

# Crossings: How Road Ecology Is Shaping the Future of Our Planet



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**Life is a highway  
(or at least inseparable from one)**

**—4 million miles of road in the U.S.**

**—40 million miles worldwide**

**—15 million more coming!**





**A symbol of freedom...**

**...and an ecological disaster**







**>1 million animals killed in U.S./day**

**>20 endangered species**

**“leading direct human cause of  
vertebrate mortality on land”**

**–Forman et al.**



A photograph of two deer running across a paved road with a double yellow line. The background shows a hillside with dry grass and some snow patches under a clear sky. The text is overlaid on the image in yellow font.

# **A few astonishing DVC stats:**

**1-2 million annual collisions**

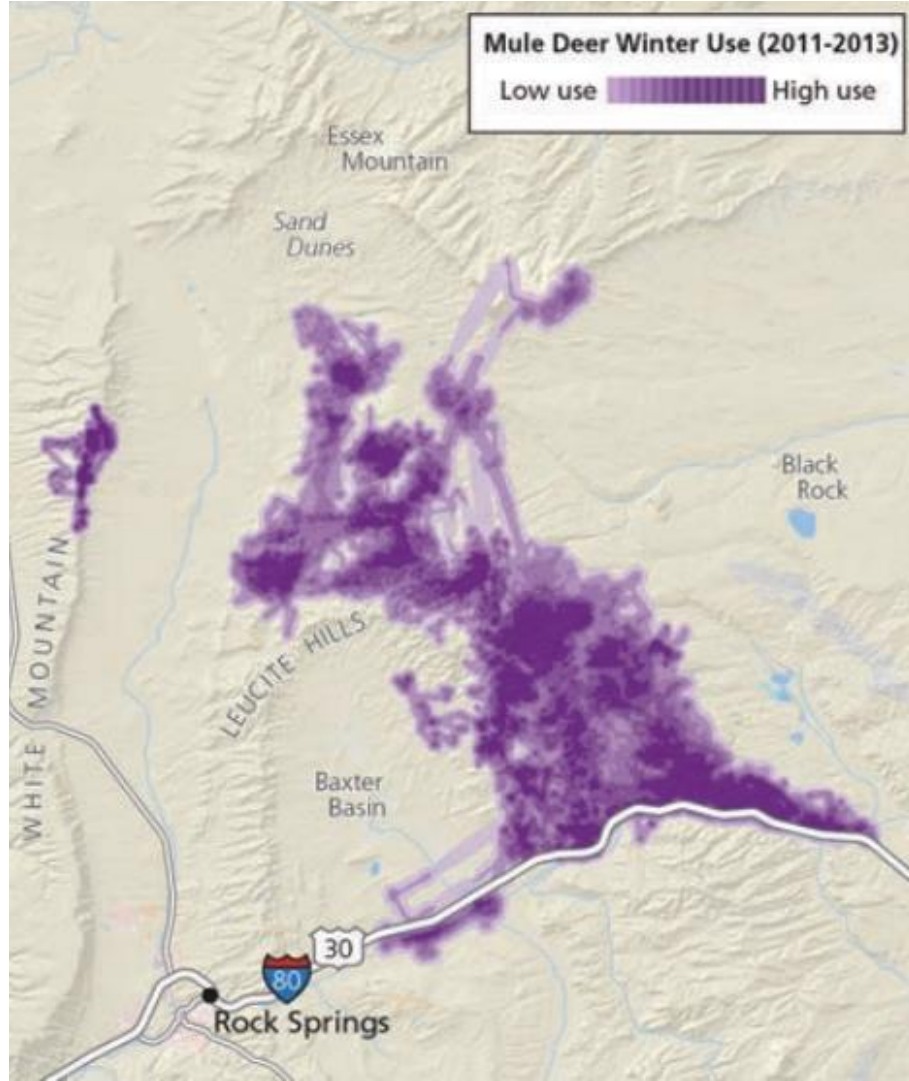
**>\$9,000 per crash**

**200-400 driver deaths/year**



# Barriers to movement

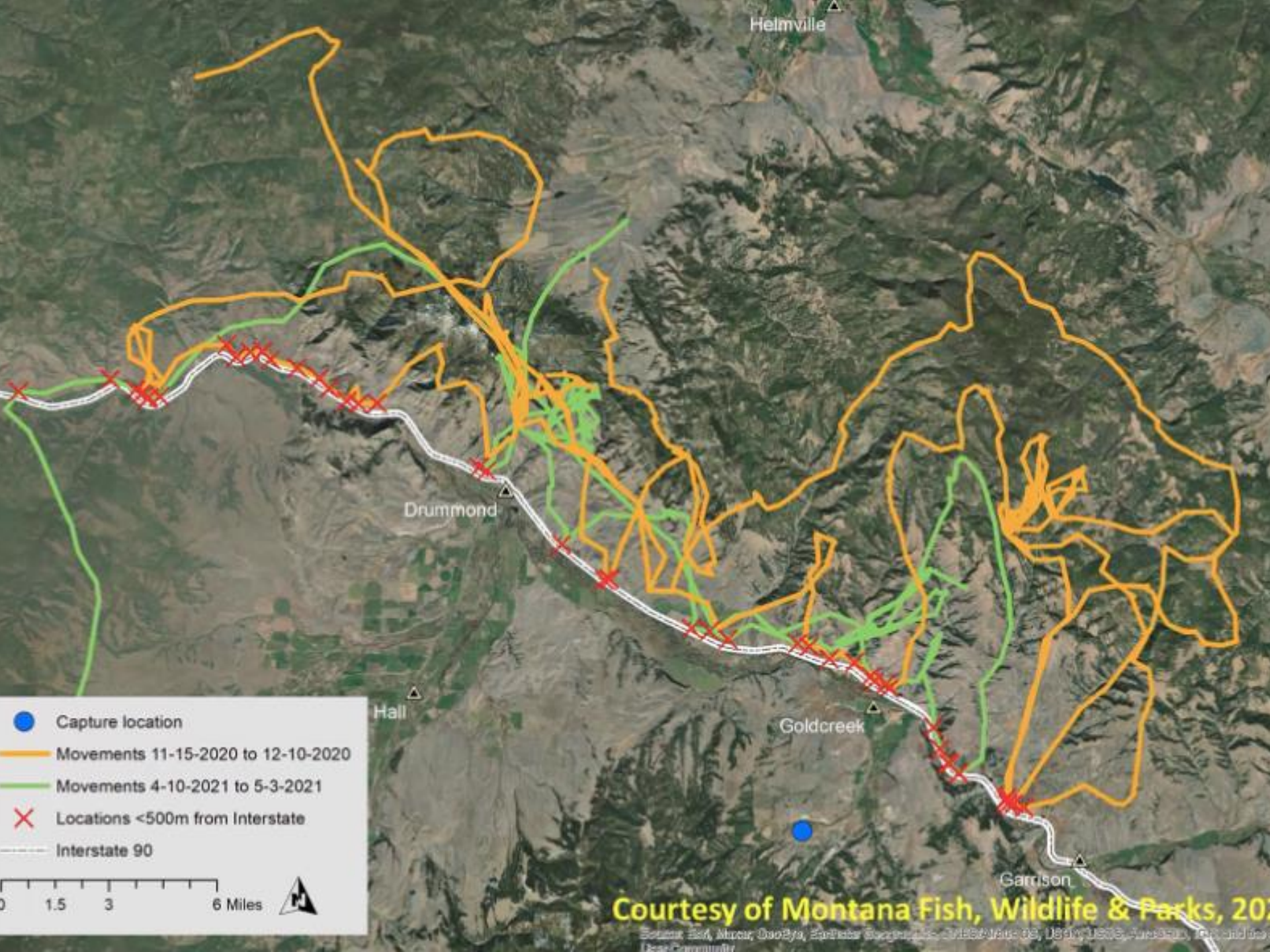




*Winter distribution of mule deer during winters 2011 and 2012. Interstate 80 prevents movement to the south where deer would likely encounter less snow.*

Mule Deer Migration Assessment, Sawyer et al.



