

Border Mitigation Flood Control for Binational Hazards

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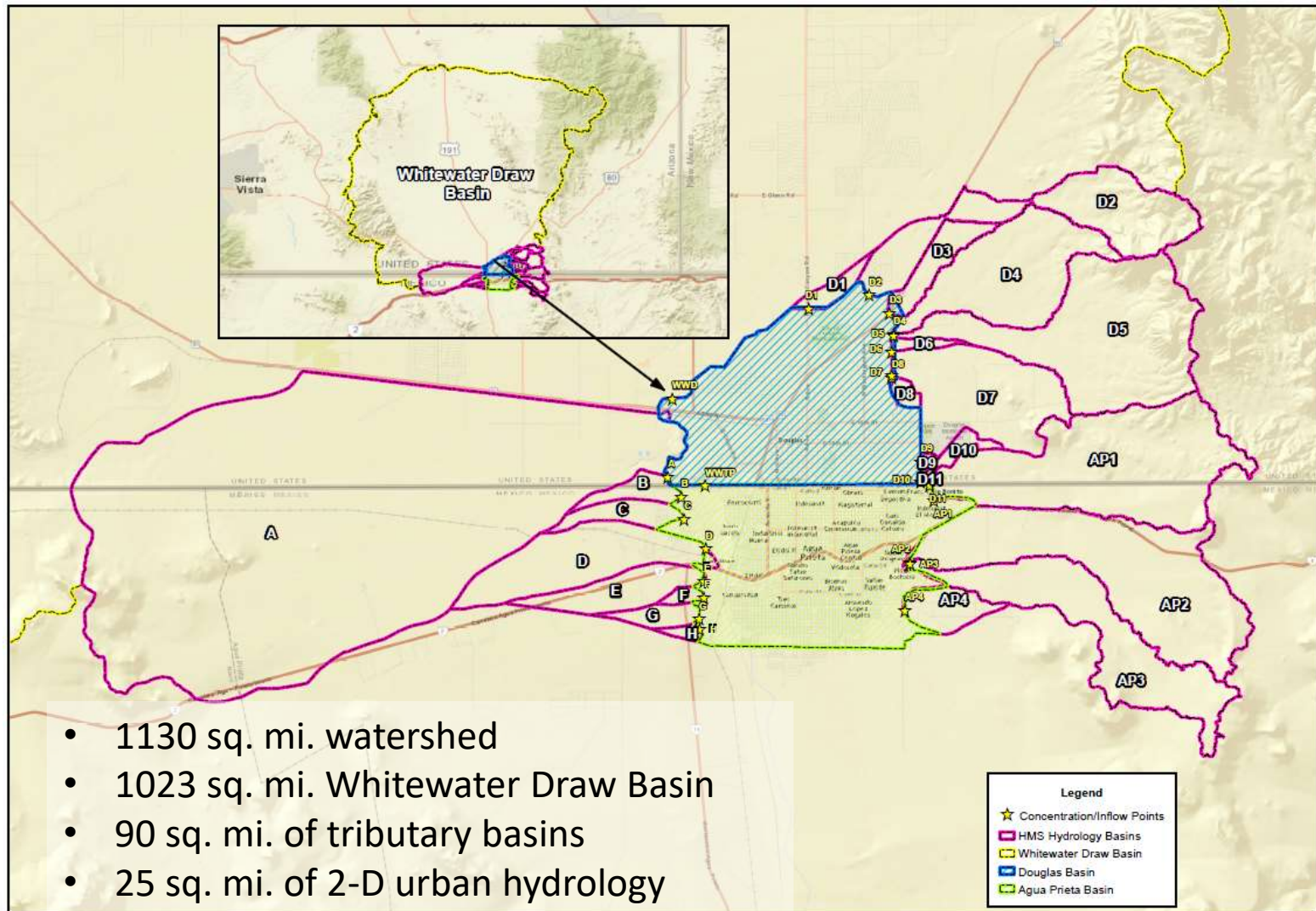
Project Information

- City of Douglas, Cochise County, USA and City of Agua Prieta, Sonora, Mexico (sister cities)
- Recurring floods in Agua Prieta
- Contract through North American Development Bank

