

Identification and Survey of Floodplain Structures

Technical Workshop

Lacey Community Center

October 30, 2013



Purpose of Structure Surveys

- Improve Flood Damage Estimates
 - Previous analyses relied on parcel boundaries and depth of water on ground
 - Current analyses will use actual structure locations and depth of water in buildings (if possible)
 - Allow specific statements about potential impacts and benefits of alternatives on particular structures

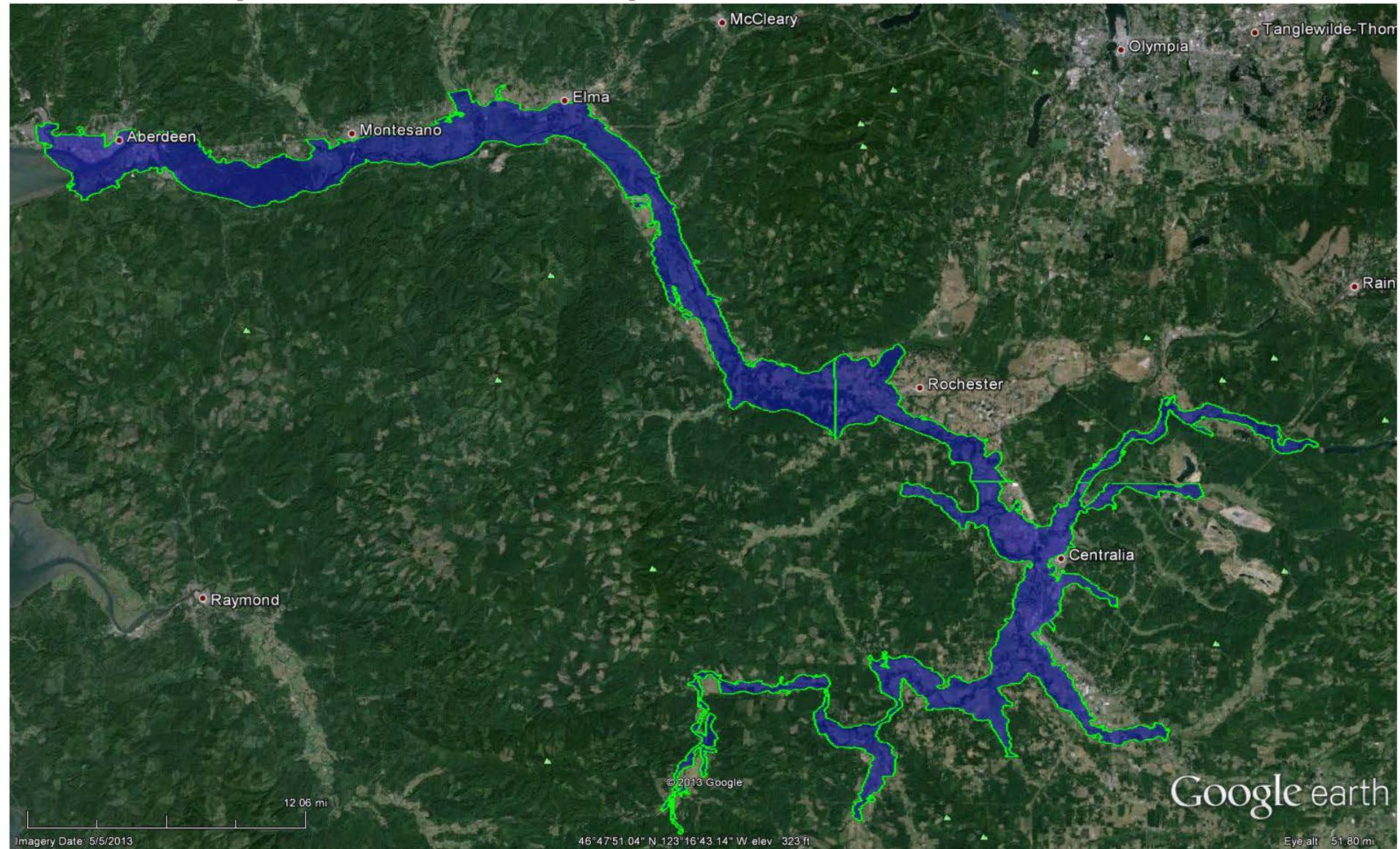
Refinements in Approach

- Determine which actual structures are flooded
- Estimate water depth in the structure
- Identify residences and commercial buildings versus “outbuildings”
- Also allows count of structures affected, in addition to total damage

Data Collected or Generated to date

- FEMA 100-year floodplain
- 100-year floodplain delineation from Flood Authority HEC-RAS Model
- Composite 100-year floodplain (merge the two floodplains and buffer the result)

