

# Island Park Reservoir Enlargement Project

Land and Real Estate Assessment  
Project Report  
July 24, 2019

# Project Scope Overview

1. Data Collection, Evaluation and Review
  - Pre-project topography & imagery      Public records
2. Base Mapping, Field Reconnaissance
  - GIS map      Survey      Refinement
3. Water Surface Rise Simulations
  - Analysis method      Effects map and catalog
4. Land Assessment Report
  - Count & valuation      Decision tool



# Analysis Elements

- Residences
  - Potential wetted structures
  - Potential residential protection
  - Potential wetted basements
- Property
  - Potential wetted outbuildings
  - Potential wetted developed property
  - Potential wetted undeveloped property
- Septic Effects
  - Horizontal setback requirement (200-foot)
  - Vertical separation requirement (GW elevation + minimum separation)

# Analysis Guiding Principles

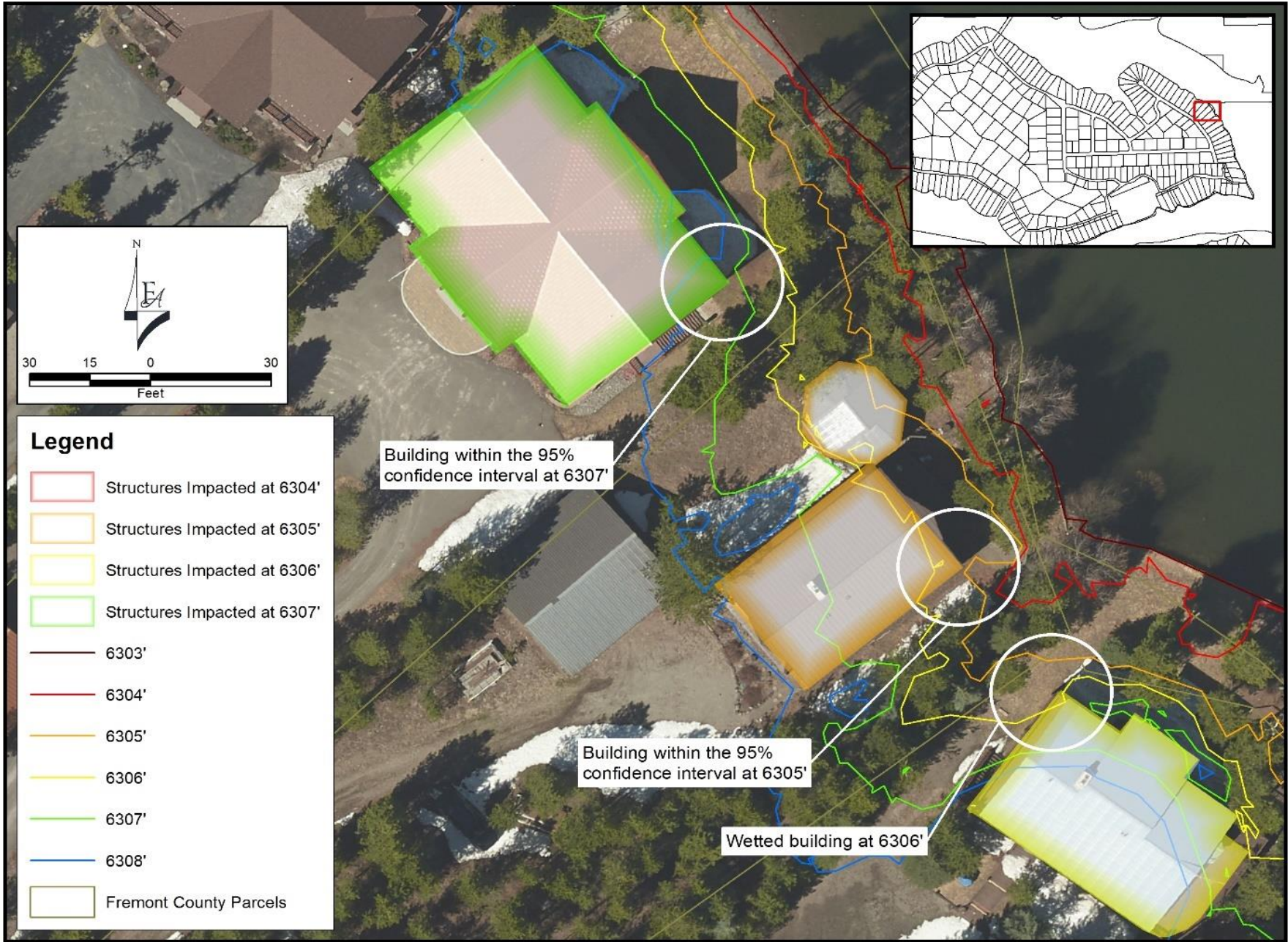
## 1. Decision Support Tool

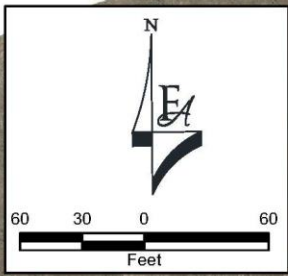
- Counts
- Valuation
- Trends

## 2. Individual Lot Based Analysis

- Potential for scrutiny on lot by lot basis
- Documentable GIS elements describing effects

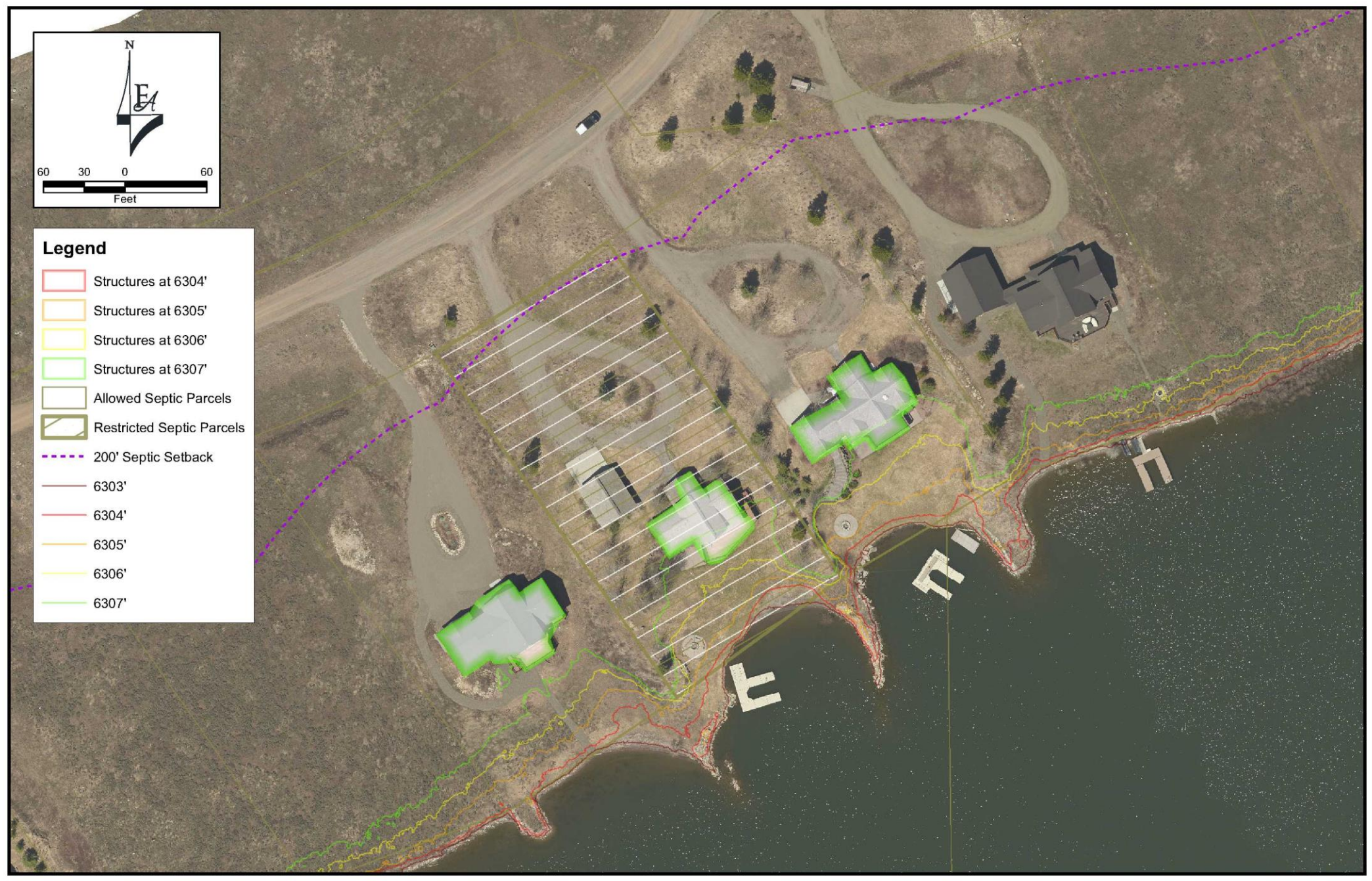
## 3. Effects categorized at 1-foot contour intervals from 6303 to 6307

