

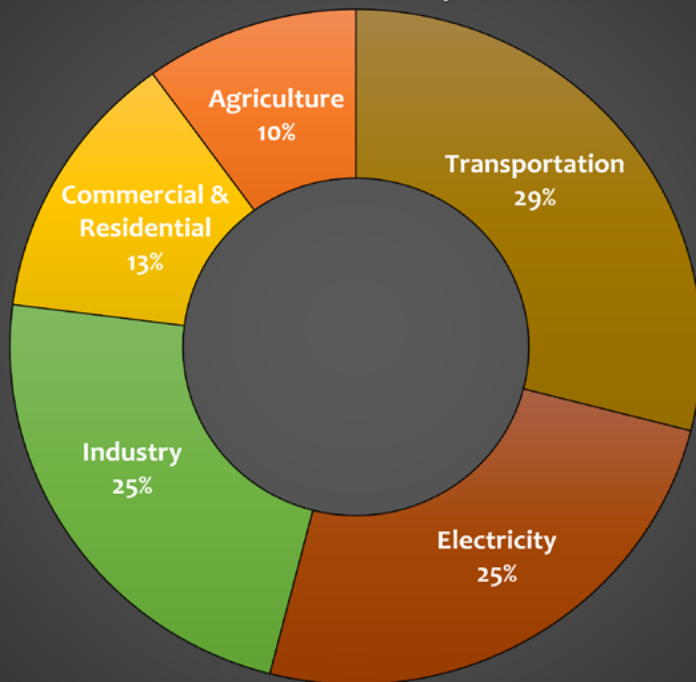
CANYON ECHO

Go EV! - Cut your Greenhouse Gas Emissions

By Gary Beverly



Total U.S. Greenhouse Gas Emissions by Economic Sector in 2019



Recently the Intergovernmental Panel on Climate Change (IPCC) released the 2022 Sixth Assessment Report. It expresses the urgent need for immediate mitigation to avoid severe effects on the global climate, economy, and us.

The IPCC report, combined with the unfortunate political reluctance of Congress, and state and local governments to act, might make you feel depressed. Don't go there. Instead, commit to personal actions that make a difference.

How? Let's start by reducing our personal contribution to the largest source of greenhouse gas emissions

(GHG) in the nation: transportation (EPA Data: 28.6%). Over half of that GHG is from passenger cars and trucks. For Arizona, transportation contributes 36.6% of GHG - also #2. Personally, transportation generates more GHG (28%) than any other activity.

The facts explain why reducing your personal transportation GHG is the most important step to mitigate climate change. You could transition to carbon-free transportation by avoiding air travel, carpooling, riding a bike, or most importantly, switching to an electric vehicle.

Electric vehicles (EVs) rock! They are quiet, smooth, relaxing, fast, great for

the state economy, less harmful to the environment, and cheap to operate (my EV costs only 1.5 cents/mile and emits only 20% of the GHG compared to my truck). Analysts project that the cumulative net benefits from greater EV use in Arizona could exceed \$31 billion state-wide by 2050 and save 160 million metric tons of GHG (that's huge!). Note that 47% of Arizona's electric power is carbon-free.

Buying an EV isn't as easy as it should be. Car dealers are often clueless and prefer to sell gas vehicles. EV owners can be good resources, but you don't need to overanalyze - just do it!

There are three types of EVs available with lots of details on the internet:

- **Hybrids** (e.g., Prius) are efficient gasoline-powered vehicles equipped with an electric motor and a small battery for regenerative braking. Range and uses, same as gas car.

- **Plug-in Hybrid EVs** (e.g., Volt) are a hybrid with a larger battery that is also charged with utility power. Range: 25-50 miles electric, then same as a gas car. Charging: overnight at home. Best use: local short trips on electric, longer trips on gas.

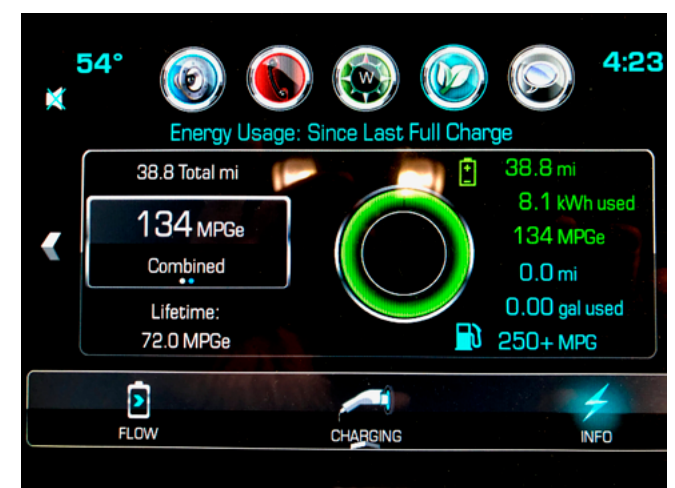
- **EVs** (e.g., Tesla)

are all-electric with a large battery and no gas motor. Range: 100-300+ miles. Charging: hours at home or very fast at commercial recharging stations. Best use: long and short trips.

When flying is unavoidable, you can purchase carbon offsets to compensate for your GHG emissions or select a participating airline. When you purchase a carbon offset, your money is pooled with others to fund a project that reduces GHG - for example capping a landfill to prevent methane leaks. An offset certificate for five tons of GHG costs about \$50. Many different projects are available, but some are much better than others so you need to be careful. For more info, visit: carbonfund.org or cooleffect.org.

You can make a difference: go EV!

Gary is Water Co-Chair, and Chair of the Publications Committee



Explore, enjoy, and protect the planet



SIERRA CLUB

Arizona Chapter Action Directory

Canyon Echo

Spring 2022
Vol. 58 No. 2

Canyon Echo © 2022. Canyon Echo (ISSN 0164-7024) is published quarterly for Sierra Club members by Sierra Club Grand Canyon Chapter, 514 W. Roosevelt St., Phoenix, AZ 85003. Phone: 602-253-8633. Printed at Valley Newspapers.

Front page banner designed by Erika Gronek.

 Printed on 100% recycled paper with soy ink.

Guest Editor: Toni Malcolm

DEDICATED VOLUNTEERS

Outings Editor\Mailing Organizer: Jerry Nelson
602-550-0282, peakbagger2@gmail.com

Copy Editor: Kurt Florman

Publications Chair: Gary Beverly 928-309-1003,
gbverde99@gmail.com

Publications Committee:

Sandy Bahr, Stan Bindell,
Gary Beverly, Benjamin Downer, Ana Gorla,
Kurt Florman, Chris Gehlker, Toni Malcolm,
Jerry Nelson, Stephanie Vazquez, Urb Weidner

SUBSCRIPTIONS: Annual dues to Sierra Club are \$39 (including \$1 for Canyon Echo). Subscription rate for non-members is \$10. Send check payable to Sierra Club - Canyon Echo, 514 W. Roosevelt St., Phoenix, AZ 85003.

ADVERTISING: Advertising is sold on a first-come, space-available basis. The editor reserves the right to refuse any advertisements, and inclusion of advertisements does not imply endorsement by Sierra Club. All interactions between advertisers and consumers are solely the responsibilities of those parties.

SUBMISSIONS: Send electronic or hard copies to the editor (include a self-addressed stamped envelope for return of hard copies). Indicate copyright or Creative Commons preference. We are not responsible for lost or damaged items. Writer's guidelines can be obtained by contacting the editor. All rights to publication of articles in this issue are reserved. The deadline is the first day of the month preceding the issue. Opinions expressed in Canyon Echo are those of the contributors and do not necessarily reflect the official views or policies of Sierra Club.

POSTMASTER: Send address changes and postage due to Sierra Club Member Services, c/o Canyon Echo, P.O. Box 421041, Palm Coast, FL 32142-6417. Periodicals postage paid at Phoenix, AZ.