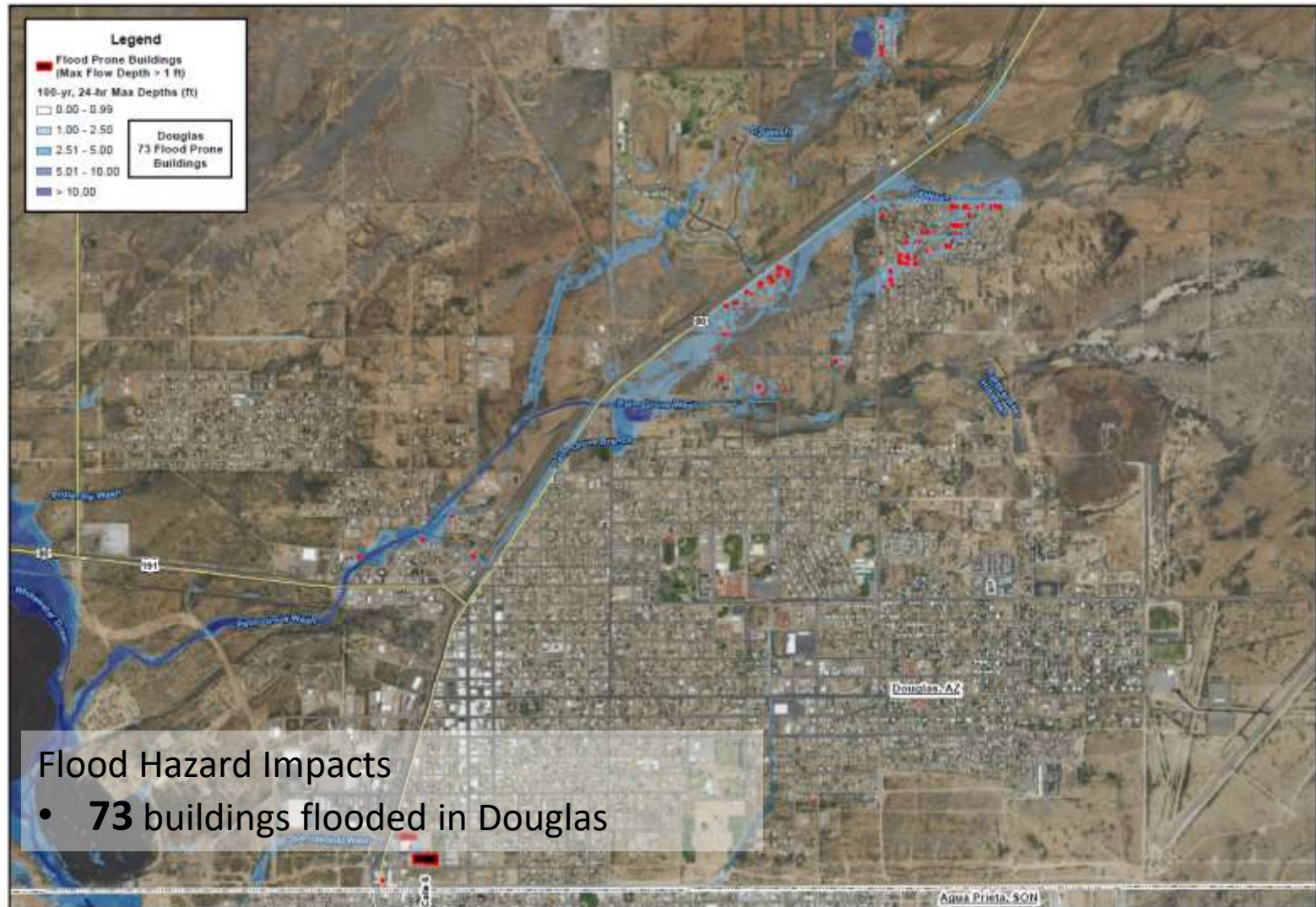


Recurring flooding in Agua Prieta, qualified as a 10-year event

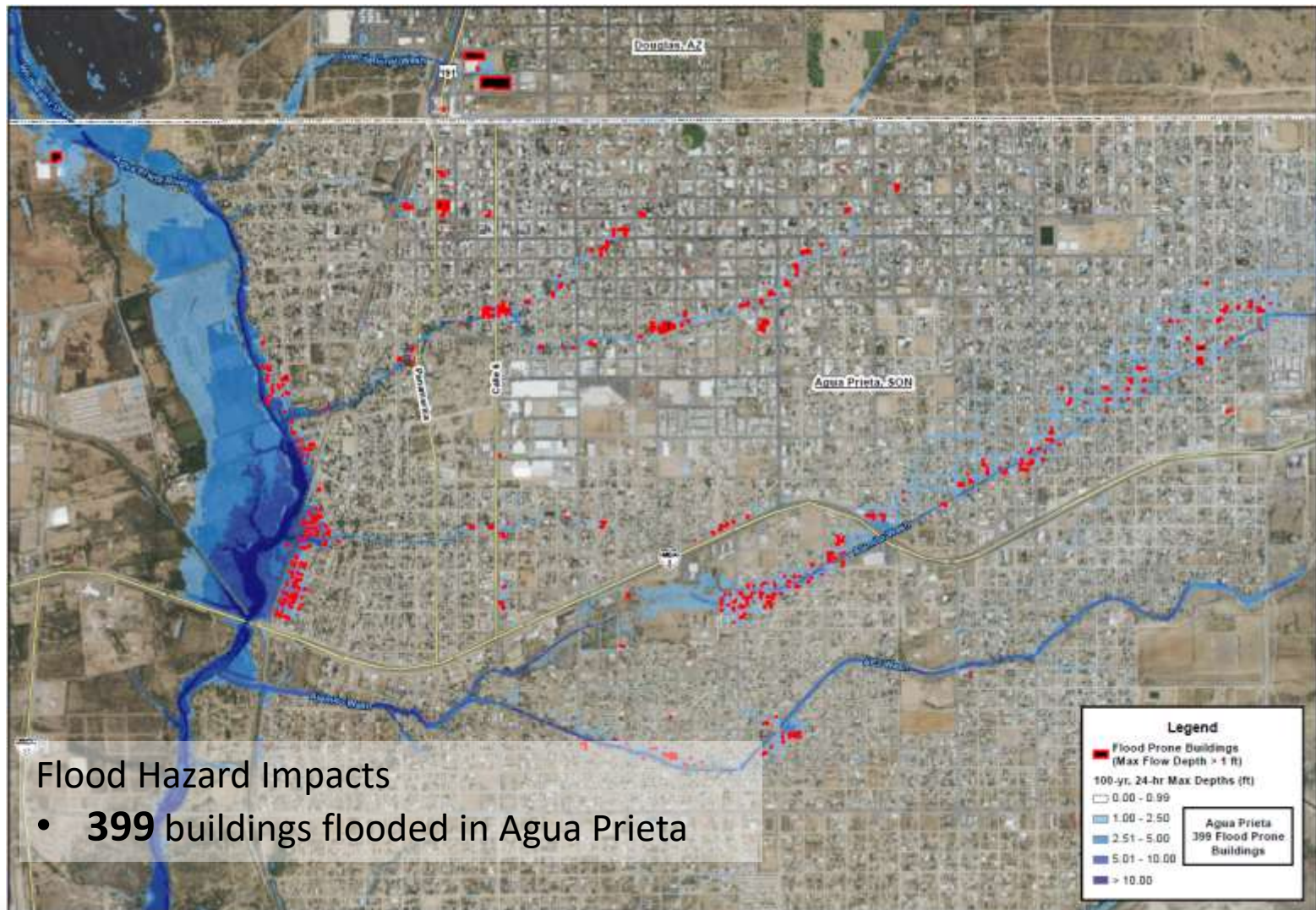
Project Location and Watershed Information



Flood Hazard Areas in Douglas, Arizona



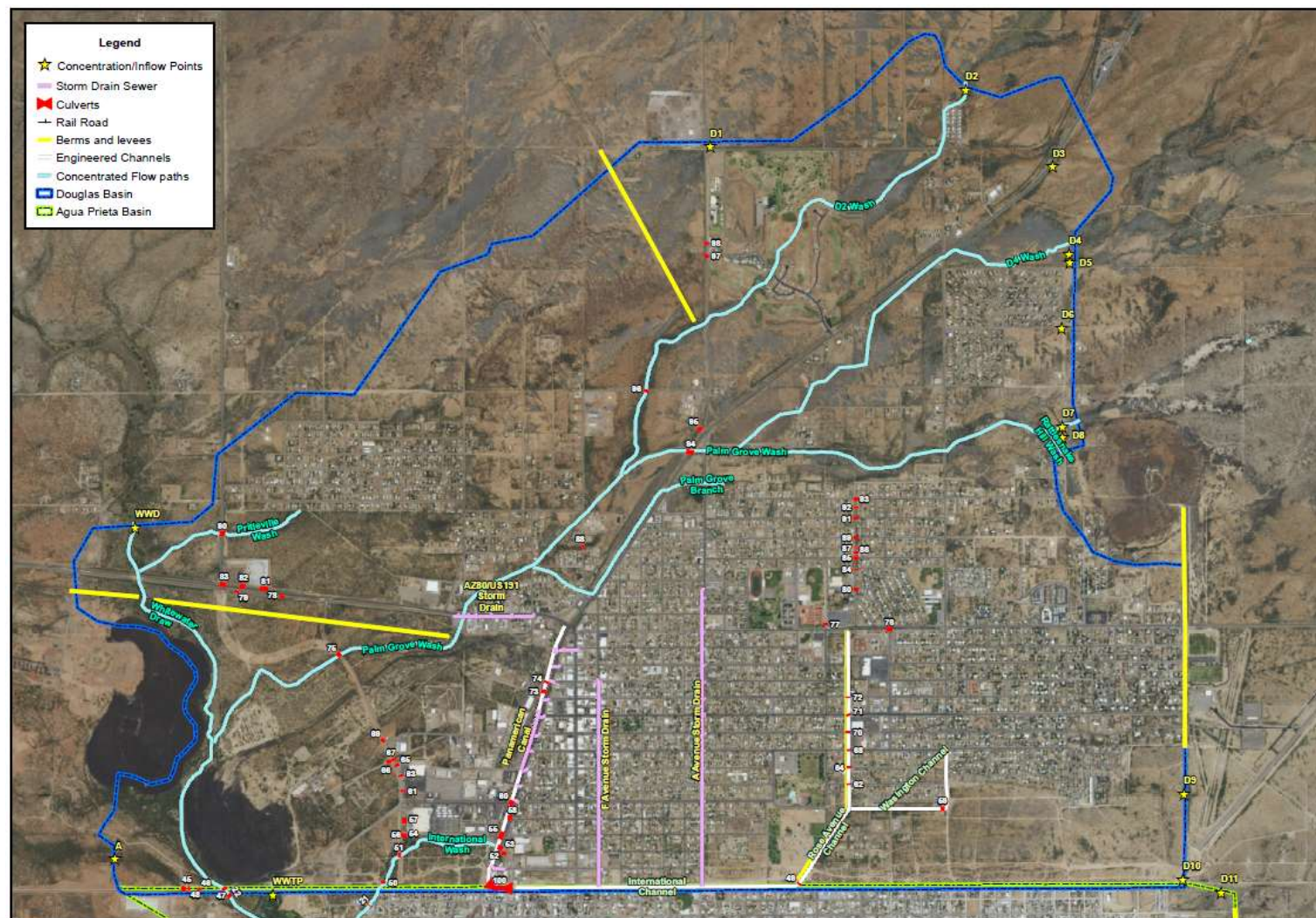
Flood Hazard Areas in Agua Prieta, Sonora

