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Governor

WYOMING Department of Transportation

"Provide a safe and effective transportation system"

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Carbon Reduction Strategy

The "Bipartisan Infrastructure Law" (BIL) (enacted as the Infrastructure Investment and Jobs Act) was signed on November 15, 2021 by President Joe Biden. A portion of BIL established the new Carbon Reduction Program (CRP) with the intent to directly reduce transportation emissions nationwide or by funding projects that are designed to reduce transportation emissions. These transportation emissions are defined as carbon dioxide emissions from on-road highway sources within a state. The CRP tasks the Wyoming Department of Transportation (WYDOT) with developing carbon reduction strategies and submitting a strategy by November 15, 2023. Every four years, the CRP strategy must be updated as noted in the CRP Implementation Guidance.

This strategy discusses WYDOT's proposed carbon reduction strategies that aim to reduce carbon emissions utilizing CRP funds. WYDOT is committed to reducing carbon emissions by identifying projects eligible for CRP funding, continuing research in highway design practices (i.e. pavement design), and supporting state and local (i.e. Metropolitan Planning Organizations-MPOs) carbon reduction planning, goals and policies.

Carbon Reduction Program Funding

Nationwide funding for the Carbon Reduction Program, from 2022 through 2026, is estimated at \$6.4 billion dollars, with the potential for Wyoming to receive approximately \$42 million dollars during the same time frame. This equates to approximately \$8.5 million/year with \$8,125,990 apportioned for FY 2022 and \$8,288,509 apportioned for FY 2023. According to the CRP Implementation Guidance, the federal share for CRP funded projects is 80%. However, WYDOT is eligible to use a federal match closer to 90% based on 23 USC 120(b), thereby, only requiring WYDOT to match approximately 10%.

CRP stipulations require 65% of the funds to be directed to the following areas in proportion to their relative share of the State's population:

- Urbanized areas with population over 200,000
- Urbanized areas with population of 50,000 but no more than 200,000
- Urban areas of 5,000 but no more than 49,999 in population
- Areas with population of less than 5,000

Wyoming does not have urbanized areas with populations in excess of 200,000 and only two urbanized areas with population of 50,000 or more; Casper and Cheyenne. There are a total of 14 urban areas in Wyoming that meet the 5,000-49,999 population category while there are 84 areas that have a population of less than 5,000.

The remaining 35% of the allocated CRP funds can be obligated to any area within the State. At the State's discretion, CRP allows up to 100% of the remaining 35% allocated funds to be transferred/flexed to other federal-aid highway programs, including but not limited to the National Highway Performance Program, Surface Transportation Block Grant Program (STBG), Highway Safety Improvement Program (HSIP), Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) Formula Program, etc.

Strategies

The United States Department of Transportation (USDOT) encourages the consideration of various program strategies when using federal highway formula funding. Safety programs such as The National Roadway Safety Strategy (NRSS) and the Complete Streets policy which prioritize safety for all users of the transportation system are just two examples of programs. There are other priorities that the USDOT places emphasis on regarding formula funding such as, The Americans with Disabilities Act (ADA), equity for all transportation users, climate change and sustainability as well as the ability for CRP projects to create jobs. WYDOT has taken these USDOT priorities into account while developing proposed carbon reduction strategies and will consider them when developing future projects.

WYDOT reviewed carbon reduction strategies that pair with WYDOT's purpose, mission, vision and values ([Strategic Performance](#)). Strategies were also reviewed to ensure that they enhance or add value to WYDOT's [Strategic Plan](#) and [Long Range Transportation Plan](#).