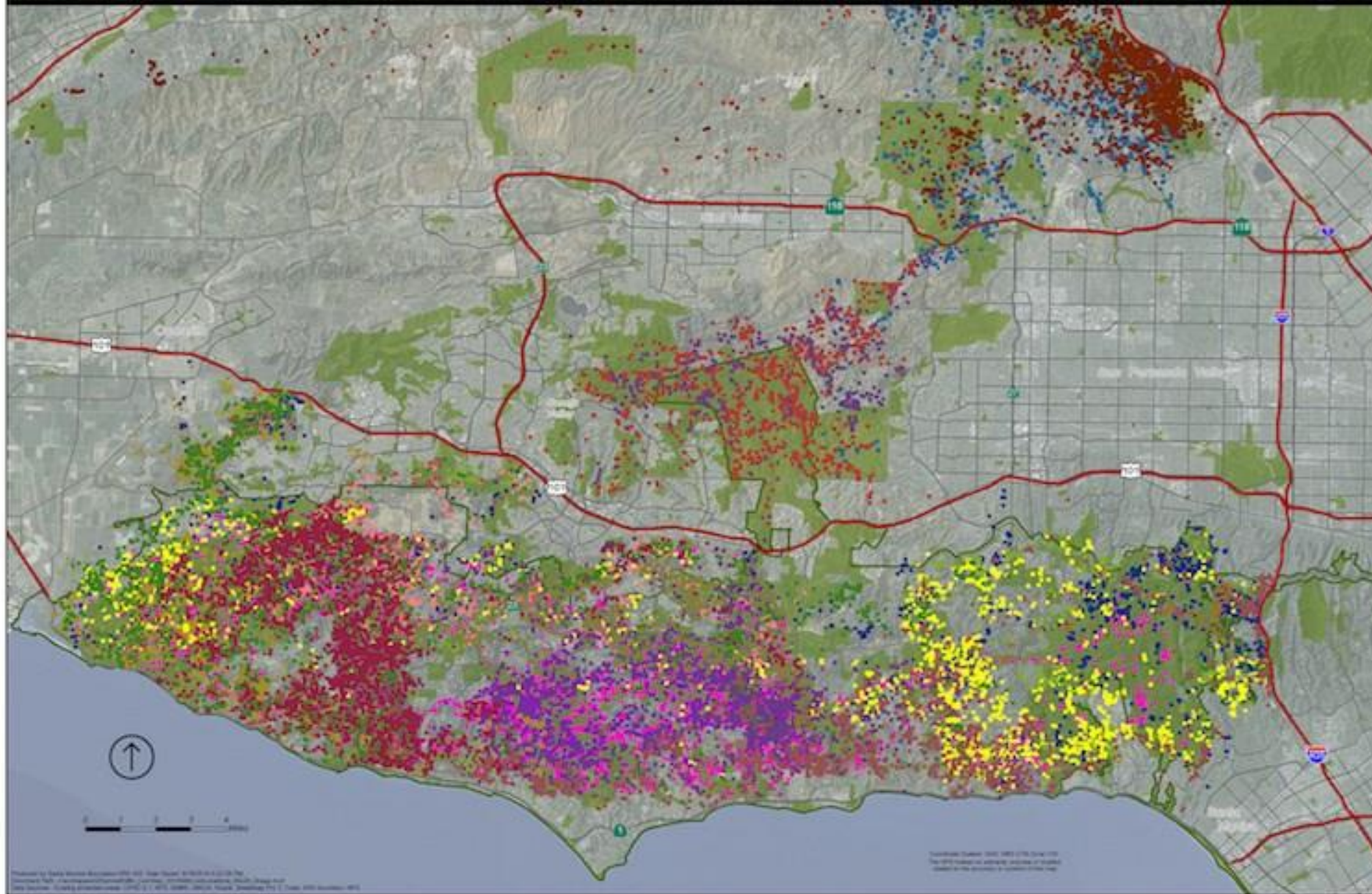


Courtesy of Montana Fish, Wildlife & Parks, 2021



# Mountain Lion Locations

Santa Monica Mountains National Recreation Area







**ECOLOGICAL  
APPLICATIONS**  
ECOLOGICAL SOCIETY OF AMERICA

Article

**Extinction vortex dynamics of top predators isolated by urbanization**





**So what do we do about it?**



**Crossings are a  
European innovation...**





**...that became famous in Canada.**





# Mule deer: an early American test case



Photo: Hall Sawyer