Chapter Director

Sandy Bahr 602-253-8633 sandy.bahr@sierraclub.org

Conservation Program and Communications Assistant

Ana Gorla 602-253-9140 ana.gorla@sierraclub.org

Grand Canyon Conservation Program Manager

Alicyn Gitlin 928-774-6514 alicyn.gitlin@sierraclub.org

Border Program Coordinator

Erick Meza 520-254-6401 erick.meza@sierraclub.org

Water Sentinels Program Manager

Jennifer Martin 602-254-8362 jennifer.martin@sierraclub.org

Southwest Local Outdoors Coordinator

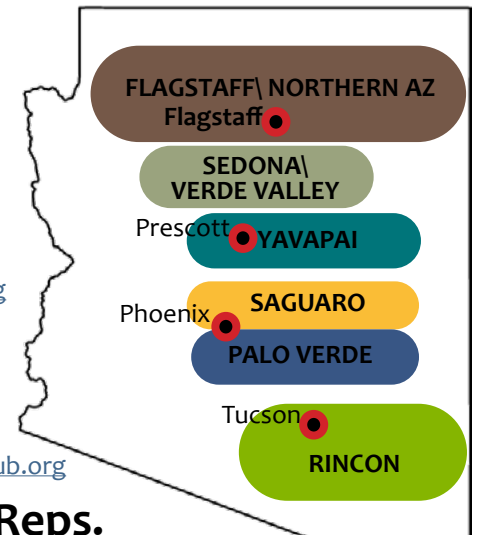
Sergio Avila 520-624-7080 sergio.avila@sierraclub.org

Southern AZ Energy Program Coordinator

Catalina Ross 520-312-2849 catalina.ross@sierraclub.org

Energy and Public Lands Coordinator

Katie Del Castillo 602-284-4374 katherine.delcastillo@sierraclub.org



Chapter Officers, Committee Chairs & Group Reps.

Chair\BIPOCC\at large:	Oscar Medina (xc)	520-903-8005	oscardemedinagomez@gmail.com
Vice-Chair\Wilderness\Pub Com\at large	Jim Vaaler (xc)	602-553-8208	jimvaaler@msn.com
Treasurer:	Chris Gehlker (xc)	602-370-0128	canyonrat@icloud.com
Secretary:	Vacant		
Conservation\Palo Verde			
Group Rep\Mining & grazing:	Don Steuter	602-956-5057	dsteuter@hotmail.com
Political:	Vacant		
CCL Alternate\ at-large\Awards:	Kathy Mohr-Almeida (xc)	4803298503	kathlyynn626@yahoo.com
Outings:	Jenny Cobb	928-925-1320	cobbsrun@msn.com
Water Chair\ at-large\Pub Com:	Gary Beverly (xc)	928-308-1003	gbverde99@gmail.com
at-large:	Cyndi Tuell	520-272-2454	cctuell@hotmail.com
CCL Delegate\at-large:	Stephanie Vázquez Salas	623-302-6889	stephanie.vazquez03@gmail.com
Member\at-large:	Anna Mohr-Almeida (xc)	480-329-8503	mmlkmo2@gmail.com
Membership Chair\at-large	Rebecca Hinton	602-405-1779	rahinton@hotmail.com
Flagstaff N AZ Group Rep.	Emma Bennati	928-7527-3116	emmap.benenati@nau.edu
Rincon Group Rep.	Vacant		
Saguaro Group Rep.	Jo Sylvester	602-292-6806	stitchinjo@yahoo.com
Yavapai Group Rep.	Tom Slaback	928-778-4233	theprescottkid@cableone.net

(xc): 2021 Chapter Executive Committee (ExCom) members | BIPOCC: Black Indigenous People of Color Committee | CCL: Council of Club Leaders

Chapter Announcements

APR 7, May 5, June 9 (THU) 6:30 pm Chapter Conservation Committee meetings (virtual). Club leaders meet to consider matters related to statewide conservation efforts, share experiences across groups, and coordinate strategy to align our Chapter mission and goals with our equity values. For more information, please contact sandy.bahr@sierraclub.org.

APR 13, MAY 11, JUN 8 (WED) 6 pm Political Committee meetings (virtual). Help us elect more environmentally-friendly candidates! If you are interested in helping improve the political climate in Arizona, consider being part of our Political Committee! All Sierra Club members are welcome to participate. For information, contact political.chair@grandcanyon.sierraclub.org.

APR 11, MAY 9, JUN 13 (MON) 6 pm. Wildlife Activist Group meetings (virtual). Interested in making a difference for wildlife? Want to help protect habitat, gather important research data on wildlife, or watchdog the Arizona Game and Fish Commission? Please consider joining our Wildlife Activist Group For more information, please contact sandy.bahr@sierraclub.org.

APR 26, MAY 24, JUN 28 (TUE) 6:30 pm Energy and Climate Action Team meetings (virtual). Discussions and programs encompass renewable energy and energy efficiency campaigns nationally and locally. Everyone is invited to participate, no matter how much or how little you know about energy issues. For more information, please contact sandy.bahr@sierraclub.org.

MAY 3 (TUE) 6 pm Publications Committee meeting (virtual). Have an idea? Help plan future issues of Canyon Echo! For more information contact ana.gorla@sierraclub.org

MAY 1 Copy deadline for Summer 2022 Canyon Echo. Articles, art, photographs, poetry, essays, and brief epiphanies are welcome. Contact Sandy Bahr at sandy.bahr@sierraclub.org.

APR 24 (SUN) 9 am chapter quarterly executive and conservation meeting

Happenings Around AZ

Five groups and one regional conservation committee make up the Grand Canyon Chapter. All events and meetings listed below are open to those interested in learning more about Sierra Club. You can find out more at <http://www.sierraclub.org/arizona/events-activities>. Schedules are subject to change.

| (x) Group ExCom members |

Palo Verde Group (Phoenix)

<http://sierraclub.org/arizona/palo-verde>

Chair\Programs:	Rebecca Hinton (x)	602-405-1779	rahinton@hotmail.com
Vice-Chair\Political:	Greg Clark (x)	480-734-0926	greg@btllcaz.com
Secretary:	Chris Gehlker (x)	602-370-0128	canyonrat@icloud.com
Treasurer:	Jerry Nelson	602-550-0282	peakbagger2@gmail.com
Outings\Wilderness:	Jim Vaaler (x)	602-553-8208	jimvaaler@msn.com
ICO:	Lisa Vaaler (x)	602-468-4158	lvaaler1@gmail.com
Conservation:	Don Steuter (x)	602-956-5057	dsteuter@hotmail.com
Membership\Newsletter:	Jim Dublinski (x)	480-532-2285	jdublinski@icloud.com
Ex-Com (At-Large):	Korey Hjelmeir(x)		khkelmeir@hotmail.com
Ex-Com (At-Large):	Kathy Mohr-Almeida(x)	480-329-8503	kathylynn626@yahoo.com

Palo Verde group programs for the next quarter are:
 Thu, Apr 28th, 2022; 6:30 PM - 7:30 PM
 Thu, May 26th, 2022; 6:30 PM - 7:30 PM

Yavapai Group (Prescott)

<http://sierraclub.org/arizona/yavapai>

Chair\Web\Treasurer:	Gary Beverly (x)	928-308-1003	gbverde@cableone.net
Vice-Chair\Conservation:	Tom Slaback (x)	928-778-4233	theprescottkid@cableone.net
Secretary\Outings:	Jenny Cobb (x)	928-925-1320	cobbsrun@msn.com
Ex-Com (At-Large):	Stan Bindell (x)	928-636-3903	thebluesmagician@gmail.com
Ex-Com (At-Large):	Stephen Cook (x)	575-418-9027	scook@projectworldview.org

Yavapai group programs for the next quarter are:
 Wed, Apr 6, 2022; 6:00 PM - 8:00 PM
 Wed, May 4th, 2022; 6:00 PM - 8:00 PM
 Wed, Jun 1, 2022; 6:00 PM - 8:00 PM

Support Your Local Sierra Club

When you make a donation to the Grand Canyon Chapter, you support Sierra Club’s work in your own backyard. You allow us to continue our efforts to protect wilderness and wildlife, to improve the quality of life in our cities, to curb global climate change, and to promote the enjoyment of nature. If you haven’t already, please also consider signing up to become a monthly, recurring donor to support local Chapter efforts!

Contributions to the Sierra Club are not tax-deductible; they support the Sierra Club’s citizen-based advocacy and lobbying efforts.

Donate online at: <http://www.sierraclub.org/arizona/donate> or by mail to:

Sierra Club – Grand Canyon Chapter
 514 W. Roosevelt St.

Rincon Group (Tucson)

<http://sierraclub.org/arizona/rincon>

The Grand Canyon Chapter is currently deciding on how to reorganize the Rincon Group or utilize an alternative structure to serve our members in Southern Arizona. In the interim, please contact the chapter office at grand.canyon.chapter@sierraclub.org or (602) 253-8633 for questions on events and issues.

