



Merced River Trail Community Benefits Study



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The trail will connect communities and existing trails along the Wild and Scenic Merced River. p.4



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The high quality of life provided by outdoor recreation is one of Mariposa County's most valuable assets and has been prioritized by the community in many plans and policies.. . . . p. 5



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Trails attract and retain businesses, visitors, and families, helping to grow and diversify the economy. p. 7



Photo by Bob Wick, BLM

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Access to trails improves physical and mental health, especially for the most vulnerable members of the community.. . . . p. 10



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The Merced River Trail can support other community goals, such as habitat conservation, equity, cultural heritage, climate adaptation, and wildfire risk reduction. p. 11



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Specific strategies around planning and engagement will amplify the trail's impacts. p. 13

Merced River Trail, Mariposa County, CA



Segment 1: Bagby to North Fork (approx. 6 mi.)

The Bagby trailhead features parking, boat take-out, and camping. Two campgrounds are accessible on the south side of the river. During times of high water, users must carefully wade across the North Fork where it joins the main stem of the Merced River.

Segment 2 North Fork to Briceburg (approx. 7 mi.)

Users share the trail with infrequent automobile traffic as it follows the gravel Briceburg Road upstream to the Briceburg visitor's center. This section includes the popular Cable Rock swimming area and three BLM campgrounds: Railroad Flat, Willow Placer, and McCabe Flat.

Segment 3: Briceburg to Sweetwater Creek (approx. 4 mi.)

This stretch of single-track trail is popular with hikers and bikers. The trail intersects the Burma Grade, a road that provides recreational access to the northern slopes of the Merced River Canyon.

Segment 4: Sweetwater Creek to Incline (approx. 8 mi.)

Here, the old railroad grade is on National Forest and private land and is not currently designated as trail. At the Ferguson Rockslide the trail follows a narrow vehicular detour and then follows the gravel Incline Road.

Segment 5: Incline to Old El Portal (approx. 5 mi.)

The trail provides access to National Forest recreation areas on the north side of the river, including the Dirt Flat and Dry Gulch campgrounds. Transit stops connect users at the Rancheria neighborhood and the El Portal Service Station.

Segment 6: Old El Portal to Crane Flat (approx. 9 mi.)

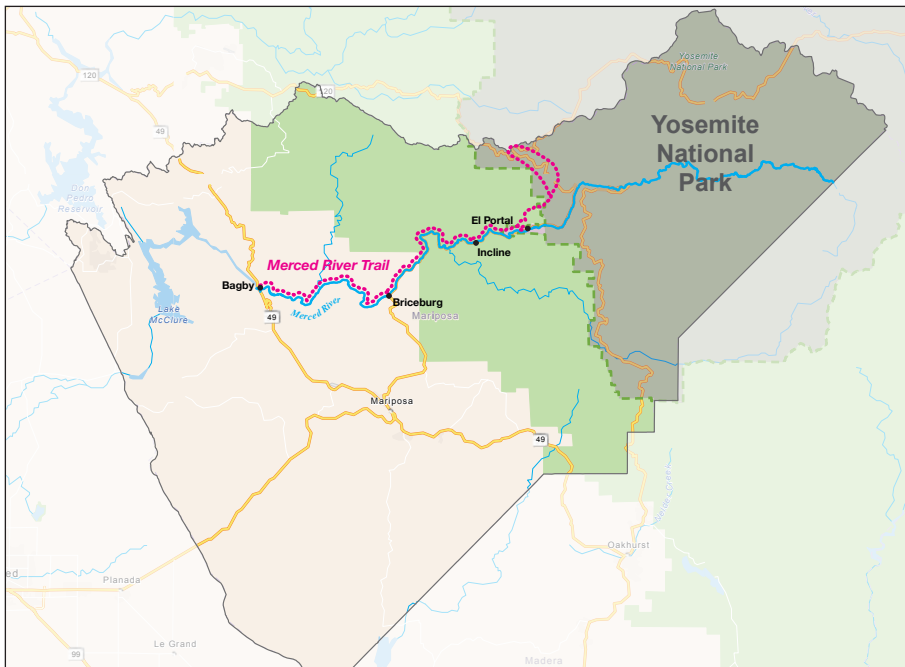
The trail goes through the Old El Portal community, passing a small grocery store and transit stop. The historic rail grade ends and the trail climbs out of the river canyon to the community of Foresta. It then terminates at Big Oak Flat Road in Yosemite National Park.

