

Mitigation Options for Wind Energy Projects

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Burns & McDonnell

October 2, 2023



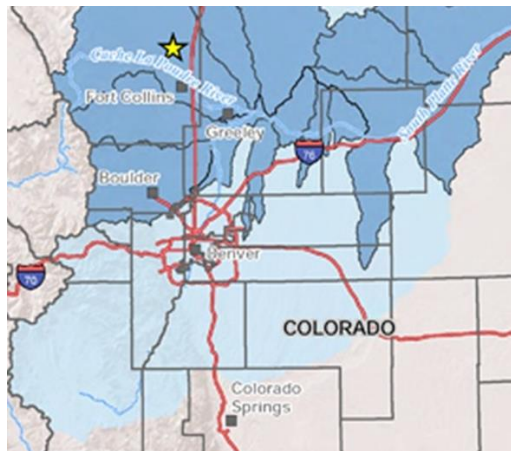
Compensatory Mitigation Options

- ▶ Stream & Wetland Mitigation Banks
- ▶ Conservation Banks
- ▶ Eagle Protection & Offset Program
- ▶ Turn-keys/Permittee Responsible Mitigation

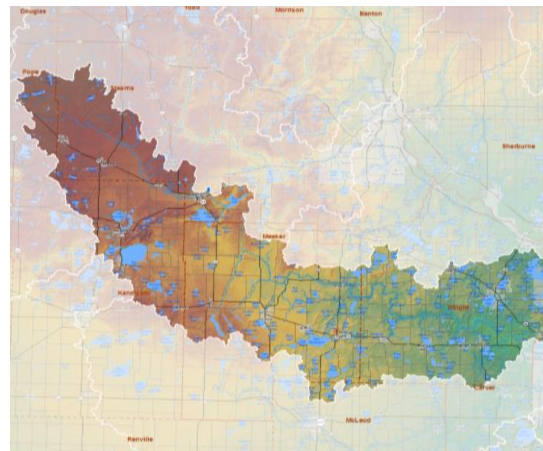


Stream & Wetland Mitigation Banks

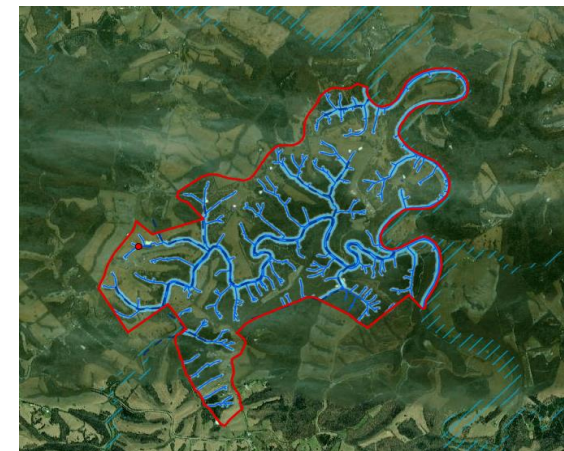
- ▶ Stream & wetland restoration ahead of impacts
- ▶ Established and approved crediting system with regulatory agencies



PARK CREEK STATION
WETLAND MITIGATION BANK



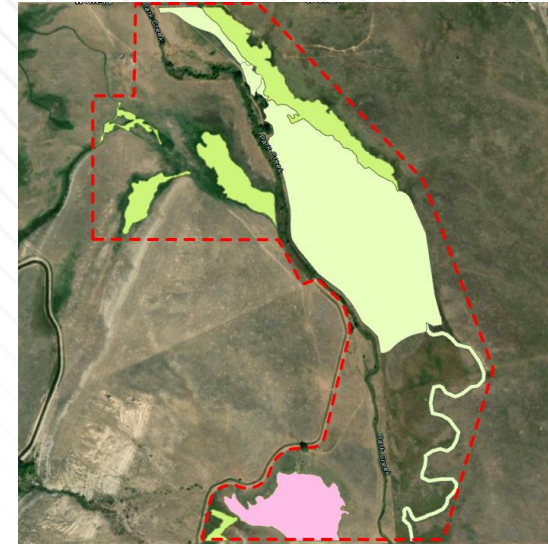
**NORTH FORK CROW
RIVER**
WETLAND MITIGATION BANK



