



# AGENDA

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**Ecosystem Connectivity Mitigation  
Advisory Committee (EMAC)  
Regular Meeting  
Monday, February 24, 2020  
10:00 AM**

**Yavapai County Development Services  
Training Room  
1120 Commerce Drive  
Prescott, AZ 86305**

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**CYMPO Ecosystem Connectivity Mitigation Advisory Committee**

Chair	Tammy DeWitt, City of Prescott
Vice-Chair	Elizabeth Johnston, Arizona Game and Fish
Member	Chuck Budinger, ADOT Northwest District
Member	Francisco Anaya, Prescott National Forest
Member	Ron James, Private Citizen
Member	J. D. Greenberg, Private Citizen
Member	Deb Pastor, Private Citizen

- 1. CALL TO ORDER AND ROLL CALL**
- 2. ANNOUNCEMENTS AND UPDATES**
- 3. APPROVAL OF THE SEPTEMBER 23, 2019 REGULAR MEETING MINUTES OF THE EMAC**
- 4. REVIEW AND APPROVAL OF EMAC MEETING SCHEDULE FOR 2020**
- 5. UPDATE OF ADOT WILDLIFE VEHICLE CONFLICT STUDY**
- 6. REVIEW AND DISCUSSION OF WILDLIFE CORRIDORS MAP AND CONSERVATION EASEMENT ARTICLE**  
*(Chuck Budinger, EMAC, ADOT NW District)*
- 7. REVIEW, DISCUSSION AND POSSIBLE ACTION TO RECOMMEND PURSUIT OF ARIZONA MIGRATION CORRIDOR PROTECTION**  
*(J.D. Greenberg, EMAC)*
- 8. REVIEW, DISCUSSION AND POSSIBLE ACTION TO MAKE RECOMMENDATIONS IN RESPONSE TO 2045 REGIONAL TRANSPORTATION PLAN**  
*(Christopher Bridges, CYMPO)*
- 9. ADJOURNMENT**

*CYMPO endeavors to make all public meetings accessible to persons in need of foreign language assistance or with disabilities. Please call (928) 442-5730 or e-mail Allison.McCarthy@yavapai.us, **72 hours** prior to the meeting to request a reasonable accommodation to participate in this meeting.*

**CYMPO  
REQUEST FOR ACTION  
FEBRUARY 24, 2020**

**SUBJECT: APPROVAL OF THE SEPTEMBER 23, 2019 REGULAR MEETING  
MINUTES OF THE EMAC**

**SUBMITTED BY:** Allison McCarthy, CYMPO Accounting Specialist

**PREPARED BY:** Allison McCarthy, CYMPO Accounting Specialist

**AGENDA TYPE: DISCUSSION/POSSIBLE ACTION**

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**ATTACHMENTS:**

September 23, 2019 Regular Meeting Minutes

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**SUMMARY/BACKGROUND:**

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**ACTION OPTION:**

Motion to approve the September 23, 2019 Regular Meeting Minutes of the EMAC.

**OR**

Motion to approve the September 23, 2019 Regular Meeting Minutes of the EMAC with noted changes.

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**RECOMMENDATION:**

Motion to approve the September 23, 2019 Regular Meeting Minutes of the EMAC.



# MINUTES

**Ecosystem Connectivity Mitigation  
Advisory Committee (EMAC)  
Regular Meeting  
Monday, September 23, 2019  
10:00 AM**

**Yavapai County Development Services  
Training Room  
1120 Commerce Drive  
Prescott, AZ 86305**

## **CYMPO Ecosystem Connectivity Mitigation Advisory Committee**

Chair	Tammy DeWitt, City of Prescott
Vice-Chair	Elizabeth Johnston, Arizona Game and Fish
Member	Chuck Budinger, ADOT Northwest District
Member	Francisco Anaya, Prescott National Forest
Member	Ron James, Private Citizen
Member	J. D. Greenberg, Private Citizen
Member	Deb Pastor, Private Citizen

**1. CALL TO ORDER AND ROLL CALL**  
Members James, Greenberg, Pastor absent.

**2. ANNOUNCEMENTS AND UPDATES**

**3. APPROVAL OF THE AUGUST 26, 2019 REGULAR MEETING MINUTES**

### **MOTION**

Member Anaya motioned to approve the August 26, 2019 EMAC Regular Meeting Minutes. Vice-Chair Johnston seconded the motion.

### **VOTE**

The vote on the motion was unanimous.

**4. REVIEW OF EXECUTIVE BOARD DISCUSSION REGARDING WILDLIFE CONNECTIVITY AND COLLISION MITIGATION FOR HWY 69 WIDENING PROJECT**

Mr. Bridges noted Madam Chair DeWitt presented summary of EMAC discussions regarding the Highway 69 Widening Project to the CYMPO TAC and Executive Board. Explained that the Executive Board recognized the current lack of funding for expansion of the existing culvert, but noted the possibility for such a project in the future.

Mr. Bridges noted that Executive Board gave general direction to look into using the remaining CYMPO construction dollars programmed for the SR69 Safety and Capacity Improvement Project in FY21 to potentially make improvements to the conditions of the culvert to better facilitate drainage and pedestrian use. Also noted it took roughly 5 years in order to get \$10 million programmed for the expansion of this project.

Member Budinger requested clarification on what was presented to the Executive Board. Mr. Bridges explained that based on discussions held at the August EMAC meeting, the committee felt that signage and fencing are not effective mitigation options, and that the expansion of the existing culvert beneath SR69 is what was presented to the TAC and Executive Board. Vice-Chair Johnston noted that mule deer will find a way to get through fencing.

Member Budinger inquired if it would be beneficial to reach out to FHWA and submit something official from the EMAC to request funding opportunities. Mr. Bridges explained that would be a possibility for future projects.

Madam Chair-DeWitt explained that greater potential to influence the design of the project would have been possible if the EMAC existed and had been involved in the project five years ago.

Vice-Chair Johnston explained Jeff Gagnon, with AZ Game & Fish, has submitted a Habitat Partnership Committee proposal for funding in the amount of \$250,000, which much go through ranking process within Game & Fish. Mr. Bridges inquired about the possibility for such funding to be used to conduct studies to look at wildlife connectivity along the entire SR69 corridor. Vice-Chair Johnston explained yes, it is a potential.

Madam Chair DeWitt clarified that CYMPO would be responsible to submitting grants on behalf of EMAC, depending on the grant requirements and eligibility.

Member Budinger reiterated that FHWA should be involved in EMAC plans. Mr. Bridges noted that CYMPO staff will reach out to notify FHWA of future EMAC plans.

Member of the public, Valarie Isly, explained it appears that a delay of the project would be wise to allow for more time for collection of funding for wildlife underpass. Noted anticipated public outcry if this project is postponed.

Mr. Bridges explained that because of lack of funding on a state level, all transportation funding is now being assigned to pavement preservation. Explained that the SR69 widening project will be the last expansion project in the state without an increase in gas tax to fund transportation. Noted that a delay in this project could put the entire project at risk. Madam Chair DeWitt explained that if the SR69 project is delayed, the State Transportation Board could potentially pull the funding and place it on a different project within the state.

Member Budinger proposed implementing a corridor study for the entire SR69 corridor to look at ways for implementing wildlife connectivity. Mr. Bridges suggested creating at a scope for such a study to then look at potentially including in the CYMPO Metropolitan Transportation Improvement Program (MTIP) in FY21.