Saguaro Group (North Maricopa County)

<http://sierraclub.org/arizona/saguaro>

Chair:	Jo Sylvester (x)	602-329-3690	stitchinjo@yahoo.com
Vice-Chair:	Rhonda Frost (x)	208-743-1006	rjuneffrost@gmail.com
Secretary\Programs:	Sally Howland (x)	602-663-2889	sally_howland@yahoo.com
Treasurer:	Jim Wikley	480-649-2836	nvrgvup@gmail.com
Outings:	Bev Full (x)	480-221-2554	bfull@cox.net
Service\Membership:	Urb Weidner (x)	602-300-8505	northwoods@cox.net
Ex-Com (At-Large):	Vacant		

Saguaro group programs for the next quarter are:
 Thu, Apr 21st, 2022; 5:30pm

Flagstaff-Northern AZ Group

<http://sierraclub.org/arizona/plateau>

Chair:	Emma Bennati (x)	928-527-3116	emmap.benenati@nau.com
Treasurer:	Darryl Colebank	928-554-5222	dcole61@hotmail.com
Outings:	Vacant		
Wildlife:	Kay Bordwell (x)	928-779-3517	kbordwell4@gmail.com
Political Liaison:	Anthony Garcia		
Public Lands:	Emma Benenati (x)	928-527-3116	emmap.benenati@nau.edu

Flagstaff group programs & Executive Committee meetings are held **on the second Thursday of the month**. Contact Kay Bordwell for more information about events in Northern AZ.

Table of Contents

Go EV! - Cut Emissions.....1	Hiking Guidelines.....7
Chapter Directory.....2	Outings Guidelines.....7
Chapter Announcements.....2	Explore & Enjoy AZ.....7
Happenings & Group Info.....3	Beyond the Slab.....7
Focus on Valley Metro.....4	SunZia is BACK.....8
Focus on Mesa.....4	EV Bills at the Capitol.....8
Focus on Tucson.....5	In Memorium: Joe Shannon....9
Dark Skies (Tucson).....5	Donors.....10/11
Chispa Electric School Busses.6	Cast of Categories.....12

What Climate Crisis Mitigation Measures Are Promised by Your Local Authority?

Focus on Valley Metro

By Toni Malcolm

In his blog “Inside the Ride” dated August 8, 2021, Mark Carlson, Rail Operations Communications specialist for Valley Metro, mentions the following statistics regarding the organization’s contribution towards reducing carbon emissions.

If Valley Metro did not exist, an additional 182,000 tons of carbon dioxide could have been discharged in 2020.

Thirty million gallons of gas were saved in 2020 by people using mass transit.

Some greenhouse gas emissions are generated from fuels that run the Valley Metro road transportation fleet and in the generation of the electricity to run the light rail. As far as possible, alternative fuels are used, and technology is becoming increasingly efficient, resulting in a decrease in the generation of greenhouse gasses.

“Even with lower than usual ridership in 2020, Valley Metro was still able to offset more greenhouse gasses than we produced,” said Mackenzie McGuffie, Valley Metro’s Sustainability Coordinator.

Focus on City of Mesa

By Toni Malcolm

On February 15, 2022, Mesa Mayor John Giles gave his State of the City 2022 address.

In relation to the Mesa Climate Action Plan adopted in 2021, Mayor Giles mentioned the following about transportation and a reduction in its carbon footprint:

The city received the second largest transit planning grant in the US to plan a five-mile streetcar route from Riverview, through the Asian District and Fiesta District, to downtown Mesa. This will connect the Cubs spring training facility with the light rail, offering a good alternative to single-family vehicles as a mode of transportation to the spring training events. It will also offer connectivity to valley transit buses and the light rail, to the Asian District, the Fiesta District and downtown Mesa. These business districts offer a variety of locally-owned eateries and specialty shops.

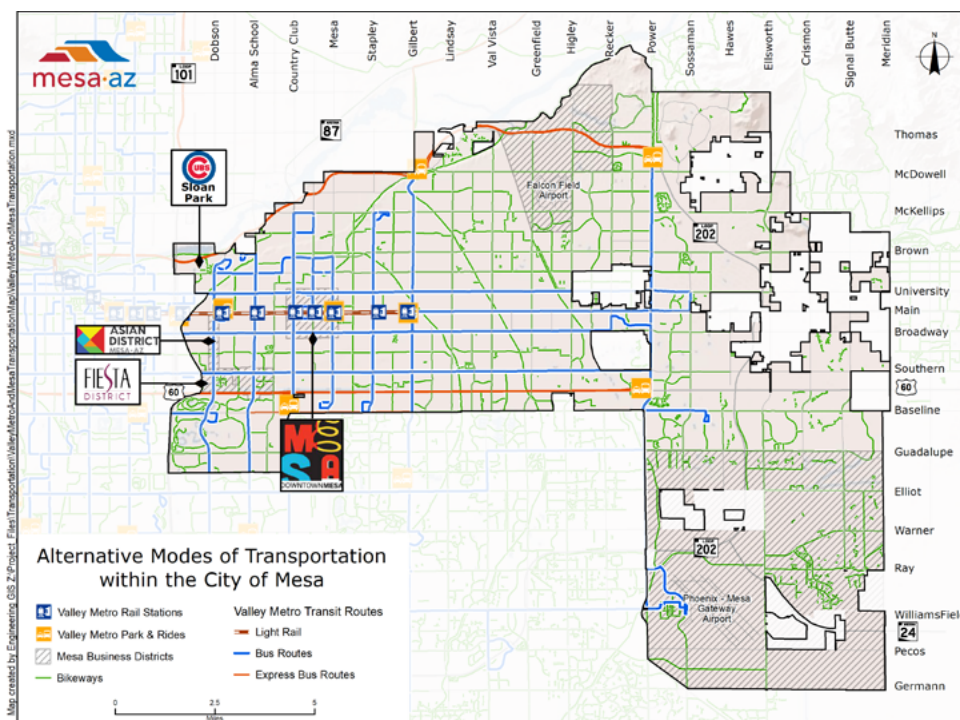
The city has adopted the use of electrical vehicles as a large part of its response to climate change. Mesa has purchased the first fully electric Fire Truck in the US. It has also pledged that over the next 10 years it will replace its entire fleet of trucks with electric ones.

ElectricaMeccanica already has several retail outlets in the US, four of which are here in the valley.



ElectricaMeccanica’s EV: Solo by Toni Malcolm

It is opening its first manufacturing facility in the US in Mesa. Here it will manufacture its flagship electrical vehicle, the Solo. This facility is slated to open summer 2022. For more information on the facility please click [here](#). The city has partnered with ASU to research the use of wastewater in the creation of micro-algae, the oils from which, amongst other uses, can create



The City of Mesa makes no claims concerning the accuracy of the data on this product nor assumes any liability from the use of the information herein. Copyright 1998, 2022 City of Mesa, Arizona. The contents of this report reflect the views of the Licensee who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of VALLEY METRO and have not been approved or endorsed by VALLEY METRO.

Cartography by Toni Malcolm

biodiesel.

For other exciting innovations and happenings in Mesa and to see Mayor Giles ride into the Mesa Convention Center hall in a Solo click [here](#).

Toni Malcolm is the guest editor for this edition of the Canyon Echo

Keep up to date with our Chapter



- Chapter: bit.ly/gcc_fb
- AZ Water Sentinels: bit.ly/azsentinels_fb
- Borderlands Campaign: bit.ly/border_fb
- Grand Canyon Campaign: bit.ly/protectgc_fb
- Rincon Group: bit.ly/rinconfb
- Flagstaff/N AZ Group: bit.ly/flagstaff_fb
- Yavapai Group: bit.ly/yavapai_fb
- Saguaro Group: bit.ly/saguaro_fb



- Chapter: bit.ly/gcc_insta
- Borderlands Campaign: bit.ly/border_insta
- Grand Canyon Campaign: bit.ly/protectgc



- Chapter: bit.ly/gcc_meetup
- Palo Verde Group: bit.ly/pvg_meetup
- Rincon Group: bit.ly/rincon_meetup



- Chapter: twitter.com/SierraClubAZ
- Borderlands Campaign: bit.ly/scb_twitter
- Grand Canyon Campaign: bit.ly/protectgc_twitter
- AZ Energy: [@AZBeyondCoal](https://twitter.com/AZBeyondCoal)

Focus on Tucson

Centering Equity: the City of Tucson Leads on Climate Action

By Oscar Medina



The City of Tucson's leadership, Mayor Regina Romero, and council members have once again affirmed their commitment to acting on climate. At the last mayor and council meeting on Feb. 23, an update of the climate action and adaptation plan was provided.

Tucson's commitment to building a Climate Action Plan started at a mayor and council retreat in Dec. of 2019. With Mayor Romero elected to lead the city and progressive leaders like Lane Santa Cruz joining the council, a shift in leadership and vision was bound to happen. In the early months of 2020, Mayor Romero joined a national network and coalition called Climate Mayors. She hired a Climate and Sustainability Advisor and advocated for a local ordinance that would fund green stormwater infrastructure, today called Storm to Shade, a holistic plan to capture stormwater to prevent flooding and improve the overall green canopy of the city.