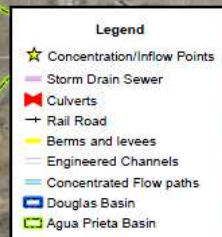


- **73** buildings damaged in Douglas
- **399** buildings damaged in Agua Prieta



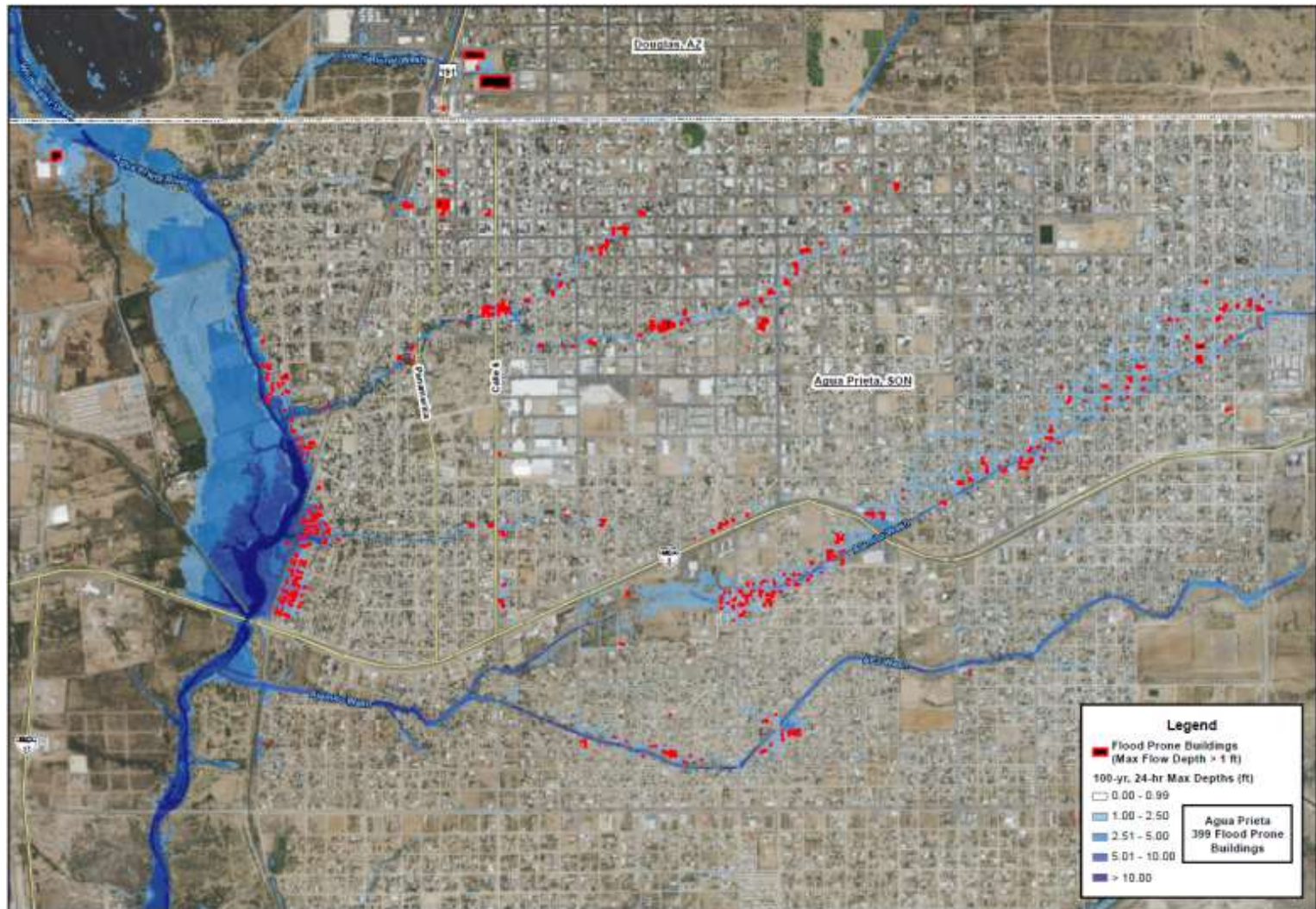
WHY?





