



The Village Crier

Your Local Community Newspaper

August 15, 2023

VOLUME 4, NO. 12

HOPI CALENDAR

Tala'Paamuyaw
(August)
The Moon of
Positive Hopi Life

Aug Tala'Paamuyaw
Sep Nasanmuyaw
Oct Angakmuyaw
Nov TömöKyelmuyaw
Dec Kyaamuyaw
Jan Tömö'Paamuyaw
Feb Powamuyaw
Mar Ösömuayaw
Apr Kwiayamuyaw
May Hakitonmuyaw
Jun Woko'uyis
July Tala'Kyelmuyaw

THIS MONTH IN HOPI HISTORY

- 1629: Franciscans arrived at Awat'ovi to establish a mission.
- 1680: Pueblo Revolt forced the Spanish out of the Southwest.
- 1680: Franciscans killed (Orayvi, Awat'ovi, and Soongopavi)

FIRST MESA CONSOLIDATED VILLAGES

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The Village Crier is published on the 2nd Tuesday of the month. To subscribe, submit news articles or advertise in the paper, contact Louella Furcap at 928-737-2670 or by email Lnahson-hoya@gmail.com

Summary of a Reconnaissance-level Rockfall Hazard Review of First Mesa Consolidated Villages, Hopi Reservation, Arizona

Summary Report by: Stephen L. Slaughter
Scientist , U.S. Geological Survey



Pictures of First Mesa, enroute to Tewa Village near the Gap area. The Mesa is very fragile and loose rocks continue to fall. Commuters are asked to be watchful and alert when going up and down the Mesa to guard against danger and accidents. PHOTOS: by Wilber Kaye

In a memorandum dated July 24, 2023 from Stephen L. Slaughter, U.S. Geological Survey to First Mesa Consolidated Villages Administrator Ivan Sidney, and a cc: to Ann M. Youberg, Arizona Geological Survey, Slaughter provided the following report:

Summary: Public safety is the stated top priority for leadership at First Mesa Consolidated Villages (FMCV). Rockfall is the primary geologic hazard identified that can pose a threat to public safety and infrastructure at the First Mesa.

Rockfalls are naturally occurring geologic hazards in steep landscapes but the rate or occurrence of rockfalls can be affected by human activities. At First Mesa there is a question of how recent changes, such as adding potable water, sewer lines, and roads may be altering how often rockfall occurs. If one or more of these changes

increase the likelihood of rockfall, then the chances of human injury or death from rockfall and the loss of sacred and historic buildings also increase.

On June 13, 2023, four scientists (Stephen L. Slaughter, Brian D. Collins, Ryan S. Crow, and Helen Fairley) from the US Geology Survey (USGS) and three scientists (Brian F. Gootee, Joseph P. Cook, and Ann M. Youberg) from the Arizona Geologic Survey (AZGS) visited the Frist Mesa and were hosted by FMCV leadership including Ivan Sidney, Fred Ami, Wilbur Kaye, Myron Ami, and other FMCV and Hopi representatives.

Based on that visit, USGS and AZGS compiled preliminary observations of geologic hazards and suggested next steps. These are only suggestions, and all actions require additional field observations to build a more comprehensive

understanding of the issues.

Observations: Scientists from the USGS and AZGS and representatives from FMCV walked along the mesa edge of Walpi, Sichomovi, and Tewa Villages to examine historic rockfalls and other areas of geologic concern. We also walked along the access road about a half mile east of Tewa to look at rockfall hazards above the road.

The main geologic units in the area are the Toreva Formation (a sub-unit of the Mesa verde Group¹) and the underlying Mancos Shale². The layer that the villages are built on is the upper member of the Toreva Formation (layer Ktu on sheet 4 of the referenced report), which is dominantly a hard, cliff-forming sandstone but also contains weaker mudstone layers.

At many locations discontinuous mudstone layers were noted 20-30 feet below the top

of the mesa. The mudstone is soft and can be easily penetrated with small hand tools.

It was shared that clay in these mudstone layers have been mined to make pottery.

These mudstone layers increase in number down the slope and are eventually broken out in the referenced geologic map as the middle mudstone member of the Toreva Formation (unit Ktm).

When water is added to the mudstone, either from rainfall penetration from above or runoff from the mesa, the clay minerals in the mudstone absorb the water and the layer weakens. Since the mudstone layers support the weight of the sandstone above it, weakening or removing the clay layer increases the chances for rockfall and can cause failure of the overlying sandstone cliff.

Continued on Page4

Issues with Water Operations

By: Ivan L. Sidney, Administrator
First Mesa Consolidated Villages

With the work on the temporary Polacca wash channeling, on an emergency basis, the construction company and the United States Army Corps of Engineers (USACE) have been working seven days a week for the past three weeks.

The expedited work is due to our summer monsoon season already here. This also requires our staff to be available to provide immediate support for work on our lands. With the past ceremonies and others scheduled during Labor Day weekend, it is placing a heavy workload on our office, especially staff.

What is also of high demand associated with maintenance issues is our water and sewer sys-

tem. Our water wells are almost in operation 24/7 to keep up with the demand. During ceremonial days, staff have to be on duty to tend to the wells and especially the sensitive pressurized system to operate the mesa water system.

The mesa water supply has to be pumped three times (3) and pressurized to deliver into mesa homes. This has been a high-cost operation we have endured with limited funding.

All payments for our water system currently pay for only the delivery of water. Water payments are not enough for maintenance and practically nothing for replacement of needed parts. Since our system is almost 40 years old, the

main lines are in need or due for immediate replacement. Our water program now has one truck, one backhoe, and one septic pumper with only four usable porta-toilets.

We have reported before why our three villages received equipment from the CARES funding with our office not included. Yet none of our three villages operate the water and sewer system.

During the recent Tewa Ceremony, all our porta-toilets were taken to the mesa for public use. During the ceremonies record attendance, we observed fifteen porta-toilets stored at two of our village offices.

Since the creation of the three Village Community service providers

by the Hopi Tribal Council, and receiving annual village allocations, we do not receive assistance, either by use of equipment or payment for operational services.

We are currently providing construction water to the Hopi Health Care Center's addition to the Emergency Room, Polacca wash flood control construction and beginning in September 2023, to the construction of Fiber Optic lines in our village.