**Good fences make  
good crossings**





# A diversity of crossings



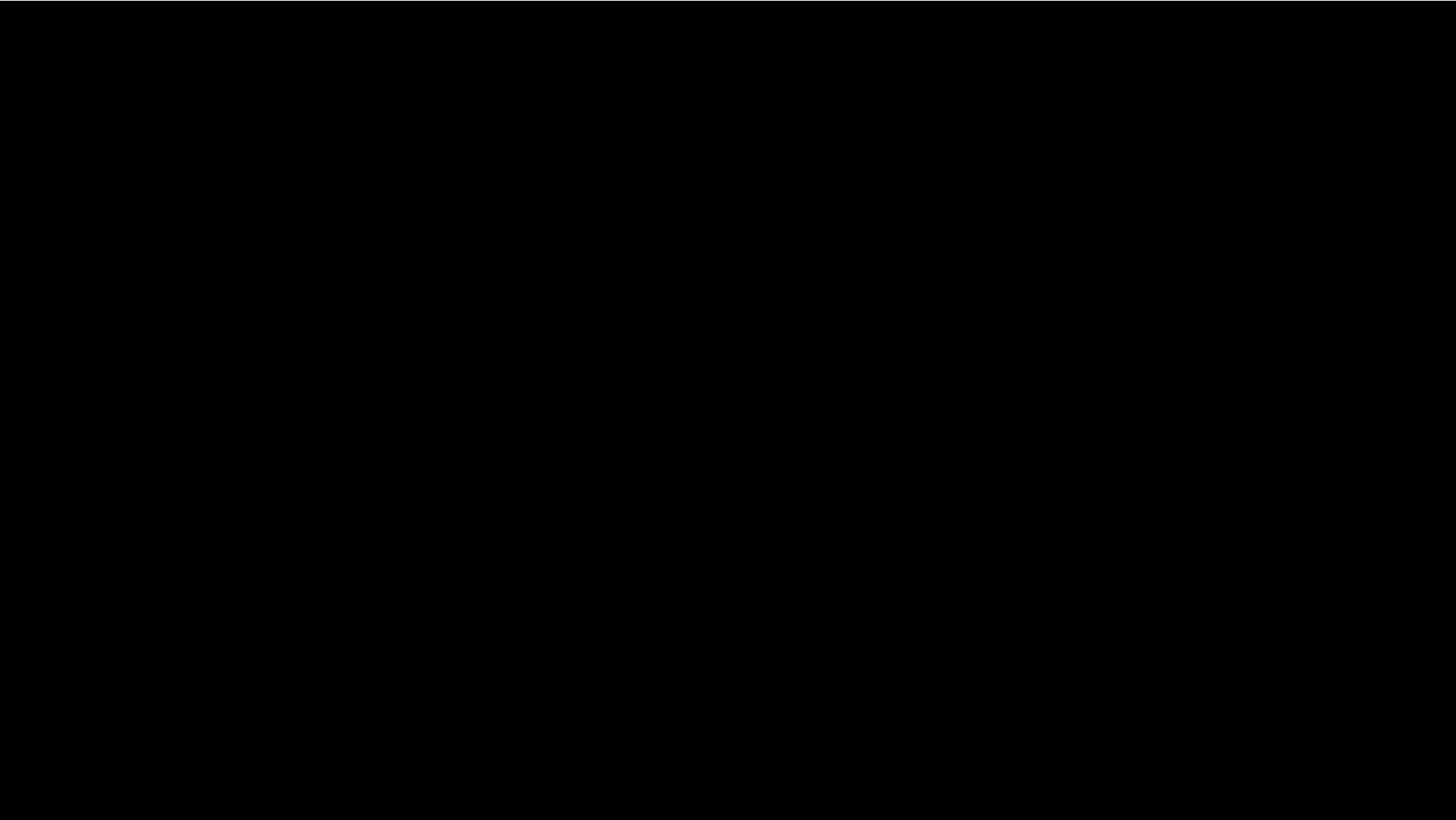














**Crossings are sound conservation—  
and smart fiscal policy**







**Now we need them for more species...**



**...and in more places.**





**We're about to get many more crossings (\$350m worth, to be exact)**





**“Fascinating and  
compassionate”  
—the New York Times**

**“Well-paced and vivid”  
—the Wall Street Journal**

