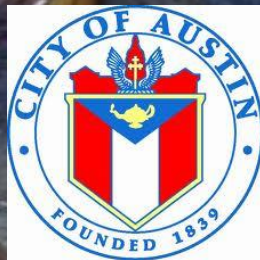


# LAKE AUSTIN DRAWDOWN MUSSEL SURVEY, 2017

Liz Johnston, WPD

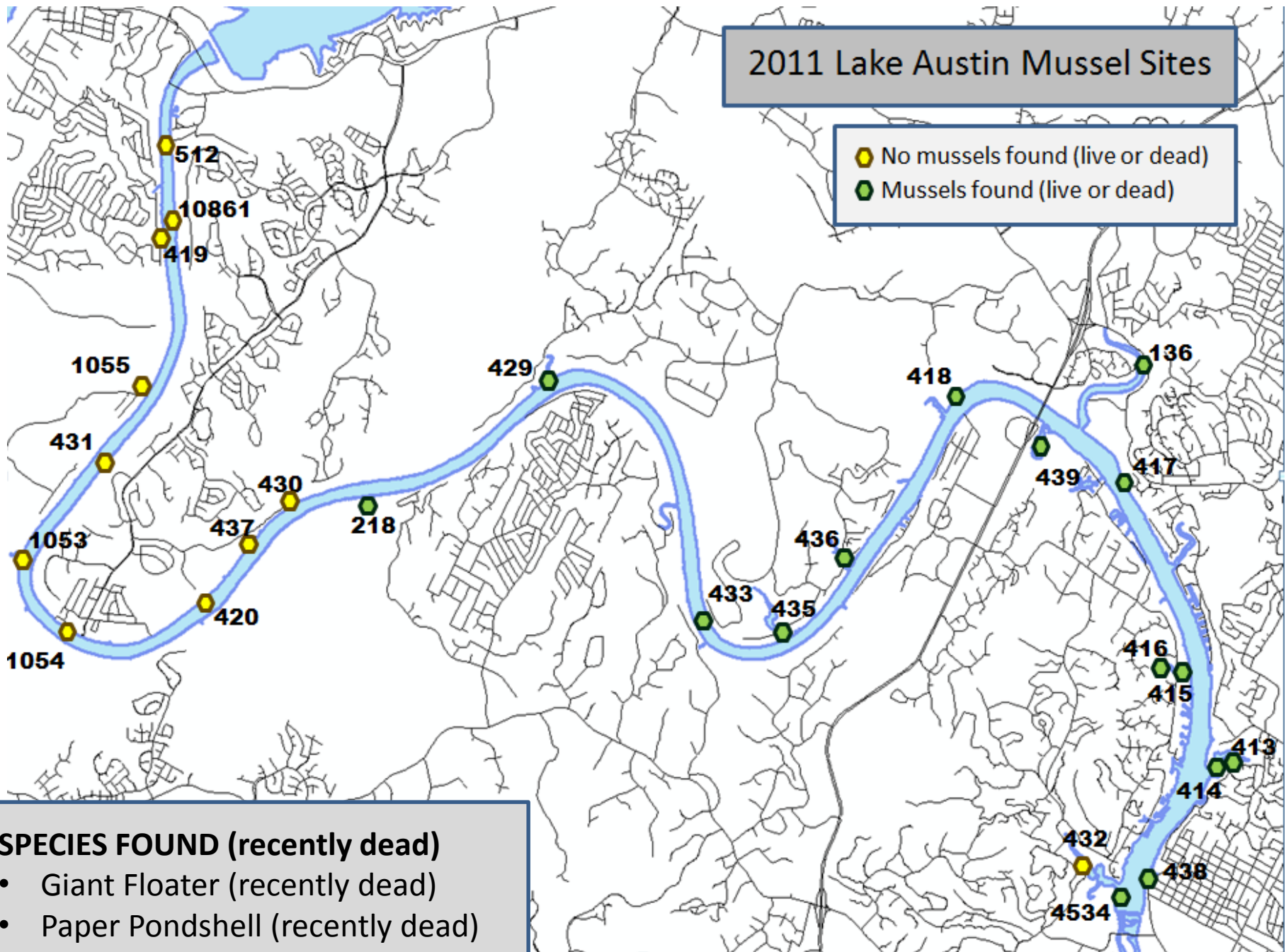
Presented to LCRA

April 19, 2017



## 2011 Lake Austin Mussel Sites

- No mussels found (live or dead)
- Mussels found (live or dead)