WYDOT's Executive Staff and Planning program consulted to determine a final list of strategies. WYDOT also submitted a letter on June 19, 2023 to the Casper and Cheyenne MPOs regarding WYDOT's proposed strategies and requested feedback and/or comment. WYDOT received comments from the Cheyenne MPO on July 5, 2023 and the Casper MPO on August 22, 2023. All of the MPOs valuable comments were reviewed and considered by the Planning program. WYDOT will utilize the following strategies and are listed in order of priority:

1. **WYDOT's Transportation Management Center (TMC)**- construct a new building to house the TMC and utilize funds to maintain the operability of the TMC facility.
2. **Truck Parking**- construct additional parking areas to serve the commercial trucking industry
3. **Sustainable Pavements**- incorporate sustainable pavements into future WYDOT projects
4. **Multimodal pathways**- design and construct additional multimodal pathways into future WYDOT projects
5. **Connected Vehicles**- continue the on-going research regarding dedicated short-range communications for commercial and passenger travelers.

WYDOT's Transportation Management Center (TMC):

The TMC houses both the Wyoming Highway Patrol Dispatch Center and the Intelligent Transportation System's (ITS) operational functions. The facility is staffed and functioning 24 hours per day, 365 days per year. The TMC qualifies for CRP funding as noted in the CRP Implementation Guidance; under "Eligible Activities", specifically "A" and "D":

- A. *a project described in 23 U.S. C. 149(b)(4) to establish or operate a traffic monitoring management and control facility or program,.....*
- D. *a project described in section 23 U.S.C. 503(c)(4)(E) for advanced transportation and congestion management technologies.*

The Federal Highway Administration (FHWA) approved WYDOT to allocate approximately \$6.6 million of FY 2022 CRP funds to a statewide biannual Intelligent Transportation System project (ITS2324), and allocate another \$6.6 million (approximately) for FY 2023 to fund the remainder of the biannual project for the operations of the TMC center. The remainder of the funds from each fiscal year (~\$1.6M) was set aside to save for the design and construction of a new TMC facility. For FY 2024 through FY 2026, WYDOT intends to continue this practice and annually allocate 100% of CRP funds for TMC operational costs with any remaining funds to be set aside for the construction of a new TMC facility. Funding TMC operational costs as well as setting aside funding for a new TMC facility meets the allocating stipulation that 65% of CRP funds are to be distributed based on populations since the TMC manages the entire state. This management can include overhead Dynamic Message Signs, Variable Speed Limit Signs, WYDOT's website or coordinating and dispatching WYDOT's maintenance personnel for winter weather and emergency response.

The following strategies may utilize the remaining CRP funds and/or other monies associated with WYDOT's STIP or other grant programs. Regardless of funding source, each listed strategy has the potential to reduce carbon emissions in the state of Wyoming.

Truck Parking:

In 2012, Jason's Law was passed that "established a national priority on addressing the shortage of long-term parking for commercial motor vehicles on the National Highway System (NHS). Truck parking qualifies for CRP funding as noted in the CRP Implementation Guidance, page 8. Currently, WYDOT is scheduled to construct a truck parking area along I-80, near the city of Evanston, which will accommodate approximately 365 trucks. WYDOT partnered with Uinta County, the city of Evanston and other local and regional stakeholders on the planned truck parking. This was crucial as the city of Evanston becomes inundated with trucks during closure periods of I-80. The stakeholders in the area were important proponents of the proposed truck parking project.

Additionally, WYDOT recently completed construction of two truck parking areas on Interstate 80 between the cities of Laramie and Rawlins. The truck parking was funded with the Better Utilizing Investments to Leverage Development grant (BUILD) program (now known as the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program). Federal Highway Administrator Shailen Bhatt attended the ribbon cutting ceremony to unveil the new truck parking areas which will accommodate up to 200 trucks.

WYDOT is working on a RAISE grant application to complete a truck parking action plan to identify and analyze potential locations where truck parking infrastructure could be strategically deployed to address high-need areas and to meet the needs of truck drivers and overburdened communities during winter closures.

Sustainable Pavements:

Pavements that reduce embodied carbon, use natural resources more efficiently and/or reduce environmental impacts qualify for CRP funding per the CRP Implementation Guidance, page 14. WYDOT utilizes sustainable strategies in its pavement design, including but not limited to,

recycled asphalt pavement, warm mix asphalt, type IL cement, full depth reclamation, cold in-place recycling and others. WYDOT's pavement design methodology also supports counties in Wyoming as they may receive mill tailings from WYDOT projects to help maintain their predominately gravel roads, thereby, reducing costs and emissions in the counties.