These improved services are not only for our village, but services to all the Hopi Villages and people. All services to our people are located on our village lands by approval of our Traditional and Religious Leaders having foresight for their

children.

As the Village Administrator, I have offered to our three villages who receive tribal funding, to take over the operations of our water and sewer system. To date, none has taken or replied to the offer. We have already offered the Hopi Utility Corporation the takeover, especially to fulfill the purpose of its creation.

It is our management's responsibility to expeditiously bill water usage by water meters. Until the use of the meters is implemented, we are considering the increase of cost of water and including a fee for sewer services. This is required to be reported to our leaders for their approval.

FIRST MESA CONSOLIDATED VILLAGES

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PUBLICATION

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Biden Designates New National Monument on Tribal Lands Near the Grand Canyon

Courtesy of USA Today

President Joe Biden signed a proclamation creating a national monument around the Grand Canyon National Park in Arizona on Tuesday, while vowing to continue to use his authority to protect "America's natural wonders."

"Over the years, hundreds of millions of people have traveled to the Grand Canyon, awed by its majesty. But few are aware of its full history," Biden said. "From time immemorial, more than a dozen tribal nations have lived, gathered, prayed on these lands."

Flanked by Sen. Kyrsten Sinema (I-Ariz.), Rep. Raúl Grijalva (D-Ariz.), Interior Secretary Deb Haaland, Arizona Gov. Katie Hobbs (D) and various Native American tribal leaders, Biden signed the proclamation establishing the Baaj Nwaavjo I'tah Kukveni –Ancestral Footprints of the Grand Canyon National Monument at a ceremony in Red Butte, Ariz.

The location of the signing ceremony was a sacred site called Wii'i Gdwiisa by the Havasupai Tribe on the monument's southern end.

The 917,618-acre national monument includes lands managed by the Forest Service and the Bureau of Land Management. The federal agencies will share "co-stewardship of the monument" with tribal nations, according to the proclamation.

The national monument will protect lands important to a dozen Native American tribes, in part, from potential uranium mining. It will also help tell the "full American story" of the people who have called the region home for millennia, Biden said during his speech.

But, he noted, these tribes "were forced out" by the designation in 1919 of the Grand Canyon National Park.

"They fought for decades to be able to return to these lands, to protect these lands from mining and development, to clear them of contamination, to preserve their shared legacy for future generations," the president said. "I made a commitment as president to prioritize, respect tribal sovereignty and self-determination. To honor the solemn promises the United States made to tribal nations. I pledge to keep using all that available authority to protect tribal lands."

But the national monument designation has already been criticized by House Republicans who have called for a probe for information on how the monument boundaries were selected and how it will affect mining and energy development. They've argued it will block new uranium mining at a time when the U.S. should be looking to become more energy independent, especially given the prominence of Russia in the market to provide low-enriched uranium to nuclear reactors.

Nathan Rees, Arizona field coordinator for Trout Unlimited, noted the site has long garnered support from bipartisan sources, including hunters and anglers in the state.

"Given the toxic history of uranium mining in this region, we commend the leadership of this administration for enacting the wishes of millions of people hoping to preserve the beauty of this idyllic landscape," Rees said.

Although the monument boundaries will pause new mining claims in the region, the designation under the Antiquities Act will not necessarily curb all extraction, much less end the decades long fight between the mining industry and tribes and environmentalists.

Rees added: "As sportsmen and sports



women, we value a multi-use approach on our public lands and insist on practical and science-based management of our natural resources. A national monument does just that."

In addition to signing the monument proclamation, Biden also talked briefly about his signature climate law, the Inflation Reduction Act, which he called the "biggest investment in climate conservation and environmental justice ever, anywhere, in the history of the world."

The IRA is expected to be Biden's main focus in subsequent visits this week to New Mexico and Utah, a trip the president is taking amid recent polling that shows a majority of the public disapproves of Biden's handling of climate change, and that most don't know much about the climate law he signed last year.

The law includes \$360 billion in clean energy and climate incentives.

"These are investments in our planet, our people and America itself," he said.

Biden briefly addressed his critics in his remarks, dismissing "MAGA Republicans" who he said want to undo the climate policies and land protection measures he's taken.

And he made no apologies for his other recent monument designations, which have included the 506,814-acre Avi Kwa Ame National Monument in Nevada that protects lands considered sacred to Yuman-speaking Native American tribes.

Sites like these "connect us to something bigger than ourselves," he said.

Report to Tribal Council from Water/Energy Committee

By: Councilman Dale Siquah, Representing First Mesa Consolidated Villages

Side Rock update:

The Water Energy Committee (WEC) received letter from Hopi Tribe Pandemic Recovery Committee (HTPRC) July 5, 2023. The letter informed WEC the HTPRC received and reviewed financial assistance request from Hopi Tribe, State and Local Fiscal Recovery Fund and voted to approve \$339,004.00 to complete planning and design for the Side Rock Project (SRP). The planning and design will determine if the HTPRC approves remaining 20 million.

The untimely granting of these funds from HTPRC is hampering the project’s feasibility. The HTPRC process for this project seemed to be held up by Tribal department’s insistence on placing the following conditions on the project.

Monthly status of following is required thru email or hard copy: Negotiation of ROW, Preliminary Engineering Report (Cost), Water use agreement between HUC & Moenkopi villages.

Jennifer Hill, PE (Principal Engineer) from Daniel B. Stephens & Associates (DBS&A) will oversee the funds and complete planning and design. Hill, Senior Civil Engineer licensed in New Mexico, Arizona, and Colorado has 20 plus years of experience primarily in water and wastewater systems.

Representative D. Siquah, Fletcher Wilkinson from Hopi Utility Corporation (HUC) , Carroll On-sae (HUC), and Selwyn Sekaquaptewa (HUC) met via ZOOM and determined proposing a revision to the grant award to HUC which funds solar electrical power to SRP’s four proposed wells. The grant was revised to drill the two additional wells and provide solar power for the two newly drilled wells. When finished the two new wells will be set up for dispensing as the two present wells are. Should the SRP come to fruition they will be conn to transport water to Upper and Lower Moenkopi.