Flood Hazard Areas in Agua Prieta, Sonora

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Agua Prieta River Constrained Crossing

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Alamito Wash Basin



Alamito Wash

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Alamito Wash

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2-Year Event Flooding



10-Year Event Flooding

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Agua Prieta Flooding in 2012

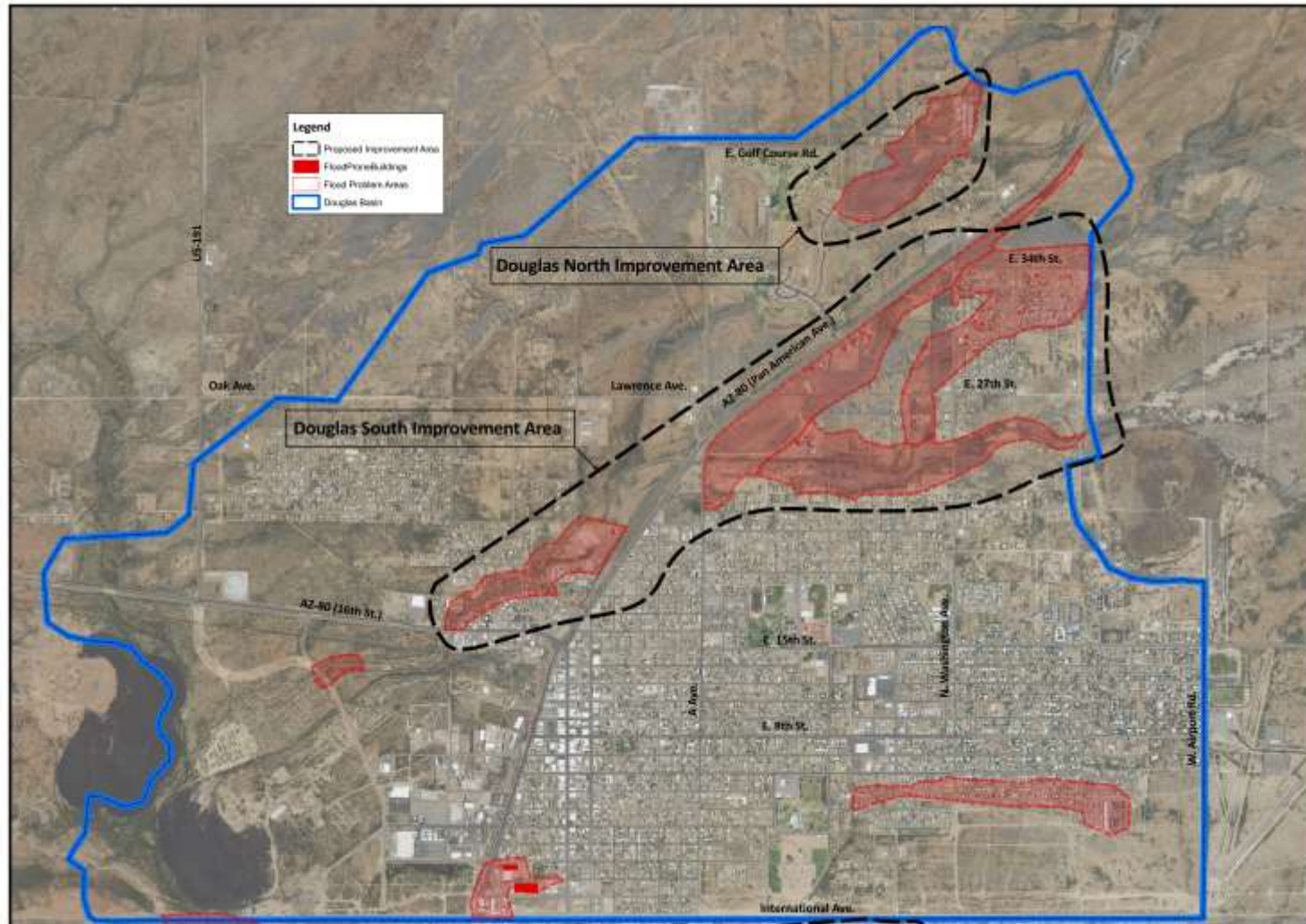
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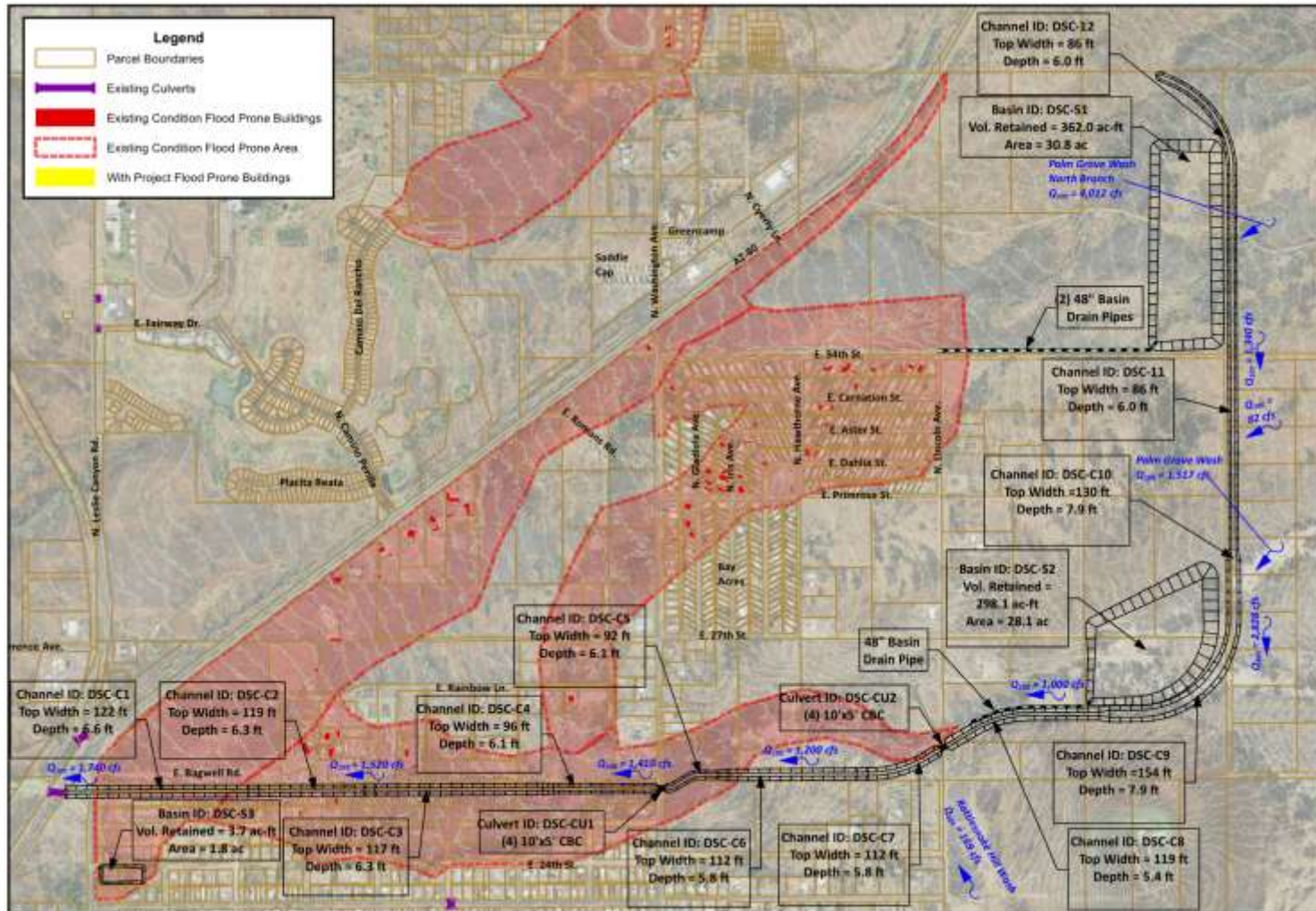
- Existing channels with lack of conveyance
- Undersized infrastructure
- Short-duration/fast-occurring events



