Biosolids

(the *other* side of Subregional Operations)

Process, Constraints, the Future

Mike Prinz, Deputy Director Subregional Operations

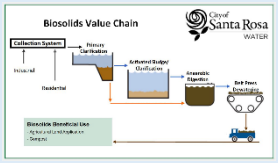
Santa Rosa WATER

AGENDA

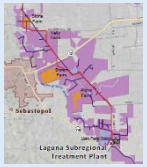
PROCESS

Costs

Plant

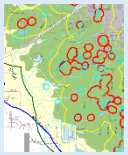


Offsite



CONSTRAINTS

Endangered Species



Economic

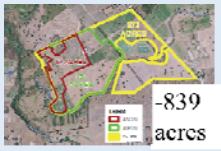
Environmental

FUTURE

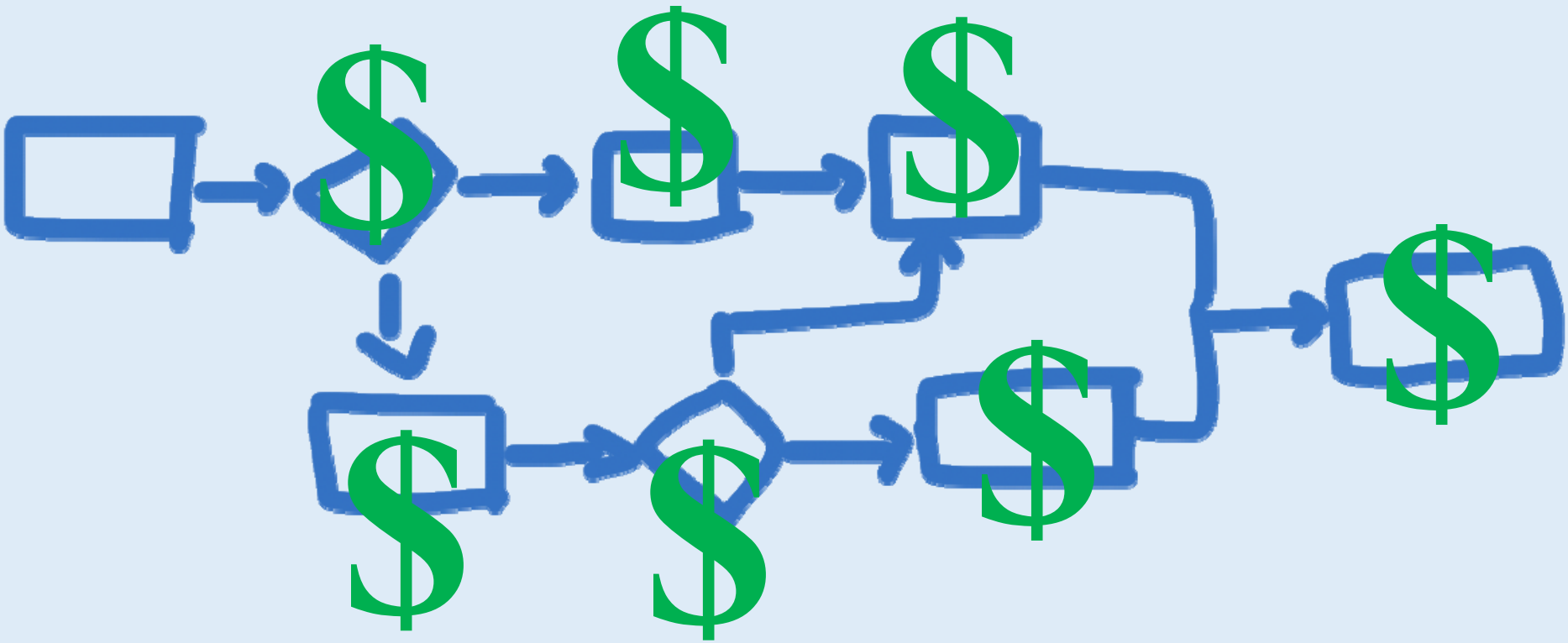
Internal

External

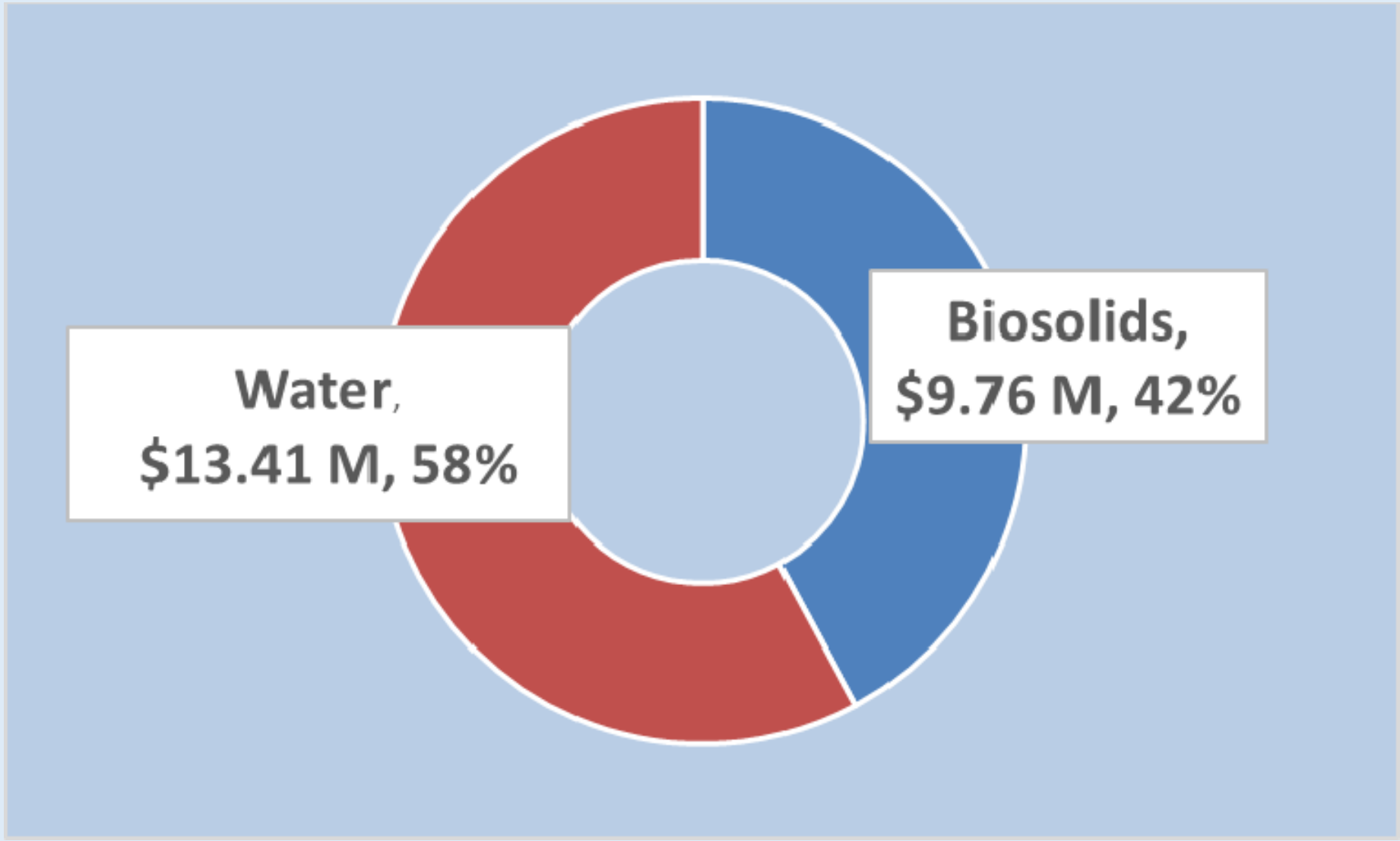
Near Term



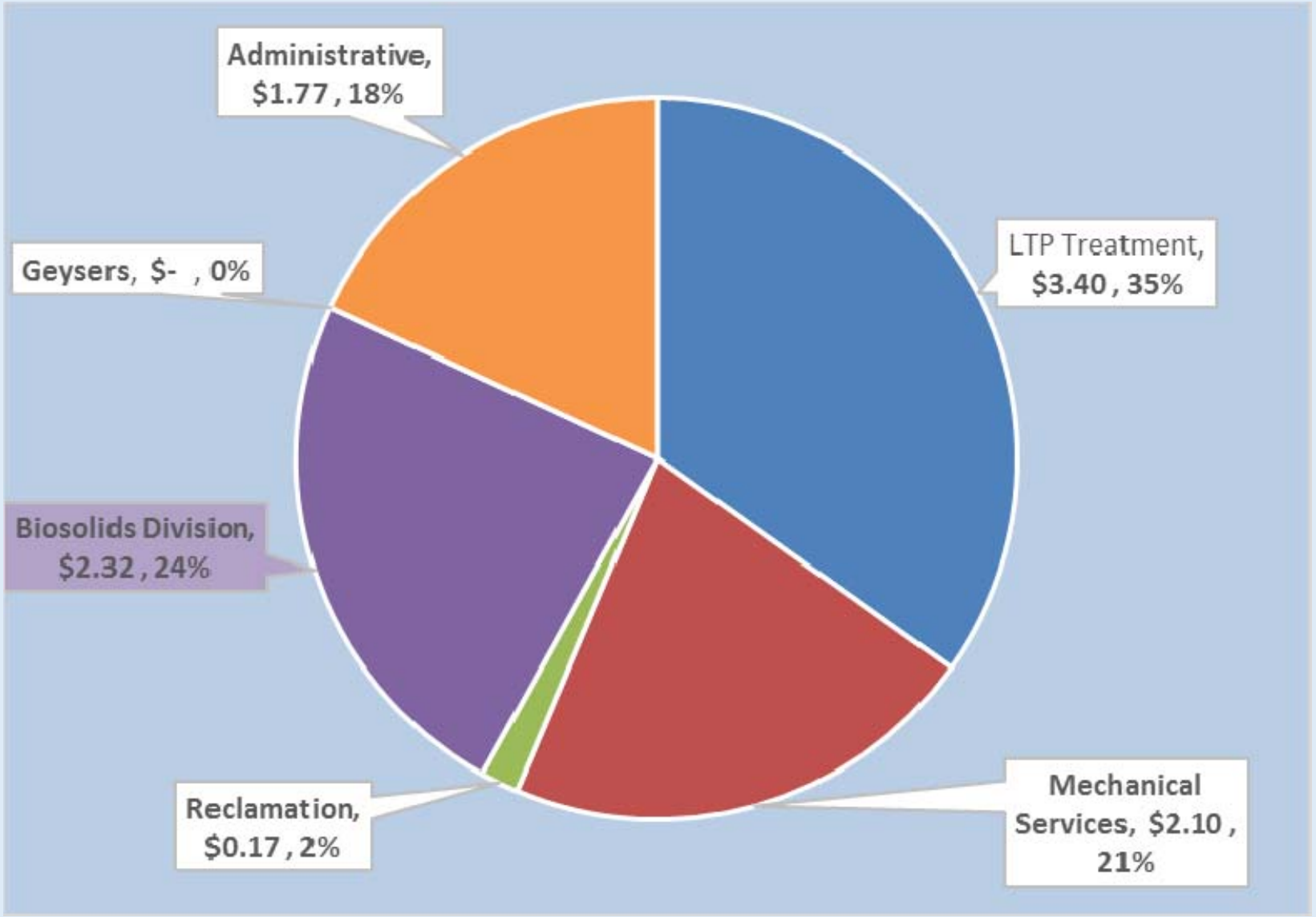
Like many aspects of the Subregional System, Biosolids are managed through a multi stage PROCESS



15/16 Subregional O/M, excluding debt service

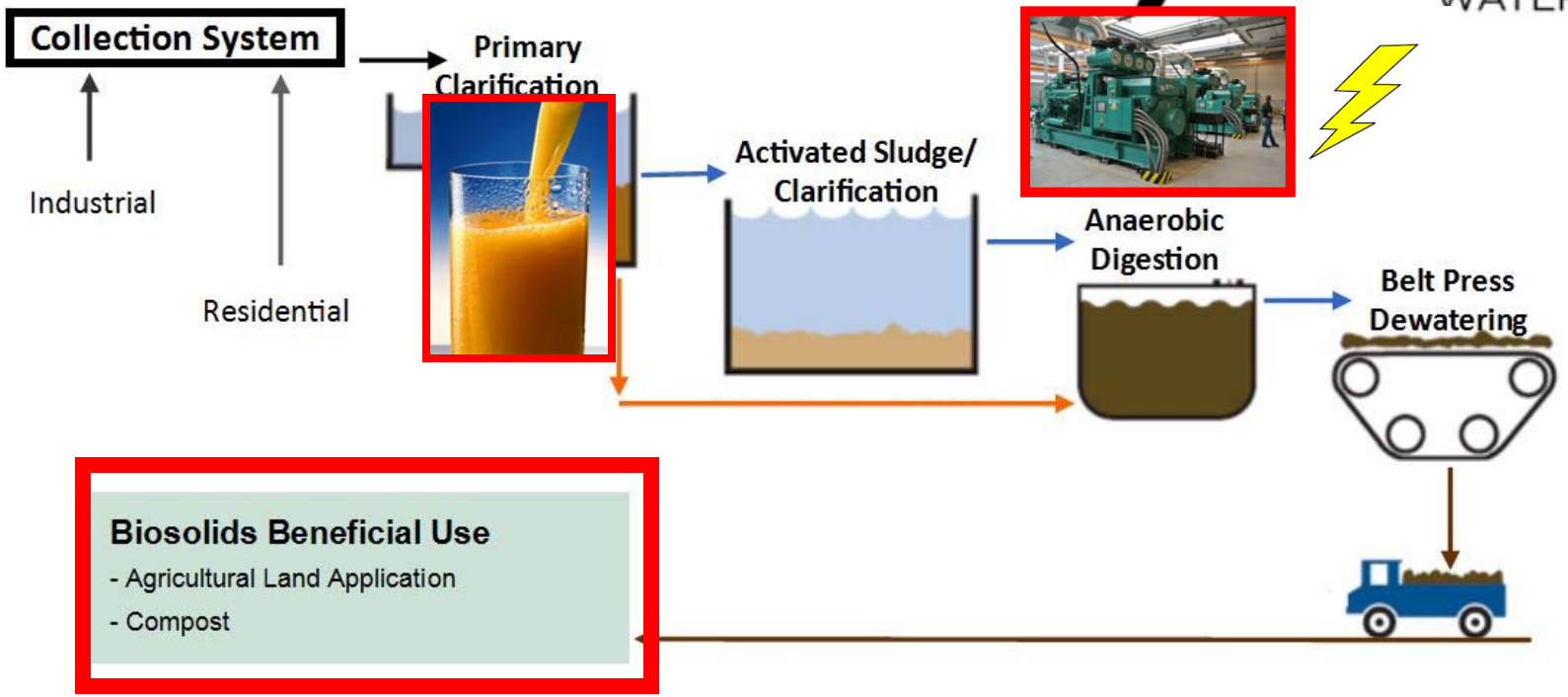


Only about ¼ of the total biosolids cost is attributable to the Biosolids Division budget

