

# Implications of Our Current Infrastructure Paradigm: A Planner's Perspective

David Rouse, FAICP, ASLA

Managing Director, Research and Advisory Services  
American Planning Association

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*Making Great Communities Happen*

# Key Points

1. The sustainable, resilient city assumes the provision of reliable infrastructure, but our aging systems cannot be depended upon.
2. We have entered a new era of uncertainty (non-stationarity) in which infrastructure designed based upon conventional engineering standards is inadequate.
3. We need to reinvent our infrastructure and governance systems to support sustainable, resilient cities.

# Sources

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Paul R. Brown. “City as Terrestrial Crustacean: Structural Engineering and Resilient Cities.”

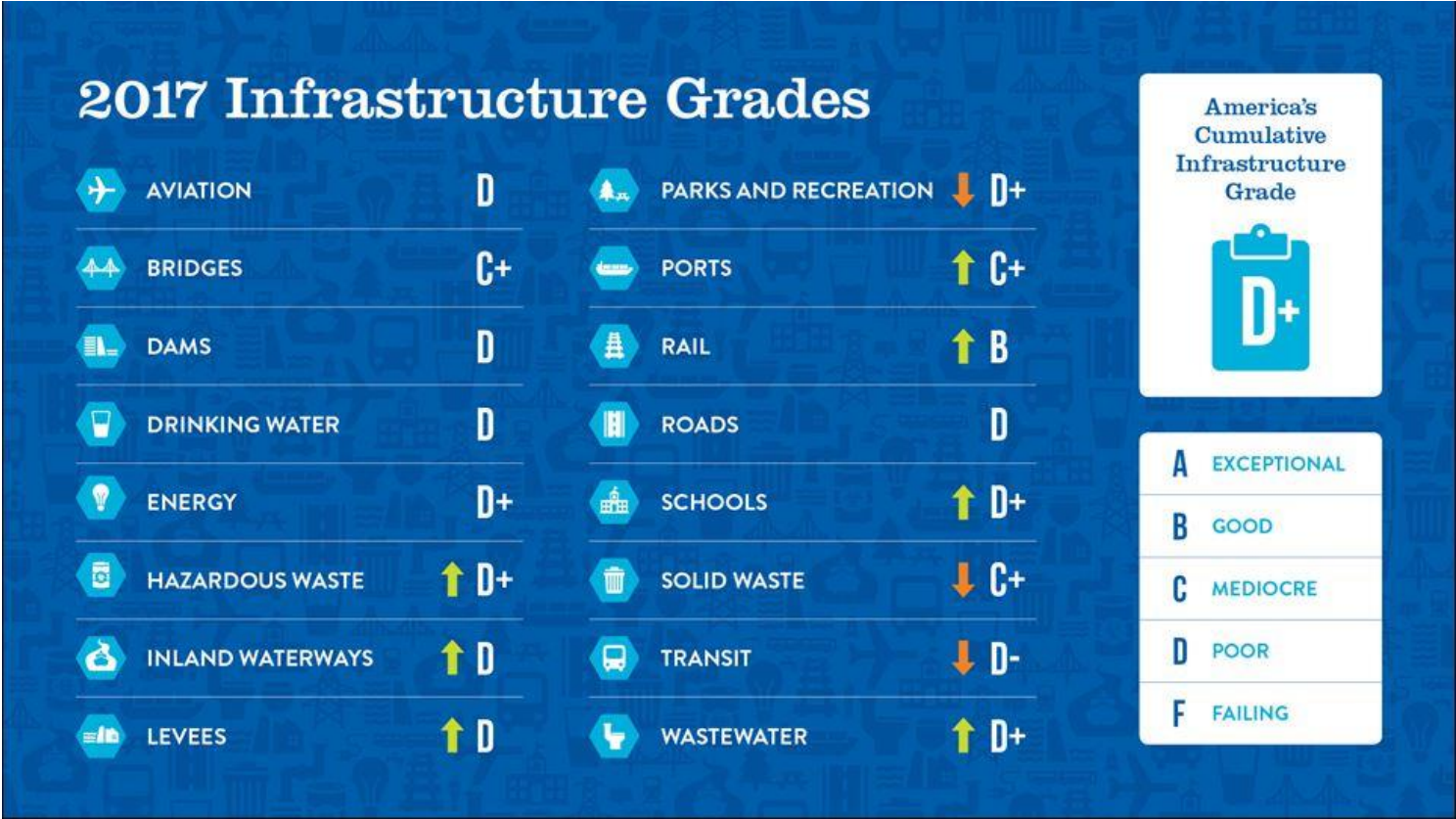
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*Washington Law Review*, Vol. 93, 2018.