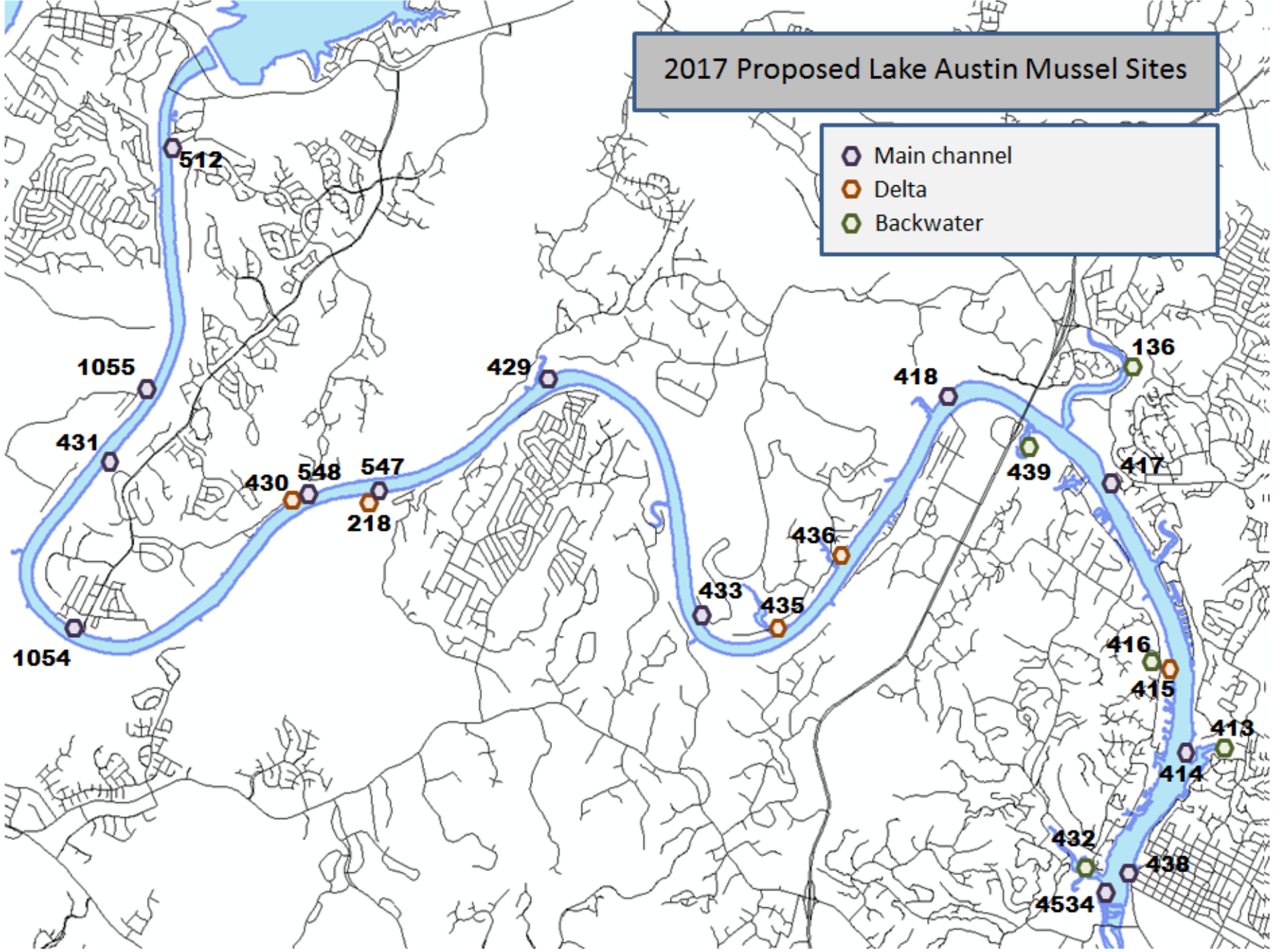


### SPECIES FOUND (recently dead)

- Giant Floater (recently dead)
- Paper Pondshell (recently dead)
- Yellow Sandshell (long dead)

# 2017 Proposed Lake Austin Mussel Sites

- Main channel
- Delta
- Backwater



# BACKWATER HABITAT TYPES



# DELTA HABITAT TYPES



# MAIN CHANNEL HABITAT TYPES



# SPECIES



## RECENTLY DEAD

- **Giant Floater (*Pyganodon grandis*)**
- **Paper Pondshell (*Utterbackia imbecilis*)**
- Lilliput (*Toxolasma texasiensis*)
- Fragile Papershell (*Leptodea fragilis*)
- Southern Mapleleaf (*Quadrula apiculata*)
- Tampico Pearlymussels (*Cyrtonaias tampicoensis*)

## LONG DEAD/SUBFOSSIL

- **Yellow Sandshell (*Lampsilis teres*)**
- Bleufer (*Potamilus purpuratus*)
- Smooth Pimpleback (*Quadrula houstonensis*)



# PRELIMINARY FINDINGS

## Species by Substrate Type

	SILT	SAND	GRAVEL
TOTAL INDIVIDUALS (number)	798	2248	155
SUBSTRATE AREA (s.f.)	87,700	494,600	35,500
SUBSTRATE SEARCH TIME (minutes)	785	2005	160
INDIVIDUALS/SUBSTRATE AREA (acres)	<b>396</b>	<b>198</b>	<b>190</b>
INDIVIDUALS/TIME (minutes)	1.02	1.12	0.97

## Species by Habitat Type

	MAIN	DELTA	BACKWATER
TOTAL INDIVIDUALS (number)	1848	803	550
HABITAT TYPE AREA (s.f.)	451,600	58,700	107,500
HABITAT TYPE SEARCH TIME (minutes)	1780	635	535
INDIVIDUALS/HABITAT TYPE AREA (acres)	<b>178</b>	<b>596</b>	<b>223</b>
INDIVIDUALS/HABITAT TIME	1.04	1.26	1.03



# Potential Future Policy Considerations

- Number of years between drawdowns
- Rate of drawdown
- Depth of drawdown
- Dredging requests
- Recovery monitoring