*Lower Colorado Water Negotiation

Navajo Water Negotiation Legal Team has reached out to the Hopi Water Negotiation Legal Team to restart Little Colorado River negotiations. Both Hopi and Navajo Legal Teams have had several meeting over the past two months working to set the stage for Hopi and Navajo Tribal Negotiation teams to meet in person.

Both Hopi and Navajo are dedicating their efforts to reach a point where true earnest negotiations can happen where tribal citizens and leadership can reach an acceptable settlement.

The efforts of the legal teams are moving forward on positions and language and need to decrease the gaps between positions.

The negotiations can be characterized as:

- Positive communication by presenting proposals and counter proposals. Presently positions have significant gaps on important issues however, both legal teams are motivated reach understanding.
- Navajo team is very detailed and I perceive this to be from their recent water settlements.

The Hopi Water Rights Negotiations Committee is Water Energy Committee members (Chairman is a member of WEC), General Counsel, Outside Counsel, and Vice Chairman. DB&S provides Technical hydrology support.

The process presently is for both tribal legal teams continue to meet until they reach a point where Tribal Negotiation Teams can meet to work towards an acceptable position to start negotiations. Hopi LCR legal team has briefed and received feedback from the Hopi Negotiation team on several occasions on proposals/positions of the Navajo LCR negotiation Legal team. Hopi LCR Water Negotiation Committee will give presentation/update to Hopi Tribal Council (HTC) when appropriate.

Presently WEC funds are being use for LCR Water Negotiation Committee and funds are dwindling. In the past, LCR Negotiation Committee was funded by resolution and all prior appropriated funds were expended. The Negotiation Committee

will author an Action Item for funding from HTC for travel, meals, and lodging to attend meetings with Navajo LCR Water Negotiation Committee.

*43rd Annual Colorado Law Conference on Natural Resources June 8-9, 2023

HTC approved WEC Chairman Rep. D. Siquah and WEC Vice Chairman Rep. D. Secakuku to represent Hopi at the conference. Separate from the Law Conference on June 7, 2023 the Colorado River Basin Tribal Coalition met and we discussed the following:

- Status of Supplemental Environmental Impact Statement (SEIS) for Near-term Colorado River Operations
- Status of Post-2026 Management Framework
- (Group continues to advocate the Federal and State governments for including them in a meaningful way on decision of the Post-2026 management)
- Updates on participation in Bureau of Reclamation Lower Colorado Conversation Program
- (Several of the largest tribal water users Gila River, Salt River, and Colorado River Indian Tribe already completed their contracts with BOR) (Hopi and others are waiting on BOR to present proposal)

There were many important sessions during the Law Conference such as:

- Understanding the Challenges (and opportunities)
- Current and Projected Hydrology: A Dangerous Trajectory primary Tribal impact event
- Early spring rainfall improved hydrology and Bureau of Reclamation was considering implementing the Lower Colorado River Basin System Conservation and Efficiency Program, initially funded by the Inflation Reduction Act and managed through the Bureau of Reclamation of the opinion with the Lower Colorado River (Arizona, California and Nevada have agreed to take less water from the drought-strained Colorado River, a breakthrough agreement that, for now, keeps the river from falling so low that it would jeopardize water supply for major Western cities like Phoenix and Los Angeles as well as for some of America’s most productive farmland. The agreement, to be announced Monday, calls for the federal government to pay about \$1.2 billion to irrigation districts, cities and Native American tribes in the three states if they temporarily use less water. The states have also agreed to make additional cuts beyond that amount to generate the total reductions needed to protect the collapse of the river.)
- The Evolving Role of Tribes—Thirteen Tribes Represented at the Conference: Ak-Chin Chairman Robert Miguel, Chemehuevi Chairman Glen Lodge, Colorado River Indian Tribes Vice Chairman Dwight Lomayesva, Gila River Indian Community Governor Stephen R. Lewis, Council Members Dale Siquah and Dewayne Secakuku Hopi Tribe, Jicarilla Apache Nation Council Member Avery Tafoya, Kaibab Band of Paiutes Alice Walker, Navajo Nation Crystal Tully-Cordova, San Carlos Apache Tribe Chairman Terry Rambler, Shivwits Band of Paiutes Shanandoah Anderson, Southern Ute Indian Tribe Vice-Chairwoman Lorelei Cloud, Ute Mountain Ute Tribe Peter Ortego, Ute Indian Tribe Vice Chairman Christopher L. Tabee

Tribe needs to be more involved recently in the planning and problem solving

- What is working - (Presently BOR has been having Government to Government meetings with Tribes that request a meeting. The meetings need to be an exchange of issues and Tribes need to be integrated in the decision making on level of the States)
- What structural changes required to integrate Tribal sovereigns more meaningful into decision making
- Tribes need to be represented at US and basin state dialogue dominated by the US and seven basin states (Arizona, New Mexico, Colorado, California, Nevada, Utah, and Wyoming)
- Water & Tribes Initiative Colorado River Basin

Coordinating Governments Team: A proposal to engage basin tribes in Developing post-2026 Colorado River Basin management framework:

Bureau of Reclamation (BOR) Lower Colorado Conversation Program agreement (phase 1) The Hopi Tribe is proposing to participate, in the alternative under 1.a. or 1.b. for at least three years for its right to divert up to 5,028 acre-feet of Colorado River water pursuant to the Cibola Contract.

Given Reclamation’s administration of this contract, Hopi provided BOR all the necessary records to evaluate Hopis proposal and will determine the benefits to the system from the participation by the Hopi Tribe. Per the terms of the Program, Hopi understands that a system conservation agreement will be required:

- Vegetation eradication Thayne Lowe getting quotes from Red River Farms and CRIT . (Tribe is creating a request for quotes for eradication and expects a short period of announcement and hope to get the contract in place within the next two weeks)
- An Action Item will be written to use the “Cibola Farm Lease account” which has \$641,024.04 as of June 12, 2023 to fund the fallowing of farm lands.
- On August 8, 2023 WEC, OGC, and Outside Counsel spoke with BOR via Zoom to finalize BOR contract proposal.

Water & Tribes Initiative/Colorado River Basin presentation to Tribal Council July 27, 2023

Matthew McKinney is the co-director of Water & Tribes in the Colorado River Basin. He is the Director of the Center for Natural Resources & Environmental Policy at the University of Montana, and has over 30 years of experience in facilitation, mediation, collaborative problem-solving, and policy research and analysis. He has worked on land, water, and natural resources issues in the American West, as well as throughout North America and around the world.