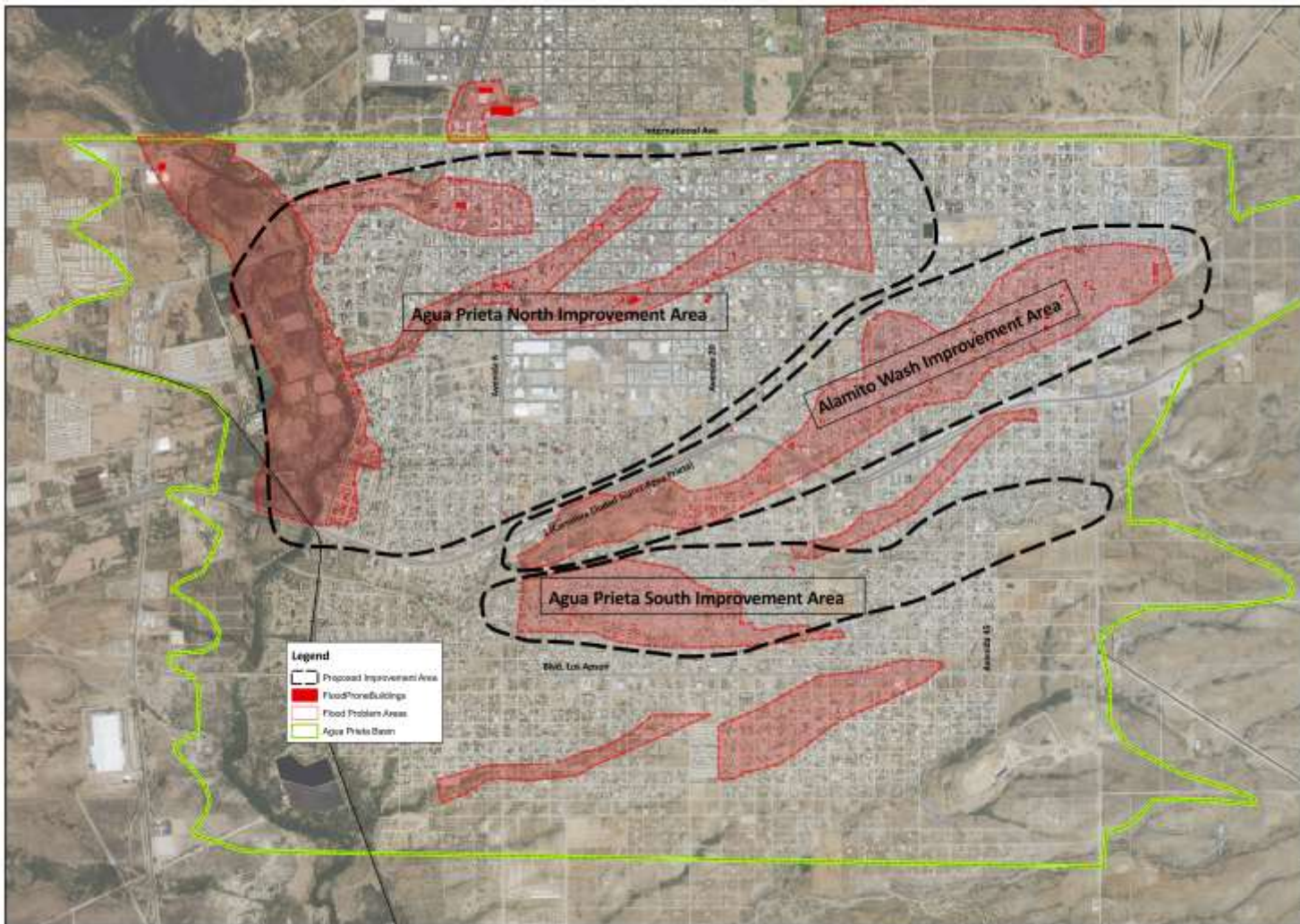
Improvement Areas – Douglas



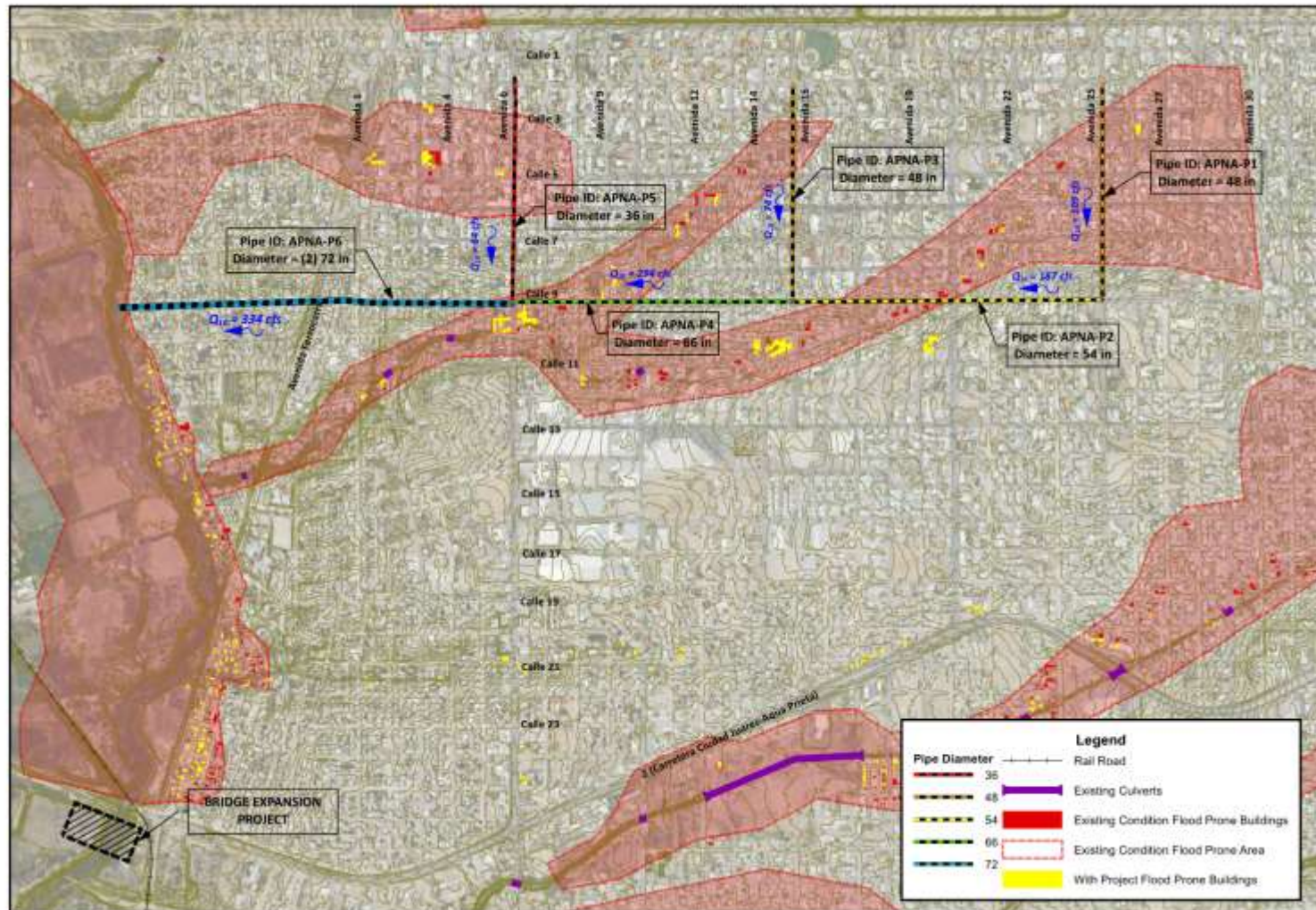
Douglas Recommended Alternative