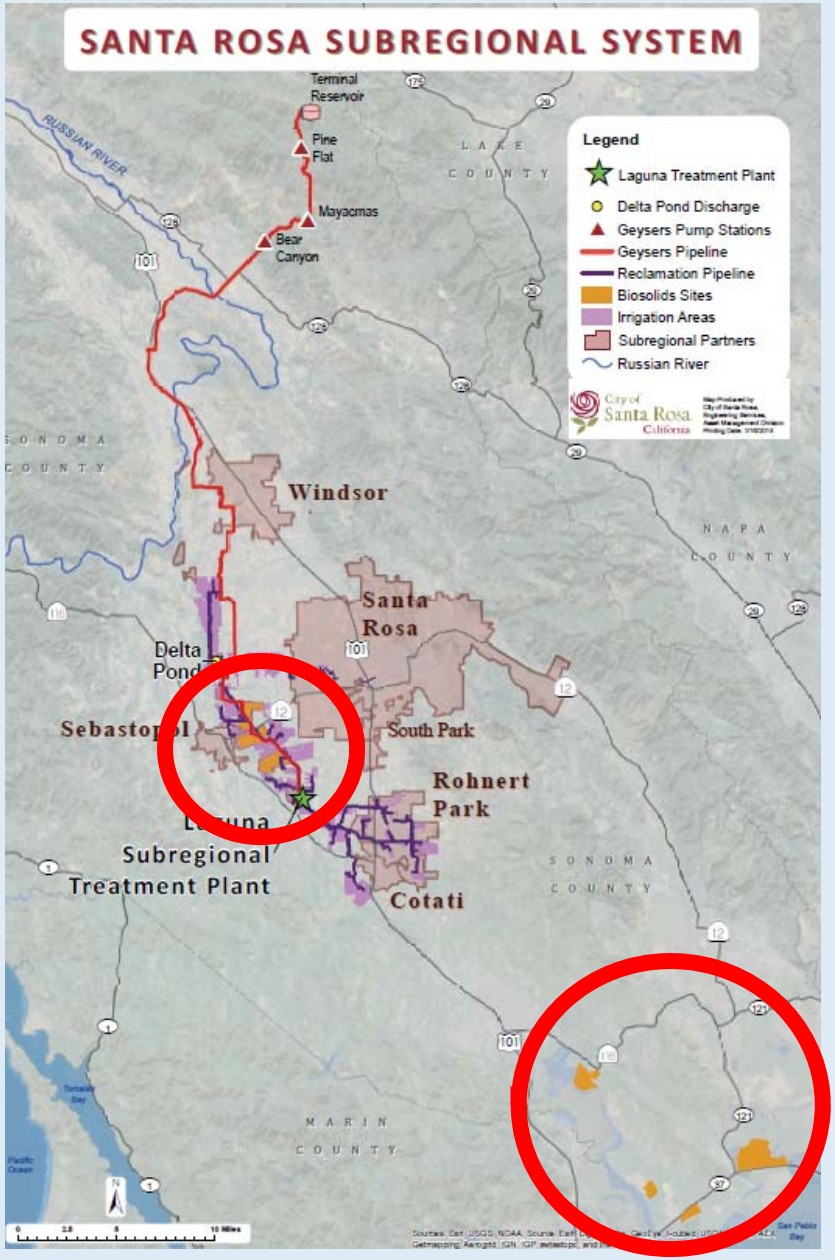


Biosolids Value Chain

City of Santa Rosa WATER

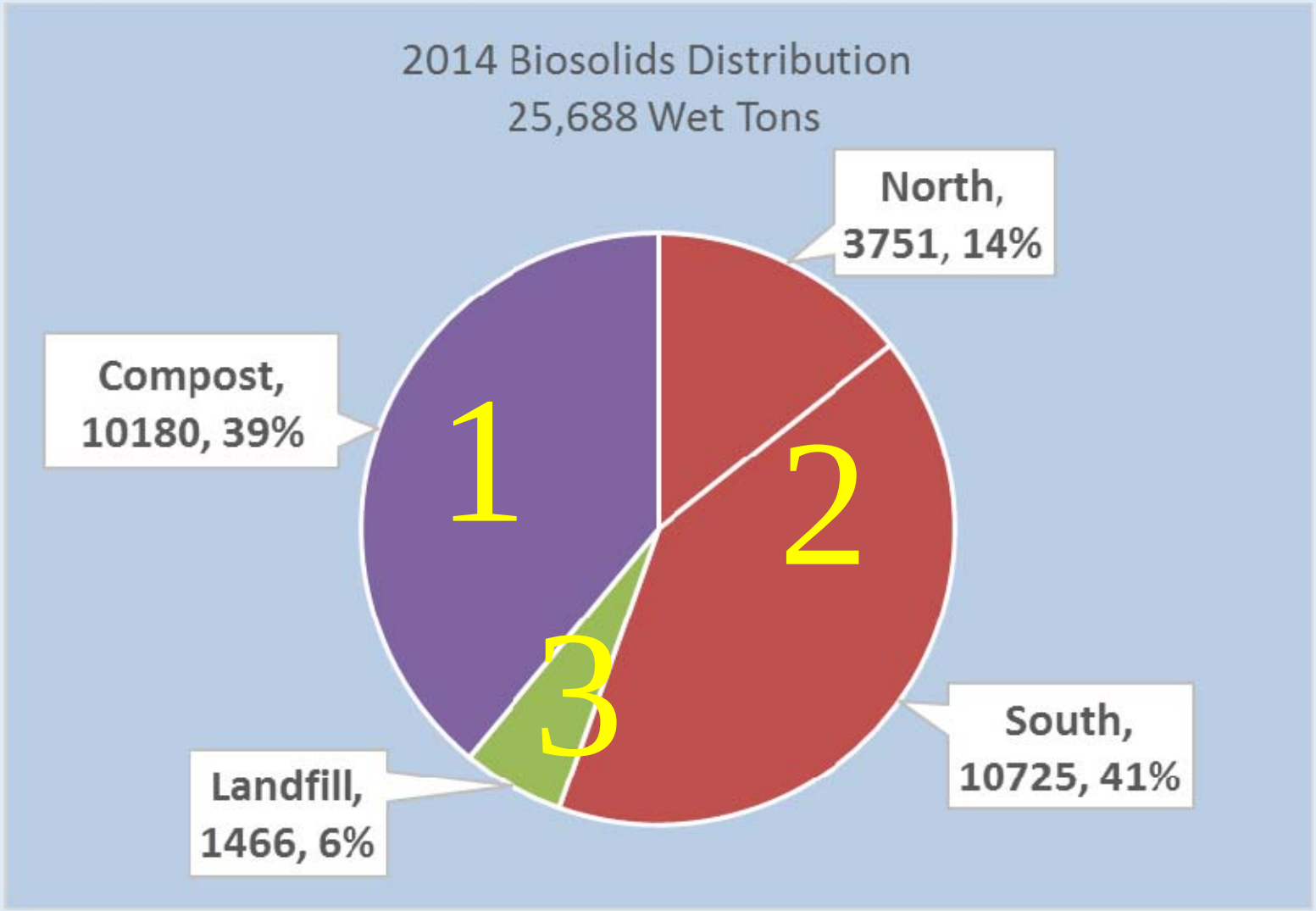


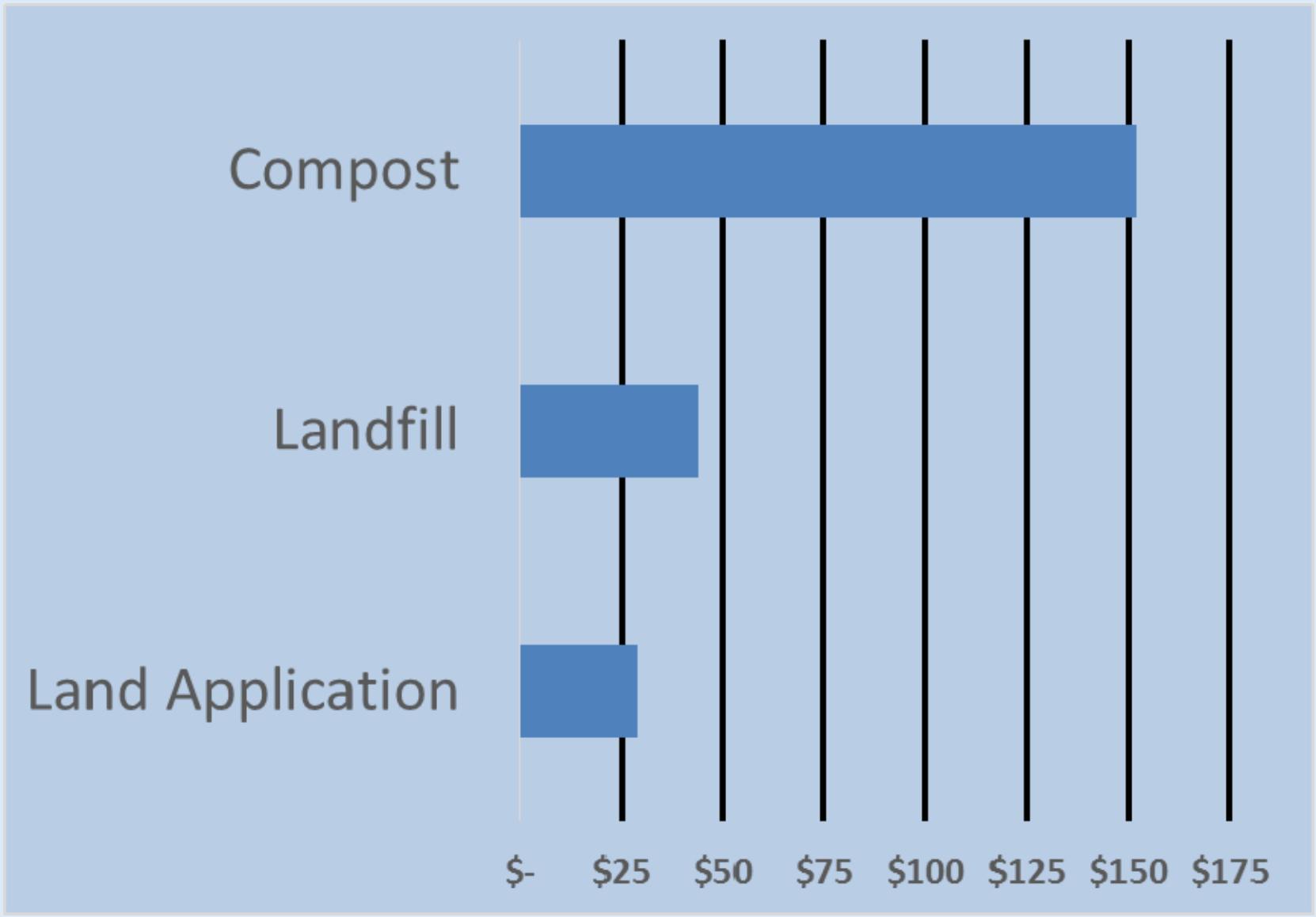
The rest of the process extends far outside the plant facility boundaries