Darryl Vigil is the co-director of Water & Tribes in the Colorado River Basin. He is Jicarilla Apache, Jemez Pueblo, Zia Pueblo, and currently serves as the Water Administrator, Jicarilla Apache Nation; Chair, Water is Life a Tribal Partnership; official spokesperson (and past chair) for the Colorado River Ten Tribes Partnership; member of the Coordination Committee of the Next Steps of the Colorado River Basin Supply Demand Study; member of the Navajo Gallup Water Supply Project Planning, Construction and Operation Committees; member of the Coordination Committee of the San Juan River Recovery and Restoration Project; past Secretary/Treasurer and Board of Trustees of the Colorado River Water Users Association; past Chair, Board of the Jicarilla Apache Utility Authority; past President/CEO, Apache Nugget Corporation the Jicarilla Apache Nation’s Gaming Enterprise.

Water & Tribes Initiative / Colorado River Basin (WTI) is a collaborative partnership designed to enhance tribal capacity and support sustainable water use through collaboration. Over the past seven years, it has emerged as a trusted facilitator and connector, bringing together Tribal and other leaders in the Colorado River Basin to build relationships, exchange information, and support collaborative action. WTI is guided by a broad-based Leadership Team that includes representatives from Tribes, states, irrigated agriculture, conservation groups, university experts, and others. The Babbitt Center for Land and Water Policy, a program of the Lincoln Institute of Land Policy, serves as the fiscal agent and administrative home for WTI

WTI facilitates several projects to achieve two objectives:

- (1) Enhance tribal capacity to manage water resources and to engage in water policy discussions;
 - (2) promote sustainable water use through collaborative problem-solving. WTI relies on several partners to support and contribute to each project.
- <https://www.waterandtribes.org/>

Continued on P5

Summary of Rockfall Hazard— Continued from Page 1

On the top of the mesa there is a pattern of cracks that are visible except where homes, pavement, and sand/soil cover the sandstone. These cracks are called joints and are common throughout the region. When seen from a bird’s eye view (figure 1), there are two alignments of cracks, one that trends northwest-southeast and the other that trends northeast-southwest (figure 2). This joint pattern is evident in satellite images. Not only do the joints appear as cracks in the surface, they also likely extend from the surface down through the sandstone to the mudstone layer. So, instead of the sandstone being a solid, single piece of rock, it is actually many individual blocks of sandstone (figure 3). The sandstone blocks on the edge of the mesa are supported by mudstone. If the mudstone loses support, the overlying sandstone block can eventually fall. Figure 4 provides an example of the joint pattern on the mesa and how roads and buildings conceal the joints.

Examples of blocks of sandstone that have fallen are evident and scattered on the slopes below the mesa. Potentially loose blocks that have not yet failed are visible along the edges of the mesa. An example of a sandstone block that was recognized as a rockfall hazard is on the road to First Mesa. As we understand it, in the 1990s a rockfall hazard was identified above the road, so the sandstone block was bolted to the sandstone blocks behind it to minimize the rock fall hazard. Whereas falling rocks can be a hazard to people, structures, and infrastructure located below (such as the access road), they can also be a concern for structures and infrastructure built above them when rock blocks fall away.

We hope this memo can help guide next steps in the assessment of rockfall hazards at FMCV. We thank you for seeking our input and for the opportunity to visit Hopi lands and First Mesa. If there are questions or clarifications, please do not hesitate to contact us. Suggestions The following suggestions are based on our combined site observations and professional experience in geologic hazards. Except for the first suggestion, all other suggestions, if implemented, would require additional field observations

to build a more comprehensive understanding. Some suggestions are relatively simple and cost-effective to accomplish, such as “joint mapping and monitoring” and others require significant expertise and time, such as “hazard mapping”.

1 Ulrich, G.E., Billingsley, G.H., Hereford, Richard, Wolfe, E.W., Nealey, L.D., and Sutton, R.L., 1984, Map showing geology, structure, and uranium deposits of the Flagstaff 1 degrees x 2 degrees quadrangle, Arizona, U.S. Geological Survey, Miscellaneous Investigations Series Map I-1446, 1:250,000 scale. Link: https://ngmdb.usgs.gov/Prodesc/proddesc_9245.htm 2 Cooley, M.E., Harshbarger, J.W., Akers, J.P., Hardt, W.F., and Hicks, O.N., 1969, Regional hydrogeology of the Navajo and Hopi Indian reservations, Arizona, New Mexico, and Utah, with a section on vegetation: U.S. Geological Survey Professional Paper 521-A, 61 p.; 5 Plates with 12 Sheets. Link: <https://pubs.er.usgs.gov/publication/pp521A>

Test for leaks in water and sewer lines.

Around the world, water is a common cause in starting a landslide3 . Water can weaken rocks through chemical and physical processes. Sources of water can be natural (rainfall, snowmelt) or from human causes (watering, leaking pipes). Because the mudstone at First Mesa weakens when it is wet and the mudstone is supporting the sandstone, it is suggested that an assessment of possible sources of water be undertaken. In addition to assessing how much natural water falls on the mesa, this should also include identifying any possible human-related water or sewer leaks; if found, these should be repaired. Pressure tests of the water and sewer systems should be conducted to identify if there are leaks and how much is leaking. All water systems can leak, but First Mesa is in a unique situation where leaking water could contribute to changing rockfall conditions. We are unable to state how much leaking water is too much without further study.

How does a water leak in the sandstone reach the mudstone and increase the potential for rockfall? Many of the joints in the sandstone likely extend from the top of the rock surface all the way down to the mudstone.

Because water cannot easily flow through sandstone, the joints create a pathway for water to flow. Water can flow through those joints into and along the top of the mudstone layer. The clay in the mudstone absorbs the water, which can weaken the mudstone. If a water leak is allowed to flow every day for weeks, months, or even years the water will spread through the mudstone layer and may eventually travel along the mudstone layer until it reaches the mesa edge, where it could form a seep or spring in the clay. Springs and seeps may be identified by finding areas where plants are vigorously growing and thriving (relative to other adjacent plants), or as salt deposits forming at the surface. One example of seeps forming due to leaking water was identified by FMCV personnel by observing vigorous plant growth in an area below the water tank. This now-fixed leak was pointed out to us during our field visit.