1

About the Merced River Trail

The Merced River Trail is a proposed recreational resource along the historic Yosemite Valley Railroad (YVRR) grade on the northern banks of the Merced River. The primary emphasis is on a nearly 40-mile segment of trail located entirely within Mariposa County, almost all of which is adjacent to a reach of river that has been designated Wild and Scenic by the federal government. Future trail segments will establish regional nonmotorized connections at the YVRR's historic downstream terminus in Merced. Nearly 17 miles of the trail are managed for hiking, biking, and horseback riding. Other sections require restoration to clear landslides and improve trail accessibility.

The purpose of this report is to describe the economic, quality of life, public health, and other benefits that Mariposa County and its residents are likely to enjoy from the Merced River Trail based on research and experiences of communities with similar projects.



Our Vision

The Merced River Trail will manifest our community's appreciation of our county's ecological, scenic, and cultural resources along the Wild and Scenic Merced River. It will address the growing needs for education, accessible recreation, and regional economic development with the imperative for conserving the canyon's many remarkable resources. The Trail will serve as a central connective component of an existing and future network of trails.

2

Alignment with Community Vision

Through public process and community engagement, Mariposa County has identified a vision for its future, and priorities and goals to achieve it.

General Plan¹

- Recreational opportunities are identified as a core issue of importance both for local residents and for regional tourism.
- The Merced River Trail is explicitly identified as an opportunity to expand regional tourism (13.1.01).
- **The Merced River Trail will advance the following goals:**
 - increase public access to trails (Goal 13-3);
 - enhance cooperation with partner agencies (Goal 12-4);
 - enhance regional tourism opportunities (Goal 13-1); and
 - help to strengthen and diversify the economy (Goal 6-4).

Strategic Plan²

- Increasing the number and mileage of publicly accessible trails is a primary infrastructure initiative.
- **The Merced River Trail will advance the following goals:**
 - develop active infrastructure that encourages recreation and increase the number and mileage of publicly accessible trails (Objective 4.1); and
 - promote Mariposa as a livable, family-friendly community (Objective 5.2).

Economic Vitality Strategy³

- The Merced River Trail aligns with the core value of “a vibrant community where citizens can live, work, socialize, and recreate in a safe, attractive, and healthy environment.”
- Promoting and upgrading the Merced River Trail is explicitly identified as an action step to develop tourist attractions and events (Action 1.2.3).
- **The Merced River Trail will advance the following goals:**
 - position Mariposa County as a year-round destination (Objective 1.3);
 - expand and diversify tourist activities (Objective 1.2);



- help attract new businesses (Objective 2.2);
- retain and expand existing businesses (Objective 3.1);
- protect Mariposa County's quality of life (Objective 5.1); and
- improve pedestrian and bicycle pathway connectivity to enhance quality of life (Action 5.1.4).

Bicycle and Pedestrian Transportation Plan⁴

- The Merced River Trail is explicitly identified as a priority bicycle project.
- **The Merced River Trail will advance the following goals:**
 - encourage a multimodal transportation system (Goal AT2);
 - develop a safe, accessible transportation system for all users (Goal AT3);
 - develop a continuous, interconnected system of bikeways (Goal B1);
 - connect pedestrian routes (Goal P1);
 - develop a bikeway system that incorporates aesthetics and rural characteristics (Goal B2); and
 - provide a comfortable environment for bicyclists by enhancing safety (Goal B3).

Regional Transportation Plan⁵

- A lack of bicycle and pedestrian paths and trails has been identified as a regional concern.
- **The Merced River Trail will advance the following goals:**
 - develop and construct a regional bicycle, pedestrian, and equestrian trail system (Objective 3.1);
 - develop projects with consideration of air quality and greenhouse gasses (Objective 5.2);
 - reduce demand for travel by single-occupancy vehicle (Objective 9.2); and
 - improve livability and encourage walking and bicycling (Objective 10.1).