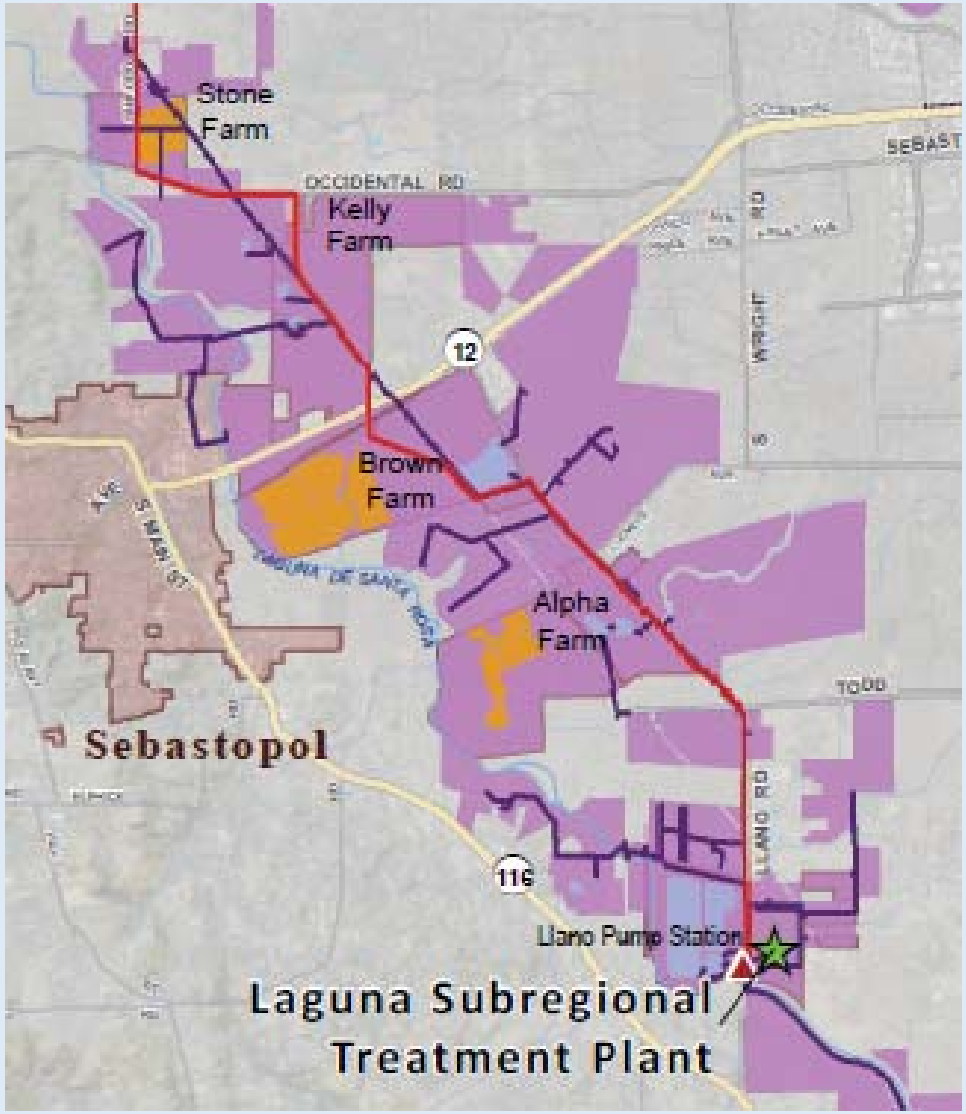
The Subregional Biosolids Management System follows a three legged stool principle

Land application is the most significant disposal route – which is likely to be the case for the long term future

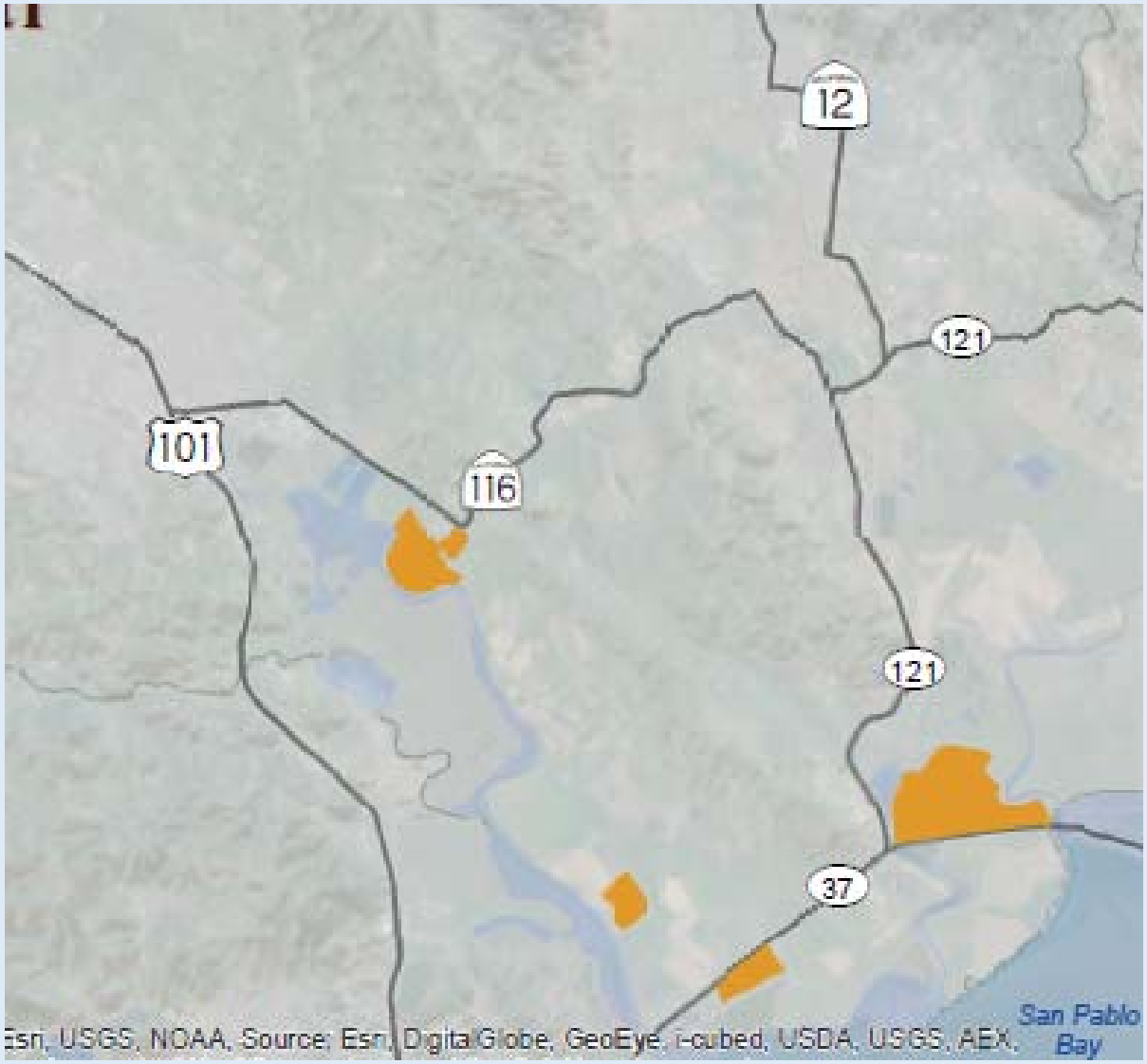



Compost
Landfill
Land Application
$-
$25
$50
$75
$100
$125
$150
$175

Zooming in shows City owned farms that are used for irrigation of recycled water along with land application of biosolids