Questions for further exploration: How do leaking water/sewer pipes interact with the mudstone and sandstone? Can leaking water change how often rockfalls occur? Can leaking water change how big a rockfall may be? Can leaking water be identified along the edge of the mesa?

Storm water mitigation. As discussed previously, water is a common cause in starting a landslide. Identifying where storm water and snowmelt collect or pour off the edge of the mesa could be important for identifying where large concentrations of flowing water may be creating hazardous conditions. If those concentrations are due to channeling by people (pavement and buildings), this concentration of water could cause additional erosion of the underlying mudstone layer. In this case, water may need to be redirected to help reduce the impacts to the mesa.

Questions for further exploration: How does stormwater impact mudstone erosion? How does stormwater interact with wide joints? Where does stormwater go that enters joints?

Hazards map. A map of geologic hazards on First Mesa would be useful in identifying specific hazards and their extent. A hazards map would include a series of map plates (online and paper) and a re-

port. These could be used to inform emergency managers and be included in the tribal mitigation plan. Hazards observed at the mesa include a variety of rockfall types, including failure of the slopes below the First Mesa. We also observed features that can affect these hazards such as the mudstone layers, pour-offs, erosion and gulying, and slopes. Each of these hazards can be ranked and defined according to their hazard potential or susceptibility to failure.

3 “landslide” is the word that captures all mass wasting events. A “rockfall” and “rockslide” are both types of landslides, so the words can be used interchangeably.

Mapping is accomplished by combining aerial imagery and collecting geologic evidence by walking the ground. In addition to mapping, repeat photography can be used to build a baseline map, such as using a drone to collect high-resolution imagery of the entire mesa and build a detailed 3-dimensional model of the mesa. Then, repeat the survey one to two times per year, or following a significant weather event. When the new data is compared to the baseline map, small movements or changes in the mesa can be identified.

Questions for further exploration: How can hazard maps aid in decision making for tribal officials and those that live and visit First Mesa? What are effective ways to convey geologic hazards to the public? How do Tribal officials deal with areas with high hazards?

Joint mapping and measuring. The regular mapping and measuring of joints (cracks) in the sandstone surface helps understand the rate of change in joint expansion or contraction over time and may indicate areas more prone to failure. Establishing survey stakes on both sides of a joint and manually measuring the distance can identify joints that may be changing over time. Though the changes may be too slight to see with the eye, accurate measuring can identify changes and track the rate of change to help locate areas of potential concern. Subtle variations in the orientation of joints relative to the cliff face may also influence which areas are more prone to failure.

Questions for further exploration: How do you select which joints to monitor? Can

this be accomplished safely and accurately by students? If this method is used to monitor joints where there is a rockfall hazard, do rocks usually slightly move before they fall?

Geologic mapping. The detailed geologic map of the area, referenced above, could be significantly improved. A more detailed geologic map could help inform future hazards work. Additional details could include information such as mapping the layers of mudstone to inform which parts of the mesa are more prone to rockfall.

Vibration testing. Vibrations from moving cars and trucks are a known problem to roads, bridges, and buildings. When a truck passes by quickly, the vibrations from the wheels can be felt through the ground to your feet. When the same truck passes by slowly, there are still vibrations, and although they are not as easy to feel, they can still cause changes to underlying rocks beneath them. At First Mesa, these vibrations have the potential to impact the stability of the sandstone blocks beneath road surfaces. How the vibrations may impact the sandstone, and how those vibrations could be changing rockfall hazards is unknown. As we understand it, there is bus, propane delivery vehicle, and regular car and pick-up truck traffic that use the roads on the First Mesa daily. All these vehicles produce vibrations that could be impacting the rockfall hazards. Understanding the relationship of vibrations from vehicle traffic to rockfall hazards would require a special study and possibly the installation of instruments that can measure very small vibrations to assess if the vibrations are capable of rock damage.

Questions for further exploration: Are vibrations stronger at the edge of the mesa? Are the vibrations stronger in narrow sections of the mesa, such as the connection road between Walpi and Sichomovi? Can these vibrations change how often rockfalls occur? Can vibrations change how big a rockfall may be? How does vehicle weight and speed influence vibrations and rockfall? How many vehicles a day travel to and from the villages on First Mesa, and how big are they?

Continued on P5

Conclusion of *Summary of Rockfall Hazard*—from P4

Scaling loose rocks. The loose rocks above the road and trails to First Mesa may threaten human life and safety. In the 1990s, one block was identified as such a great hazard that it was bolted to the mesa to lessen the chance of it falling on the road. We observed many smaller rocks that continue to pose a threat to people and could be removed by scaling, which is a controlled removal of rocks. There are professionals that perform controlled rockfalls. They identify loose rocks that pose a threat to downhill areas and use tools to gently pry single rocks loose until they fall off the slope in a controlled manner. To ensure the loose rocks are not going to cause more rockfall hazards, the contractors install temporary instruments in adjacent rocks to measure small changes in rock movement. If an

adjacent rock moves when a loose rock is scaled, the contractors know to also assess adjacent rocks for additional rockfall hazards. Due to the potential for a large rockfall chain reaction, scaling should only be done by professional contractors with experience in scaling. Ideally the scaling should be conducted as part of a comprehensive rockfall hazard assessment that evaluates the potential for rockfalls across a larger area. Questions for further exploration: Where do rockfalls occur most frequently? How might rockfalls be mitigated either through scaling or other engineering measures (for example, rock bolting). **Education.** Development of educational materials to help people understand the hazard can help save lives and provide people

the tools to identify potential rockfall hazards. Brochures, fact-sheets, presentations, comic books, commercials, and other media can help people understand the signs of potential rockfall, identify conditions when rockfall may be more likely (such as after a long rainstorm), and provide tools to reduce their exposure to rockfall hazards. This could potentially be accomplished through educational exchanges with local schools, community colleges, and Northern Arizona University. This type of collaboration could bring about opportunities and programs to advance Tribal knowledge and training to respond to and mitigate their hazards. If there are additional questions or clarifications, please do not hesitate to contact us.

