## What's happening?

The Army Corps of Engineers is slated to continue their next phase of large-scale river surgery upstream into the American River Parkway, from Howe Bridge to the Mayhew Drain, over about three river miles. This is part of a larger effort to ensure Greater Sacramento can accommodate more floodwater volume during wet periods, due in part to climate change. The sole focus for the American River is erosion control for the river banks and levees. Overtopping or seepage issues were not identified in need of correction.

The proposed solution is to remove the large majority of trees and virtually all of the ground cover that lines the river bank, to add rocks and soil to the cleared stretches, and to attempt to plant trees again, all over a short period of time. This approach has drawn a considerable amount of public concern.





#### Why are we alarmed?

Overall, eleven of the Lower American River Parkway's twenty six miles are at risk for forest removal, and so far revegetation of bulldozed sections downstream has not gone as planned. The next targeted stretch of channel work contains mature riparian forest with thousands of trees providing square miles of critical habitat and temperature refuge for aquatic and terrestrial species. These ecosystems provide many important services for society, such as maintaining water quality, naturally armoring river banks and increasing resistance to erosive shear stress, and providing recreation and nature space. The area, a lush riparian corridor, is a coveted green space full of trails, beaches, picnic and fishing areas, and river accessways for swimming or small watercraft. The riverbank is critical habitat for endangered Salmonids and other threatened or endangered species. If the project goes forward, most of these resources and activities from multi-mile stretches of river will likely vanish. The Lower American Parkway is one of the few major green spaces in Sacramento and sees more than five million visits a year. Losing major portions of this resource may also cause economic harm. There's considerable uncertainty whether fundamental components of the construction work are allowable in a Wild and Scenic river, and there are rumors the project's aggressive schedule is due to impending funding loss deadlines..

#### Why do we question the proposed solution?

We are skeptical of the evidence provided to justify the need for such a massive intervention. We believe a project of this consequence deserves more investigation, into both diagnosis methods and treatment

options. We advocate for using modern analysis methods, maximizing the use of innovative nature-based solutions<sup>1</sup> (NbS), and letting the public participate in the project's strategy and approach.

#### What causes river bank erosion?

Major factors include how fast the water flows close to the river banks during various ranges of high flows and how susceptible the material near the river bank is to erosion. It is well known that vegetation and trees along river banks - roughness - cause slower water near the river banks. If revegetation does not go as planned, the with-project condition to address erosion will cause faster, more erosive water at the river banks.

# How do we predict what might happen?

We have some evidence of the river's behavior under various flood conditions but the major predictive tool is computer modeling of water flow at levels that haven't been seen recently. In the last decade this kind of modeling has seen particular growth in applied sciences and engineering. However, the modeling conducted for the construction project dates back to 2004, and is potentially dangerously oversimplified. More modern but still very affordable computational fluid dynamics modelling, and more accurate geologic models, would yield a fresh look at predictions of erosion risk.

## **Roots vs Rocks?**

Many of the oaks along this stretch of the river are older than the US, and have held steady to the bank during flood flows before and after Folsom Dam was constructed. Is it really the best solution to remove nearly all the trees to replace them with riprap? How successful will it be to replant trees in an area where large rocks impede root growth and lack of shade might stunt new saplings? Is the construction style planned generally using modern concepts of river engineering and nature-based strategies, or is it more of an outdated, heavy-handed, one-size-fits-all approach applied to a complex riverine environment? The American River Common Features project dates back to the 1990s.

#### What's next?

With State-of-California and federal designation as a Wild and Scenic River, and the only Wild & Scenic river in the United States to pass through a major metropolitan area, the Lower American River truly is the crown jewel of Sacramento, and it's in need of special attention and a second opinion before undergoing more surgery. We believe the project should be paused and alternative solutions investigated through further study with extensive peer review.

The public comment period for the project has been extended to February 23, 2024.

For more information, go here.

To write a public comment, go here.

<sup>&</sup>lt;sup>1</sup> Solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions. European Commission 2020.