As part of the Mayor's campaign platform, an early commitment to reducing the urban heat island effect came with the launching of the Tucson Million Tree (TMT) initiative, a plan that has already resulted in the planting or distribution of close to 40,000 trees. In September of 2020, a Climate Emergency Declaration

was passed by the mayor and council, establishing concrete goals of carbon neutrality by 2030 and centering on frontline communities (low-income and people of color). Most importantly, the community survey, listening sessions, and planning are prioritizing frontline communities that are most impacted by climate change. In the spring of 2021, I had the privilege of watching a

community listening session in Spanish at Las Milpitas Community Farm. These listening sessions are only one way that historically marginalized communities have been invited to the dialogue.

In addition, the electrical vehicle readiness roadmap was adopted in February of this year and its implementation is underway, including the creation of a vehicle fleet transition

plan, the launching of five electric transit buses, and the adoption of EV ready code amendments for all new residential developments, with multi-family and commercial new buildings in process. The renaming of the landfill in the south side of Tucson to Los Reales Sustainability Campus, reaffirms the city's commitment to zero waste by 2050.

In order to center equity, an investment to hire a climate action consulting firm was made to complete the climate action and adaptation plan by December of this year. In the next few months, our city will see the culmination of an equity forward and community engagement approach consisting of stakeholder workshops, community dialogues, pop-up events, and climate action *promotoras*, all of which will shape the final Climate Action and Adaptation Plan. Finally, this holistic plan will for once strategically invest time and resources that will engage Black, Indigenous, and People of Color (BIPOC) perspectives that will shape the future decisions that will lead toward a just, sustainable, and equitable future as we build climate-resilient communities.

For more information, visit the [City of Tucson Climate Action Hub](#).

Oscar is Chair for the Grand Canyon Chapter



Tucson Streetcar at Night by Bettamaya Foott bettamaya@darksky.org ; darksky.org
The National Headquarters of the Dark Sky Association is in Tucson Arizona

Light Pollution Disrupts the Cycle of Life

By Gail S. Abend



Dark skies filled with stars, and the band of the Milky Way is a joy and was the normal condition before our species started lighting up the night sky. It started slowly with campfires, then gas lamps, then electric lights followed by tall towers glowing at night. I've had the good fortune to work at our dark sky national parks. There were so many stars, finding familiar constellations was a challenge.

Light pollution is as damaging to our planet as air and water pollution. The stars and planets hold deep meaning for Native Americans and other Indigenous cultures worldwide. Dark skies are the source of origin stories, the home of

ancestors; the stars are the library and universities for various cultures past and present. And our fellow life forms on the planet require dark skies to conduct the business of survival. Light pollution disrupts the lives of animals on land, sea, and air.

Nocturnal animals depend on the dark of night to hunt their prey or to avoid predators. Artificial light in urban and suburban areas has created skyglow, (the brightening of the night sky over inhabited areas), permanently turning night into day. The nighttime croaking of frogs and toads may become memories as artificial light disrupts their mating chorus and eventually their

reproduction.

Have you ever seen the march of the baby sea turtles to the sea? It's a bittersweet event as many become prey to seabirds; we cheer when one makes it to the sea. Hurray, she has a chance. Yet artificial light affects the reproduction of sea turtles. The turtles hatch at night on the beach. The babies instinctively turn to the bright horizon over the ocean. It has been this way for millions of years. Artificial light draws them away from the ocean. Millions of hatchlings die this way every year.

Migrating birds navigate by the moon and stars; artificial light takes them off course and they crash into

glass towers aglow with lights that persist long after their occupants have left for the day. You've seen moths gathering around your porch light. Predators take advantage of insects attracted to artificial light. Light pollution is contributing to the decline of insects which we know are important pollinators and a link in the food web.

Light pollution disrupts the cycle of life.

We can do something about it:

- Support dark sky ordinances
- Use warm colored LED bulbs, dimmers & motion sensors

See more at: <https://www.darksky.org/light-pollution>

Gail is an active member of our wildlife group



Electric school buses:

The start of a vision for clean transportation

By Nuvia Enriquez



In 2017, Chispa Arizona, a community organizing program of the League of Conservation Voters, launched the Arizona Clean Buses for Healthy Niños campaign to advocate for healthier communities and lobby to bring electric school buses to our state.

It took years of organizing by Chispa Arizona and community members to make this happen. Phoenix Union High School District students (PUHSD) relentlessly advocated for electric buses with their school board for an entire year. Cartwright School District students' moms convinced their school board to invest in electric buses and then organized to pass a \$60 million bond that would partly be used to purchase an electric bus for the district.

In April 2019, the PUHSD Governing Board voted to invest in an electric bus pilot program and purchase the first electric school bus in the state. In January 2020, community members welcomed the first electric school bus in Arizona's history. In the summer of 2021, Cartwright Elementary School District became home of the largest electric school bus in the state.

Now, what started as a push for equity in the community by bringing electric school buses, has grown into a broader vision for clean transportation in the state with Chispa Arizona's Clean and Green Campaign. One of the goals of the campaign is to improve Maricopa County's air quality through 100% free and electric public transportation by 2035.

The project, in part, intends to secure funds that prioritize the investments needed for the electrification of public transit and a more equitable infrastructure that can be accessible to all community members. This includes bus lots with

charging equipment, accessible, affordable and sufficient charging stations for individual cars, and other elements necessary for a more general transition to electric vehicles to be viable for the community.

"Money is going to be invested towards transit in our region through an extension of Proposition 400, a half-cent sales tax, which voters will see on their ballots this fall and vote to potentially extend. Revenue from the extension will shape our region's development for the next 25 years," says Sawsan Abdurrahman, Chispa Arizona's Clean & Green Campaign Manager. "With Maricopa County being severely impacted by poor air quality and extreme heat, we must prioritize investing this revenue in electric vehicles and infrastructure, not more highways, which will worsen our air quality and urban heat island."

Chispa Arizona plans to achieve the Clean and Green campaign goals by building relationships with decision makers to ensure community voices are represented in policy; community organizations to ensure strong

partnerships; and the public to ensure community needs are centered. The organization will also engage in an awareness and education effort through social media and events, and by collecting and showcasing the stories of community members who rely on the public transportation system.

Chispa Arizona will launch the Clean and Green campaign on April 23, during its celebration of Earth Day. Those interested in getting involved with these efforts can visit chispaz.org for more information or follow them on social media.

Nuvia is Deputy Communications Director for Chispa Arizona



Chispa Arizona staff celebrate Cartwright School District's electric school bus. The 84-passenger bus is the largest electric school bus in Arizona by Brandon Ripp

Subscribe to Current News & Action Alerts



We send 2 Chapter email updates per month, including upcoming events & activities, action items and more
bit.ly/gcchapter



Grand Canyon Protection Campaign email updates are sent once every other month
bit.ly/grandcanyonemail



Wildlife email updates are sent once every other month
bit.ly/wildlifeemail



Borderlands email updates are sent every month
bit.ly/borderemail



Arizona Water Sentinels email updates are sent once every other month
bit.ly/azwateremail



Energy email updates are sent once every other month
bit.ly/azenergyemail



Legislative updates are sent weekly during the legislative season
bit.ly/legislativeemail

Hiking Guidelines

The Sierra Club is a nationwide organization with active local outings for members and non-members. Please join us as we make friends and explore life-enriching interests. Simply find an outing by date and contact the leader for directions, reservations, time, and additional information. **RESTRICTIONS: NO FIREARMS, RADIOS, OR PETS** (unless noted otherwise). Outings are by reservation. Call early (group limit 20)

Each hike is rated for degree of difficulty and risk by the leader.

“A” >16 miles or >3,000 ft. elevation change (EC) “D” <3 miles and 500 ft. EC
 “B” 8-16 miles and 1,500-3,000 ft. EC RT Round Trip
 “C” 3-8 miles, 500-1,500 ft. EC OW One Way

The trip leader has absolute authority to question trip participants as to their equipment, conditioning, and experience before and during the trip. All participants on Sierra Club outings are required to sign a standard liability waiver. If you would like to read the liability waiver before you choose to participate in an outing, please go to <http://content.sierraclub.org/outings/local-outdoors/resources> or contact the National Outings Dept. at 415-977-5528 for a printed version. Sierra Club liability covers leaders only. Each person is responsible for his/her own first aid equipment. If you are injured, notify the leader immediately. If you leave the trip, with or without the leader’s permission, you are considered to be on your own until you rejoin the group. Hikers are encouraged to carpool and share the driver’s fuel expense. Donations are accepted from all participants at \$1 (member) and \$3 (nonmember). Money is collected by the leader and deposited with the group treasurer. For more information, contact the Sierra Club Grand Canyon office at 602-253-8633. Hikes and outings are also listed online at <https://www.sierraclub.org/arizona/events-activities>. CST 2087766-40. Registration as a seller of travel does not constitute approval by the State of California.