Madam Chair DeWitt explained costs estimates of \$4 million were provided by ADOT. Mr. Bridges explained that the project location and amount of fill movement add significantly to the project cost. Also noted that due to the traffic volume of SR69, additional highway would have to be constructed while the culvert is being expanded in order to allow traffic to continue moving.

Vice-Chair Johnston clarified that deer cross from the north side to the south side of SR69 and gather in a pocket, which is not where they necessarily want to go. Johnston also explained that when there is a high human presence in the culvert, deer are less likely to gather in that area, and therefore are more likely to cross over SR69.

Madam Chair DeWitt also noted existing land on either side of SR69 is State Trust Land which could be sold and developed at any time. Vice-Chair Johnston noted that an agreement could be potentially set into place to dedicate land on either side as a wildlife easement.

Member of public, Vanessa Louis, inquired about what entity is collecting road kill data. Mr. Bridges explained it currently is unclear if any entities are collecting this data.

**5. REVIEW AND DISCUSSION OF THE 2045 REGIONAL TRANSPORTATION PLAN**

Mr. Bridges explained that due to funding changes made at the state level, the goals of CYMPO's 2045 Regional Transportation Plan (RTP) have shifted from previous RTPs to focus more on recommended investment choices. Mr. Bridges explained a goal for the 2045 RTP is for wildlife corridor implementation guidelines and suggestions to be included in the plan.

Mr. Bridges invited members of public to attend 2045 RTP meetings. Bridges also noted 600 to 700 out of 1,300 comments made to the 2045 RTP were wildlife-related comments.

Vice-Chair Johnston suggested the 2045 RTP TAC review the Wildlife Linkages Report, posted on the ADOT website. Member Budinger suggested the Game & Fish guidelines also be reviewed by the 2045 RTP TAC.

Vice-Chair Johnston noted she will meet with Jeff Gagnon and Scott Sprague with Game & Fish for information on current wildlife collision data.

**6. ADJOURNMENT 11:00 AM**

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**CYMPO  
REQUEST FOR ACTION  
FEBRUARY 24, 2020**

**SUBJECT:    REVIEW AND APPROVAL OF EMAC MEETING SCHEDULE FOR 2020**

**SUBMITTED BY:**    Allison McCarthy, CYMPO Accounting Specialist

**PREPARED BY:**    Allison McCarthy, CYMPO Accounting Specialist

**AGENDA TYPE:**    **REVIEW/POSSIBLE ACTION**

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**ATTACHMENTS:**

2020 EMAC Meeting Schedule

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**SUMMARY/BACKGROUND:**

A 2020 EMAC meeting schedule has been created, keeping in line with the previous year's schedule of the fourth Monday of the month. This item provides the opportunity for the EMAC to make changes to the presented schedule, or to accept the 2020 schedule as presented.

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**ACTION OPTION:**

Motion to approve the September 23, 2019 Regular Meeting Minutes of the EMAC.

**OR**

Motion to approve the September 23, 2019 Regular Meeting Minutes of the EMAC with noted changes.

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**RECOMMENDATION:**

Motion to approve the September 23, 2019 Regular Meeting Minutes of the EMAC.



**CYMPO**  
Central Yavapai Metropolitan  
Planning Organization

## ECOSYSTEM CONNECTIVITY MITIGATION ADVISORY COMITTEE 2020 MEETING SCHEDULE

**The following is the 2020 meeting schedule for the Central Yavapai Metropolitan Planning Organization (CYMPO) Ecosystem Connectivity Mitigation Advisory Committee (EMAC)**

**Meetings are held on 4th Monday of each month (unless otherwise noted)**

**LOCATION OF MEETING:** Yavapai County Development Services, Training Room, 1120 Commerce Drive, Prescott, AZ 86305 (unless otherwise specified)

**TIME: 10:00 AM, unless otherwise noted**

No Meeting in January	No Meeting in July
February 24	August 24
March 23	September 28
April 27	No Meeting in October (Rural Summit)
No Meeting in May (Memorial Day)	November 16*
June 22	No Meeting in December

*\*Thanksgiving Day November 26, 2020*

***All meeting times and location are subject to change with adequate notice given  
Notice will be provided if a scheduled meeting is cancelled  
Meeting details may be found online at [CYMPO.org](http://CYMPO.org)***

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Agenda Item # 5

**CYMPO  
REQUEST FOR ACTION  
FEBRUARY 24, 2020**

**SUBJECT: UPDATE OF ADOT WILDLIFE VEHICLE CONFLICT STUDY**

**SUBMITTED BY:** Christopher Bridges, CYMPO Administrator

**PREPARED BY:** John Wennes, ADOT MPD

**AGENDA TYPE: UPDATE**

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**ATTACHMENTS:**

Wildlife-Vehicle-Conflict Study (Update)

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**SUMMARY/BACKGROUND:**

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**ACTION OPTION:**

No action required.

**OR**

No action required.

# Wildlife-Vehicle-Conflict Study (Update)

## Project Overview

The major goals for this project include:

- Identify significant wildlife-vehicle-conflict areas throughout Arizona on the state and federal highway system.
- Prioritize the significant problem areas – key segments of highways.
- Present solutions-mitigation projects, measures or techniques in an *Implementation Plan*.
- Develop project-level scopes and cost estimates to implement the highest priority recommended solutions.

## Current Status

- TAC kickoff meeting January 23 at ADOT. Well-attended meeting, with ADOT Districts, Traffic Safety, Risk Management, Research, MPD, Department of Public Safety, project consultant and sub-consultants attending in person.
- Consultant evaluating crash data from Arizona Crash Information System, Arizona Location Identification Surveillance System, and On-Base to inform the *Current and Future Conditions* making up Working Paper #1.
- WP #1 anticipated to be complete in May, 2020 followed by the
- WP#2 – Mitigation Projects in July 2020.
- Draft/Final Report in September 2020

Study webpage on ADOT/Planning/Transportation Studies

<https://azdot.gov/planning/transportation-studies/wildlife-vehicle-conflict-study>

**CYMPO  
REQUEST FOR ACTION  
FEBRUARY 24, 2020**

**SUBJECT:     REVIEW AND DISCUSSION OF WILDLIFE CORRIDORS MAP AND  
CONSERVATION EASEMENT ARTICLE**

**SUBMITTED BY:**     Chuck Budinger, EMAC, ADOT NW District

**PREPARED BY:**     Chuck Budinger, EMAC, ADOT NW District

**AGENDA TYPE:**     **REVIEW/DISCUSSION**

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**ATTACHMENTS:**

- Idaho Conservation Easement Article
- Wildlife Corridors Map

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**SUMMARY/BACKGROUND:**

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**ACTION OPTION:**

No action required.

**OR**

To be determined by discussion.

# Land deals protect critical mule deer migration area in Bear Lake County



Outdoors © Published at 5:50 pm, January 1, 2020



*The following is a news release from the Idaho Department of Fish and Game.*

On Dec. 18, Idaho Fish and Game finalized two voluntary conservation easements at Rocky Point, south of Montpelier in Bear Lake County, which will permanently protect crucial migration areas for big game on more than 1,800 acres of land in Southeast Idaho.

The conservation easements are for property on both sides of Highway 30 where thousands of mule deer cross on their migration between summer range in the Caribou Mountains and winter range on the Bear Lake Plateau.

Without the easements, future development could obstruct migration of mule deer, as well as elk, pronghorn and moose.

Based on the terms of the conservation easements, the properties will remain undeveloped to ensure that the land remains a big game migration area and that access to winter range is protected. The private owners of the land will also continue to use it for livestock grazing.