Multimodal Pathways:

Multimodal pathways are typically constructed for non-automotive (nonmotorized) traffic such as pedestrians, bicycles, etc. They typically are wide enough to accommodate several user types and are required to meet federal ADA guidelines. Multimodal pathways qualify for CRP funding as noted in the CRP Implementation Guidance; under "Eligible Activities", specifically "C":

C. a transportation alternatives project as described in 23 U.S.C. 101(a)(29) as in effect prior to the enactment of the FAST act, including the construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation.

Several recent WYDOT projects have included multi-modal pathways in the Jackson area of Wyoming. These pathways allow bikers and pedestrians to travel through the area uninhibited by problematic, summer tourist traffic. By reducing vehicles on the road, congestion is reduced as well as emissions.

As previously noted, Wyoming's MPOs commented on WYDOT's proposed carbon reduction strategies and showed support for all of the strategies, especially, multi-modal pathways. The MPOs typically utilize Transportation Alternative Program (TAP) grants to design and construct multi-modal pathways. Both the Casper MPO and the Cheyenne MPO have recently completed construction of multi-modal pathways. The Casper MPO completed phase 1 of the Evansville East Sidewalk and Trail construction linking neighborhoods to parks, businesses and other trails. The Cheyenne MPO partnered with WYDOT to build a pedestrian crossing under State Highway 212, allowing the new southern development access to the Cheyenne Greenway and Laramie County Community College to the north.

Multi-modal pathways make up a large portion of the MPOs' urban planning as noted in their planning documents (Unified Planning Work Program (UPWP), Long Range Transportation Plan (LRTP), etc.). The Casper MPO is reviewing the feasibility of constructing several pedestrian crossings for the Mills Platte River Trail. While the Cheyenne MPO has several [Greenway](#) pathways planned including the West Crow Creek section and the Henderson Underpass section

Other Wyoming cities are interested in multi-modal paths to enhance their cities and reduce carbon emissions. Examples of these projects are the South Bypass Pathway in Buffalo, the second phase of a walking path in LaGrange, and pathway projects in Lusk, Lander, and Powell. All of these projects have the potential to reduce carbon emissions.

Connected Vehicles:

WYDOT's Connected Vehicle pilot program uses dedicated short-range communications (DSRC) based applications to provide advisories, roadside alerts, and dynamic travel guidance for commercial and passenger travelers. The current pilot program focuses on the I-80 corridor and qualifies for CRP funding as noted in the CRP Implementation Guidance; under "Eligible Activities", specifically "E":

E. a project for the deployment of infrastructure-based intelligent transportation systems capital improvements and the installation of vehicle-to-infrastructure communications equipment, including retrofitting dedicated short-range communications (DSRC) technology deployed as part of an existing pilot program to cellular vehicle-to-everything (C-V2X) technology.

Since this is a pilot program, it is still in the development phase. However, WYDOT is excited about the potential for this program to enhance safety with the added benefit of reducing carbon emissions.

History

WYDOT has utilized and continues to consider the following methods to reduce carbon emissions.

- Wetland mitigations
- Living snow fences
- Infrastructure improvements to reduce congestion, increase traffic flow
- Bike/pedestrian infrastructure
- LED Lighting / solar lighting
- Transit projects
- New interchange designs / Single Point Urban Interchange (SPUI) / Roundabouts
- Cement replacement (Fly Ash)
- Preventative maintenance
- Virtual meetings
- Virtual bid openings
- Virtual field reviews
- Drone use in various applications
- Construction e-ticketing
- Telework / flexible hours (work hours)
- New preventative maintenance procedures
- Research use of right of way
- Improve State fleet vehicle maintenance practices

Strategy Evaluation

WYDOT will evaluate the program by reviewing projects to ensure CRP funds are utilized on approved activities. WYDOT will revisit the strategies in four years and update as necessary.

Approved By: _____



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