Requirements for 2022 Spring Outings

Sierra Club Grand Canyon Chapter Outings are happy to be back on the trails! We look forward to seeing you and encourage you to recommend Sierra Club Outings to your friends, family, associates, and others. Some new rules are outlined below.

- If you are experiencing possible COVID symptoms or are sick, you should not be attending the outing.
- You are responsible for contacting the Outings leader to report a positive COVID test.
- Group sizes may be limited for safety and to allow for social distancing.
- Masks are optional for adults outdoors.
- Unvaccinated minors must wear a mask.
- Masks are required for indoor close quarters such as vehicles, restaurants, visitor centers, etc. regardless of local mandates or vaccination status. In close quarters such as vehicles, it is recommended that you open windows for ventilation when possible.
- You are welcome to wear a mask outdoors if it makes you more comfortable.
- No vaccine or tests are required for day events.
- Be aware that there may be participants in your group who are vaccinated or not vaccinated.
- You will not be identified as to your vaccine status and cannot be turned away if you are not vaccinated.
- Vaccination is required for multi-day trips that involve staying overnight indoors.
- Exemptions are allowed with a negative PCR test 72 hours before trip departure.
- A Medical Form is not required for front country outings.
- A Medical Form is required for the back country for leader review and is confidential.

Grand Canyon by Alicin Gitlin

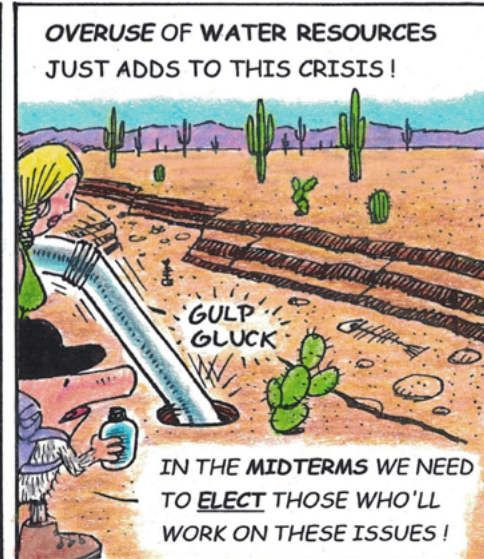
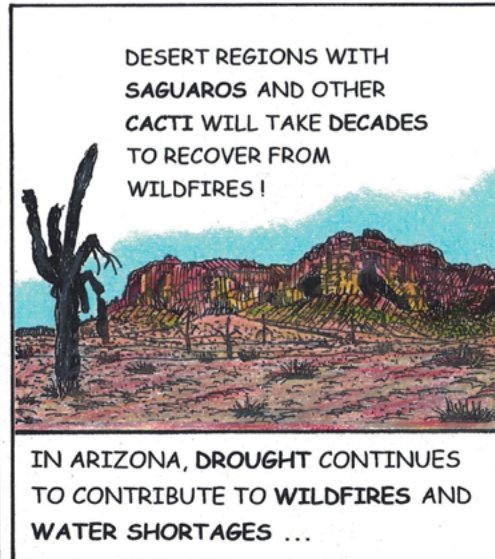
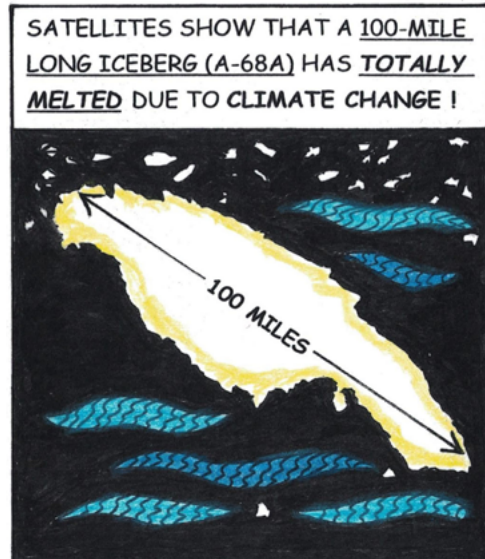
Explore and Enjoy Arizona

APR 9 (SAT) “B” Center Mountain Dayhike This outing will take place in the Sierra Ancha Wilderness Area. This outing will also take place on lands formerly occupied by the Hohokam Culture, and following that, by other Native American entities. The land was formally ceded to the United States after Mexico’s defeat in the Mexican-American War in 1848. This outing will be about 7 miles in length RT with an elevation gain of about 1,800 feet. The leader will discuss fire ecology and the wilderness history of this area. Excellent riparian scenery will be found on this trail as well as great views of Reynolds Creek Canyon. Plan on having dinner in Miami at the conclusion of the trip.

For reservations, meeting time and place contact your leader **Jim Vaaler** at jimvaaler@msn.com or call Jim at (602) 553-8208.

Beyond the Slab

-- CELEBRATING OVER **30 YEARS** OF PUBLISHED ECO-AWARENESS !



By **Greg Pentkowski**



SunZia is BACK....from bad to worse

By Elna Otter



A study conducted by the Environmental Protection Agency in 2012 found that the San Pedro Valley has the highest index of biodiversity in the Southwestern states of Arizona, New Mexico, Nevada, Utah, and Colorado. The current trajectory of transmission lines planned by SunZia directly impacts this area. Currently, over a third of the San Pedro Watershed is under protective status, which should mandate no further intrusion. In 2016, despite the objections of many Arizonans, the Arizona Corporation Commission (ACC) approved two 500-kilovolt lines to transfer wind

energy from eastern New Mexico through Arizona to customers in Phoenix and California. The argument was that this would facilitate renewable energy. The question was whether this project was an appropriate one. The vote was not unanimous. The chairman, in his dissent, spoke about the sacrifice of natural values in the San Pedro River Valley, and several provisions were included to minimize, as much as possible, the damage to the wildlife in the valley.

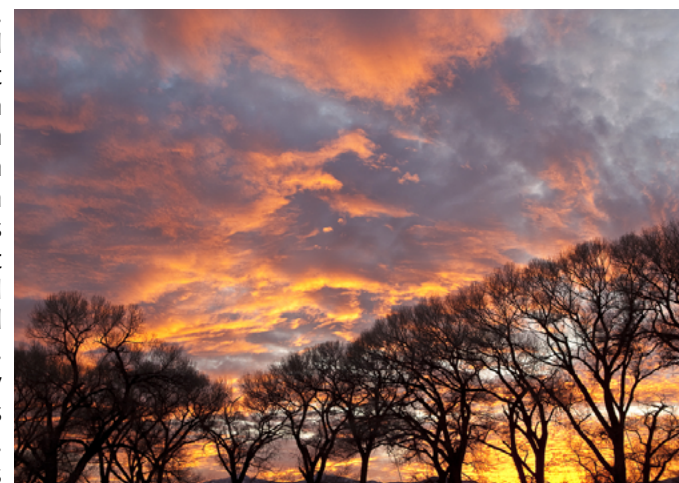
The intervening years have seen a lot of activity on the proposal, mainly in New Mexico since the White Sands Missile

Range is near the route. There will be a second Environmental Impact Statement (EIS), which is expected to be out in April. This time, to gain further distance from White Sands, the plan is to severely disrupt not one but two National Wildlife Refuges related to the Rio Grande. Unfortunately, the new plan brings changes for Arizona too.

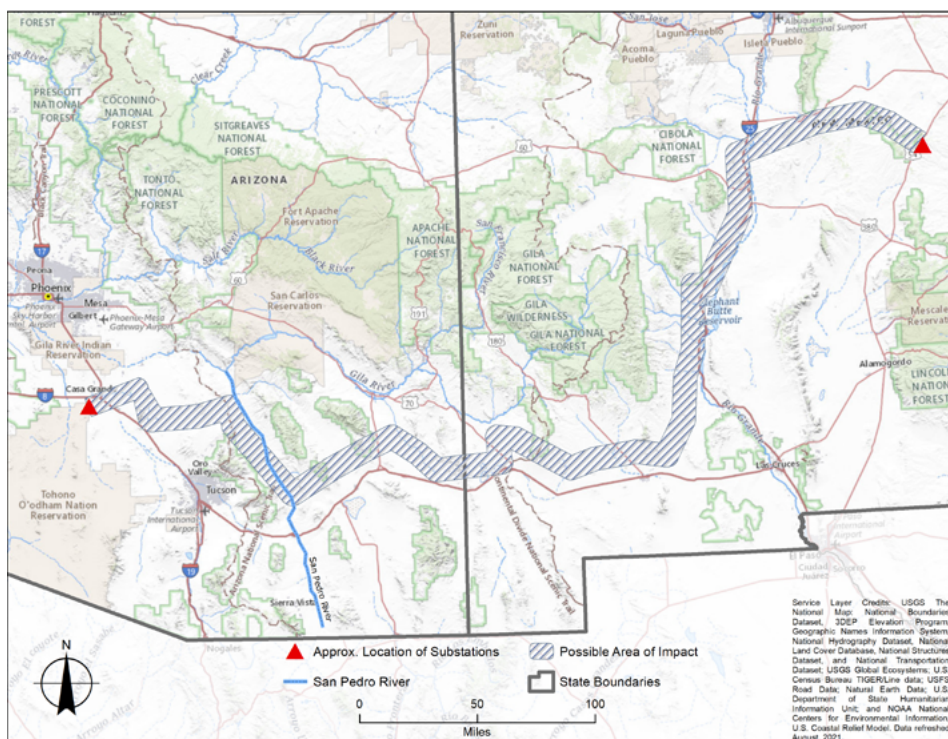
The San Pedro Valley's status as an important bird flyway is threatened.