"This is a working lands ranch from a working lands family, and we have no intention of changing that," said Matt Pieron, wildlife biologist and Mule Deer Initiative Coordinator for Idaho Fish and Game. "The current use of this sagebrush-steppe habitat is perfectly compatible with our conservation goals."

The properties will also be opened to the public for hunting, fishing, trapping, and wildlife viewing, and will connect public lands on either side of the highway.

The group of mule deer that use this migration corridor belongs to one of Idaho's largest herds, which spend summers in the Caribou Mountains and numbers around 20,000, based on Fish and Game's aerial surveys. The herd winters in a variety of areas, but about a third of them cross the short stretch of Highway 30 at Rocky Point.

"Based on collision reports, staff observations, remote cameras, and electronic collar data, we have a ton of information that shows that these mule deer are migrating through a three or four mile stretch of highway that borders these easements," Pieron said.

**Partnerships were crucial to securing easement**

The total acquisition cost for the conservation easements was \$1.275 million, and Fish and Game contributed \$576,500 in license monies for the project. The balance of the funding came from a variety of partners, including:

- Southeast Idaho Mule Deer Foundation / Sagebrush Steppe Land Trust
- SE Idaho Chapter of Muley Fanatics Foundation
- National Fish & Wildlife Foundation
- Greater Yellowstone Coalition
- Knobloch Family Foundation
- The Pew Charitable Trusts
- Idaho Fish & Wildlife Foundation
- Center for Large Landscape Conservation

“We had tremendous support across the board, including from smaller, grassroots, local organizations like the Southeast Idaho Mule Deer and Muley Fanatics foundations,” Pieron said. “These folks are incredibly important, because they are the people who know firsthand how crucial it is to preserve this area to ensure the longterm health of their mule deer population, and in turn, the health of their local economy.”

Every fall, more than 4,000 mule deer hunters visit Unit 76, where Rocky Point is located. These hunters combined spend over 22,700 days hunting for mule deer, and over \$2.4 million on supplies.

Without this mule deer migration, the size of the herd would likely shrink, as would hunting opportunity and the local economic benefits associated with this mule deer population.

“This mule deer herd is very important to us, both culturally and economically, and that’s why we supported this project” said Chris Price, chapter president of Muley Fanatics Foundation.

#### **Idaho Transportation Department, F&G working together to address wildlife-vehicle collision hotspot**



This stretch of Highway 30 is a well known hotspot for wildlife-vehicle collisions. According to the roadkill data that Idaho Fish and Game collects, over 100 mule deer are struck and killed by vehicles annually on a 20-mile stretch of Highway 30, 70 percent of which have been killed within the four-mile section at Rocky Point. Because wildlife-vehicle collisions with large animals tend to be underreported, the number of mule deer-vehicle collisions is likely even higher.

This makes this mule deer population and the hunting opportunity it supports susceptible to continued decline, and poses a continuing safety hazard to drivers. It is something the local community has been concerned about.

“We lose so many deer on this stretch of highway,” Price said. “There are hundreds of deer killed in that Rocky Point area, and we want to do what we can for our deer herds to help them out.”

The conservation easements have opened the door for solutions that will decrease the number of wildlife-vehicle collisions moving forward. Idaho Fish and Game and the Idaho Transportation Department are working together to design wildlife crossing improvements for this segment of Highway 30. Idaho Transportation Department will provide the funding for the wildlife crossings in the area.

“The community will have the opportunity to learn more about this project and provide input on potential improvements that will help wildlife cross the highway, while at the same time keeping motorists safe,” said Tara Capson, ITD project manager.

The first opportunity for the community to give input will be in early 2020.

[SUBMIT A CORRECTION](#)

### Comments

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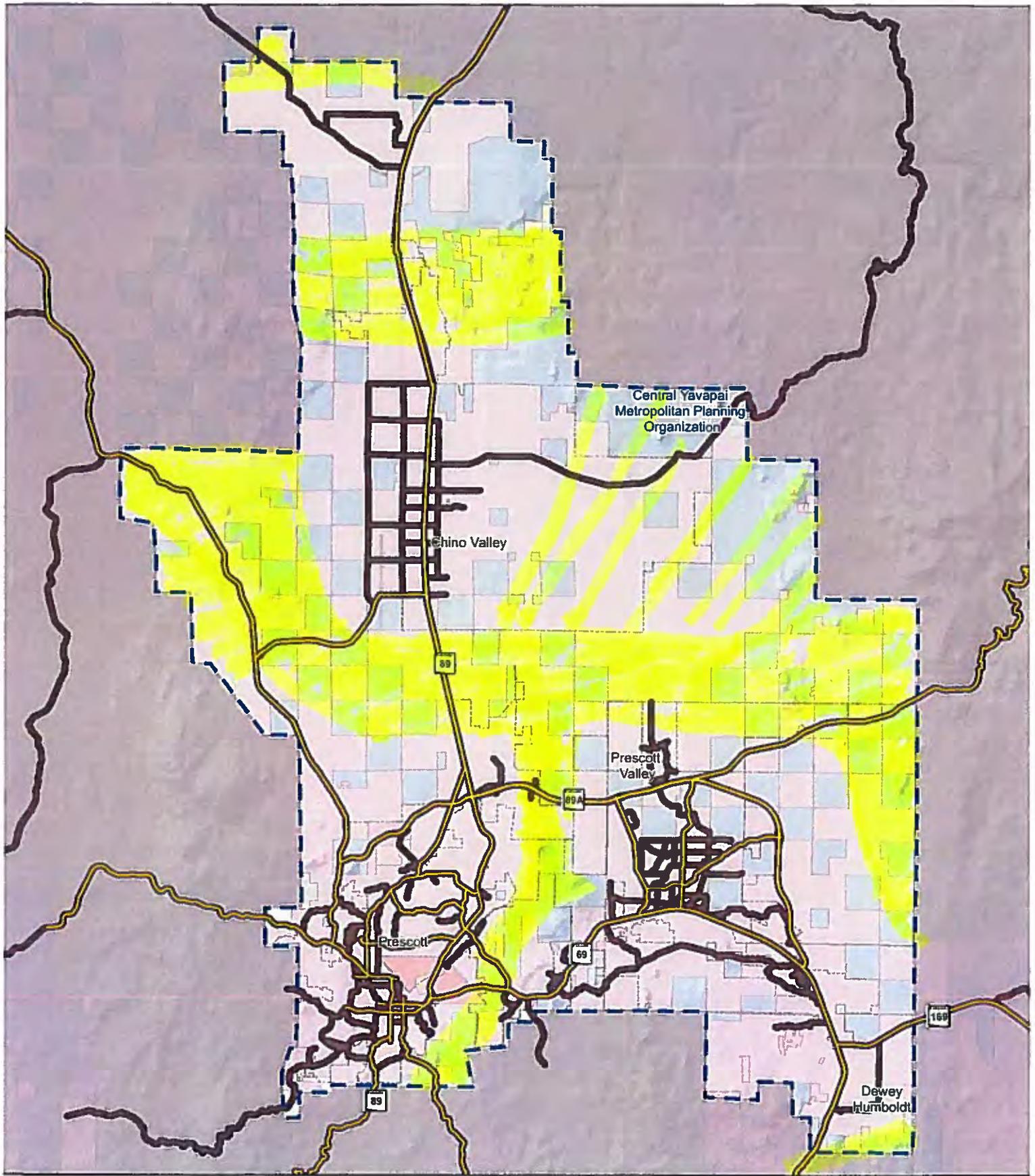
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**2045 CYMPO RTP Update**  
**Regionally Significant Routes**