3

Economic & Business Impacts

Research has documented that communities with amenities such as trails have more prosperous economies.⁶ The quality of life from trails can encourage economic development by:

- Attracting visitors who spend money at local businesses;
- Promoting the development of new retail opportunities that address existing gaps in the outdoor recreation sector;
- Stimulating spending by local residents who buy outdoor gear, food, and supplies;
- Attracting entrepreneurs, new residents, retirees, and others who want to live in a community with a high quality of life;
- Attracting a talented workforce that wants to live close to outdoor recreation;
- Providing job opportunities for those building, maintaining, managing, and stewarding the trail.



+ Tin Shed Sports has become a hub for locals and visitors alike to the mountain town of Nederland, Colorado (pop. 1,400) as a full-service bike and ski shop, as well as a café and coffee roaster that hosts live music and other community events.

- Recreation infrastructure such as trails adds to a community's quality of life, making it easier for businesses to recruit and retain employees.¹²
- The Merced River Trail directly supports goals and action steps identified in Mariposa County's *Economic Vitality Strategy*, including economic diversification to support good-paying, year-round jobs in the county and developing and marketing recreational activities available in the county.¹³



“Mariposa as a destination is more important than ever with the potential of long-term limited access into Yosemite National Park. Enhancing recreational activities in Mariposa County will drive more visitors into our market, increase repeat visitation, and provide opportunities for economic growth. Further, investing in such activities will better the overall health of our residents and visitors alike. We fully support the Merced River Trail Project along with additional recreational initiatives in the future.”

*- Scott Fiester, Executive Director,
Mariposa Chamber of Commerce*

Visitors coming to Mariposa County to enjoy the trail would spend money at hotels, restaurants, and gear stores, supporting local businesses and jobs.

- More than 4 million people per year visit nearby Yosemite National Park. The Merced River Trail would provide activities to attract some of Yosemite's visitors to towns along the trail. The trail could help make Mariposa a recreation destination outside the park, capitalizing on its proximity to Yosemite while increasing the community's economic resilience when the park is closed.
- The Merced River Trail, at a lower elevation than Yosemite, can help Mariposa County diversify its off-season offerings and bring visitors to town, helping to reduce seasonal unemployment.



Photo by Will Brewster

+ **The Whitefish Trail system in Whitefish, Montana, a gateway community for Glacier National Park, has 22,000 visitors each year, who spend about \$6.4 million annually, supporting 68 jobs in this community of 8,300.⁷**

A network of trails in Mariposa County could be sites for events such as bike races and fun runs. Organized events bring participants and spectators to the area and help initiate regular return visits.

- + **In northern Wisconsin, participants in nonmotorized events spend an average of \$260 during their trip. Events also encourage visitors to return to the area again: participants return an average of four times per year.⁸**
- + **In Gallup, New Mexico, mountain bike races bring between \$333,000 and \$650,000 in revenue per event.⁹**

- + **At a mountain bike race in North Carolina, racers spent \$296 in the area, on average. Racers who stayed in the area to visit other attractions spent even more.¹⁰**
- + **In Oregon, participants in mountain bike tours and races spent between \$1,100 and \$1,600 during their trips.¹¹**



Photo by David Greenwood, BLM

4

Quality of Life Improvements

The high quality of life provided by outdoor recreation is one of Mariposa County's most valuable assets. It has been identified by community members as a priority in the county's General Plan and Economic Vitality Strategy and contributes to the area's identity, heritage, and sense of place.

Trails can:

- Enhance a community's outdoor culture;
- Tie together communities along the trail for a common purpose;
- Enhance physical and mental health;
- Create an inexpensive, accessible, and equitable place for families and neighbors to recreate; and
- Offer an opportunity to connect and learn about nature.

Trails attract and keep new residents.