All of our land application sites in South County are on privately owned property



Land application works differently in ‘North’ County versus ‘South County’ – but the result is the same

‘Land Application’

Alpha farm is not only a land application site, but is also the home of Alpha Barn

Alpha Barn

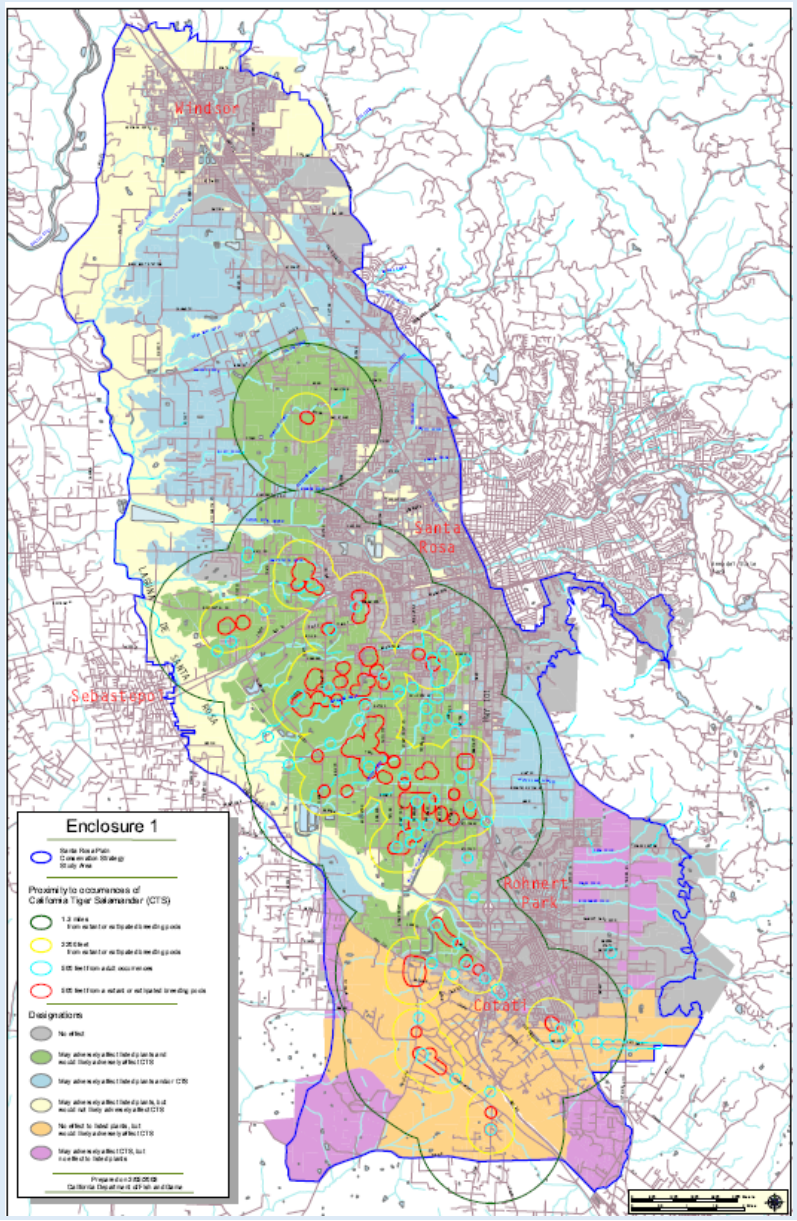
The interior of Alpha Barn has a capacity of about 7,000 wet tons – about 25% of the total annual LTP production

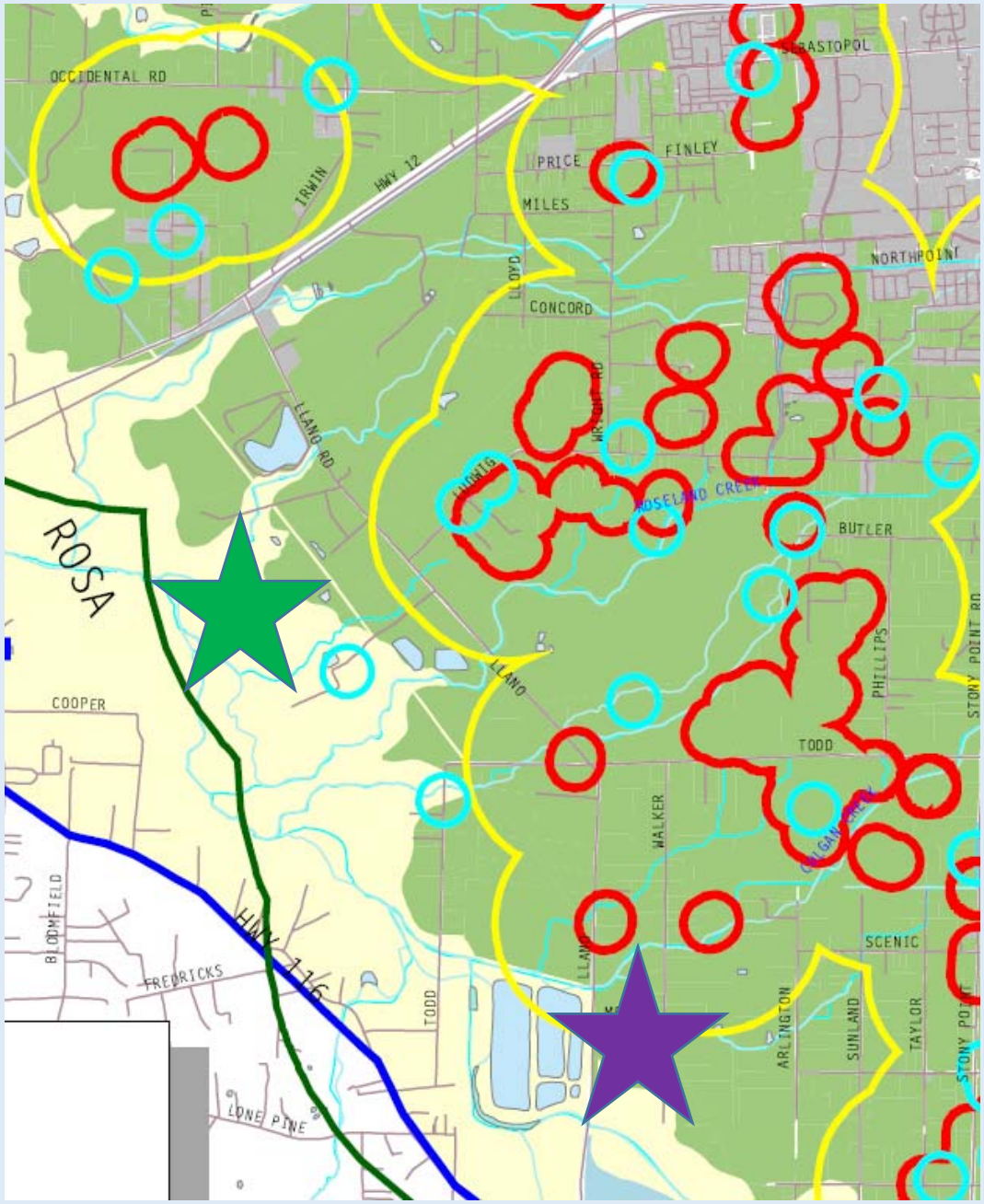
Roughly 1/3 of the biosolids produced every year are processed into class A compost at the City's compost facility.

