educational Museum

Update Feb. 11, 2017

By Michael Conway

[SB1415](#) - Transfers the Mining & Mineral Museum to the University of Arizona permanently.

Earlier this week, AZGS Director Phil Pearthree and I met with Univ. of Arizona lobbyists and Sen. Gail Griffin and her chief aide to discuss SB1415, which transfers the Polly Rosenbaum Building and assets of the former Arizona Mining and Mineral Museum to the University of Arizona.

The chief purpose of [SB1415](#) is to, 'Transfers the Mining, Mineral and Natural Resources Educational Museum (Museum) to the University of Arizona (U of A) permanently. The original 2016 bill placed the museum with the AZGS and returned the museum to the Arizona Historical Society by July 2018, in the event AZGS had not opened the museum. The new bill specifies the University of Arizona as the primary institute for operating, maintaining, and managing the building and its assets. UA administrators assure us there is still a large role for AZGS to play in developing content and channeling museum design. We anticipated this change in language, we embrace it, and we are ready to go forward with UA committed to the task.



UPDATE 2-28-17:

[SB1415](#) passed in the Arizona Senate with a vote of 30-0 on February 23rd, and was transmitted to the House.

MMNRE Advisory Committee - Stalled

Our hope for appointments to the MMNRE Advisory Committee came to naught in January. We were on the agenda of the Office of the Arizona Boards & Commissions but they cancelled their January meeting due to staffing issues. Not to worry, we'll continue to call and e-mail Boards and Commissions weekly to get back on their schedule.

As SB1415 progresses in the House, Mike will keep us informed.

SB1184 - Arizona Geological Survey; appropriation

Sen. Griffin also introduced SB1184 to reinstate AZGS' state allocation of \$941,000 for FY 2018. You may recall that our budget was zeroed out in FY 2017, and we were

transferred from state government to the College of Science at the University of Arizona.

Please let us know if you have any questions or concerns.

Mike Conway, Rowena Davis, Catie Carter (Curator); AZGS - MMNRE Team
Michael Conway | Chief, Geologic Extension Service
Arizona Geological Survey

Late Breaking News

SB1184 passed in the Senate with a vote of 28-2 on February 23rd and was transmitted to the House.

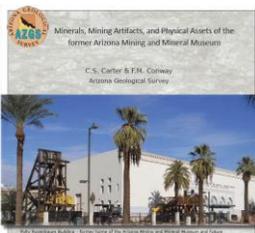
(Italics - S. Coté, Editor)

MUSEUM CASES RETURNED - 3-31-17



Unloading one of the cases and a group picture of the volunteers in front of the haul truck mural
Photo by Catie Carter, AZGS

Two AZGS employees and eight former AZ Mining and Mineral Museum (AZMMM) volunteers returned seven cases to the museum building. These cases had been on loan to the U of A's Biosphere2 since the AZMMM's closing.



AZ Mining, Mineral & Natural Resources Educational Museum Update April 2017

By Michael Conway

The following is a progress report on the MMNRE Museum. Notably, we just published a 24-page Open-File Report, '[Mineral, Mining Artifacts, and Physical Assets of the](#)

[former Arizona Mining and Mineral Museum'](#). See the cover image above. The report includes 8 tables and several dozen images characterizing the nature, origin and scope of both the mineral and the mining artifact collections. We thank Jan Rasmussen for reviewing an earlier version and for pointing to several areas in which the manuscript was deficient. Of course, any mistakes or overlooked features lie directly on our shoulders.

The update includes key accomplishments and sections on outreach, upcoming events, and challenges.

SB1415, which transfers the museum permanently to the Univ. of Arizona, is faring well in the AZ Senate and House. Keep your fingers crossed.

Please let us know if you have any concerns or questions. I suspect an increase in MMNRE activity after SB1415 is signed into law. More on that later!

MMNRE-AZGS team

Mike Conway, Rowena Davis & Catie Carter (Curator)

AZGS' MMNRE has accomplished a number of things since our last update; key accomplishments are noted below. Please let us know if you have questions, concerns or ideas for moving forward.