Years ago it was declared to be of international significance. It remains a primary conduit for bird migration in the West. The transmission towers and lines (an average of 135 ft. tall) would pose a danger to birds. Neotropical birds that are nesting need to forage at night, and that would take them from the river bottom up past the power lines. The valley is also important for non-avian wildlife. At this point, the San Pedro region is the second largest unfragmented area in the state, second only to the Grand Canyon area. The EIS proposes about 700 miles of new roads along the SunZia's proposed corridor, some directly fragmenting the San Pedro region.

When the ACC approved the project, it was in conjunction with a Plan of Development that specified minimizing new roads, and setting up an eight-mile portion of the lines employing aerial construction for the



SunZia line affects the San Pedro downstream from where this photo was taken by Bob Wick, Bureau of Land Management



Map showing possible area of impact of the SunZia Proposed Transmission Line
Cartography Toni Malcolm

setting of transmission structures and conductors. It appears that this requirement may not be taken seriously as there is all kinds of evidence that road access to this eight-mile stretch from a rural dirt road through the valley is being planned—access routes and property are being obtained by SunZia.

There is concern for the fully designated Dark Skies Park near Oracle. The tower lights in place for aircraft would clearly adversely impact the park.

This new EIS is expected to be available for public comment in early April 2022. Submitting a comment during this phase is essential in order to have standing for future phases of the EIS. We encourage you to comment and to request that BLM select the “No Action” alternative.

Elna is an active member of Sierra Club

Moving EV Bills at the Arizona Capitol

By Stan Bindell



Four bills that would promote the use of electric vehicles are pending in the state legislature. Three of those bills are sponsored by Arizona State Sen. Victoria Steele and one by Arizona State Rep. Paul Boyer.

These bills have bipartisan support. Steele is a Democrat in Legislative District 9 in Tucson; Boyer is a Republican in Legislative District 20 in Phoenix.

Sen. Steele said she was motivated to support these bills after she was asked by young climate activist Kyle Kline what she was doing about climate change. She told Kline that she is in the minority party and unable to move climate change legislation.

That was unacceptable to Kline.

Sen. Steele didn't know if she could get anything accomplished, but gathered her staff to ask what was the biggest climate issue, how they should tackle it and what's stopping them.

“These bills have failed several times before and we don't know if we'll see the finish line, but excuses will never get us there,” she said.

Steele said she has been able to get Electric Vehicles to move by building trusting relationships with other legislators.

“That takes time, but I've found that when I look for the best in another person I can usually find it and connect with them

at those points. We can usually get some important work done together,” she said.

House Bill 1151, titled as the Charging Station Pilot Program, would establish more charging stations throughout Arizona for electric vehicles. The program would be administered by the Arizona Department of Education and other state agencies for state buildings.

The bill, as originally proposed, would have provided \$500,000 in state funds; those funds were eliminated from the bill and the funding would have to come from the federal government.

If no federal funding was supplied

then the program would be repealed in 18 months.

The bill was heard by the Senate Transportation and Technology Committee as well as the Appropriations Committee. It is scheduled to be heard on the Senate floor and then it would be sent to the House.

If the House Transportation hears the proposal there is a good chance it will pass.

Sandy Bahr, chapter director of the Sierra Club's Grand Canyon Chapter, said all of these bills are important because transportation electrification cleans up the air, reduces carbon emission and lessens reliance on oil and gas from other countries as well as reducing the chances for oil spills.

Contd. on p. 9

Contd. from p. 8

“Many communities suffer from poor air quality and transportation is the biggest contributor to air pollution,” she said. “The more we can electrify cars, trucks and buses the better off for the air.”

Bahr said using electric vehicles addresses climate concerns.

House Bill 1152 would require a plan to get zero emissions for vehicles. This would require the Arizona Department of Environmental Quality, Arizona Department of Transportation and Arizona Department of Administration to develop coming up with a zero emission program for the state. This is meant to address interstate and intrastate travel in Arizona by having charging stations for electric vehicles where needed.

“This would assure infrastructure for electric vehicles,” she said.

Bahr said the state is likely to get funding for promoting zero emission vehicles. This would mean preparation and coordination among state agencies.

“This would reduce vehicles not polluting into the atmosphere,” she said.

This bill passed out of the Senate and awaits action in the House.

House Bill 1154 would create a study committee on vehicle transportation electrification.

“This is a good idea because there are a lot of opportunities to promote electric vehicles,” she said.

This committee would look at how dollars should be prioritized, the barriers to vehicle electrification and where more charging stations are needed.

Bahr said electric vehicles are more affordable than they used to be, including used electric vehicles.

This bill passed out of the Senate

and is waiting to be heard in the House.

This committee would include legislators from both parties, environmentalists and representatives from the electric vehicle industry.

Senate Bill 1246 would make the process easier for schools to acquire electric school buses and vehicles.

According to this bill, schools would be able to select preapproved companies that provide electric school buses and charging stations.

This bill passed out of the Senate and has been sent to the House Education Committee. This bill passed the Senate 28-0 with two not voting.

There is no funding included in this bill, but funding from the federal government is expected.

Bahr said diesel buses are bad for kids lungs and overall health. Plus, this would mean less pollution in the air.

“This would promote electric school buses,” she said. “Students shouldn’t be exposed to these exhaust fumes while waiting for their buses.”

Bahr said sometimes change can be slow if the schools use the same vendors, so this will address that by giving them a list of vendors to pick from.

Bahr said these bills promoting electric vehicles will also address climate change issues as cars and trucks put about three trillion pounds of carbon in the air.

“This will improve air quality,” he said. “We have to do more and do more sooner about climate change. These bills will help us do that in Arizona.”

Stan is ex-com at large for the Yavapai Group

Joe Shannon



Saying goodbye to a friend

By Alicyn Gitlin

Longtime Flagstaff-Northern Arizona Group Chair, Joe Shannon, passed away in January, only days after stepping down from the Flagstaff-Northern Arizona Group Executive Committee. Joe remained a fiery and determined advocate until his last days.

Joe’s love of the outdoors started when he was young, as an energetic child, in a large family where nature was his refuge. People who knew Joe well will be surprised to learn that he and his friends loved to wrench on and race dirt bikes. As an adult he turned the same energy to running and riding mountain bikes.

His father cultivated an affinity for water by reading National Geographic magazines with his son. Young Joe wanted to be Jacques Cousteau. He eventually got a Bachelors in Marine Biology from Roger Williams college and soon after began working along the Hudson River. From there on, rivers would become central to his life’s work.

In 1989, Joe was teaching in Scottsdale when he and his partner Emma heard about an opportunity to join a teacher’s river trip in the Grand Canyon. During that trip, Dave Wegner, who at the time worked for Glen Canyon Environmental Studies (GCES), a unit of the Bureau of Reclamation (BOR), hike a treacherous route to the river, full of excitement about the announcement that an Environmental Impact Statement would be prepared to examine the effects of Glen Canyon Dam. Inspired by the excitement around Colorado River science, Joe changed his career direction and pursued a Masters and PhD at Northern Arizona University, studying how dam-regulated flow patterns impacted the life of the Colorado River and its tributaries.

In loving Memory



Joe Shannon & Lindsey Jones by Alicyn Gitlin

He went on to work with GCES, which became the Grand Canyon Monitoring and Research Center under the U.S. Geological Survey, after it was determined to be a conflict of interest for BOR to study the impacts of its own dam. Joe eventually became a research professor at NAU, where he focused on the science and policies that shape our rivers.