The biosolids ‘process’ must completely fit within CONSTRAINTS

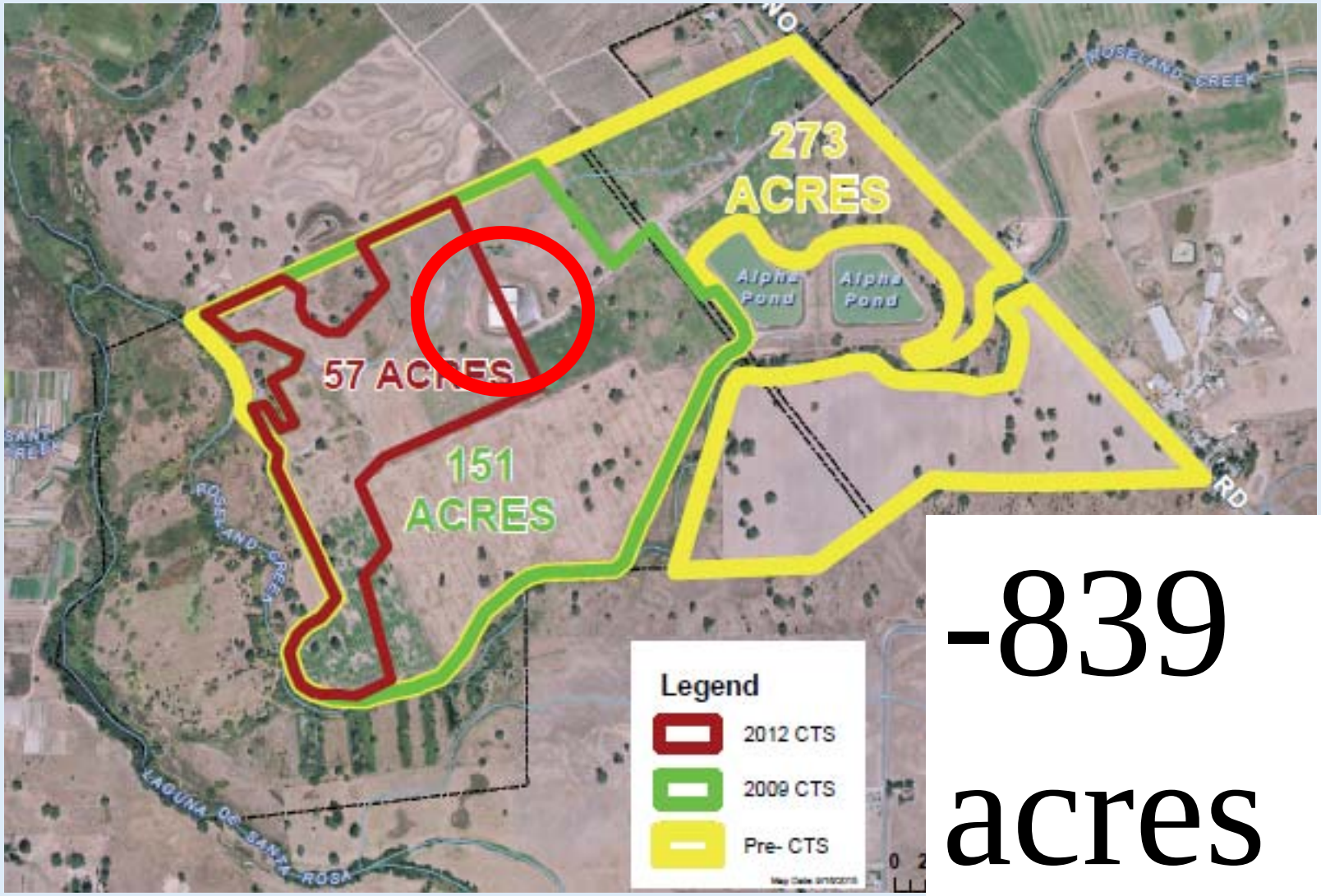
California Tiger Salamanders are endangered, and are consequently a significant constraint for land application

CTS and their breeding areas have been documented in numerous parts of central Sonoma County



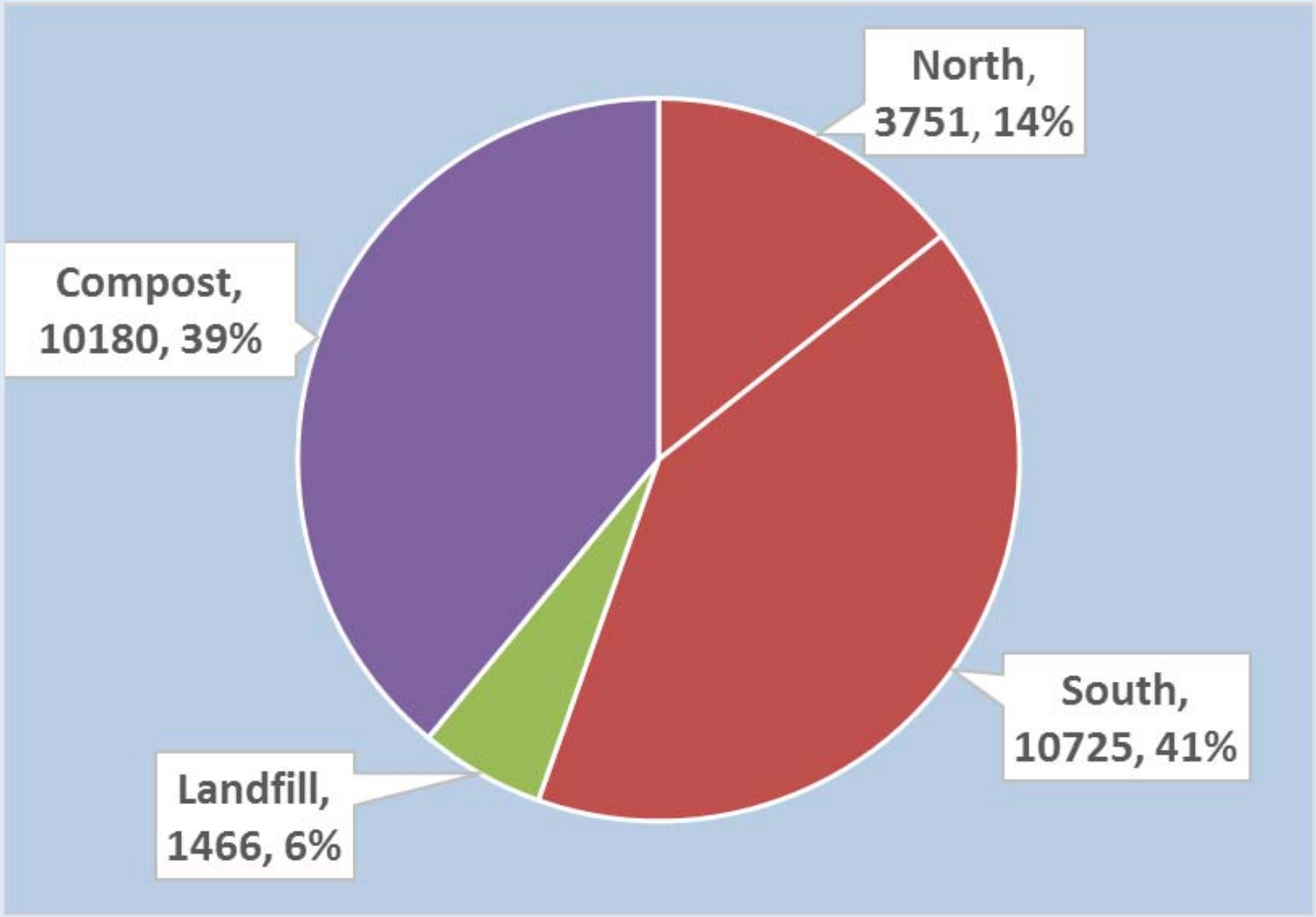

OCCIDENTAL RD
SEBASTOPOL
IRWIN
HWY 12
PRICE
FINLEY
MILES
NORTHPOINT
LLOYD
CONCORD
LLANO RD
ROSELAND CREEK
BUTLER
ROSA
PHILLIPS
STONY POINT RD
COOPER
LLANO
TODD
WALKER
BLOOMFIELD
HWY 116
FREDRICKS
SCENIC
ARLINGTON
SUNLAND
TAYLOR
LONE PINE