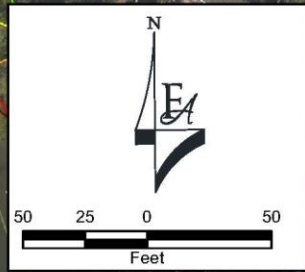
















**Legend**

- Structures at 6304'
- Structures at 6305'
- Structures at 6306'
- Structures at 6307'
- Allowed Septic Parcels
- Restricted Septic Parcels
- 200' Septic Setback
- 6303'
- 6304'
- 6305'
- 6306'
- 6307'





**Legend**

-  Structures at 6304'
-  Structures at 6305'
-  Structures at 6306'
-  Structures at 6307'
-  Allowed Septic Parcels
-  Restricted Septic Parcels
-  200' Septic Setback
-  6303'
-  6304'
-  6305'
-  6306'
-  6307'





# Decision Matrix Development

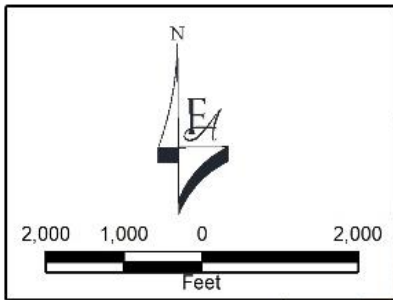
- Document and summarize effects data by parcel
- Collate aggregate parcel effects data by contour
- Develop valuation for affected elements
- Develop matrix of estimated effect value by parcel and contour

# Simulation Results



Parameter	Counts by Proposed Elevation (feet)				
	6303	6304	6305	6306	6307
Total wetted residential structures (ea.)	0	3	18	55	84
Total wetted basements (ea.)	4	6	6	8	9
Total potential residential protection (ea.)	32	52	64	64	64
Total estimated wetted outbuilding (ea.)	0	4	8	10	17
Total restricted septic parcels (ea.)	58	71	79	93	134
Total affected parcels (ea.)	87	123	153	190	232
Total wetted property area (acre)	0	119	179	254	360