**Legend**

- CYMPO Boundary
- Cities
- Existing Travel Demand Model Route
- Regionally Significant Route

**Land Ownership**

- State Trust Land
- BLM
- AZ Game & Fish
- Military Res.
- Private Land
- Yavapai County Land
- Yavapai Prescott Indian Res.
- Prescott National Forest

*conceptual wildlife corridors*

**CYMPO  
REQUEST FOR ACTION  
FEBRUARY 24, 2020**

**SUBJECT: REVIEW, DISCUSSION AND POSSIBLE ACTION TO RECOMMEND  
PURSUIT OF ARIZONA MIGRATION CORRIDOR PROTECTION**

**SUBMITTED BY:** J.D. Greenberg, EMAC

**PREPARED BY:** J.D. Greenberg, EMAC

**AGENDA TYPE: REVIEW/DISCUSSION/POSSIBLE ACTION**

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**ATTACHMENTS:**

- Wyoming Wildlife Corridor Article
- Wyoming Migration Corridor Executive Order

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**SUMMARY/BACKGROUND:**

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**ACTION OPTION:**

To be determined by discussion.

**OR**

To be determined by discussion.

# Governor's Trailblazing Migration Order to Hinge on Local Control



February 17, 2020

CHEYENNE, Wyo. -- Wyoming took a big first step toward blazing a new trail on managing big game migration corridors when Gov. Mark Gordon signed an [executive order](#) last week.

Dan Stanton, a biologist and sportsman's representative on the governor's advisory group on migration, says keeping paths open for deer, elk, moose and other game to travel between summer and winter ranges helps keep herd numbers strong.

"Migration corridors are the most critical piece for long term sustainability of the herds," he states. "And anybody that likes to see the wildlife and likes to see them in abundance should pay attention to how this process plays out."

The executive order establishes how corridors are managed, starting with key routes in southwestern Wyoming, and how other routes should be designated in the future.

All eyes will be on the Cowboy State as the plan is implemented, including from the U.S. Bureau of Land Management. No other western state has a comprehensive migration management plan in place, and Stanton says Wyoming has an opportunity to be a national leader in protecting big game.

Stanton calls the governor's order a balanced approach, designed to meet the needs of wildlife, which

draws tourist dollars to the state, alongside those of ranchers and oil and gas companies.

Stanton says lessons learned in sage grouse planning, which also involved diverse stakeholders, helped lay the groundwork for the process going forward, starting at the county commissioner level.

"Letting those commissioners appoint groups to manage these corridors, help make decisions," he states. "I think that local control is something that's very important to Wyoming, but very important to the success of maintaining these corridors. You have to have the local buy in."

**The Wyoming Game and Fish Department and Department of Transportation also announced plans to protect more of the state's big game last week. The new [Wildlife Crossing initiative](#) aims to keep the traveling public safe by reducing roadway collisions.**

Each year, some 6,000 deer, pronghorn, elk, moose, bighorn sheep and mountain goats are killed on Wyoming's highways and interstates.

[Eric Galatas, Public News Service - WY](#)

[Seal of the State Of Wyoming]

**STATE OF WYOMING  
EXECUTIVE DEPARTMENT  
EXECUTIVE ORDER**

Order 2020-?

**WYOMING MIGRATION CORRIDOR PROTECTION**

**WHEREAS**, Wyoming is home to the longest intact mule deer and pronghorn antelope migration corridors in the world, and

**WHEREAS**, migration corridors are essential to the maintenance of viable mule deer and antelope populations, and

**WHEREAS**, wildlife that utilize these corridors are highly valued by all people and contribute significantly to the economy and reputation of Wyoming, and

**WHEREAS**, land associated with migration corridors provide the state and nation with multiple-use and industrial opportunities that are integral to Wyoming's revenues, jobs, and way of life, and

**WHEREAS**, private landowners play a key role in maintaining migration corridors, and

**WHEREAS**, county governments play a significant role in land use planning and in conserving wildlife habitat and open spaces, and

**NOW THEREFORE**, to preclude any need for more regulatory action, or action by agencies beyond the purview of the State and without coordination with the State; pursuant to the authority vested in me by the Constitution and Laws of the State, and to the extent such actions are consistent with the statutory obligations and authority of each individual agency, including those found in the Wyoming Regulatory Takings Act, W.S. § 9-s-301 through 9-s-305, I, Mark Gordon, Governor of the State of Wyoming, do hereby issue this Executive Order providing as follows:

1. The Sublette Mule Deer, Baggs Mule Deer, and Platte Valley Mule Deer Migration Corridors are hereby designated (Appendix D).
2. The establishment of a process whereby other corridors could be designated in the future (Appendix B).
3. Each executive branch agency in Wyoming shall exercise its legal and regulatory authorities to protect and further the annual movement of mule deer and antelope between seasonal ranges in their respective migration corridors. State agencies shall

follow the procedures outlined in this Executive Order, while recognizing that adjustments to management may be necessary based upon local conditions, opportunities, and limitations (Appendix C).

4. Where surface disturbance inside of designated corridors is proposed within, near or adjacent to areas that have already been disturbed or are naturally unsuitable, state agencies should work to maintain habitat and minimize future disturbance by locating proposed disturbances within such disturbed or unsuitable areas (Appendix C).
5. Some of the most important habitat inside of designated migration corridors may fall on private land. To be clear, this Executive Order does not apply to actions occurring on private land. However, owners of affected private lands are encouraged to consult with WGFD to minimize impacts inside of a designated corridor (Appendix F).
6. Any surface-disturbing activities requiring a state-issued permit within designated corridors should be permitted in a manner that maintains the continued functionality of a designated migration corridor (Appendix C).
7. Any state-permitted activity within designated corridors during the migration period should be conditioned so as not to impede the functionality of the corridor by big game (Appendix C).
8. Valid existing rights shall be recognized and respected. Activities existing or permitted in designated migration corridors prior to February 1, 2020 will be conducted and conditioned as specified in the authorizing permits or instrument(s) for such activities (Appendix E).
9. State agencies shall issue permits or where appropriate issue comments to other agencies on recreational activities inside of designated migration corridors with the goal of maintaining migration corridor functionality, and reducing the displacement of animals using the designated corridor during migration periods. (Appendix C).
10. Where the impacts of a proposed activity are unknown or uncertain or where management decisions can be locally tailored, an adaptive management approach will be employed and consider the best-available science as well as the perspective of area working groups, as appointed by the Governor in consultation with commissioners of relevant counties. Any deviation from the management direction contained in this Executive Order shall be approved by the Office of the Governor (Appendix B).
11. County governments should develop a template for updating land use plans consistent with this Executive Order and make necessary updates to those plans.
12. The Wyoming Department of Transportation (WyDOT), in conjunction with the Wyoming Game and Fish Department as well as other state agencies such as the Wyoming Wildlife and Natural Resource Trust (WWNRT), shall plan and engineer state and federal highway and associated projects that intersect designated migration corridors to avoid, minimize and mitigate vehicle/wildlife collisions, facilitate big game movement, and support migration connectivity. WyDOT shall include opportunities to address wildlife/roadway infrastructure projects in its annual planning efforts.

13. This Executive Order is to be construed narrowly and limited to the habitat and activities specifically described herein.
14. This Executive Order, together with its attachments, constitutes Wyoming's strategy for managing migration corridors and their habitats. Appendices A through G are expressly adopted and incorporated by reference herein, and each shall have the full force and effect of this Executive Order. Amendment to any Appendix may be made without requirement that the full Executive Order be amended.