Joe was known for giving people opportunities. He invited students on his river trips and brought new people into mountain bike riding, as well as road riding and racing. He refused to be constrained by the way things had always been done, by bringing the new field of stable isotopes to aquatic studies in the Grand Canyon and learning to row or motor his own boats during science trips. He worked tirelessly to prioritize forest protection above damaging recreation projects and to fight climate change.

I can’t remember when I first met Joe; he always seemed to be a part of the Grand Canyon community. His NAU graduate seminar on dam management made me realize we could change Glen Canyon Dam’s operations to, at least partially, heal the river ecosystem it had so wrongly harmed.

I feel fortunate to have collaborated for so many years with such an influential mentor. His restless energy inspired many and I hope we can continue to carry on his great work.



Grand Canyon Chapter of Sierra Club Poster by Toni Malcolm

Thank You to Our Donors!

Hitched to Everything Else in the Universe (\$1-49)

Kathleen Abernathy	Barbara Diers-Blackman	Ms Rosemary Kist	Peggy Papay	Abby Spotskey
Cynthia Adornetto	Clifford & Lucy Dorcy	Dr Carole Klopatek	Jeanette Pawlowski	Alice & Karl Stambaugh
Ray PE Alfini, PE	Susanne Durling	Tyler & Katrina Kokjohn	Kenneth R Peres	Ms Laura Steckman
Fannie Allen	Richard Babin & Jo Eaton	Andrew La Follette	Becky Peters	Dan Stormont
Craig Anderson	Leslye S Evans-Lane	Garvin G Larson	Valleria Pickett	W Stovall
Susan Anderson	Mary Fachman	Stephanie Lebhar	Julie Pindzola	Karen Stucke-Jungemann
Phyllis Smith & Anna Arnold	Dorothy A Foster	Anne Leonard	Bruce Plenk	K M Wyly & A Stumpf
Nancy Atherton	John M. Franklin	Joanne Lewis	David Leslie Poland	Ted Taylor
D Auer	Deborah & Steve Franks	Greg Lewis	John Poling	Patricia Theisen
Jesica Baca	Irma Frederick	Cheryl Liebmann	Michael J J Pope	Glenn & Martha Thompson
Jennifer Baltz	Faye & Larry Gardner	Phillip Long	Mary Pradelt	Patrick Timlick
Joan Batchelor	Roselyn B Gibel	Rose Marie Duran Lopez	Mark Mulligan & Toni Ramsey	Dan Tokar
Gloria Becker-Rial	Jerry Gless	Harry Lumley	Paul Rawson	Ms Marsha Turkin
Marianne Bell	Sarah W Gordon	Hollace Lyon	Marlene Reister	Peter Uhrig
Ms Rebecca Berry	Richard Griesenbeck	Toni Malcolm	Mrs Lisa Reyes	Richard & Mina Van Dyne
Doug Bland	Stephen E Griffin	Michael Marek	Nyssana Reyes	Dan Millis & Kate Van Roekel
Gail Bliss	Susan & Stan Hahn	Mary Marquardt	Sally & Esther Rings	Carmen Velarde
Betsy Bolding	Harley Halseth	Joan Mason	Helene Rollins	Kendra Vining
Carolyn Bosserman	Dorothy Hanson	Karen McClelland	Leilani Rothrock	Joy Wall
John A Brodie	Les Harris	Gary McCormick	Dr Irene A Saikevych	LoriAnne Barnett Warren
T J Wernette & C Brown	Rosalie Hill	Ms Susan McKuhen	Marie G Sansone	Lois & Robert Watson
Nancy Buell	Tim Hogan	Lee & Linnea McNeil	Cayetano Santiago	Margaret Weesner
Victoria Cahill	Sandy Hughes Hughes	Amy Meyertholen	Drs. Tuber & Schechtman	Deborah Weir
Marilyn Canteloupe	Bonnie Hughes	Erick Meza	John Seamon	Doug F Wells
Grand Canyon	Yves Huin	Ms Karen Michael	Deborah Sebree	Jeff Winkler
David Cardinali	Elizabeth Hunter	Georgine Morris	Rosemary Semrau	David Winkler
Patricia Carina	Janette Huntington	Elena Moshinsky Moshinsky	Paul R Gordon & Eve Shapiro	Robert & Ila Wist
Christine Carlson	Robert Huskey	Mrs Karen Muir	Philip Shea	Sandra Zarcone
Laurie Jurs & Jennifer Clarke	Natalie Ireland	Sisko Munves Munves	James Shea	Sally Zwayer-Jones
Thomas J Cleman	Paul Jehle	Janice E. Myers	Richard E & Lynore R Shepard	IRA Unknown Donor
Cathy Cohn	Ms Anne Jehle	Sergio Avila & Jenny Neeley	Andrea Shields	Wilburforce Foundation
Ken Collier	Helene Jensen	Ms Uriel Nelson	Samuel Slosburg	Energy Action Fund
Louise Courtney	Howard Johnson	Shane Nicholas	Kenneth Smith Smith	MET Foundation Inc.
Sherrie Cox	Elizabeth & Dave Katzelnick	Mr Stephen Nunn	Michael F & Mary Ann Smith	
Eugene Croisant	Jules Ketcham	Susan O'Hara	Mr Charles M Spining	
Linda Crouse	Ms Laura Key	John D MD Palmer	Larry Spivack	

Keep Close to Nature's Heart (\$50-99)

Theresa A DeBoer	Mark Fischer	Karen Eadon	Nathan Fidel	Ms Joan Prefontaine
Rebecca Smith Gross	Ruth L Eckert	Lisa & Tom Cambron	Howard Myers	Ronald & Judith Probst
Bich Hoa Nguyen	Ehrick & Sally Howland	Beth Cain	Lenna Burnham	D Finkelstein & H Rauch
Jo Ann Moon	Ronald & Judith Probst	Mr. Mark Hackbarth	Augusta Davis	Richard Dunie & Deanna Rosen
Linda Miller	Penelope Graves	Patricia Waterfall	Prof Joseph R Heller	Hildy Saizow
Pauline Bonsall	Richard Dunie & Deanna Rosen	Jeffrey Heimer & L W Brock	Dorothy Baker	Ben & Lisa Stoken
David Langley	Tony Gentry	Ms Joan Prefontaine	Marc & Terry Frost	Barbara Straub
Jerry McCoy	Karen Michael	D Finkelstein & H Rauch	Mitch Bunting	J Kay Johnson & W Towler
Mary Fosket	Amee Beck	Diane Huffman	Inge Flanagan	Susan K Valdivia
Charles and Nancy Conn	Pat Flahart	Douglas Higgins	Dan Francis	Patricia Waterfall
Hollis Brown	Sondra Wilkening	Gabrielle B. Lawrence	Darell K Evans, Jr	Dorothy Watkins
Judith Anderson	Sara Allen	Ben and Lisa Stoken	Nancy Kersten	Linda Rosato & Thomas Wehr
Dr and Mrs Robert D. Beren	David Duffee	John Loughrey	Stuart Moody	Linda Wennersten
Don and Linda Bentley	Cathy Williams	Mr Thomas Good	James Ball	Sondra Wilkening
J Kay Johnson and W Towler	Dennis & Sevren Coon	Nancy Ethridge	Al Bellavia	Cathy Williams
Michael Hyatt	Paul Golab	Stephen & Susan Browning	Linda Rosato & Thomas Wehr	Deborah Zepnick
Susan K Valdivia	Hildy Saizow	Deborah Zepnick	K & M Houghtaling	
Dorothy Watkins	Pamela W Hyde	Barbara Straub	Peter & Barbara Burkholder	
Christopher Johnson	Linda Wennersten	David Lutz	Ila L Abernathy	

Contd. p. 11

The dates of these donations range from December 17th 2021 - March 7th 2022

contd. from p. 10

Make the Mountains Glad (\$100-499)

Vickie Aronson	Harriet Winston Fire	Paul Hoyt	Mary Ann Meyer	A Maley-Schaffner & T Schaffner
Gail Aubel	Chris Fleischman	Maureen L Hymel	Eve Murillo	David B Shaffer
Michelle Banks	Jeanne Frieden	Richard B Jacobs	R and S Nichols-Young	G & R Spletstoeszer
Mr & Mrs David Barner	Fred and Nan Friend	Ms Susan Kettlewell	Ms Sandra F Novak	Elliott L & Valerie A Stearns
Nancy Bevens	Dawson Henderson & S Galbreath	Ms Rivko Knox	Mr William Ohl	William Thornton
Terri Buresh	Chris Gehlker	Joyce Mackin	Abigail Okrent	Brit Rosso & Leslie Uhr
Carolyn Burns	Laurel Cooper & John Gilkey	Peter B Magnuson	Amy Phillips	Don G Vandegriff
Robert D Cable, Jr	Robert Gilliam	Kathy Malm	Mr Donald W Powell	Bruce J Villere
Ms Diane Carr	Edward & Elizabeth Goff	Heather McClain	Linda and J Michael Powers	Donald Wall
Nancy Chidester	Michael Brown & Shery Grant	Mr R D McIver/Ms Faye McIver	Beth Proffitt	Anastatia Walsh
Scott J Cooley	V L Greenfield	Jane McNamara	Kathleen Rahn	Mr Gene I Wendt
Ruth Rettig & David Dube	Janet Grossman	Andrew Means	Kathy Roediger	Duffie Westheimer
Barbara Elk	Margaret Herding	Sally Merrill	Kelly Rowell	Richard Wiarda
Burt Feuerstein	Larky Hodges	G DeRussy & D Metzger	R Kulakofsky & J Sawyer	Walt Wictor