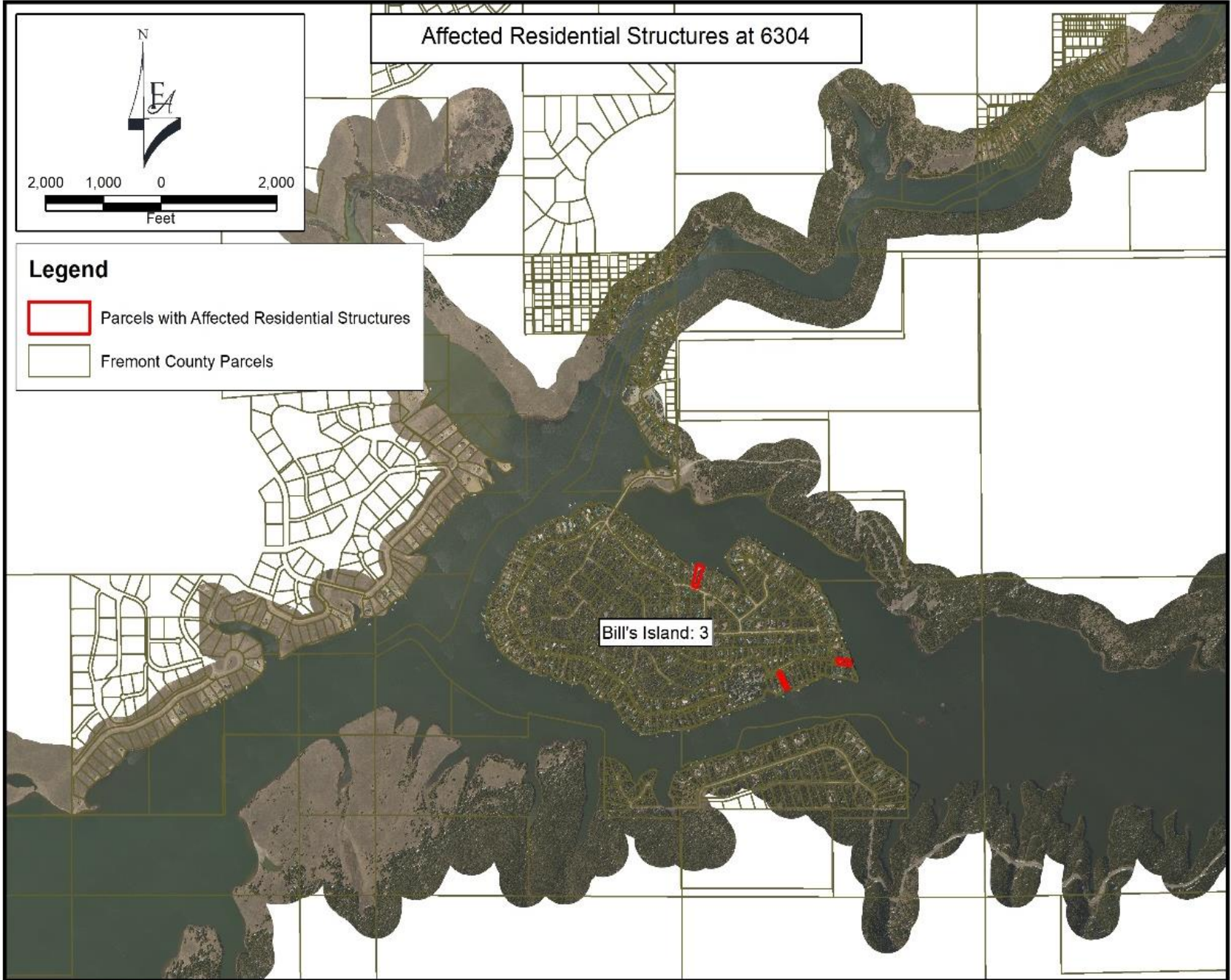
Parameter	Volume & Valuation for each Evaluated Elevation (feet)			
	6304	6305	6306	6307
Additional Storage (AF)	8,253	16,808	25,654	34,796
Estimated Real Estate Effect Value (\$M)	\$9.3	\$22.2	\$48.0	\$71.9