Given my hand and the Executive Seal of the State Of Wyoming this \_\_\_\_day of \_\_\_\_\_, 2020.

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Mark Gordon  
Governor

## Appendix A Definitions

Big Game Migration Corridor: Pathways big game use to travel between summer and winter seasonal ranges which are essential for the productivity of a population or subpopulation.

Identified Migration Corridor: The geographic area used by big game for seasonal movements between summer and winter ranges that has undergone research by or approved by the Wyoming Game and Fish Commission (WGFC) to delineate the habitat and the components of habitat. Identified migration corridors are not subject to the management and processes outlined in this Executive Order.

Designated Migration Corridor: An identified migration corridor that was nominated for designation by the Wyoming Game and Fish Commission (WGFC) and was subject to the process for designation outlined in this Executive Order. The Sublette Mule Deer, Baggs Mule Deer, and Platte Valley Mule Deer Corridors are designated by this Executive Order.

High Use Area: Segment or portion of a big game migration corridor used by 20% or greater of the sampled population.

Medium Use Area: Segment or portion of a big game migration corridor used by 10-20% of the sampled population.

Low Use Area: Segment or portion of a big game migration corridor used by less than 10% of the sampled population.

Stopover Areas: The area used the majority of time by the sampled subpopulation to forage and rest during spring and fall migration.

Bottleneck: Any portion of a big game migration corridor where animals are significantly physically or behaviorally restricted.

Biological Risk Assessment: Analyses of the potential biological risks, foreseeable biological threats, and conservation opportunities that exist in the migration corridor. An assessment is developed with public stakeholder input and updated as conditions change on the landscape.

Science Behind Identifying a Big Game Migration Corridor: Big game migration corridors are defined using 3 or more years of animal location and fine-scale movement data from a sampled population of animals that are equipped with GPS or satellite collar technology. These data are combined with scientifically sound analysis techniques. Long-term knowledge of local WGFD personnel, landowners and other stakeholders is used in addition to these data to validate the identification of big game migration corridors, stopover areas, and big game migration bottlenecks.

Migration period: The specific dates during which migrating big game are physically present within a portion of a designated migration corridor, which can vary year to year.

Avoidance: A determination based on the best available science to ensure that no negative impacts occur to a migration corridor.

Migration Corridor Functionality: Maintaining connectivity between summer and winter ranges to allow big game movements conducive to optimal foraging and rest during migration.

## **Appendix B Corridor Designation Process**

Wyoming is home to numerous migration corridors. The identification of corridors may benefit herd management and overall herd fitness. It is the formal act of designating, rather than identifying, a corridor that warrants compliance with the terms of this Executive Order and limitations of human use to conserve those corridors. Not every migration corridor requires designation to ensure the health of the animals and/or the herd that uses it.

The Wyoming Game and Fish Department (WGFD), as the agency with authority over the management of wildlife, shall lead research efforts on migration of big game. A summary of results of agency research will be available to the public so long as the information is not specific enough to negatively impact functionality of the corridor or the health of the herd. A minimum of 3 years of research on a herd's migration patterns, which includes the collaring of a representative sample of animals from the herd, is necessary for a corridor considered for designation.

The following process shall occur prior to any formal migration corridor designation:

1. The Wyoming Game and Fish Department (WGFD) identifies a migration corridor. During the initial identification, the following information shall be provided:
  - a. Big game species using the identified pathways between summer and winter range;
  - b. Big game pathways used to delineate the potential corridor and the underlying scientific information available that has informed the WGFD identification;
  - c. The location of identified stopover areas, the acreage and land ownership;
  - d. The location of identified bottlenecks, the acreage, and land ownership;
  - e. The location of identified high-use, medium-use, and low-use areas within the corridor, the acreage, and land ownership; and
  - f. Existing infrastructure within the potential corridor.
2. WGFD conducts an initial evaluation to determine if the identified corridor may warrant designation. If proceeding toward a possible designation, the WGFD develops a Biological Risk Assessment. Any assessment will be developed with public stakeholder input and updated as conditions change on the landscape.
3. WGFD presents the identified corridor and Biological Risk Assessment to WGFC for consideration.
4. WGFC provides an opportunity for public comment regarding the Biological Risk Assessment and develops a recommendation to the Governor for consideration of a designation.
5. The Governor determines if designations should be considered. If the determination is made to proceed the Governor may appoint an Area Working Group in consultation with the appropriate county commissioners and tribes, based on the location of the corridor. Membership of the area working groups will include county commissioners, and if affected, tribes, and representatives of affected interests and industries.

- a. Area Working Groups are given a set period of time to:
  - i. Review WGFD's Biological Risk Assessment for the identified corridor
  - ii. Analyze/review corridor components (use, stopover, bottleneck, etc) identified by WGFD to determine what leases, infrastructure, surface and subsurface asset ownership exists within the corridor. Then determine the potential impacts of a designation on socio-economic factors for the region
  - iii. Identify opportunities for conservation that could enhance the corridor
  - iv. Provide an analysis of the State's priority highway/wildlife projects and recommendations related to advancing those in the identified corridor
  - v. If designation is recommended, develop recommendations related to the management of the corridor in the future as it relates to development and conservation efforts in corridors. These recommendations should take into consideration any county commission plans established to manage development inside the corridor
  - vi. Conduct public meetings to refine a recommendation to the Governor

6. Final recommendations are delivered to the Governor who either formally designates the identified corridor, returns the recommendation for further refinement, or formally rejects the proposal for designation.

## **Appendix C**

### **New Infrastructure, Recreational Use and Development Conditions**

Wherever possible, development, infrastructure and use should occur outside of designated corridors. Inside corridors, state regulatory agencies should support the continued function of designated migration corridors by avoiding and minimizing impacts from development or use allowed within the corridor.

All applicants for state permits inside designated corridors will be required to engage with appropriate permitting state agencies. These applicants for state-permitted projects and state-permitted uses within a designated migration corridor are required to consult with the Wyoming Game and Fish Department (WGFD) as part of the permitting process. If the WGFD determines the proposed project or use will have adverse effects on the functionality of the migration corridor the agency shall provide the permit applicant with potential development alternatives other than those contained in the project proposal. Permit applicants shall have access to all information considered in developing recommendations. Upon completion of that consultation, if the applicant does not agree with the recommendations of the WGFD it must prepare a letter outlining concerns with the WGFD recommendations. The WGFD will then deliver the recommendation and, if applicable, the accompanying letter to the Governor's Office. The Governor shall review these materials and recommend a resolution of the applicant's concerns to the WGFD and the applicant. After conferring with the applicant and making any appropriate revisions, the WGFD shall submit the final recommendation to the appropriate permitting agency.

The following components of a corridor have unique management considerations for all development and uses:

Bottlenecks: No new surface development shall be permitted within bottlenecks and state agencies shall restrict uses to those that do not impair the functionality of a corridor.

High Use: Surface disturbance and human presence should be limited to levels that do not cause avoidance of migrating animals throughout the high use portion of the corridor during migration timeframes.

Stopovers within High Use: In areas of significant ecological importance (feeding, resting, cover, water, topographically limited, etc.) within stopovers in high-use portions of the corridor, surface disturbance should be avoided, and additionally human presence during migration periods should be avoided. Significant ecological areas should be identified prior to any lease nomination or permit application.