The Morning Stars Sing Together (\$500+)

Jeff Augustine	Robert Dixon	Howard Mechanic	Fred & Dianne Oswald	Dale & Christine Volz
Peter & Betty Bengtson	Mr Mark Ferguson	Mr Randy Miller	Linda Paul	
David M Bixby	Dr Kenneth & Diana Gometz	William Morgan	Robert W. Sanderson	
Margaret R. Diaz	John Kelley	Jerry Nelson	Elizabeth Stewart	

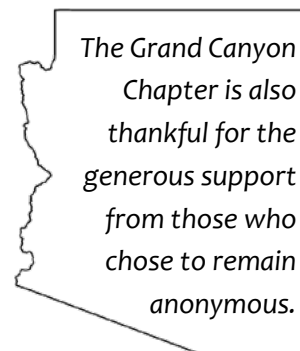
Thank you to our Monthly Donors

Ray Alfini, PE	Louise Courtney	Garvin G Larson	Mr Stephen Nunn	Abby Spotskey
Fannie Allen	Linda Crouse	Joanne Lewis	Susan O'Hara	Alice & Karl Stambaugh
Craig Anderson	Susanne Durling	Phillip Long	Abigail Okrent	Dan Stormont
Nancy Atherton	Richard Babin and Jo Eaton	Harry Lumley	Peggy Papay	K M Wyly & A Stumpf
Sandy Bahr	John M Franklin	Laurie Jurs	Becky Peters	Ms Marsha Turkin
Jennifer Baltz	Jerry Gless	Hollace Lyon	Julie Pindzola	Dan Millis & Kate Van Roekel
Joan Batchelor	Sarah W Gordon	Toni Malcolm	Bruce Plenck	Carmen Velarde
Gloria Becker-Rial	Stephen E Griffin	Joan Mason	Michael J Pope	Kendra Vining
Peter & Betty Bengtson	Rebecca Smith Gross	Karen McClelland	Mark Mulligan & Toni Ramsey	Dale & Christine Volz
Ms Rebecca Berry	Harley Halseth	Gary McCormick	Paul Rawson	Joy Wall
Doug Bland	Tim Hogan	Amy Meyertholen	Mrs Lisa Reyes	Margaret Weesner
Gail Bliss	Bonnie Hughes	Georgine Morris	Nyssana Reyes	Deborah Weir
Betsy Bolding	Sandy Hughes	Elena Moshinsky	Sally & Esther Rings	Jeff Winkler
Carolyn Bosserman	Janette Huntington	Mrs Karen Muir	Leilani Rothrock	Robert and Ila Wist
T J Wernette & C Brown	Howard Johnson	Sisko Munves	Drs. Tuber & Schechtman	
Victoria Cahill	Ms Karen Michael	Janice E. Myers	John Seamon	
David Cardinali	Ms Laura Key	Sergio Avila & Jenny Neeley	Deborah Sebree	
Christine Carlson	Ms Rosemary Kist	Bich Hoa Nguyen	Philip Shea	
Ken Collier	Tyler & Katrina Kokjohn	Shane Nicholas	Kenneth Smith	

Support for Arizona Water Sentinels



Thank you to the
Riester Conservation
Foundation for your
\$2,000 donation
supporting the
Arizona Water Sentinels!



Canyon Echo encourages contributors to use Creative Commons licensing

This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike License.

To view a copy of this license, visit
<http://creativecommons.org/licenses/by-nc-sa/2.5>
or send a letter to

Creative Commons, 543 Howard Street, 5th Floor,
San Francisco, California 94105.

All other contributions, including photos, cartoon, and written work, fall under standard copyright restrictions

CAST OF CHARACTERS: *A Warm Welcome To New Members Of Our Team*

Ana Gorla: *Chapter Program & Communication Assistant*



courtesy of Ana Gorla

Ana Gorla joined the Sierra Club Grand Canyon Chapter staff team in December as our Program and Communications Assistant. In her role, she helps put together our newsletter and online messages, oversees our social media accounts, supports, and assists with Chapter events, and provides administrative assistance. Ana has already suggested new ways to increase volunteer participation at our events, actions, and activities, and she has a special focus on ways to engage with a more diverse audience. Please help us welcome Ana and thank her for her great work. You can reach her at ana.gorla@sierraclub.org. She welcomes your questions if you want additional information about her.

What are your hobbies or interests?

I go through phases enjoying different hobbies. Right now I love gardening. It feels like a science experiment as I am learning and growing things from seeds while also enjoying nature. It's very relaxing. I also enjoy thrifting on the weekends, and cooking (plant-based) new foods.

Do you have a favorite place to walk, run, hike, bike, or watch wildlife? If so, where is it and why is it your favorite?

I love biking in Tempe (where I currently live) near Kiwanis Park. It's so easy to take the canals to Phoenix, Gilbert or Papago park. Biking is such a cool way to see the city. I also like birdwatching. When I travel to national parks and northern Arizona, it takes me out of the human experience and makes me see how many creatures have their own busy lives too.

What made you want to work for Sierra Club?

I have been wanting to dedicate my work skills to something I am very passionate about and I couldn't think of a better way than to be part of the environmental movement. I love that Sierra Club is making strides to be an inclusive space; where anyone with a passion for the environment can feel safe, are heard, and are included in the Club's mission. Particularly in Arizona, I am so happy to have found a group of locals that are so dedicated to public lands and strive for a better life for everyone that calls Arizona their home.

What do you like most about your new job?

The community! I don't think I've ever worked at a place where I felt "these are my people". That's how I feel here; from local to national.

What are the biggest challenges to this work in Arizona?

Greedy politicians and corporations. It sucks to see communities work so hard on issues and have many people on board just to get stopped by, sometimes, one person.

How can Sierra Club volunteers best support you and your work?

Since I am still new to the space, communication is super helpful for me as I learn and grow with the community here.

What one word do you think describes you best?

Good-natured (pun intended).

Erick Meza: *Chapter Borderlands Program Coordinator*



courtesy of Erick Meza

Sierra Club's Grand Canyon Chapter is pleased to welcome Erick Meza to our staff team as the new Borderlands Program Coordinator. Erick began his work with the Chapter at the end of October and hit the ground running by conducting outreach, organizing talks and events, and working to ensure better mitigation of the negative impacts of the border wall and associated infrastructure. We are lucky to have Erick as part of our Sierra Club team. Please help us welcome Erick. You can reach him at erick.meza@sierraclub.org.

And now, learn a little bit more about Erick in his own words.

Tell us a little bit about yourself.

I'm Erick Meza, I was born in the Sonoran Desert of Mexico in a small town called Guaymas on the coast of the Sea of Cortez. I identify as Mestizo with roots in the Sonoran Desert Native people and European colonizers. My family and I migrated to Tucson 7 years ago as we have a strong community here.

What are your hobbies or interests?

I love growing vegetables and anything else you can eat. I also have a big interest in building with natural materials.

Do you have a favorite place to walk, run, hike, bike or watch wildlife? If so, where is it and why is it your favorite?

I love the desert landscape. But if that includes a mountain, canyon, or water feature even better. My happiest place is the Sea of Cortez.

What made you want to work for Sierra Club?

To have the opportunity to learn and work closely with border communities that are going through lots of hardships and face very complex issues.

What do you like most about your new job?

That I get the opportunity to amplify the voices of border communities and hear directly from the most impacted, and advocate for the wildlife that does not have a voice in all the decisions that directly affect them.

What are the biggest challenges to this work in Arizona?

That the environmental issues are surrounded by very strong economic and political interests that intersect in the border region.

How can Sierra Club volunteers best support you and your work?

By getting informed of what is happening. The border is very dynamic and things are constantly changing. Get involved; reach out to us or any other group doing environmental work; help amplify the message and change the negative narrative of the Borderlands.

What one word do you think describes you best?

Creative.