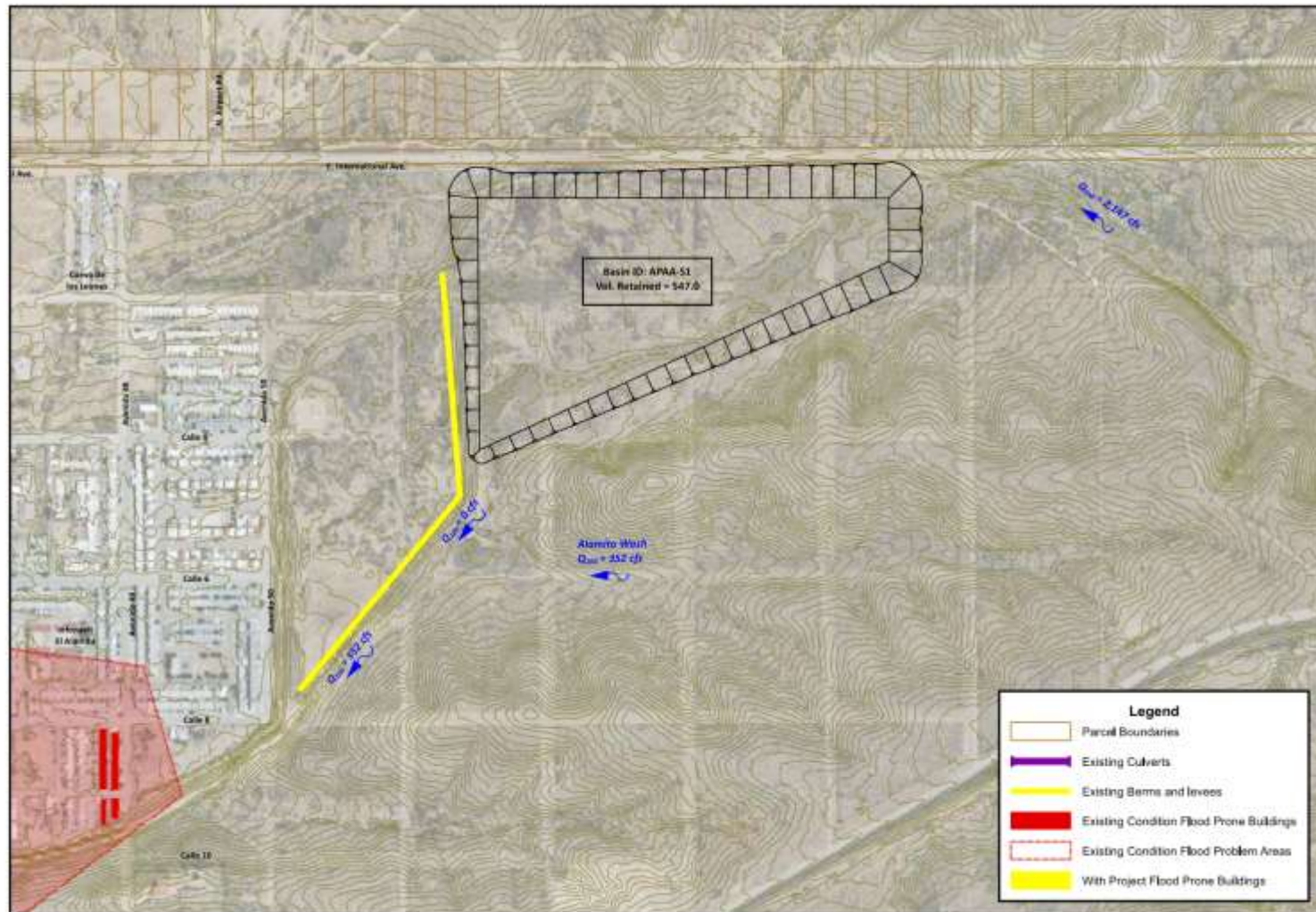
Improvement Areas – Agua Prieta



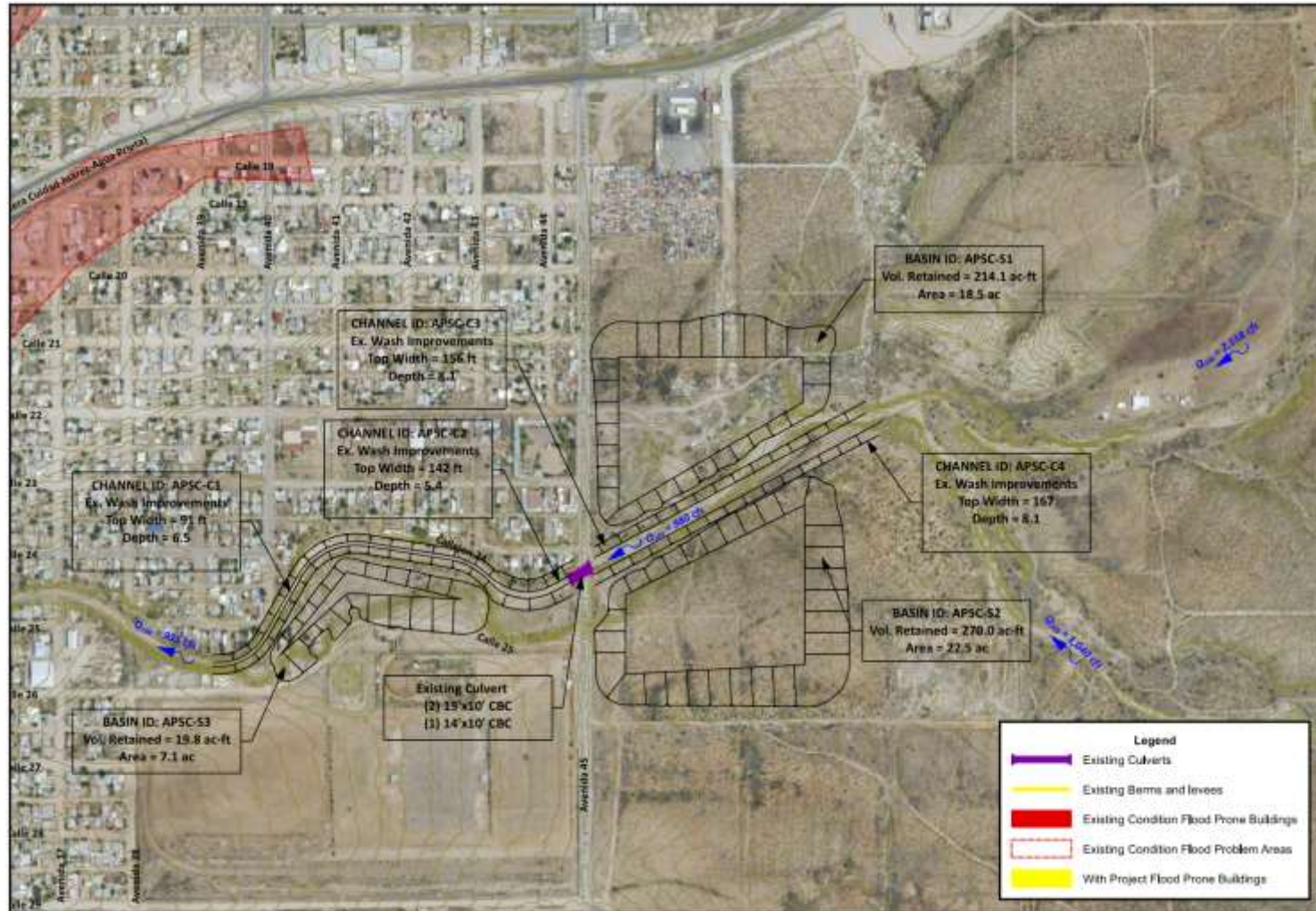
Agua Prieta - North Recommended Alternative