Low and Medium Use and Stopovers Within: Where possible avoid disturbance and seasonal use. However, there is an acknowledgment that development and use can occur, so, minimization of surface disturbance and human presence should be considered an alternative. Minimization may include project alterations, recreational permit restrictions, and other efforts that can be shown to limit impacts to these areas. Surface disturbance, development and

human presence during migration periods should be limited. Within low and medium use areas special consideration should be given to stopover areas.

Any potential lease or activity should be properly noticed to state that the lease is subject to this Executive Order.

## Appendix D Maps

Maps and specific shape files of the three designated migration corridors as well as the two identified corridors are available at <https://wgfd.wyo.gov/wildlife-in-wyoming/migration>

## **Appendix E Valid Existing Rights**

Within the designated corridors existing rights shall be recognized and respected. Activities existing or permitted in designated migration corridors prior to February 1, 2020, and activities existing or permitted prior to the date of Executive Order 2020-1 will not be required to be managed under this Executive Order. Examples of existing activities include oil and gas, mining, wind energy development, transmission lines, agriculture, processing facilities, housing, state and federal highways, and other uses that were in place prior to the designation of the migration corridors and specific components of the corridors. Federal and state permitted activities, including Industrial Siting Council permitted projects, within a defined project boundary (such as a recognized federal oil and gas unit, drilling and spacing unit, mine permit, subdivision plat, state or federal highway right-of-way, utility or other right-of-way, grazing allotment etc.) shall be allowed to continue within the existing boundary even if the use exceeds the recommendations developed through this Executive Order.

For the purposes of this section "Pre-existing Oil and Gas Units" means oil and gas units established prior to February 1, 2020. In administering oil and gas plans of development in designated migration corridors, logical and systematic planning will occur in accordance with the terms of oil and gas unit agreements for Pre-existing Oil and Gas Units and the goals of this Executive Order. Each situation should be addressed with flexibility and an understanding of the local landscape, habitats and other factors. Pre-existing Oil and Gas Units within designated migration corridors are not subject to this Executive Order, except inside bottlenecks.

It is understood that the level of existing and future development in Pre-existing Oil and Gas Units may exceed the guidelines of this Executive Order. Proponents and agencies are still expected to minimize surface disturbance whenever possible and follow all other existing, applicable lease stipulations. As projects are completed, total disturbance areas will be recorded by proponents and agencies and the disturbance level considered in evaluating other development proposals for all users of migration corridors.

Mining: Leasable Coal Mining Operations; Coal mining activities authorized prior to February 1, 2020 and included within the approved permit boundary will be allowed to continue under the regulatory and permit-specific terms and conditions authorized under the Wyoming Environmental Quality Act (WEQA) and the Surface Mining Control and Reclamation Act of 1977 (SMCRA) as administered by the Wyoming Department of Environmental Quality (WDEQ). Leasable, Locatable, and Saleable Non-Coal Mining Operations Non-coal solid mineral mining activities within a permit boundary approved prior to February 1, 2020 are not subject to this Executive Order.

Existing, permitted/authorized corridors and rights-of-way (ROWS) for roads, power lines, pipelines, and other utilities (e.g.- water, sewer) are considered valid existing rights.

Activities within ROWs or corridors for transmission, distribution power lines, substations, pipelines, and other utilities established and authorized prior to February 1, 2020 are not subject to this Executive Order. Activities within ROWs for state and federal highways established and authorized by the Wyoming Department of Transportation and the Federal Highway Administration prior to February 1, 2020 are not subject to this Executive Order.

## **Appendix F Private Landownership**

Functioning ranches and agricultural lands provide crucial ecological and habitat services to all wildlife, including ungulates and antelope. Economically viable and well-managed private lands are a priority because, among other values, they provide open space, forage, water, and security for big game herds and migration habitats.

To aid in the continued existence of open spaces, the Wyoming Department of Agriculture and other State agencies shall use existing research and knowledge to facilitate the continued existence of functioning ranches and agricultural lands that provide crucial ecological and habitat services to wildlife and ways to recognize the value of ecosystem services.

State agencies should work with private landowners to build upon efforts to conserve migration corridor habitats.

### Recognition

The State of Wyoming recognizes the contributions of private lands to the continuance of big game migration corridors. State agencies shall, consistent with their statutory authority, notify private landowners of identified big game migration corridors that intersect with that private landowner's property. Private landowners will have the opportunity to be actively engaged in management through their involvement in area working groups.

### Coordination

To aid in the conservation and enhancement of migration corridors the State of Wyoming will support voluntary enrollment in landowner-focused programs. These may include federal, state and local conservation funds to benefit, including conservation easements, improvements and investments on projects and initiatives inside of designated corridors and as a secondary effort in identified corridors.

### Range improvement projects

In identified and designated big game migration corridors, the Wyoming Game and Fish Department shall provide information to landowners who voluntarily seek assistance in siting new range improvement projects, such as water sources and fences, and in modifying existing range improvement projects.

### Alternative funding programs for private landowners

The Wyoming Game and Fish Department and the Wyoming Wildlife and Natural Resource Trust, as well as other state agencies, shall explore opportunities to support private landowners that sustain and enhance big game migration corridor habitats. This includes evaluating alternative funding opportunities, such as the potential to develop a habitat leasing/conservation leasing program.

### Management flexibility on federal grazing allotments

State agencies that review and assist in developing Allotment Management Plans and National Environmental Policy Act (NEPA) documents related to grazing management and associated decisions shall work with land managers and federal land management agencies to identify opportunities and

implement voluntary actions to improve both habitat associated with big game migrations and livestock operations through management flexibility and adaptive management.

## Appendix G Research

Furthering research on big game migration corridors is imperative as is maintaining the research and upkeep on information related to designated corridors to ensure management is influenced by the best available science.

The Wyoming Game and Fish Department and University of Wyoming should continue to provide the public with research on migration and seasonal habitats.

Specific topics that are deserving of attention potentially include:

- Stopover areas and their use by big game. Including response of big game to the existing development inside of stopover areas, big game's cause for selection of stopover areas, why big game select specific stopover areas, impact of reclamation, and change of stopover size and habitat over time.
- Technologies for decreasing vehicle-caused mortality.
- The impact of human recreation inside of migration and other seasonal habitat.
- Competition between deer and pronghorn with the following other species: elk, predators, invasive and noxious weeds, and feral horses. (As data emerges from currently ongoing studies, the Game and Fish Department and Commission should develop recommendations to manage, mitigate and, where possible, abate interspecies competition and other issues that affect corridor function and herd health and viability.)
- The possibilities for mitigation as a tool to maintain the functionality of a corridor.

**CYMPO  
REQUEST FOR ACTION  
FEBRUARY 24, 2020**

**SUBJECT: REVIEW, DISCUSSION AND POSSIBLE ACTION TO MAKE  
RECOMMENDATIONS IN RESPONSE TO 2045 REGIONAL  
TRANSPORTATION PLAN**

**SUBMITTED BY:** Christopher Bridges, CYMPO Administrator

**PREPARED BY:** Christopher Bridges, CYMPO Administrator

**AGENDA TYPE: REVIEW/DISCUSSION/POSSIBLE ACTION**

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**ATTACHMENTS:**

- *DRAFT* 2045 Performance Based Prioritization List of Projects
- *DRAFT* Environmental Project Scoping Considerations

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**SUMMARY/BACKGROUND:**

As an advisory committee, the EMAC has the ability to make recommendations to the CYMPO TAC and Executive Board regarding future project considerations. With the 2045 Regional Transportation Plan (RTP) coming to completion, CYMPO is seeking recommendations from the EMAC to be considered by the TAC and Executive Board.