The existence of CTS has had significant impacts on City Owned biosolids land applications sites

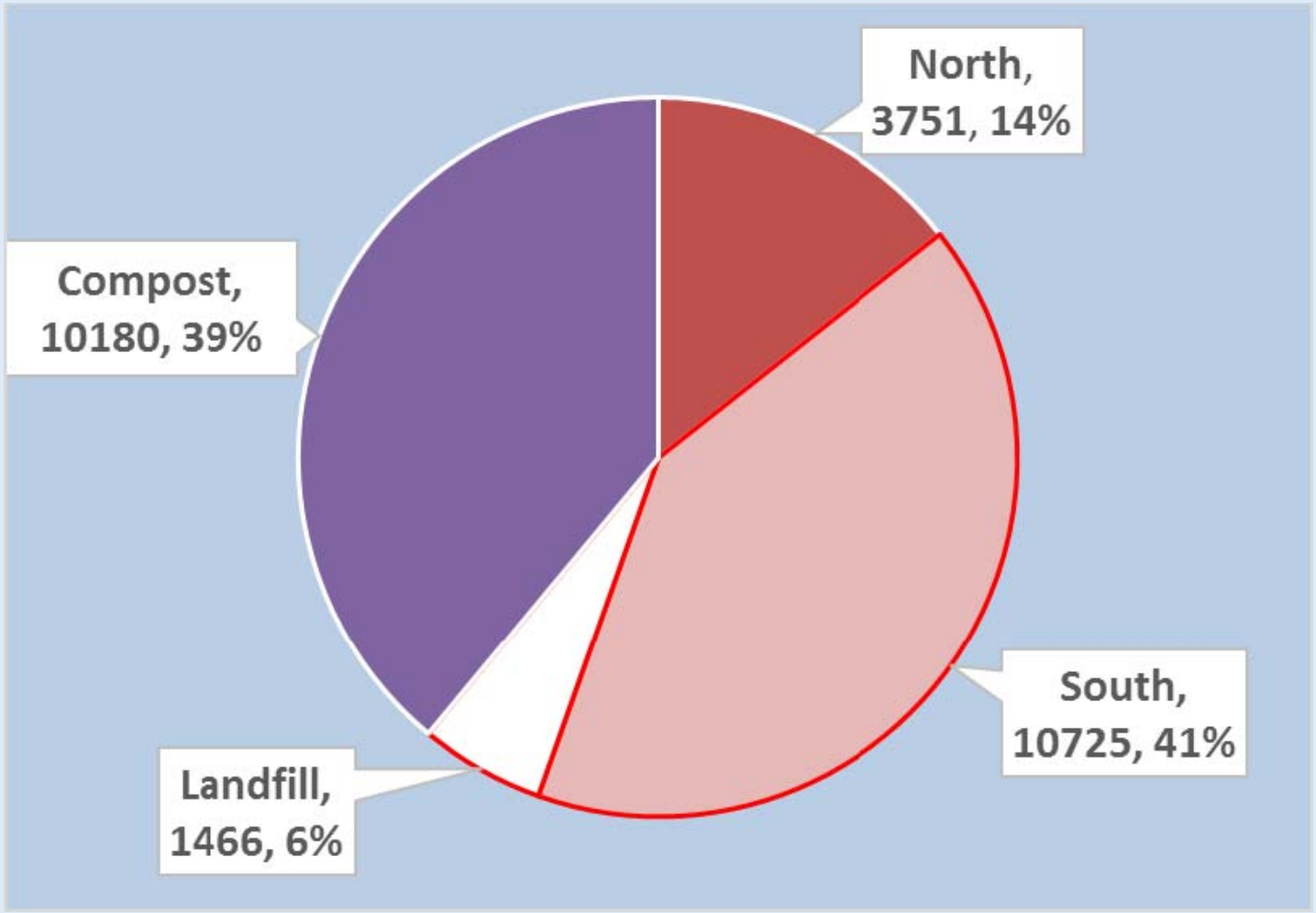


-839 acres

Landfill disposal is being phased out by 2025, and private property in South County is subject to changing perspectives of landowners



Landfill disposal is ‘going away’ by 2025, and private property in South County is subject to changing perspectives of landowners.



Organic farming is lucrative and increasing, but excludes land application of biosolids AND our compost

Source: Red Rock Foods

Environmental factors can result in decreased loading rates

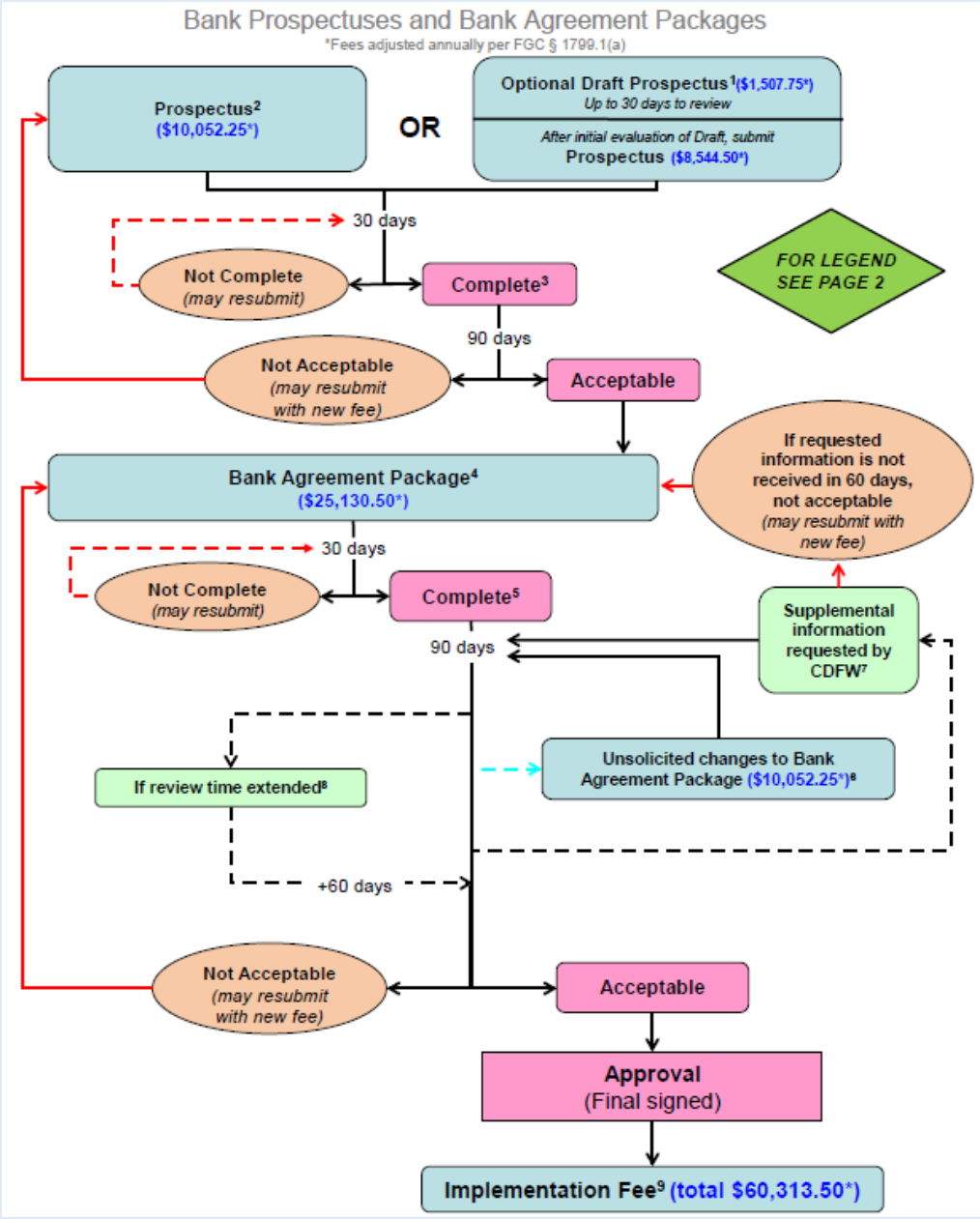
The net effect of these constraints…decreased BMS resiliency