- On 4 April 2017, we released AZGS Open-File Report, '[Mineral, Mining Artifacts, and Physical Assets of the former Arizona Mining and Mineral Museum'](#). The 24-page report documents the history, nature and scope of the AMMM mineral and mining artifacts collection – see attachment & Fig. 1.

- AZGS-MMNRE staff, M. Conway, R. Davis and C. Carter, attended the Museum Association of Arizona's Annual Conference on 3 April 2017. We participated in the 'Starting from Scratch' panel discussion describing the challenges, successes and pitfalls of museum start-ups. Other participants included the [Arizona Farm and Ranch Experience](#) and the [Tohono O'odham Nation Cultural Center and Museum](#).
- SB1415, introduced by AZGS senate champion Senator Gail Griffin in Jan. 2017, will transfer the Polly Rosenbaum Building, physical assets of the former Arizona Mining and Mineral Museum, and ~\$425,000 annual operating and maintenance budget to the University of Arizona. The bill has performed well in both the Arizona Senate and House. Senate and House members are just now reconciling proposed allocated funds with Gov. Ducey's proposed budget, but the future of SB1415 looks bright.
- Thousands of people viewed MMNRE's exhibit '*Minerals from Historic Mining Districts*' at the February 2017 Tucson Gem and Mineral Society Show. We received a number of compliments from prominent, and not-so-prominent, members of the Arizona mineral community for the quality and aesthetic appearance of the display. TGMS provided a large display case (66"x22"x28") and a \$300 stipend to offset AZGS costs.
- AZGS staff continues to reach out and cultivate relationships with individuals in both the museum community and the natural

resources research community.

Outreach

- ✓ We are finalizing a small-scale prototype of 'Mining Powers the Arizona Experience' on the 3rd floor lobby of the [Arizona Senate Building](#) (see the graphic on following page). The exhibit includes mineral and ore specimens from Cochise, Greenlee, Maricopa, Mojave and Yavapai Counties, along with displays showcasing the past, present and future of Arizona mining. We'll include a poster on industrial minerals, 'Turning Mountains into Mole Hills – Building Arizona out of sand & gravel'.
- ✓ Catie Carter is collaborating with Mardy Zimmerman, Earth Science Museum Outreach, and the Roosevelt Elementary School District, Phoenix, to establish a lending library of teacher's mineral kits to assist teachers in presenting minerals and mineral properties, including their uses and benefits to human society.
- ✓ On 15 March, we hosted a table at the 'Mining Day of the Capitol' on the Capitol Mall in Phoenix. Attendees included state legislators.
- ✓ In March 2017, we released '[Exploring Northern Arizona's San Francisco Volcanic Field](#)' Story Map. Over the past month the Story Map has been viewed over 1,300 times.
- ✓ On 25 February, Catie Carter hosted a table at Paradise Valley elementary school STEAM event presenting the physical characteristics of minerals and informing teachers, parents, and students of the goal of AZGS-MMNRE staff to repurpose the former Arizona Mining and Mineral Museum and reopen it as the MMNRE Museum.

- ✓ Filmed and posted to YouTube a short video describing MMNRE traveling exhibit, '[Minerals of Historic Mining Communities of Arizona](#)', hosted at the Arizona Capitol Museum, Phoenix.

