Comprehensive Living Models, Driving Effective Mitigation



Comprehensive Modeling



Integrated 1D/2D Modeling

- Best for modeling basin-wide unconsolidated flow modeling*
- Best to understand impact at when work is done at
- Models Are:
 - Complex and require lots of good data.
 - Can take longer to preform analysis.
 - Can be more \$\$





What is a "Living Model"

- Living models are built by communities that want to maintain models they can:
 - Continually leverage to understand issues with flooding
 - Impacts of developments
 - Drainage system changes
 - Alternative Analysis for CIPs
 - Design
 - Impact of proposed development regulation or zoning changes on the entire study area.
- Upgrades and adjustments can typically be made to the model with minimal effort.







Original Canaan & Ponus Study

- Design Storm 4% Annual Chance Event
 - 25-year storm
 - 6.39" of rain in 24-hour period
- Study Area

Woodard & Curran

- Approximately 468 acres (a little over 650 with river)
- Current Floodplain
 - Approximately 108 acres
 - Average depth of 1.4 feet



Visualize Alternatives



Study 2, Four Drainage Improvements

113

s Avenue

Study 2A, Ponus Road Collection System



DEPARTMENT (**PUBLIC WORKS & OPERATIONS**



Study 2B, Ditch Outlet Improvement

Comment "Ditch has 2 pipes coming in and one going out"





Flood Analysis (2 out pipes)







Study 2C, Remove Surging Channel



Study 2D, Hillside Flow Erodes Street



DEPARTMENT OF PUBLIC WORKS & OPERATIONS Sewer Separation and Flood Mitigation with Plunge Pool / Storage.