The Future

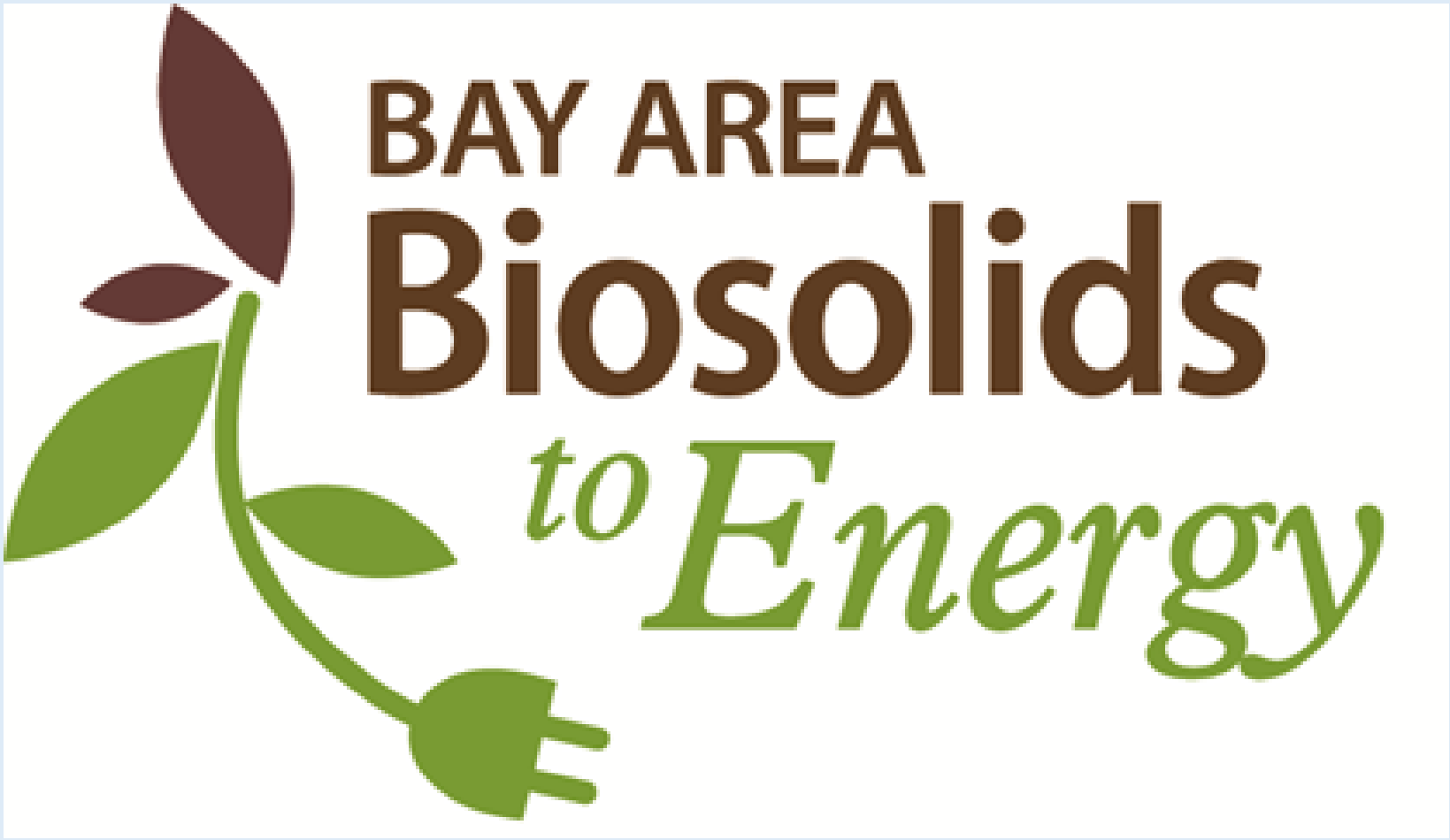
A Biosolids Management Strat Plan was developed in 2014

Staff are continually analyzing ways to maximize City resources ‘internally’

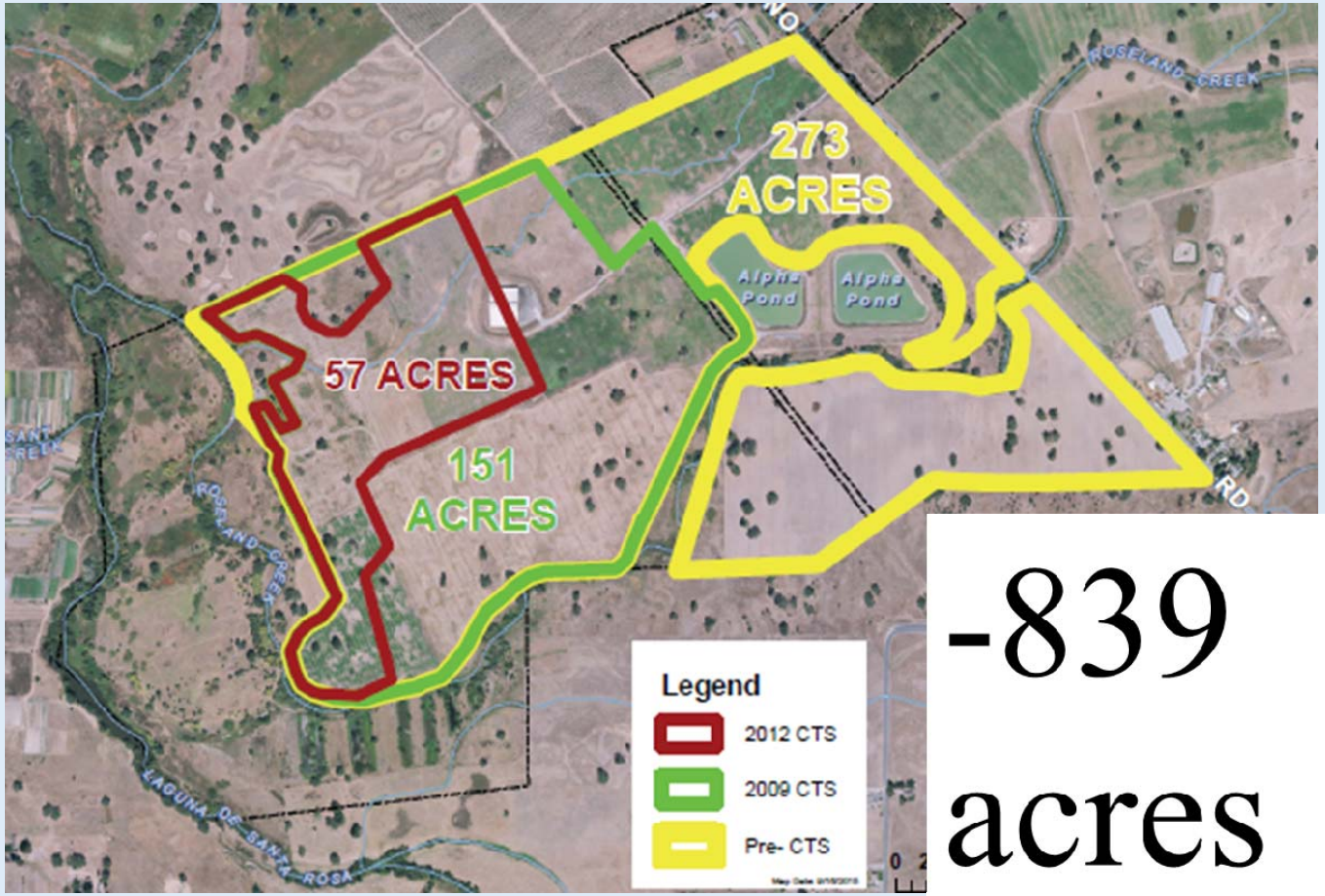
We're investigating creation of a CTS mitigation bank



Santa Rosa joined the Bay Area Biosolids to Energy Coalition in 2011



Due to evolving constraints, land application economics, need for resiliency, and results of the 2014 Biosolids Management Strategic Plan, <u>purchase and lease of additional land application areas is being pursued</u>



-839 acres

QUESTIONS?