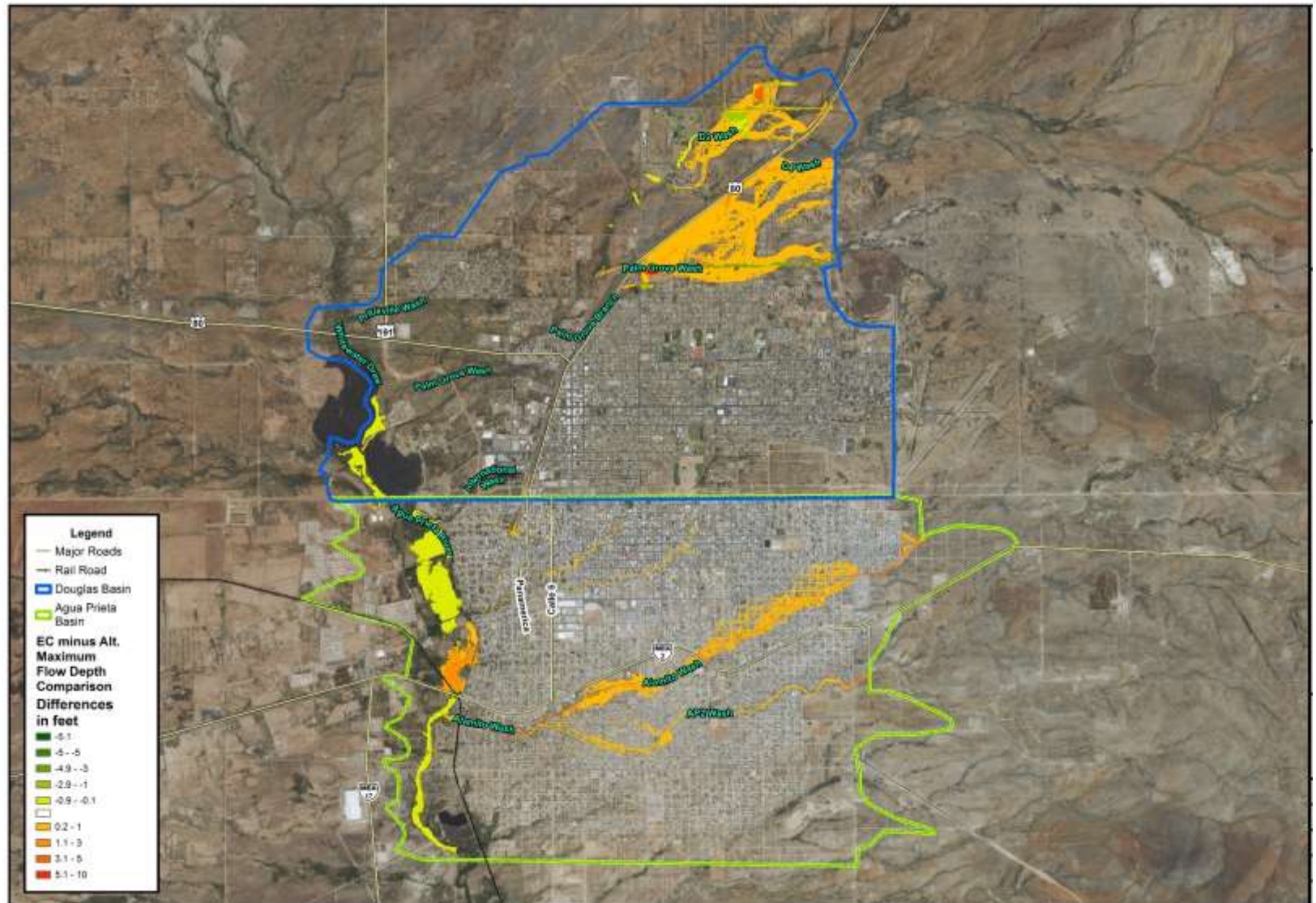
Alamito Recommended Alternative



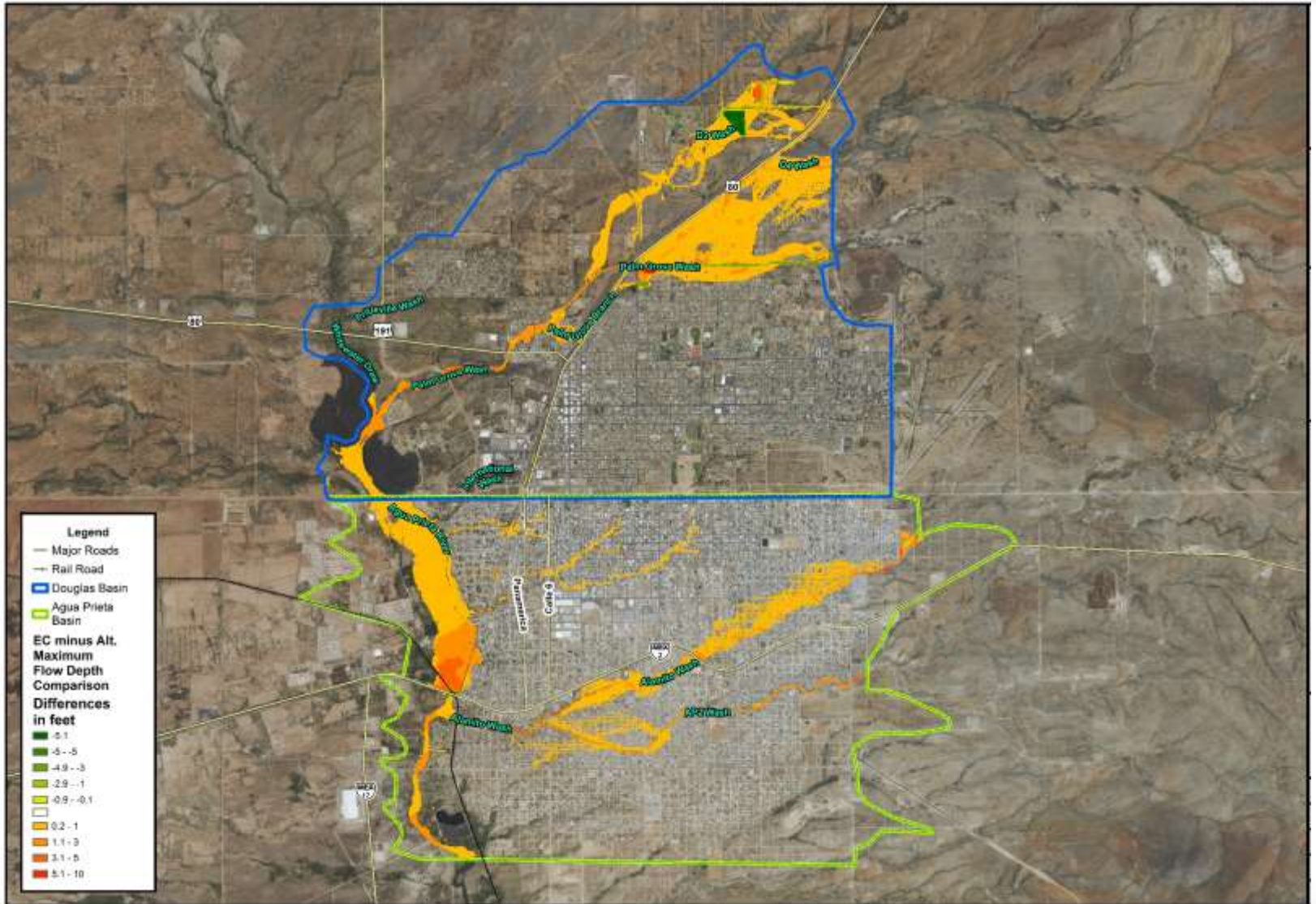
Agua Prieta - South Recommended Alternative



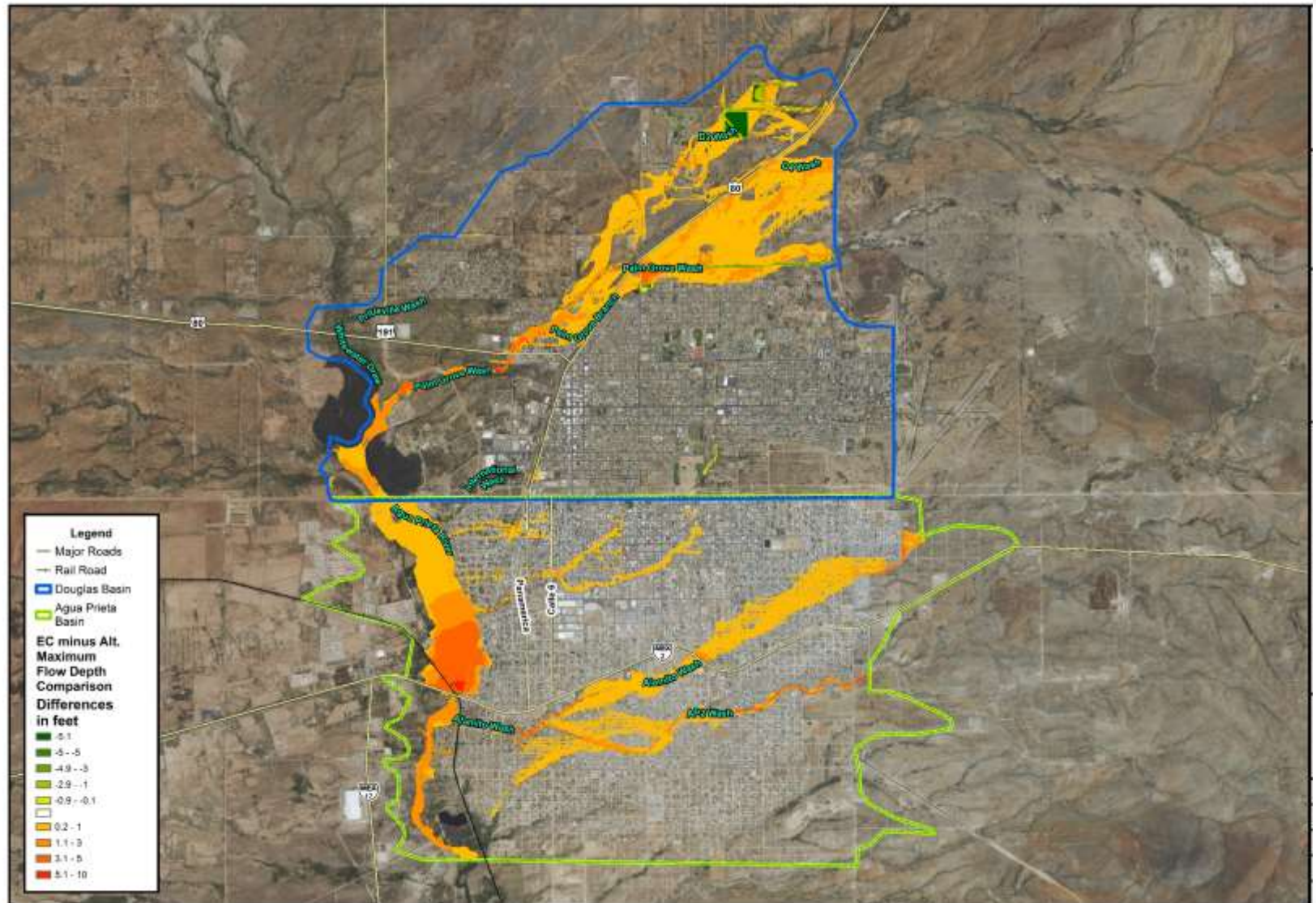
Flood Hazard Mitigation Alternatives (2-year)



Flood Hazard Mitigation Alternatives (10-year)



Flood Hazard Mitigation Alternatives (100-year)



Agua Prieta River Flooding



- Staggering differences in flood hazards, despite similarities between watersheds
- Planning and policy enforcement is fundamental
- While prompt mitigation is needed in Agua Prieta, there is work to do in Douglas as well
- There is willingness to cooperate to solve common problems across of the border