RICHLAND CREEK
STREAM BANK

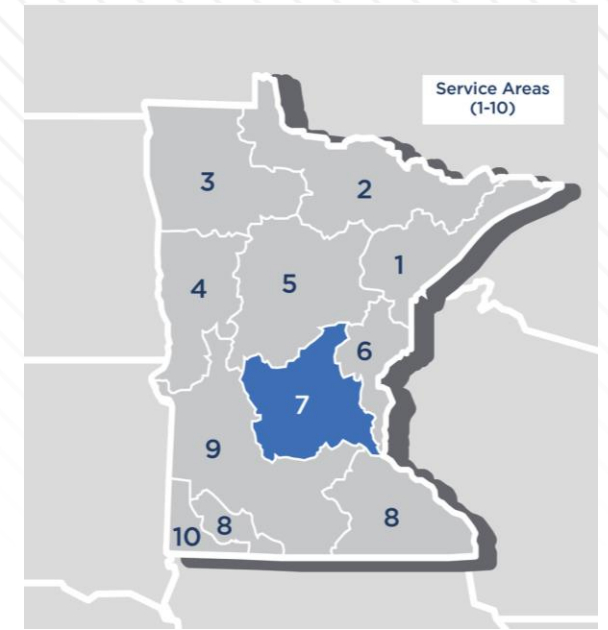
Park Creek

- ▶ 250-acre Wetland Mitigation Bank on the Front Range of Colorado
- ▶ Larimer County, Service area extends South toward Denver
- ▶ Re-establishment/creation of 55 acres of wetlands adjacent to Park Creek
- ▶ Rehabilitation of 30 acres of existing wetlands
- ▶ Currently in final approval with Omaha District USACE



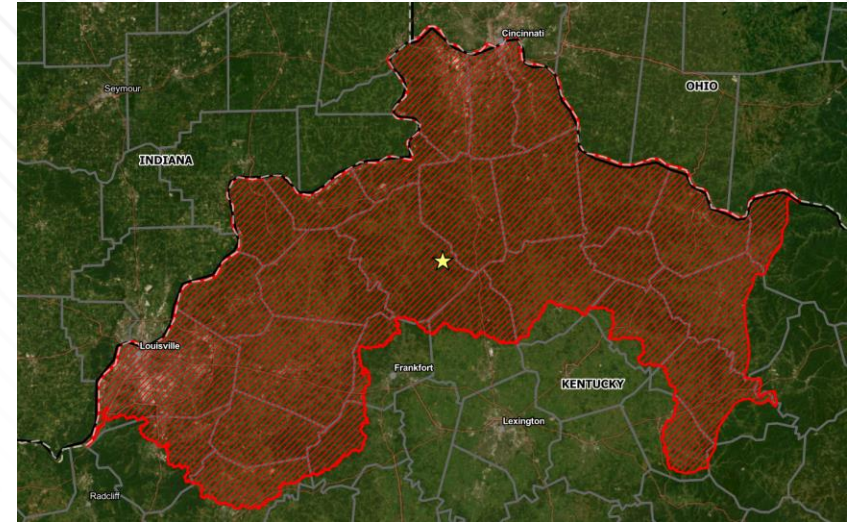
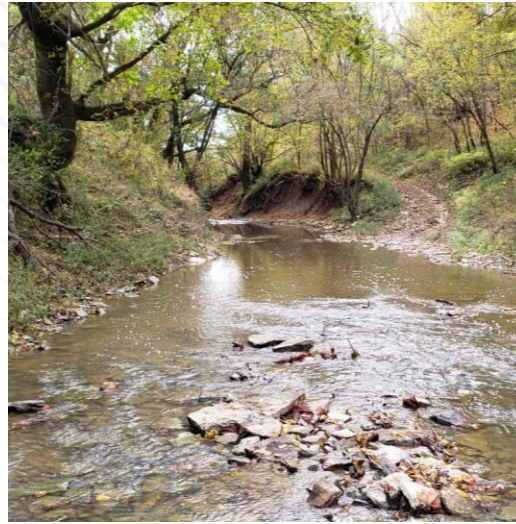
North Fork Crow River