# Affected Residential Structures at 6304



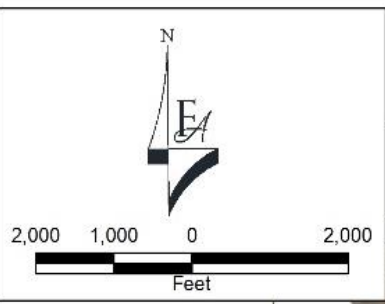
**Legend**

-  Parcels with Affected Residential Structures
-  Fremont County Parcels



Bill's Island: 3

# Affected Residential Structures at 6305



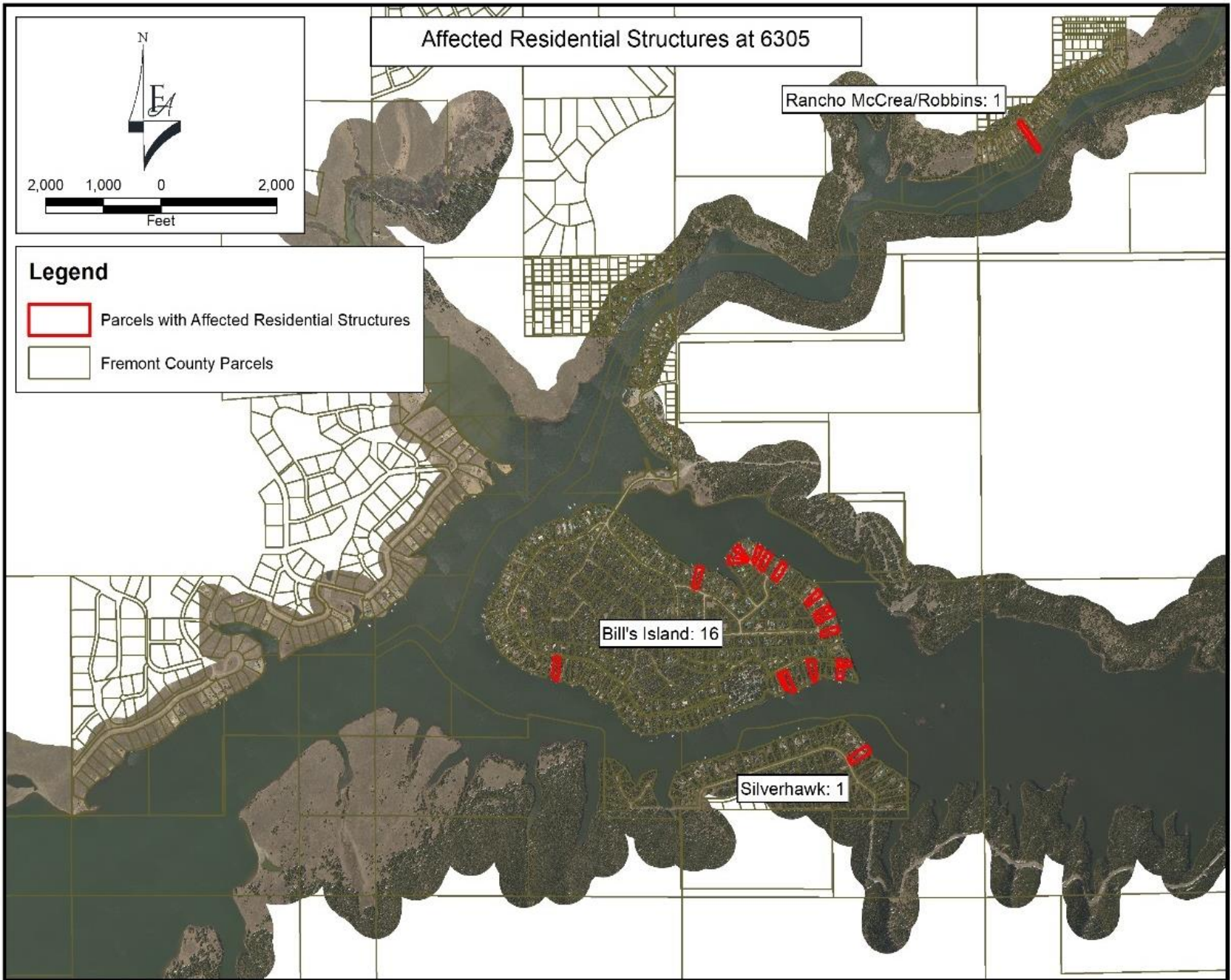
**Legend**

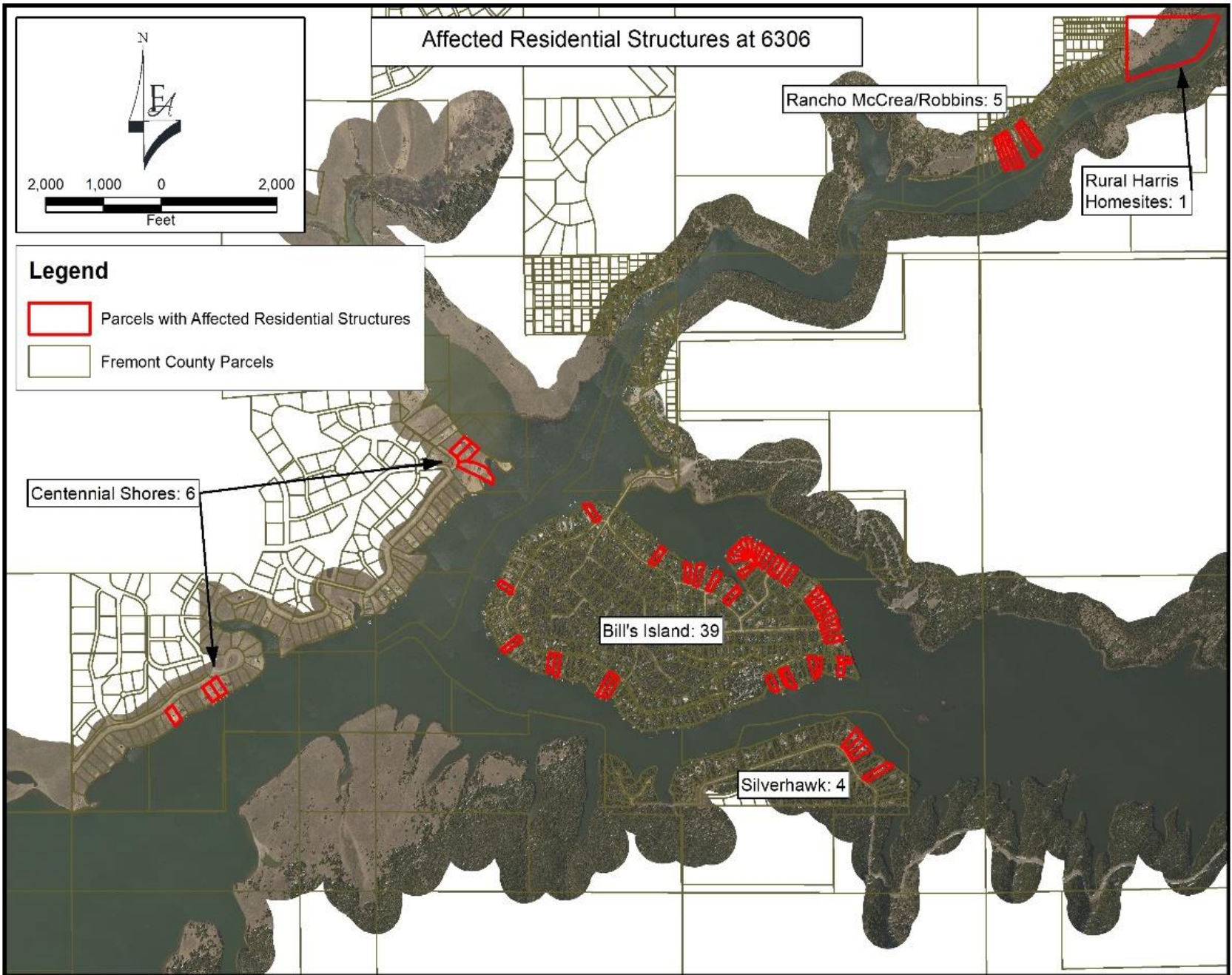
-  Parcels with Affected Residential Structures
-  Fremont County Parcels