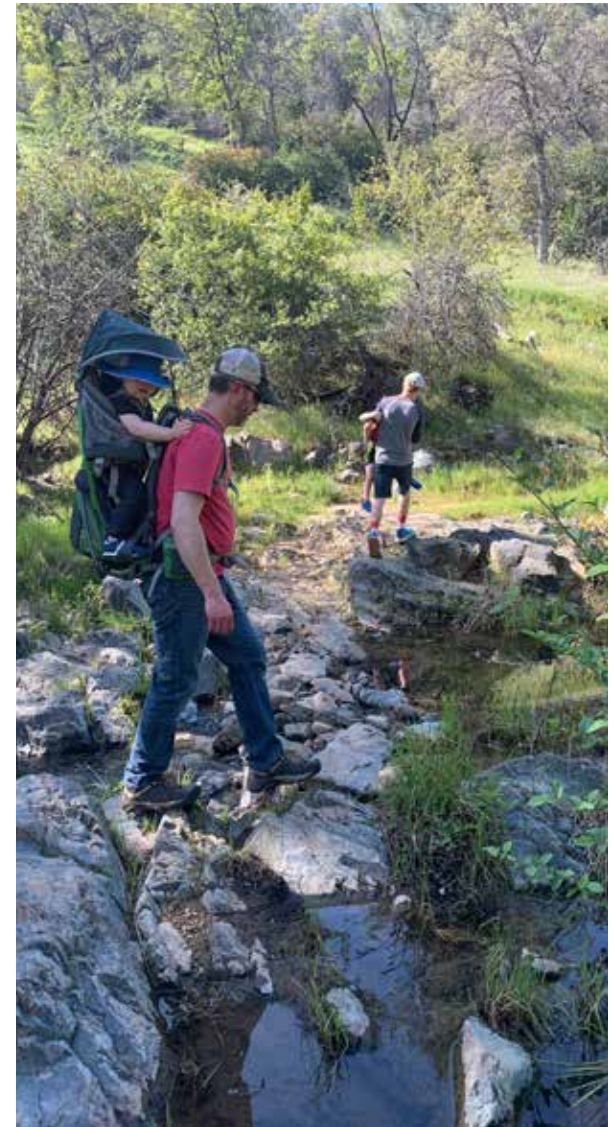
- + **In Jackson, Wyoming, nine out of 10 survey respondents used pathways and trails. Ninety-six percent of residents stated that outdoor recreation was an important factor in their decision to move to or stay in the area.**¹⁴
- + **In Whatcom County, Washington, 95% of long-time residents—many of whom are mountain bikers, hikers, and trail runners—stated that trails are important to their decision to stay in the area.**¹⁵
- + **Other studies conducted on the Perkiomen Trail in Pennsylvania,¹⁶ the Whitefish Trail,¹⁷ and the Omaha Recreational Trails¹⁸ show that, in addition to being economic drivers, trails enhance the quality of life of residents.**

Trails located near where people live and work, like the Merced River Trail, often are very popular.

- + **In Missoula County, Montana, 89% of residents had used city parks in the last year, 73% had used hiking trails, and 56% used paved commuter trails.**¹⁹

Needs for trail construction and maintenance may spur the development of a Youth Corps organization, many of which operate throughout California. Youth Corps organizations provide members with jobs, and also improve social outcomes for members: more than a year after their work with the Corps, members report higher hourly earnings, a higher rate of college graduation, and lower rates of criminal offenses.²⁰ The U.S. Forest Service, one of the land managers along the river corridor, operates numerous Youth Conservation Corps crews.

The Merced River Trail also has the potential to connect to additional recreation areas at higher elevation, helping to catalyze a regional trail system that would contribute even more to developing the county's outdoor culture.



5

Public Health Benefits

Public health research shows that when people live close to trails, they tend to be more physically active.

The COVID-19 pandemic has brought to light the critical need for close-to-home access to the outdoors. Resources like the Merced River Trail—designed to be easily accessible, safe places to exercise and spend time outdoors—have been particularly valuable while many sites, such as national parks, have been closed due to COVID-19.