- ▶ Wetland Restoration in Meeker County, Minnesota
- ▶ 83 acres of shallow marsh and wet meadow wetland complex restored
- ▶ Over 70 native plant species seeded
- ▶ Minnesota pre-determined service area 7
- ▶ Approved, selling credits, and being monitored



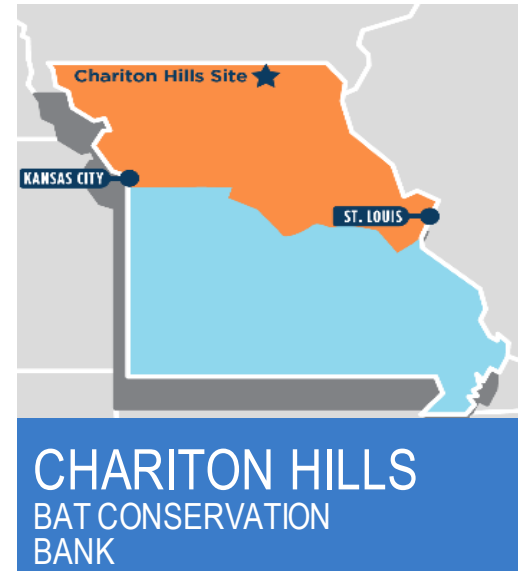
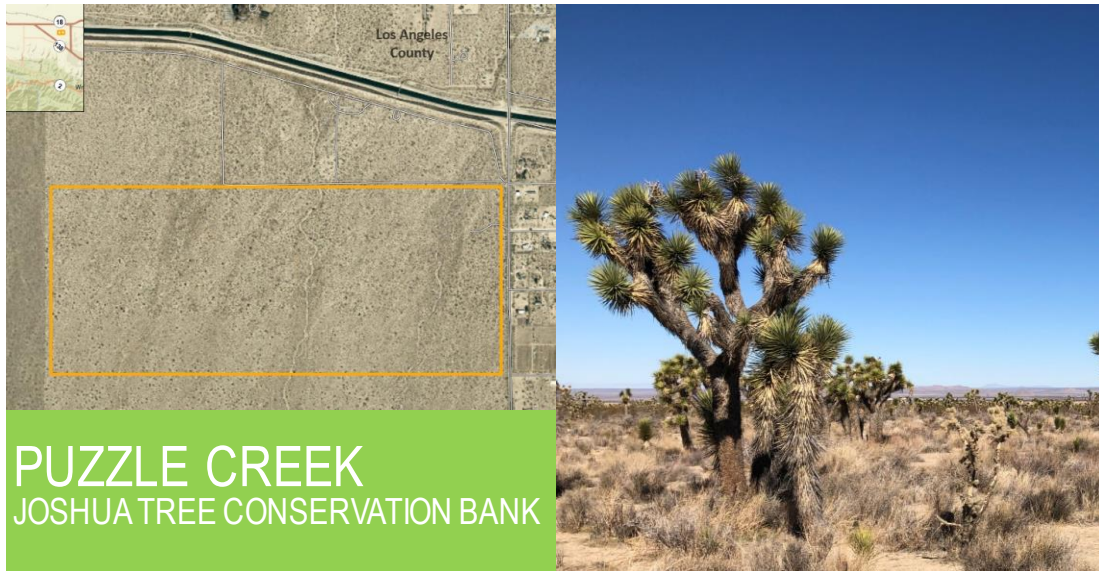
Richland Creek

