



CALIFORNIA HIGH-SPEED RAIL AUTHORITY

November 1, 2012

**Approach to Environmental Mitigation, Project
Enhancements, and Agency Agreements**

APPROACH TO ENVIRONMENTAL MITIGATION

- Project construction and operation will generate both regional benefits and environmental impacts:
 - Regional Benefits – more transportation options, less reliance on auto travel, improved air quality, energy savings, economic growth
 - Environmental Impacts – traffic near HST stations, emissions from construction equipment, conversion of agricultural land to non-agricultural use, loss of biological habitat
- Through project design, the Authority has emphasized features to avoid, reduce and minimize adverse impacts

APPROACH TO ENVIRONMENTAL MITIGATION

- Incorporate design features to avoid or minimize environmental impacts
- Implement mitigation measures that reduce or eliminate identified impacts
- Incorporate project enhancements - where feasible - to enhance the environment and to meet common state objectives

APPROACH TO ENVIRONMENTAL MITIGATION

- Sample Design Features
 - Protect public roadways and railroads during construction
 - Cover trucks to reduce dust emissions while hauling soil and other materials
 - Fund research on the wind and noise effects of HST operations on agricultural activities
 - Maintain pre-project hydrology by avoiding increased flows from the project site
 - Limit fueling (and other activities using hazardous materials) to areas away from surface water

APPROACH TO ENVIRONMENTAL MITIGATION

- Sample Mitigation Measures
 - Maintain property access to mitigate for road closures
 - Modify local intersections to improve traffic operations
 - Reduce emissions from construction equipment and on-road vehicles
 - Offset construction air quality emissions through a Voluntary Emissions Reduction Agreement (VERA)
 - Preserve the total amount of “Important Farmland”
 - Provide onsite biologist to monitor construction and mitigation activities
 - Implement a Restoration and Revegetation Plan

APPROACH TO ENVIRONMENTAL MITIGATION

- Sample Project Enhancements:
 - Source renewable energy for traction power and facility operations from CA-based renewable energy producers
 - Prioritize use of recycled materials in infrastructure and facilities
- Design, build, and operate:
 - Facilities that achieve the highest levels of energy and water performance
 - Resilient systems and facilities that will flexibly serve community needs for decades to come



APPROACH TO ENVIRONMENTAL MITIGATION

- Project Enhancements (Continued):
 - Integrate stations into communities – serving as both transportation hubs and a node of sustainable development
 - Require use of low impact development measures for complying with water quality requirements
 - Investigate community energy approaches centered on station sites



APPROACH TO ENVIRONMENTAL MITIGATION

- Interagency agreements are needed prior to project construction to implement many of the mitigation measures
- Agreements include:
 - CA Department of Conservation
 - *preserve in perpetuity +/- 1,400 acres for continued agricultural use (Merced to Fresno)*
 - San Joaquin Valley Air Pollution Control District
 - *Achieve a net zero increase in emissions during construction,*
 - *Achieve a net improvement in regional air quality during project operation, and*
 - *Achieve a reduction in greenhouse gases*

APPROACH TO ENVIRONMENTAL MITIGATION

- Agreements (continued):
 - U.S. Army Corps of Engineers
 - Achieve a *no net loss* to wetlands and aquatic resources
 - U.S. Fish and Wildlife Service; National Marine Fisheries Service
 - *Avoid, minimize, or reduce harm* to endangered/ threatened species
 - CA Department of Fish and Game
 - *Fully mitigate* for state endangered/threatened species

APPROACH TO ENVIRONMENTAL MITIGATION

- Agreements (continued):
 - State Water Resources Control Board
 - *Comply with water quality requirements* through design standards during construction and operation of the train
 - Central Valley Flood Protection Board
 - *Avoid, minimize or reduce* stream flow impacts to existing flood protection facilities

APPROACH TO ENVIRONMENTAL MITIGATION

- Next Steps:
 - Continue discussions with regional, state and federal agencies on agreements
 - First agreement ready for Board review and approval - CA Department of Conservation
 - Remaining agreements to be ready for Board review beginning early 2013

Questions?