Water/Energy Committee Report—Cont’d from P3

Tribal Capacity Building Initiative

To help achieve WTI’s commitment to “enhance the capacity of Tribes to manage water resources and to engage in water policy discussions” (one of its two primary objectives), several partners came together to complete the first-even baseline assessment of tribal capacity in the Colorado River Basin. The report below provides the first step in an ongoing commitment to work with Tribes and various partners to address the capacity building needs, interests, and priorities of the Tribes. WTI is also leading two other efforts to enhance tribal capacity (see information below):

- Indigenous Women’s Leadership Network
- Universal Access to Clean Water for Tribal Communities

The WTI is an independent, collaborative partnership designed to (1) enhance the water resources capacity of Tribes in the Colorado River Basin and (2) support sustainable water use through collaboration. Daryl Vigil and Matt McKinney serve as co-directors. During the time certain WTI asked for input, advice, and guidance from Hopi Tribal Council regarding:

a. If HTC feels this is good use of time and energy
(HTC felt WTI’s efforts were in the interest of the villages and tribe)

b. Over all purpose and expected out comes
(HTC asked for an initial written document and presentation of the information on purpose and ex-

- pected outcomes)
- c. Who else should be consulted and involved in this effort?**
Other suggested participants/consultants are: Hopi Utility Corporation, Hopi Tribal Water Resources, Village Water Providers, Village Leadership, Indian Health Service, and Office of Community Planning & Development)
- d. Questions**
In the past Fred Lomayesva, Dr. Carrie Joseph and Dale Siquah have met WTI to explore options to enhance the water resources capacity for the Hopi Tribe and their conversations have led to the following:
1. Assist Tribe to enhance its water resource capacity by:
 - a. Need/and or opportunity to upgrade Tribe/ Village water related infrastructure
 - i. Develop a comprehensive infrastructure plan
 - ii. Take advantage of unprecedented federal funding for infrastructure projects.
 - b. Enhance Hopis water resources program
 - i. Provide field-based training
 - ii. Support recruitment for applicants for water related positions
 - iii. Revise and update water ordinances, codes, and regulations
 - iv. Support water resource planning
 - c. Clarify Hopis vision for water
 - i. Existing capacity to achieve the vision
 - ii. How to bridge any gap

First Mesa Consolidated Villages

P.O. Box 260
Polacca, AZ 86042

928-737-2670



First Mesa Consolidated Villages Water Payment Schedule

July	Due Date: August 10, 2023
August	Due Date: September 10, 2023
September	Due Date: October 10, 2023
October	Due Date: November 10, 2023
November	Due Date: December 10, 2023
December	Due Date: January 10, 2024

\$10 Late Fee imposed after due date

First Mesa Consolidated Villages Tribal Council Representatives REPORT Card

FMCV Tribal Council Representatives are required to make Monthly Reports and Updates to the First Mesa Community. However, due to past gathering restrictions, Reports are published in the Village Crier. Below is a recap of reports submitted by your Representatives, beginning January 1, 2021 to Present.

2023 Reports Received	Ivan Sidney Admin	Albert Siquah	Dale Siquah	Wallace Youvella Jr
January	✓/✓	○	✓/✓	✓
February	✓/✓✓ ✓/✓✓	○	○	✓
March	✓/✓	○	✓	✓
April	✓	✓	✓	✓
May	✓/✓	✓	✓	✓
June	✓/✓	○	✓	✓
July	✓/✓	✓	✓	✓
August	✓/✓	○	✓	✓
September				
October				
November				
December				
2022 Reports	Ivan Sidney Admin	Albert Siquah	Dale Siquah	Wallace Youvella Jr
January	✓/✓	✓	✓	✓
February	✓/✓/✓	✓/✓	✓	✓
March	✓/✓/✓	✓/✓	✓	✓
April	✓/✓/✓	○	✓	✓
May	✓/✓	○	✓✓✓	✓
June	✓✓✓✓	○	✓	✓
July	✓✓✓✓ ✓✓✓	○	✓	✓
August	✓/✓	✓	✓	✓
September	✓/✓	○	○	✓
October	✓✓✓✓	✓	○	✓
November	✓✓✓✓	○	✓	✓
December	✓✓✓✓	○	○	✓

A BRIEF HISTORY OF THE PUEBLO REVOLT OF 1680– CELEBRATED ON AUGUST 9, 2023

Courtesy Copy from the
Pueblo Indian Cultural Center



Popé, a Tewa Pueblo leader- The Pueblo Revolt of 1680 was a revolution against Spanish religious, economic, and political institutions imposed upon the Pueblos. It is the only successful Native uprising against a colonizing power in North America.

In the 1670s, the Spanish governor of New Mexico ordered several Pueblo holy men executed, and many others publicly whipped.

Po'Pay, a holy man and War Captain of Ohkay Owingeh, was one of the men whipped in Santa Fe, an experi-

ence that hardened his resolve to drive the Spanish from New Mexico.

In the face of turmoil, suffering from prolonged drought, and fearing the complete loss of our culture, the Pueblo people resorted to armed resistance.

Po'pay of Ohkay Owingeh (formerly referred to as San Juan Pueblo) organized and led the revolt.

A date for collective rebellion was set, and runners were sent to all the Pueblos carrying knotted cords which represented the number of days until the day of uprising. Each morning, the Pueblo leadership untied one knot from the cord, and when the last knot was untied, it was the signal for them to act in unison.

The successful revolt kept the Spanish out of New Mexico for 12 years, and established a different power dynamic upon their return.

The Pueblo Revolt holds great historical significance because it helped ensure the survival of Pueblo cultural traditions, lands, languages, religions, and sovereignty.



MISSING PERSON

If you have information call
Hopi Law Enforcement Services, (928) 734-7340
Case No. 2204-0058



KEISHA KOOTSWATEWA

Missing from: Teesto, Arizona
Date missing: March 22, 2022
Date of birth: January 31, 1990
Age: 32
Gender/sex: Female
Height: 5 feet 6 inches
Weight: 200 pounds
Build: Medium - Heavy
Eyes: Brown
Hair: Short/Mid-length Dark Brown
Race: Hopi/Tewa – Native American
Complexion: Brown Skin
Clothing: Unknown
Scar: "Tewa" on right forearm, rose with design on left forearm, native design(s) on left shoulder
Circumstance: A missing persons report was filed with Hopi Police Department. She was last seen in Teesto, AZ on or about March 22, 2022.