- ▶ 1,250 acres in Owen County, Kentucky
- ▶ Over 115,000 linear feet of streams to be restored, rehabilitated, preserved, and protected
- ▶ Light-touch and minimal clearing construction approach
- ▶ Serves the Louisville and Cincinnati areas



Conservation Banks

- ▶ Species-specific benefits ahead of impacts
- ▶ Established and approved crediting system with regulatory agencies



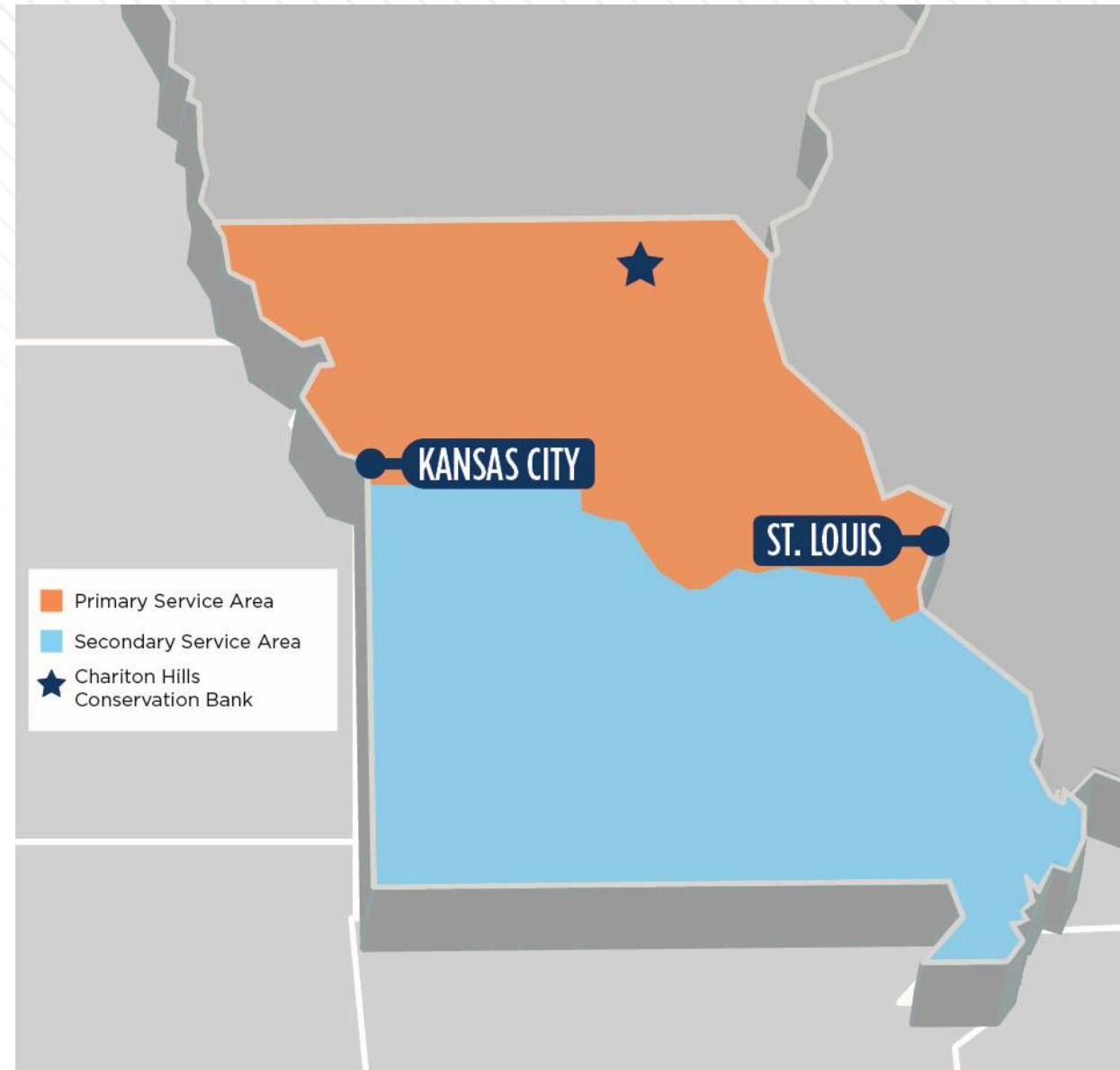
Puzzle Creek

- ▶ Conservation Bank for Western Joshua Tree (*Yucca brevifolia*) in LA County
- ▶ 320 acres total, including 4 acres of arid dry wash state waters
- ▶ October 2020 Emergency Listing, recently passed Western Joshua Tree Conservation Act
- ▶ California Department of Fish and Wildlife
- ▶ Service Area: Inyo, Kern, Los Angeles, Mono, Riverside, and San Bernardino Counties



Chariton Hills Conservation Bank

- ▶ 1,300 +/- acres contiguous with State of Missouri Conservation Areas
- ▶ Species present: Indiana bat, northern long-eared bat, little brown bat, tricolored bat









Using Credits to Offset Impacts

- 1 Contact the bank owner to discuss potential project needs and credit contracting options
- 2 Include credits in discussions with USFWS
- 3 Upon concurrence of USFWS, Permittee pays for credits and is done – the bank owner takes care of USFWS notices, ledger, endowment, and biological obligations

Advantages of Conservation Banks

For the Project Developer

- ▶ Pre-approved credits provide mitigation certainty
- ▶ Less internal staff time spent on developing mitigation solution
- ▶ Banks have been shown to reduce permit timeframes
- ▶ No interim, long-term site management or ledger tracking
- ▶ Third-party credits sever mitigation liability

For Agencies

- ▶ Saves time
- ▶ Reduces review time for permit decisions
- ▶ Consolidates mitigation
- ▶ Permanent protection of resources
- ▶ Conservation ahead of impacts