Rancho McCrea/Robbins: 1

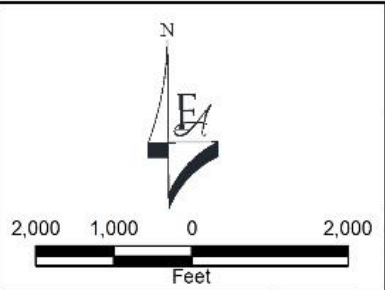
Bill's Island: 16

Silverhawk: 1





Affected Residential Structures at 6306



**Legend**

-  Parcels with Affected Residential Structures
-  Fremont County Parcels

Rancho McCrear/Robbins: 5

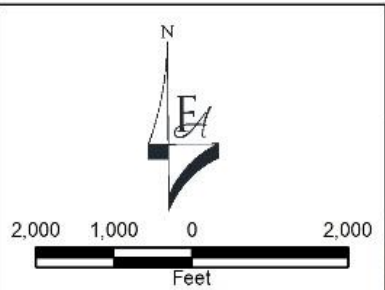
Rural Harris Homesites: 1

Centennial Shores: 6

Bill's Island: 39

Silverhawk: 4

# Affected Residential Structures at 6307



**Legend**

-  Parcels with Affected Residential Structures
-  Fremont County Parcels

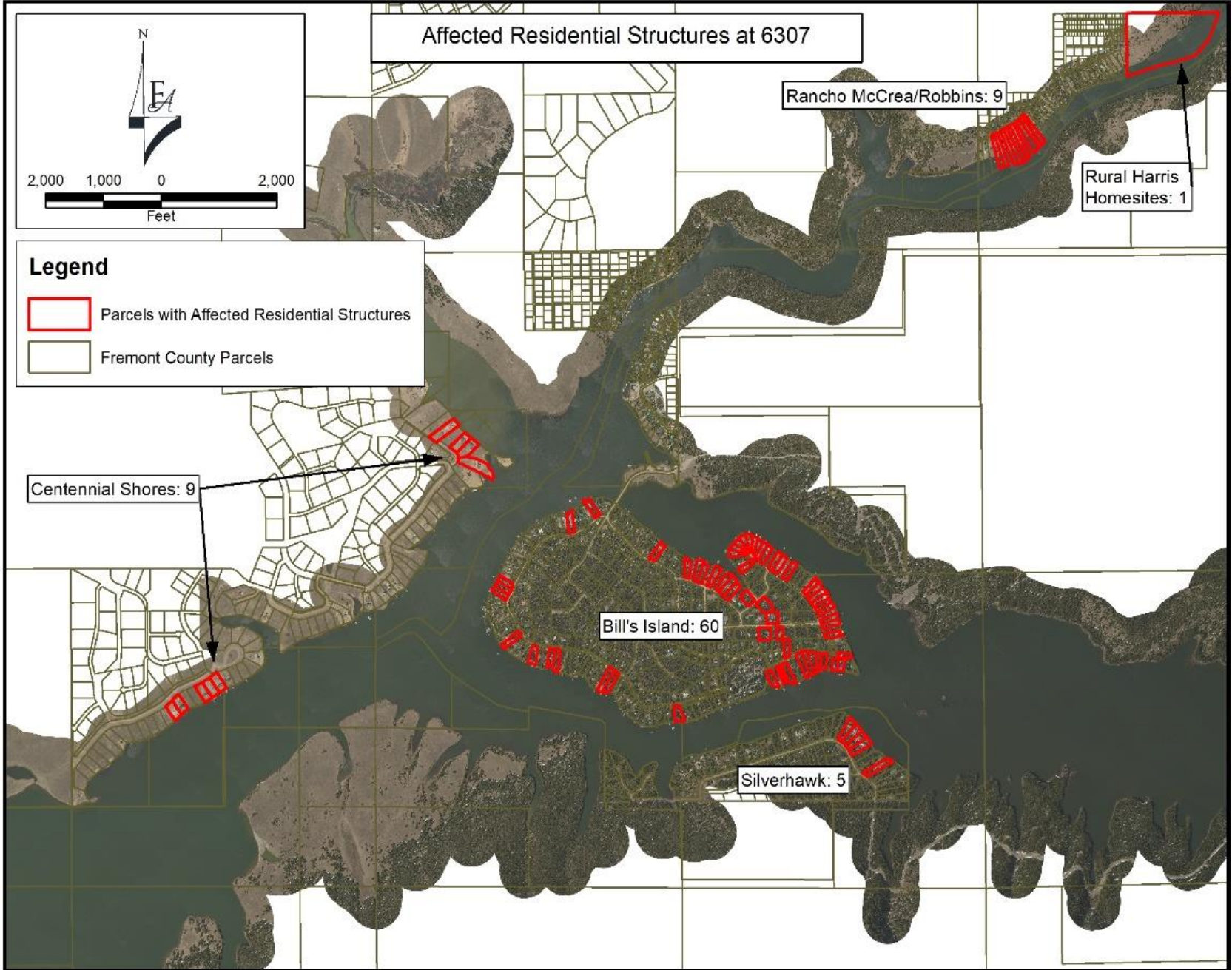
Rancho McCrea/Robbins: 9

Rural Harris Homesites: 1

Centennial Shores: 9

Bill's Island: 60

Silverhawk: 5



# Conclusions

- Optimal target full pool elevation 6305
  - Elevation 6304 may not justify a project
  - Elevation 6305 could increase total storage 12% and low-end storage 80%
  - Elevation 6305 / 6306 breakpoint
  - Elevation 6305 maximum for some flowage easements
- Bureau of Reclamation flowage easement definition, understanding, and administration
- Other potential project benefits
  - Recreation access and navigation improvements
  - Reservoir and downstream water quality management

# Next Steps

- Land Assessment Refinement
  - On site survey extent of inundation, structures and features, property boundaries
  - Refined septic system assessment
  - Verification of groundwater levels
  - Geotechnical investigation
- Further definition of Bureau of Reclamation flowage easements is recommended
- Bureau of Reclamation feasibility and environmental compliance studies
  - Basin hydrology, water use / rights, flood routing
  - Reservoir and system operations
  - Structural modifications
  - Environmental evaluation
  - Public and stakeholder involvement



# Questions / Discussion