Any information is appreciated on whereabouts or persons she may have been with or seen. Please call Hopi Law Enforcement Services, (928) 734-7340.



"Bring Our Relative(s) Home"

Keisha, who is Hopi/Tewa with brown hair and eyes. She was born January 31st, 1990. Keisha is 5'6 and 200lbs. She has several tattoos. Keisha was last seen with her boyfriend in Teesto and she has not been seen nor contacted family since. She is listed as # MP90377 in NaMus.

If you have any information about the disappearance of Keisha Kootswatewa please contact the Hopi Tribal Resource Enforcement Services at 928-734-3000.

Keisha Lene Kootswatewa was last seen in Teesto, Arizona on March 22nd, 2022. She was 32-years-old.

TUUVI GATHERING MOENKOPI, AZ October 21 & 22, 2023

Applications for Arts & Crafts, Food Vendors and Dance Groups can be picked up at the hotel front desk or contact us for emailed or faxed applications.

Public Meeting of the Polacca Wash Mitigation Efforts by the USACE and Report by the USGS and the AGS Teams regarding the First Mesa Rock Shifting

By: Louella N Furcap
Public Information Officer

A public meeting of the Polacca Wash Mitigation efforts by the United States Army Corps of Engineers (USACE) and the First Mesa Rock Shifting was held Wednesday evening, August 9, 2023, 6pm at the First Mesa Elementary School to update community members of the progress and any obstacles the Crew may have encountered during their work on the Polacca wash.

First Mesa Consolidated Villages (FMCV) Administrator Ivan Sidney opened the meeting and Consultant Myron Ami presented updates of the Project through a power point presentation, and assisted by Staff Assistant Wilber Kaye. The agenda was followed precisely; however, the 2-hour meeting did not allow much time for questions and answers although a few questions were asked during the presentation.

A close-out meeting will be held soon with the USACE and a report will be provided in the next edition of the Village Crier.

A Summary Report of the *Rockfall Hazard Review of First Mesa Consolidated Villages* by the U.S. Geological Survey (USGS) and the Arizona Geologic Survey (AGS) Teams is presented on the first page and following pages throughout this edition.

"Public safety is the stated top priority for leadership at First Mesa Consolidated Villages," the report states. "Rockfall is the primary geologic hazard identified that can pose a threat to public safety and infrastructure at the First Mesa."

A follow-up meeting on the Rockfall Hazards of the Mesa will be forthcoming.



Hopi Jr. Sr. High School First Day of School

Hopi Jr./Sr. High School (HJSHS) kicked off the 2023-2024 school year on Monday, August 7.

In a school news release, personnel said “We’re so excited to start the new year and see all our amazing students! HJSHS starts serving breakfast at 8:00 am and 1st period begins at 8:25 am.”

Students planning to ride one of the HJSHS buses must be enrolled and reg-istered. For questions, please call (928) 738-5111.



Hopi Jr. Sr. High School
2023-2024 BUS ROUTES
and SCHEDULES

As HJSHS begins our 2023-2024 school year please take a minute to review our updated bus routes and schedules. They include several changes from last year. For questions, call the HJSHS Transportation Dept. at (928) 738-1443

Bus Schedule Pauline Nash H1
Sequi 6:55 AM
Lomahaptewa 7:00 AM
Tu’Tsi 7:05 AM
Tootsie 7:08 AM
Kooyaquaptewa 7:12 AM
Sandsprings Jct. 7:17 AM
Hwy 264/Jeddito Jct. 7:20 AM
Jeddito NHA 7:22 AM
Cedar Sch. Jct. 7:24 AM
Skunksprings 7:30 AM
KC Agency 7:35AM
Mc Gee 7:37 AM
Benally 7:38 AM
IHS Housing 7:39 AM
Sinquah 7:40 AM
Honanie 7:44 AM
Naha 7:46 AM

BUS SCHEDULE DICKSON SILAS H11
ROUND VALLEY HOUSING 6:20 AM
ROAD SIDE 6:25 AM
PINON BASHAS 6:30 AM
LOOKING FOR HORSE 6:34 AM
WHIPPOORWILL JCT 6:45 AM
WHIPPOORWILL CHAPTER 6:47 AM
DEMPSEY 6:49 AM
JEEHDDEEZA HOUSING 6:55 AM
LOW MTN NHA 7:00 AM
FMES 7:35 AM
NASH 7:38 AM
WILLIAMS 7:41 AM
CROOK 7:43 AM
NUVAYESTEWA 7:46 AM
LOW MTN JCT 7:51 AM
JULIANNA 7:53 AM

BUS SCHEDULE David Russell H15
SPIDER GRILL 7:15 AM
SUVEE 7:25 AM
3 KIVAS 7:30 AM
DAWA 7:35 AM
TAYLOR 7:37 AM
HWY 264/MAHO 7:46 AM
RABBIT LANE 7:48 AM

BUS SCHEDULE CHARLES PADDOCK H6
SIPAULОВI HOUSING 7:17 AM
WINGS 7:20 AM
LOMAWAIMA 7:25
SIEWEUMPTWEA 7:26 AM
LOMAKEMA 7:30 AM
POLYESTEWA 7:36 AM
TEWAYGUNA 7:39 AM
PAVATEA 7:40 AM
COLLATETA RANCH 7:45 AM
LEE 7:51 AM
MAHLE 7:52 AAM
OLD FINA 7:53 AM
AG CHURCH 7:55 AM

BUS SCHEDULE CLEMENT HONIE H12
BILAGODY 6:50 AM
LOMATSKA 6:52 AM
HARDING 6:54 AM
KAYE 6:56 AM
ANDREWS/MP 45.8 6:57 AM
WADSWORTH 6:58 AM
NAMOKI 7:05 AM
QUOCHYTEWA 7:07 AM
TRIBAL HALL 7:08 AM
COMM. BLDG 7:10 AM
CHURCH HILL 7:12 AM
PEREZ 7:14 AM
TUNGOVIA 7:15 AM
HARDROCK ROAD 7:18 AM
HOPi MISSION 7:20 AM
DAWAKI 7:35 AM