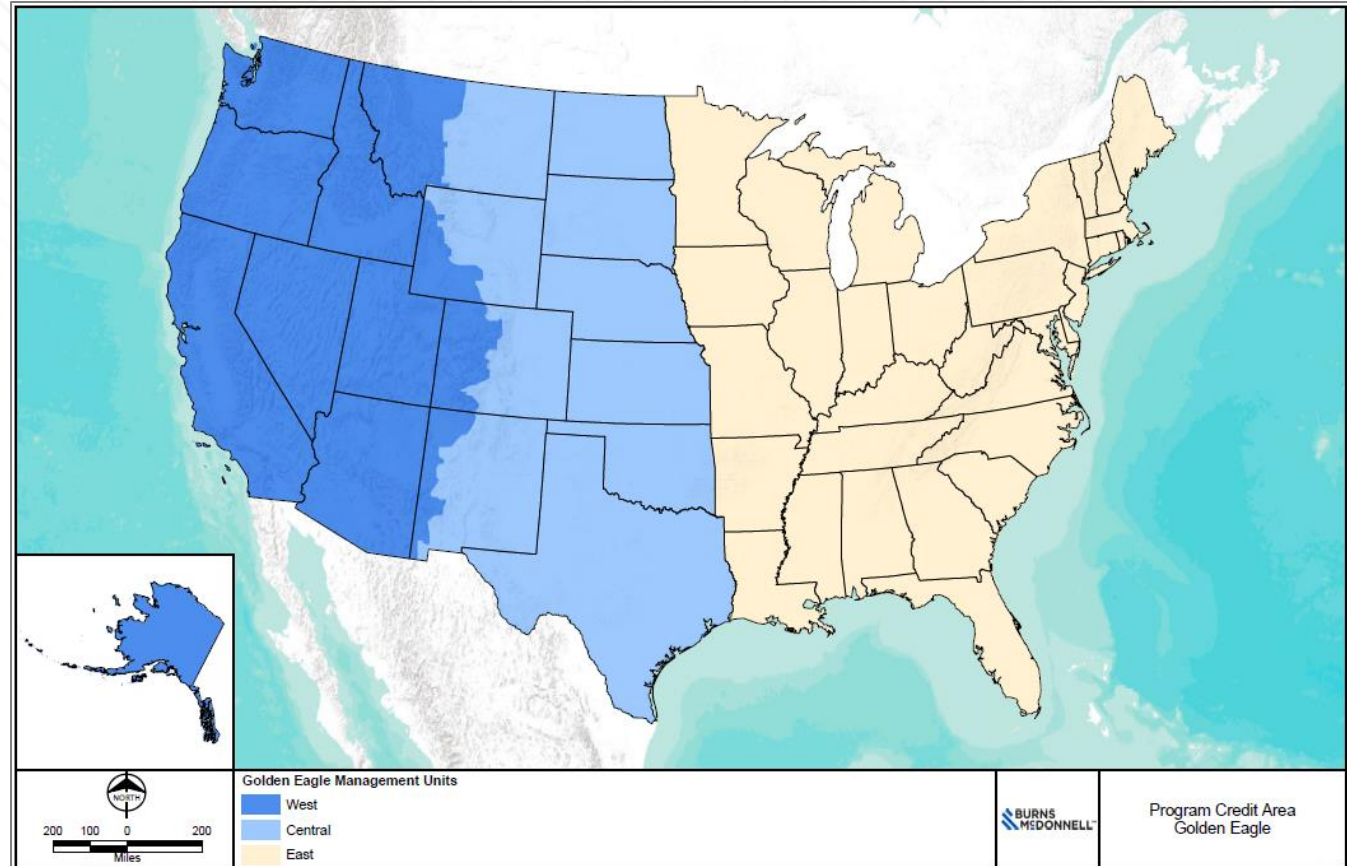
Eagle Protection & Offset Program (EPOP)

- ▶ EPOP has been established by Burns & McDonnell through an agreement with the USFWS which requires species-specific environmental enhancements.
- ▶ Credits are generated by EPOP through specifically approved power pole retrofit activities.
- ▶ Third parties can use these credits to offset their corresponding permitted eagle incidental take within the same eagle flyway.



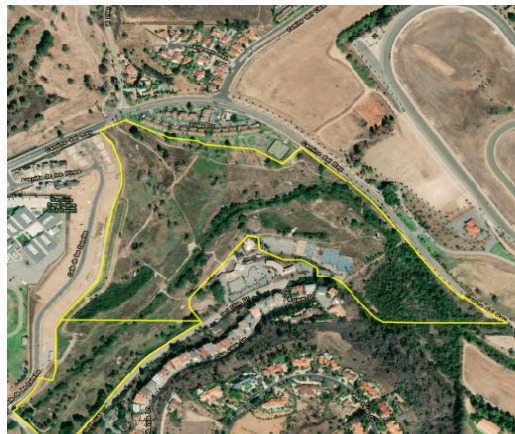
EPOP Benefits

- ▶ USFWS-supported
- ▶ Nation-wide approach
- ▶ Long-term fix = 30-year credit
- ▶ Streamlined solution
- ▶ Local collaboration



Turn-keys/Permittee Responsible Mitigation

- ▶ Project-specific mitigation
- ▶ Tailored to the needs of the client



MOOSA CREEK
RIPARIAN RESTORATION



Moosa Creek

- Riparian Restoration in San Diego County
- 67 acres of habitat for threatened and endangered species: Least Bell's Vireo & Southern Willow Flycatcher
- Permittee Responsible solution for Marine Corps Air Station Camp Pendleton through USFWS
- Currently finishing plantings, managing vegetation, and completing the first year of annual reporting



MITIGATION QUESTIONS?



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