- Research has found that people are more physically active when there are trails nearby, reducing incidence of cardiovascular disease, cancer, mortality, and childhood obesity.²² Many of the largest gains occur with the people who are often most difficult to reach with public health programs: those who are not already walkers, people with a high school education or less, or those who have low incomes.²³
- Several studies have found that people experience significant improvements in self-esteem and mood after exercising outside.²⁴
- Several studies have found the health benefits of new trails, measured in avoided healthcare costs, outweigh the cost of building and maintaining a trail system by 2:1.²⁵
- Designated bike paths can help bikers and pedestrians feel safer, and therefore they are more likely to be physically active.²⁶
- Improved safety is particularly valuable for people commuting to work via bike, as they do in El Portal. Research has found that bike routes separated from traffic can significantly reduce the risk of injury or death.^{27,28}
- In Mariposa County in 2019, one-in-four adults are obese, and 19% of adults report no leisure time physical activity.²⁹ The Merced River Trail will provide easily accessible opportunities to increase physical activity, reducing chronic disease incidence and improving residents' mental health.³⁰ Sections of the trail also could be used to support programs that integrate health care with outdoor recreation, such as Prescription Trails and Walk with a Doc.³¹
- Mariposa County struggles with limited access to primary care medical providers like physicians and dentists. In Allen County, Kansas, community planners found that improving access to amenities like dog parks were popular with residents and also made it easier to recruit professionals like dentists to the area.³²



“Safe, accessible places to be active are associated with improved health outcomes known to reduce chronic diseases such as obesity, diabetes and heart disease. Increased opportunities for accessible, safe, no-cost, and interactive outdoor physical activity is health strategy worthy of exploring, and the Merced River Trail can be a significant addition to our community’s portfolio of public health resources.”

*-Ginnie Day, MPH, CHES
Mariposa County
Health & Human Services*

6

Synergies with Community Values



Habitat Conservation

The Merced River Trail corridor is home to a Wild and Scenic River and important wildlife habitat. The Merced River Trail will help create a continuous corridor of publicly managed land, increasing the ability to collaboratively manage for the benefit of wildlife. A sustainably-designed trail, trailheads, waste disposal, and other amenities can reduce impacts to wildlife.³³ Well-designed trails can compartmentalize impacts to a limited space and help keep users out of sensitive areas. Through programming, signage, and events, trails can help educate the public about wildlife species, habitat conservation, and responsible recreation. Easier access to the river corridor also can facilitate opportunities to expand ongoing aquatic research, improving understanding of the area's ecology and potentially providing job opportunities to support researchers.



Equity

The benefits of trails—including the health, economic, and quality of life improvements—are greatest for people who live near trails, especially for the most vulnerable populations. Research has shown that children who live near green space are less likely to be obese or overweight.³⁴ The gap in mortality rates between low- and high-income residents decreases with proximity to green space, and people across all income levels have improved health when they live closer to trails.³⁵ By providing an active recreation resource in rural Mariposa County, the Merced River Trail can help create equitable access and distribute the benefits of trails to more residents. During the coronavirus pandemic, this need is especially significant.



Cultural Heritage

The Merced River Trail is on the ancestral lands of the Southern Sierra Miwuk Nation. Native traditions, heritage, and contribute to more inclusive, equitable, and representative expressions of the region's history and identity. In order to be successful, it is essential that the trail's interpretive and cultural storytelling elements are the product of a process of co-creation and collaboration with the tribe.



Climate Resilience

Trails that connect communities become more than recreational amenities—they become integrated into the transportation network. Research shows that new trails that connect gaps in existing networks result in a greater share of bicyclists,³⁶ and proximity to bicycle facilities increases bicycle commuting, especially when separated from roadways.^{37,38} By linking into existing transportation and trail networks, the Merced River Trail can become an important transportation route. This can help reduce greenhouse gas emissions and other air pollutants in Mariposa County while also improving health and quality of life for commuters.³⁹

As the climate continues to warm, having a diverse portfolio of recreational opportunities can benefit the economic vitality and health of Mariposa County. The Merced River Trail can be an alternative destination if other venues, like Yosemite National Park, are inaccessible due to severe storms, wildfires, or floods.



Wildfire Risk Reduction

Trails can reduce wildfire risk by acting as fuel breaks and by providing access to remote areas for fuel treatment and wildfire suppression. However, if not well-managed, trails can also act as potential sources for wildfire ignition from campfires and motorized vehicles off-trail. To reduce potential for human ignition, the Merced River Trail can remain nonmotorized and limit camping to designated areas. Programming and signage can also create opportunities to educate users about how to reduce wildfire ignitions, the role of fire in the region's ecology, and steps the community can take to reduce risk. Placement of new trail segments outside of the Merced River corridor can be explored with regional wildfire experts to identify where trail construction can help create fuel breaks.