BUS SCHEDULE MOODY LOMAYAKTEWA H16
MOENCOPI 6:00 AM
BACAVI COMM 7:00 AM
HOTEVILLA P.O. 7:05 AM
HOTEVILLA QWAN-KIVA 7:08 AM
VIEWPOINT 7:11 AM
OLD SOLAR FOUNDATION 7:14 AM
SAKENIMA 7:17 AM
OLD ORAIBI 7:23 AM

BUS SCHEDULE Martha Nequatewa H8
Hotevilla 6:40 am
Poleahla 7:20 am
Naha 7:25 am
Honyestewa 7:30 am
Mesa 7:40 am
Sand Clan 7:50 am

Delbert Nevayaktewa H9
HONWYTEWA 7:06 AM
LUCAS 7:07 AM
HONYAKTEWA 7:08 AM
HARVEY 7:09 AM
COOCHYAMPTWEA 7:10 AM
KOYAWENA 7:12 AM
SOOHAFYAH 7:17 AM
MISHONGNOVI COMM. 7:25 AM
HONANI 7:29 AM
SMDS 7:30 AM
TERRANGO 7:32 AM
KUYVAYA 7:32 AM
LOMAINTEWA 7:35 AM
SUNLIGHT MISSION 7:40 AM

BUS SCHEDULE Adrienne Talaswaima H13
BEAR CLAN 7:05 AM
WALPI HOUSING 7:10 AM
KAYE 7:18 AM
YOIWAIMA 7:20 AM
LESLIE 7:25 AM
RED CLAY 7:30 AM
DUKEPOO 7:32 AM
COMM. BLDG 7:35 AM
COYOTE SPRINGS 7:39 AM

BUS SCHEDULE HAROLD LOMAYAKTEWA H17
HARDROCK 7:00 AM
MOWA 7:20 AM
ANDREWS 7:22 AM
FRANCISCO 7:24 AM
HONIE 7:27 AM
SELINA 7:30 AM
TASKURSHOVI 7:37 AM
MALCO 7:38 AM
SHUNGOPOVI COMMUNITY 7:40 AM
SECOND MESA P.O. 7:46 AM
KOOPEE 7:56 AM

First Mesa Elementary School



Important information regarding FMES
2023-2024 school year

2023-2024 FMES Bus Route Schedule:

Please be at your pick up location 5 minutes prior to pick up time. We look forward to seeing students on Monday, August 7, 2023 as we embark on another great year of learning!

- Mesa Riders - Your Bus Stop is Now Located at the Polacca Post Office.
- FMES is requesting Kindergarten students be accompanied for bus pick up and afternoon drop off.

Student Drop Off:

We encourage all students to ride the bus this year. Bus drop offs will be utiliz-ing the bus loop located on the North side of the building. Students who missed or did not ride the bus may be dropped off on the East side (main) entrance. Doors will have staff monitoring, however they will be locked to ensure safety measures are adhered to, therefore all dropped off students should be escorted to the door. Staff will be directing traffic throughout the week as we adjust to the changes, so please pay attention to their directions.

Back Packs

Students are allowed to bring their own backpacks from home. FMES will pur-chase a limited amount of clear backpacks in case a student needs one or if there is a need for one in an instance of safety concerns.

Mask Policy

The FMES Safety team has held numerous meetings and based on available data as well as mandates, FMES is adopting an OPTIONAL Mask Policy. If there are safety measures that arise the team will adjust accordingly. FMES will pro-vide any student & staff member with PPE when requested.



High School Football started practice on July 24th. Following the AIA & NAIC Season of Sport start dates, our remaining Hopi Jr. High & High School fall sports programs begin practicing the week of August 7th. Those sports include:

Jr. High Cross Country	Jr. High Football	Jr. High Spiritline
High School Football	High School Chess	HHS Spiritline
High School Volleyball	High School Cross Country	

firstmesaconsolidatedvillages.com
928-737-2670



US Army Corps of Engineers at work on the wash channel near Polacca bridge

Schedule of Events

August 12th, 1:30-3:30pm
Gallup North Stage Flea Market with
Young Guns and Arizona Dreamers

August 19th, 9pm-1am,
American Legion Hall, Winslow, AZ
21 and Over. No cover charge

August 26, 9pm—1:30am
Museum Club, Flagstaff, AZ 21 and over.
Cover Charge

August 31, 9pm—1am, Thursday night
White Mountain Apache Fair
Country Hall Building. Cover charge

Tuuvi Gathering

October 21 & 22, 2023

Applications for Arts & Crafts, Food Ven-
dors and Dance Groups can be picked
up at the hotel front desk or contact us
for emailed or faxed applications.

SAT. & SUN.
OCT 21ST & 22ND

TUUVI GATHERING

Moenkopi, Arizona

ARTS & CRAFTS || JEWELRY, POTTERY, PAINTINGS,
KACHINAS AND SO MUCH MORE!
SOCIAL DANCING | FOOD VENDORS!!

For more information call 928-283-4500 or
email tuuvigathering@experiencehopi.com or
use the QR code to go to our website.

LAS VEGAS, NEVADA
OCTOBER 24-28

2023 INDIAN NATIONAL FINALS

47

RODEO

CHAMPIONS CROWNED

LEGENDS BORN

SOUTH POINT



Be mindful and careful around
lightning strikes in the area.

First Mesa Consolidated Villages

P.O. Box 260
Polacca, AZ 86042

Navajo Nation Fair Schedules

Central Agency Navajo Fair
Chinle, AZ
August 22-28, 2023

Navajo Nation Fair
Window Rock, AZ
September 3-10, 2023

Northern Navajo Nation Fair
Shiprock, NM
September 29- October 2, 2023

Western Navajo Fair
Tuba City, AZ
October 19-22, 2023

Annual World’s Oldest Continuous Rodeo Aug 17–19, 2023

Payson Event Center
Payson, Arizona

Thursday: 6:00pm,
Friday: 7:00pm,
Saturday: 7:00pm

Gates open @ 5:00pm

Events

Bareback Riding	Barrel Racing
Bull Riding	Mutton Bustin
Saddle Bronc Riding	Steer Wrestling
Team Roping	Tie Down Roping
Women's Breakaway Roping	