Upcoming Events

- ✓ MMNRE curator Catie Carter will be attending the American Alliance of Museums 2017 Annual Meeting and Museum Expo in St. Louis, Missouri, 7-10 May 2017.
- ✓ Phoenix Zoo. We are collaborating with the Phoenix Zoo's Mike Foley in developing MMNRE branded outreach materials describing the geologic setting of the zoo grounds and environs. Under the auspices of the MMNRE, we'll collaborate with zoo staff to design and deploy a suite of geologic products – signage, paper products (geologic - zoo *scavenger* hunt), and electronic products – Story Map, and social media program to engage zoo visitors in the geology of the Phoenix Basin. Additionally, we hope to deploy a traveling exhibit of Phoenix-area minerals and rocks thus promoting the MMNRE.
- ✓ South Mountain Park Environmental Center (SMPEC). We are working with Lisa Herrmann, Director of the SMPEC on deploying a traveling exhibit of South Mountain rocks and minerals. Additionally, we are collaborating with Dr. Ron Dorn (ASU Geography) and one of his graduate students on the impact of debris flows on neighborhoods adjacent to South Mountain.
- ✓ ABC's of Arizona's Natural Resources. An original social media program profiling Arizona's natural resources and the research efforts of UA, ASU and NAU in developing sustainable 'best practices' of those resources. Facebook and twitter posts deployed weekly beginning in mid-

to late-April. The resulting ABC's graphics will be cataloged on Flickr.

Challenges

- We continue to struggle with the Arizona Boards and Commissions in appointing members to the MMNRE Advisory Board. It has been five months since first contact and while they have promised action, there has been no progress.

(Editor's Note: other pictures from this 4 page report are not included here.)

◇ ◇ ◇

LEGISLATIVE UPDATE - SB1415

On April 19th, the Arizona House Rules Committee passed SB1415 transferring the Polly Rosenbaum Building and the former AMMM mineral and mining artifact collections to the Univ. of Arizona. The bill came out of Caucus, too, so it's sailing along nicely. One more legislative step and it goes over with the budget bill to Gov. Ducey.

Among other things, SB 1415, reads, 'In coordination with the mining, mineral and natural resources educational museum advisory council established by section 27-111, 'the University of Arizona shall operate and maintain a mining, mineral and natural resources educational museum as the state depository for collecting, cataloging and displaying mining, mineral and natural resources artifacts and specimens.'

Our thanks go to Senator Gail Griffin, her staff and colleagues for introducing and shepherding SB1415 to this point. We are almost there.

Bill SB 1415 is online at <https://apps.azleg.gov/BillStatus/GetDocumentPdf/449650>

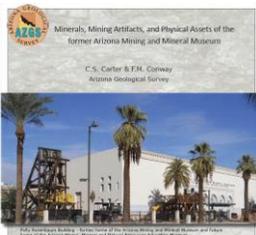
Update 4-20-17 - SB1415 just went through it's 3rd reading and passed 53 to 0-6-1. Full steam ahead!

LATE BREAKING NEWS – SB1415

Update - On Friday, 28 April 2017, Gov. Doug Ducey signed SB1415 transferring the Polly Rosenbaum Bldg. and the physical assets of the former Arizona Mining and Mineral Museum to the University of Arizona.



Michael Conway | Chief, Geologic Extension Service, Arizona Geological Survey



AZ Mining, Mineral & Natural Resources Educational Museum Update May 2017

By Michael Conway

LEGISLATIVE UPDATE - SB1415

SB1415: mining and mineral museum; transfer

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Bill SB 1415 is online at:

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UPDATE - SB1415

On Friday, 28 April 2017, Gov. Doug Ducey signed SB1415 transferring the Polly Rosenbaum Bldg. and the physical assets of the former Arizona Mining and Mineral Museum to the University of Arizona.

UPDATE - SB1184

SB 1184: appropriation; Arizona geological survey

Good news to report regarding the fate of AZ Geological Survey.

On Friday, 5 May 2017, Arizona Gov. Ducey signed the FY2018 budget into law. It includes \$941,000 in annual funding for AZGS and assures that we will be part of the base budget through 2020. For more on this and the challenges that lie ahead, please see Arizona State Geologist’s Phil Pearthree’s short note:

<http://arizonageology.blogspot.com/>

I’m delighted to report that we are back in business with sufficient state funding to perform our state-mandated services, including: geologic mapping, economic geology assessment, natural hazard assessment, and outreach and education, among other things.

Please feel free to alert your community and colleagues.

Thanks for your help, encouragement and support over the past several years.

Michael Conway | Chief, Geologic Extension Service Arizona Geological Survey