Balancing Growth

Mariposa County's diverse and unique landscape can help it become a year-round outdoor recreation destination. As the community works to enhance its recreation economy, welcome all users, and expand trail connections, the demand for trails will increase. The design and vision of the Merced River Trail can help ensure that this growth does not compromise the ecological, scenic, and cultural resources of the region.

7

Strategies for Maximizing Trail Benefits



Trailhead strategy.

Position trailheads and access points to maximize equity across communities, improve usefulness for transportation, create connections to local businesses, and minimize environmental impact.



Build for sustainability.

Use sustainable trail design practices to reduce sedimentation and erosion, avoid sensitive areas, and restore areas already degraded.⁴⁰ Provide adequate facilities to reduce impacts from human and dog waste.



Tie to transportation.

Leverage the trail design for transportation where it is an important connector. Improve trail tread, road crossings, and road separations to improve safety and increase use. Tap into transportation planning and funding programs such as the Federal Land Access Program and US BUILD grants.



Reach new users.

Integrate programming to build the next generation of trail stewards, raise awareness, reduce user conflicts, and ensure equitable access.

For example:

- Communities have had great success reaching families and new trail users through junior ranger programs, free trail activities, guided walks, or loaner gear. Colorado State Parks lend activity backpacks to kids for self-paced trail education.
- Take educational presentations off the trail and into existing community institutions like schools, churches, civic organizations, and cultural centers to broaden your reach.



Nurture leadership.

Foster relationships and partnerships to support jobs and businesses like gear shops, youth corps, and researchers. Begin building relationships with business and nonprofit leaders who could initiate and run programs and enterprises that are mutually beneficial with the Merced River Trail.



Sign the way.

Use signage to make wayfinding easy for new users and to direct attention to important issues and build synergies. Signs can help minimize off-trail impacts, contamination from human waste, and risk of wildfire ignition when they are clever and strategically located.

For example:

- Partners near Bozeman, Montana collaborated to develop signage highlighting the importance of dog waste to water quality. (at right)
- CalFire's Ready for Wildfire program offers a toolkit with ready-made signs, slogans, and more for campfire safety.



Collaborate for stewardship.

Work with trail user groups and nonprofit organizations to manage and maintain trails, educate users, and minimize conflicts. Consider direct partnership with a community organization for long-term trail stewardship.

Trail stewardship organizations can spearhead trail construction, maintenance, outreach, and fundraising.



Whitefish Legacy Partners is a nonprofit organization that helps expand, develop, manage, and maintain a network of trails around the Glacier National Park gateway community of Whitefish, Montana. They acquire land and easements to expand access. Trails are designed, constructed, and maintained with professional and volunteer crews. The organization also leads educational programming for youth and adults. whitefishlegacy.org



Mammoth Lakes Trail System includes more than 300 miles of trails improved and stewarded by a partnership between the Town of Mammoth Lakes, California, Inyo National Forest, and the nonprofit Mammoth Lakes Recreation. Long-term vision is supported by a collaborative master plan and interagency governance. A local special tax initiative helps fund the trail work. Mammoth Lakes is also working to integrate trail and open space planning into wildfire risk reduction efforts. mammothtrails.org



Sierra Buttes Trail Stewardship is a nonprofit organization that builds and maintains trails around the Sierra Buttes, Tahoe, Plumas, and Lassen national forests of California. Trail work is accomplished through professional trail builders, coordinated volunteers, and contracts with the U.S. Forest Service. Businesses and residents support work through volunteer work events and programs like Adopt-a-Trail and \$1 for Trails. Community events bring families and user groups together. sierratrails.org



Gallatin Valley Land Trust is a nonprofit organization that conserves open space and helps create and expand the 100+-mile “Main Street to the Mountains” trail system around Bozeman, Montana. They collaborate with public and private organizations to acquire easements, design and build trails, and coordinate volunteer maintenance programs. They lead stewardship and educational activities like free, family-friendly Discovery Walks and a Trails RX program. gvltr.org

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Photo by Bob Wick, BLM



Photo by David Greenwood, BLM

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