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**ACTION OPTION:**

To be determined by discussion.

**OR**

To be determined by discussion.

## 7.1 Additional Project Scoping Considerations

### 7.1.1 Environmental

#### Quality of life

One of Arizona's biggest economic generators is tourism, due in part to its vast natural landscapes and wide variety of outdoor recreation opportunities such as hiking, biking, rock climbing, camping and golfing. The CYMPO region is a popular destination for many of these activities for visitors and residents alike. Future development plans and transportation projects should consider natural resource management as a means of maintaining quality of life for both the region's residents and visitors. Considerations should include: 1) strategies to limit nature landscape impacts, 2) implement and promote various multimodal transportation options to maintain low levels of air, noise and light pollution, 3) account for rainwater collection and storage opportunities to sustain and recharge subsurface aquifers and 4) preserve/enhance wildlife habitat corridors in and around human developments.

#### Wildlife & Ecology

The CYMPO region is home to several animal and plant species that rely on the rural openness of the area for their habitat. Due to the disparities in size and varying habitats of the local flora and fauna, there is no one-size-fits-all mitigation measure that could be applied uniformly. Coordination with AZGFD, EMAC and other ecological stakeholder groups should begin early and continue throughout the scoping phase of any future development projects or transportation improvements to ensure proper mitigation measures are fully considered. CYMPO and AZGFD should collaborate with EMAC to further seek consideration of measures to;

1. maintain habitat permeability by adapting mitigation measures (overpasses, underpasses, funnel fencing) for recognized wildlife corridors,
2. recognize the role that ecological systems hold in providing green infrastructure for stormwater, management,
3. preservation and maintenance of native grass and tree species to prevent erosion,
4. mitigation of non-native invasive flora growth and
5. reduction of fire hazard.

Potential wildlife infrastructure should include consideration of the following:

1. Wildlife Crossing/Warning Signs

Wildlife crossing signs are the most basic type of infrastructure protecting wildlife, used on roadways at locations of known wildlife migratory routes or feeding areas to provide motorists with increased warning to the potential presence of wildlife on the roadway. This method is used to heighten motorist awareness to potential interactions. Wildlife crossing signs are more commonly used for larger wildlife, such as deer and elk, due to the higher potential collision severity, but can also be used to warn for the presence of other wildlife common to the specific location.

Potential Benefit – strategic implementation of wildlife crossing/warning signs can better alert motorists of potential wildlife encounters.

Approximate Cost - \$6,500 per location (1 sign for each direction)

## 2. Wildlife Funnel-Fencing

Wildlife fencing is used as a semi-permeable barrier that runs parallel along a roadway's right-of-way. This infrastructure is used to direct wildlife away from roadways and funnel towards constructed crossing locations. Depending on design, fencing is moderately effective in keeping larger species off the road. Some of these larger species can damage the fencing over time, reducing its effectiveness and requiring periodic maintenance attention.

Successful implementation of this infrastructure can reduce vehicle-wildlife collisions and when used in conjunction with structured crossing can facilitate better habitat connectivity. Fence design considerations account for sufficient opening allowance for effective crossing, proper construction material selection and numerous other factors in order to effectively channel wildlife, prevent wildlife injury and allowing adequate escape options for wildlife within the roadway right-of-way.

Potential Benefit – strategic implementation of fencing can reduce wildlife collision by up to 90% depending on the before-after conditions

Approximate Cost - \$500,000 – \$750,000 per mile

## 3. Wildlife Detection System

Wildlife detection systems use cameras and/or sensors to detect the presence of wildlife within roadway corridor right-of-way. These sensors are typically connected to dynamically activate warning signs, including a flashing beacon to indicate the presence of wildlife ahead. Alternatively, the system can activate higher intensity roadway lighting to increase visibility during low lighting conditions for motorists when wildlife is present. This system requires the precise location of both the sensors as well as the signs to effectively warn motorists. These warning systems therefore require specific placement at high crossing locations and can be supplemented with additional infrastructure, such as fencing and wildlife crosswalk electrified mats. These electrified mats are installed perpendicular to the road to ensure wildlife complete the entire crossing and do not become trapped within the roadway right-of-way.

Potential Benefit – provides location-specific enhanced warning to motorists of active wildlife crossings in the roadway.

Approximate Cost –

\$350,000 per crossing location (Upgrading existing crossing)

\$1,000,000 – 1,500,000 (Implement new crossing, new fencing and new detection system)

## 4. Grade-Separated Wildlife Crossings

Grade-separated wildlife crossings, as shown in **Figure 62**, can be implemented as either an underpass or an overpass, allowing wildlife to safely cross below or above the roadway corridor respectively. Grade-separated crossings can be implemented to benefit both large and small wildlife species, with separate height and design specifications. A critical component to the success of a grade-separated crossing is the proper placement at natural migratory crossing locations and the use of wildlife fencing in order to effectively channel the targeted wildlife to the crossing infrastructure. Additional cost savings can be realized for underpass crossings that are constructed or retrofitted at locations with terrain that warrant bridges/culverts.

Potential Benefit – strategic implementation of grade-separated wildlife crossings can reduce wildlife collision by upwards of 80% depending on the before-after conditions

Approximate Cost - \$600,000 - \$10,000,000

**Figure 62 – Grade-Separate Wildlife Crossing Example**



### **Water**

CYMPO and its member agencies should consider water scarcity when pursuing implementation of new transportation facilities. Central Yavapai County's discharge to recharge ratio is currently below sustainable levels for its current urbanized areas. Depletion of underground water supplies could lead to wells and streams drying up, the water tables lowering and the collapse of riparian areas. Future projects should consider design options to prevent water loss and improve water recharge levels. Potential design elements for consideration include harvesting rainwater and gray water in tanks and dry wells to replenish underground water supplies and implementing sustainable landscaping around transportation corridors to reduce water consumption and erosion.

## 6.2 2045 Performance Based Prioritization

### Modernization

**Table 38 – 2045 Modernization – Higher Priority**

ID	Name	Description	Planning Construction Cost Estimate*	Score
AG	SR 69 / Glassford Hill Rd	Adjust SR 69 / Glassford Hill Rd Signal Timing	\$0.012	450.2
AJ	SR 69 Adaptive Signals	Implement Adaptive Signal System	\$0.80	501.2
BH	Willow Creek Rd Adaptive Signals	Implement Adaptive Signal System	\$0.72	151.7

\*Project cost estimates are expressed in millions

**Table 39 – 2045 Modernization – Medium Priority**

ID	Name	Description	Planning Construction Cost Estimate*	Score
AR	SR 89 Shoulder Widening	Widen shoulder from Phippen Tr – Willow Lake Rd	\$1.13	64.5
H	Glassford Hill Rd Adaptive Signals	Implement Adaptive Signal System	\$0.45	39.1
AS	SR 89 TI EB Dual Left-Turn	Construct second EB off-ramp left-turn lane	\$0.13	30.3
AN	SR 89 / Del Rio Centerline Rumble Strips & Safety Improvements	Install centerline rumble strip from MP 333.4 – 335.9	\$0.99	26.8
BG	Wildlife Warning Signing	Install Wildlife Warning Signage from MP 334 – MP 348 (4 signs)	\$0.01	15.2
AH	SR 69 / SR 169 Intersection Improvements	Convert traffic signal to two-lane roundabout	\$4.37	9.4