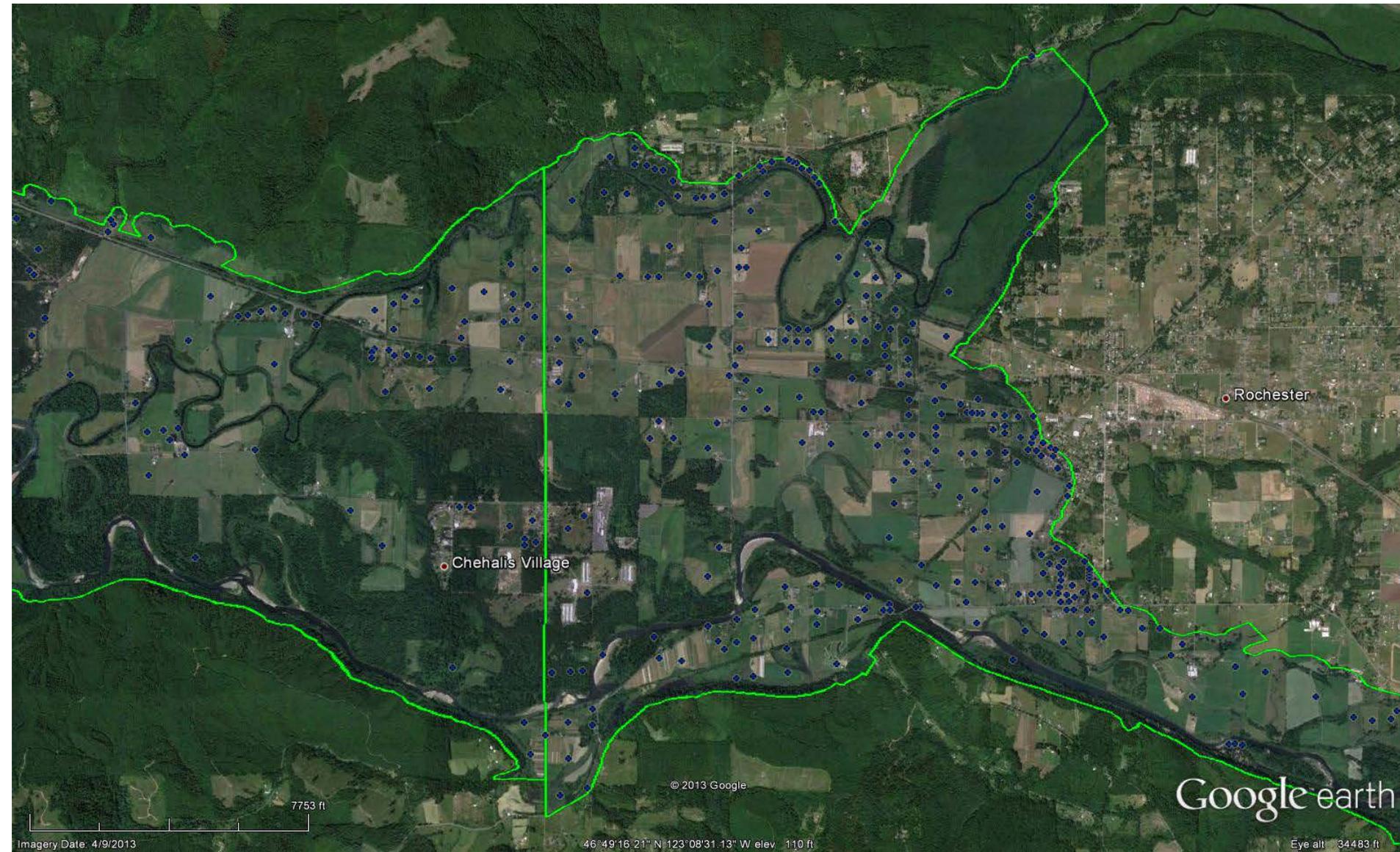
Composite Floodplain (preliminary)



Data Collected or generated to date

- GIS shapefile showing a point at the centroid of each tax parcel with a structure value greater than \$0
- GIS shapefile with roofline delineations for structures in the floodplain.
- Elevation certificates for Lewis County (in PDF format)

Parcels with Structures



Parcels with Structures



Actual Structure Delineations



Additional Information Required

- Economic analysis requires depth of flooding above finished floor
- Hydraulic model gives depth of flooding above ground
- Need depth of finished floor above ground
- How to obtain?

Proposal for obtaining finished floor elevations

- Use Google Street view or similar to estimate building floor above ground
- Add elevation taken from LiDAR data set
- Result is finished floor elevation
- Verify with field surveys on limited basis

Remotely acquire floor elevation data



Proposal for obtaining finished floor elevations

- Conduct pilot program to test and refine methods
- Estimate FF for +/- 100 homes
- Survey 10 or more of these to check results
- If the estimated floor elevations are generally within +/- 1 foot of actual elevations then proceed