

# Natural and Built Environment: Sustainable Water Management and Protecting Environmentally-Sensitive Areas



Lauren Ice | Code Advisory Group | March 21, 2016



# Austin's unique water concerns

- Edwards Aquifer and its creeks and springs
- Water needs in a growing region
- Flooding

Other environmental concerns that could put pressure on our water resources:

- Climate change
- Decreasing urban green space

# Priority Programs of Imagine Austin

1. Invest in compact and connected
2. Sustainably manage our water resources
3. Continue to grow Austin's economy by investing in our workforce, education systems, entrepreneurs, and local businesses.
4. Use green infrastructure to protect environmentally-sensitive areas and integrate nature into the city
5. Grow and invest in Austin's creative economy
6. Develop and maintain household affordability throughout Austin
7. Create a Healthy Austin Program
8. Revise Austin's development regulations and processes to promote a compact and connected city

# Priority Programs of Imagine Austin

## 2. **Sustainably manage our water resources**

Imagine Austin recognizes that we are facing a changing climate, weather patterns, increasing demands on water in the aquifer, and regional water management complexities.

## 4. **Use green infrastructure to protect environmentally-sensitive areas and integrate nature into the city**

Imagine Austin also recognizes that diverse elements of green infrastructure serve multiple purposes and provide numerous benefits.

# The LDCode: How to sustainably manage our water resources

- An Imagine Austin focus is to reduce water use by businesses and households (gallons per capita per day)
- Standards and incentives for:
  - Low-impact development
  - Innovative water and graywater reuse
  - Preservation of sensitive land, floodplains, and water recharge areas
- Support development patterns that better manage water resources



# Relationship to other priority programs

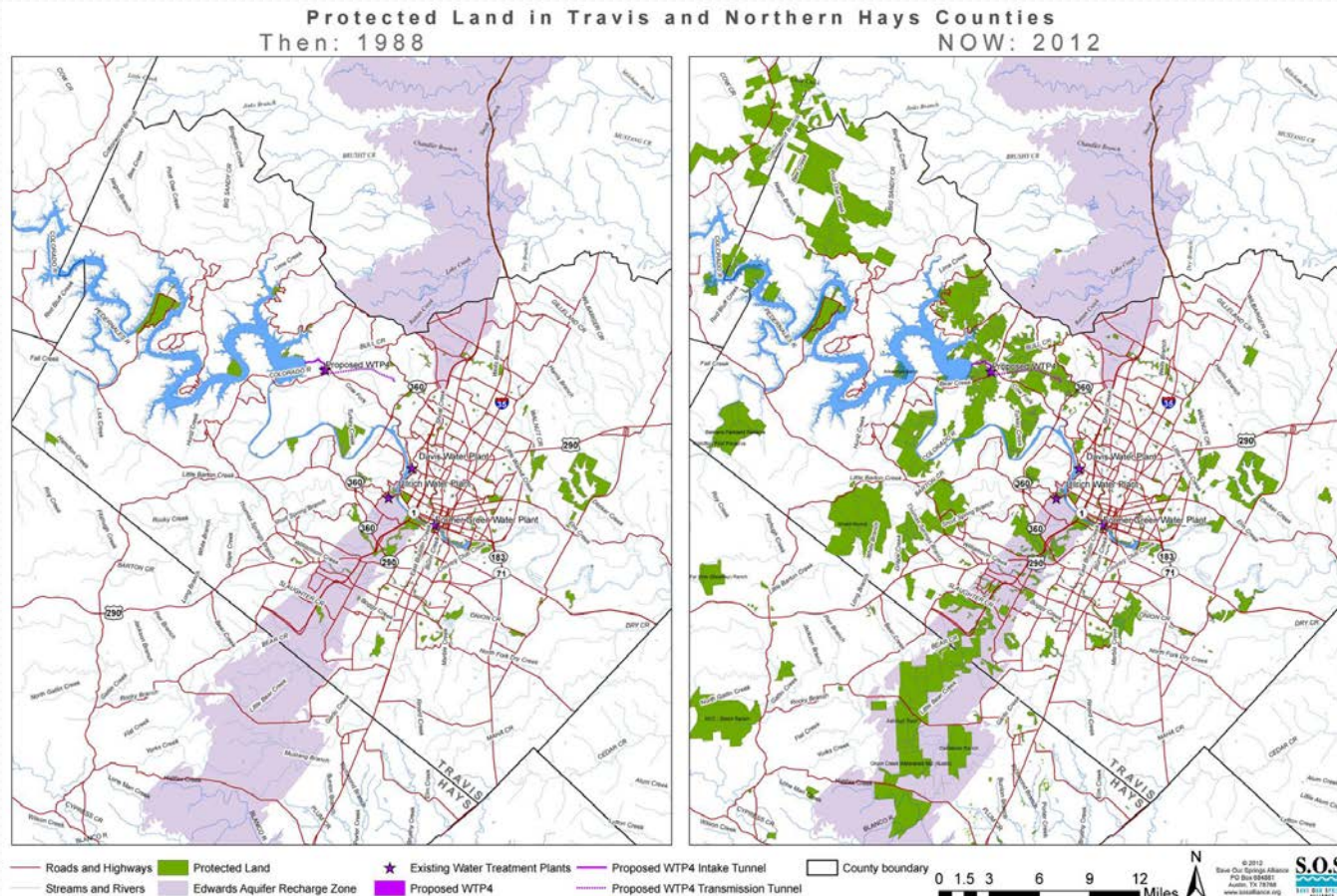
- Use green infrastructure:
  - Innovative stormwater techniques
  - A healthy urban forest
  - Additional water quality lands
  - Improved site design
- Compact and connected:
  - Improving city's site and landscape design requirements
- Invest:
  - Maintain and upgrade existing infrastructure
  - Reduce water leaks

# Building Blocks: Conservation and Environment





# Permanently preserve areas of environmental and agricultural value.





Limit development in sensitive areas.



Citizen initiative that led to Save Our Springs Ordinance

# Innovation and technology to increase sustainability and conservation

- Requiring on-site water reuse strategies
  - Rainwater harvesting
  - Graywater /reclaimed water
  - Beneficial use of stormwater
  - Air conditioning condensate
- Requiring conservation measures
  - Incentivizing efficient irrigation
  - Use native and adapted plant material
  - Limit lawn areas

# Integrate green building and expand green infrastructure elements

- Tree preservation/urban forest
- Reduced impervious coverage
- Green buildings
- Ensure new development provides necessary and adequate infrastructure improvements, e.g. stormwater treatment and infiltration





# Flood mitigation

- Watershed-scale requirements for green infrastructure to retain stormwater on-site
- Performance-based incentives to credit stormwater retention, recharge, and reuse
- Incorporate on-site stormwater management through drainage swales and rain gardens to treat runoff before it enters creeks and lakes.