\*Project cost estimates are expressed in millions

**Table 40 – 2045 Modernization – Lower Priority**

ID	Name	Description	Planning Construction Cost Estimate*	Score
AL	SR 89 / Bramble Dr Roundabout	Construct one-lane roundabout	\$5.,62	4.2
AF	SR 69 / Fain Rd	Install curve warning sign, speed reduction sign & beacons, curve chevrons and roadway lighting	\$1.36	3.2
AP	SR 89 Raised Median	Install a raised median from Butterfield Rd – Road 3N & retime signal at Road 3N	\$0.54	3.0
K	Glassford Hill Rd WB Parallel Entrance Ramp	Extend WB on-ramp with parallel entrance	\$0.26	3.0

**Table 40 – 2045 Modernization – Lower Priority (cont'd)**

ID	Name	Description	Planning Construction Cost Estimate*	Score
AO	SR 89 / SR 89A EB Ramp Improvements	Construct EB dual-lane entrance ramp	\$2.42	1.6
AM	SR 89 / Chino Valley Safety Improvements	Install a raised median between MP 327 – MP 329. Construct a traffic signal and install intersection lighting at Road 1 N. Convert traffic signal to two-lane roundabout at Road 2 N.	\$9.61	1.0
AQ	SR 89 Raised Median	Install a raised median from Perkinsville Rd – Road 3N with two-lane roundabout at Road 3N	\$2.22	0.9
AI	SR 69 / SR 169 Intersection Improvements	Reconfigure intersection to install second SB left turn lane	\$0.21	0.9
D	Big Chino Rd Roundabout	Construct one-lane roundabout	\$5.01	0.3
J	Glassford Hill Rd TI	Convert diamond TI to roundabouts	\$7.35	0.2
O	Great Western At-Grade Intersection Closure	Close at-grade intersection	N/A	0.0
N	Granite Dells Pwky Roundabout	Modify interchange roundabouts configuration	\$0.32	0.0
Y	Road 6N Alignment	Align Road 6N approaches at SR 89	\$0.53	0.0
BF	Viewpoint Dr TI WB Entrance Ramp	Expand WB entrance ramp to 2-lanes	\$0.02	0.0
AD	SR 69 (North of Poland Junction) Shoulder Widening	Widen shoulder from MP 275 – MP 277.5	\$3.17	0.0
AE	SR 69 / Central Ave Safety Improvements	Implement intersection safety improvements	\$0.23	0.0

\*Project cost estimates are expressed in millions

## Expansion

**Table 41 – 2045 Expansion – Higher Priority**

ID	Name	Description	Planning Construction Cost Estimate*	Score
AY	SR 89 Willow Lake Rd - Phippen Tr Widening	Widen SR 89 from 2 lanes to 4 lanes	\$8.60	48.1
AK	SR 69 Widening	Incrementally widen SR 69 from 4 lanes to 6 lanes between SR 169 – SR 89	\$33.25	33.5
AX	SR 89 Widening (Phase II)	Widen SR 89 from 4 lanes to 6 lanes between SR 89A – Deep Well Ranch Rd	\$6.19	27.4

**Table 42 – 2045 Expansion – Medium Priority**

ID	Name	Description	Planning Construction Cost Estimate*	Score
BE	Sundog Connector	Construct new 4-lane facility	\$27.72	7.5
AW	SR 89 Widening (Phase I)	Widen SR 89 from 4 lanes to 6 lanes between Deep Well Ranch Rd – Center St	\$30.80	7.4
AU	SR 89 Widening	Widen SR 89 from 2 lanes to 4 lanes w/medians between Road 3N – Road 4N	\$6.49	7.1
L	Glassford Hill Rd Widening	Widen Glassford Hill Rd from 4 lanes to 6 lanes	\$6.35	6.1
AT	SR 89 Widening	Widen SR 89 from 2 lanes to 4 lanes w/medians between Old Highway 89 to Frontier Rd. Construct one-lane roundabouts at Old Highway 89 and Frontier Rd	\$14.54	5.5
AV	SR 89 Widening	Widen SR 89 from 2 lanes to 4 lanes w/medians between Road 4N – Road 5N. Construct Roundabout at Road 5N	\$9.24	5.3

\*Project cost estimates are expressed in millions

**Table 43 – 2045 Expansion – Lower Priority**

ID	Name	Description	Planning Construction Cost Estimate*	Score
E	Chino Valley Extension	Construct new 4-lane access-controlled facility	\$103.51	1.9
BC	SR 89A Widening (Phase III)	Widen SR 89A from 2 lanes to 4 lanes between Fain Rd – MP 329	\$22.29	1.5
R	Great Western Extension (Phase III)	Construct new 4-lane facility roadway between SR 89A – SR 89	\$91.17	1.2
T	Lakeshore Dr Widening	Widen Lakeshore Dr from 2 lanes to 4 lanes between Navajo Dr – Fain Rd	\$8.96	0.9
G	Fain Rd – SR 169 Connector	Construct new 4-lane access-controlled facility	\$77.98	0.8
BD	Jasper Parkway	Construct new 4-lane facility between SR 69 – SR 89A	\$30.96	0.7
P	Great Western Extension (Phase I)	Construct new grade-separated TI	\$25.31	0.6
AZ	SR 89A / Robert Road TI	Construct new grade-separated TI	\$34.78	0.5
AC	SR 169 Widening	Widen SR 169 from 2 lanes to 4 lanes	\$19.87	0.5
F	Deep Well Ranch Rd	Construct new 4-lanes facility	\$15.32	0.4
E	Country Club Bypass	Construct new 2-lane facility	\$27.49	0.4
BB	SR 89A Widening (Phase II)	Widen SR 89A from 4 lanes to 6 lanes between Glassford Hill Rd – Robert Rd	\$12.71	0.3
BA	SR 89A Widening (Phase I)	Widen SR 89A from 4 lanes to 6 lanes between SR 89 – Glassford Hill Rd	\$21.53	0.1
I	Glassford Hill Rd Extension	Construct new 4-lane facility between SR 89A – Great Western Extension	\$21.80	0.0
S	I-17 Widening	Widen I-17 from 4 lanes to 6 lanes between SR 69 – SR 169	\$88.84	0.0
AA	Side Road Connector	Construct new 4-lane facility	\$23.99	0.0

**Table 43 – 2045 Expansion – Lower Priority (cont'd)**

<b>ID</b>	<b>Name</b>	<b>Description</b>	<b>Planning Construction Cost Estimate*</b>	<b>Score</b>
V	Northern Connector	Construct new 2-lane facility	\$19.28	0.0
B	Airport Loop Road	Construct new 2-lane facility	\$31.69	0.0
A	Airport Boulevard	Construct new 2-lane facility	\$11.65	0.0
M	Granite Dells Pkwy	Construct new 4-lane facility	\$26.66	0.0
W	Old Black Canyon Hwy Widening	Widen Old Black Canyon Hwy from 2 lanes to 4 lanes between Stoneridge Dr – County Club Bypass	\$9.07	0.0
AB	SR 169 – I-17 Connector	Construct new 4-lane access-controlled facility	\$102.90	0.0
U	Navajo Dr Extension	Construct new 4-lane facility south to Old Black Canyon Hwy	\$5.64	0.0
X	Peavine Trail	Construct new 2-lane facility	\$0.14	0.0
Z	Santa Fe Loop	Construct new 4-lane facility	\$23.18	0.0
Q	Great Western Extension (Phase II)	Construct new 2-lane facility north of SR 89A	N/A	0.0

*\*Project cost estimates are expressed in millions*