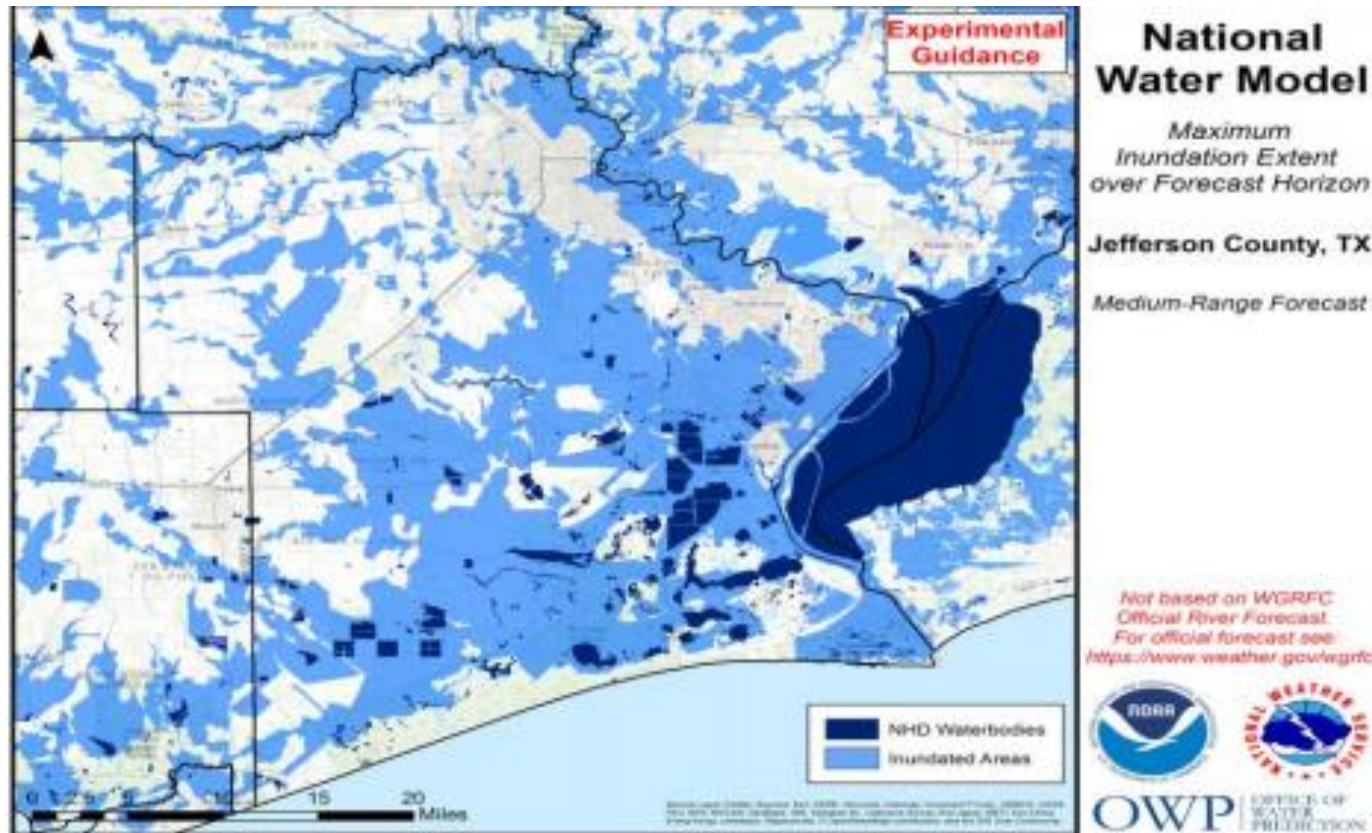


Key Point #1: The sustainable, resilient city assumes the provision of reliable infrastructure, but our aging systems cannot be depended upon.



Source: American Society of Civil Engineers 2017 Infrastructure Report Card

Key Point #2: We have entered a new era of uncertainty (non-stationarity) in which infrastructure designed based upon conventional engineering standards is inadequate.



Source: NOAA Water Model, Maximum Inundation Forecast for Hurricane Harvey



Key Point #3: We need to reinvent our infrastructure and governance systems to support sustainable, resilient cities.



From terrestrial crustacean...



...to octopus.

# The Role of Planning: Five Strategic Points of Intervention

## Plan Development

- Community visioning and goal setting
- Plan making

## Plan Implementation

- Policies, regulations, standards, and incentives
- Development review and approval
- Public investment

Source: William Klein, The Five Strategic Points of Intervention, PAS Quicknotes 31, American Planning Association, 2011

### Designing the Coastal Community of the Future

By working with residents, the City of Norfolk is building a long-term strategy to address the flooding challenges due to sea level rise. How we use land today helps ensure the opportunity that Norfolk will be a dynamic, water-based community into the next century.

#### Designing New Urban Centers

Green areas are at low-risk of coastal flooding and have great potential for high density, mixed-use and mixed income development. These areas are prime opportunities for creating walkable, bikeable, transit-rich communities. The City should encourage transformational development in these areas.

#### Enhancing Economic Engines

Red areas are home to key economic assets that are essential to the city's future. Land use policy and infrastructure investments to protect these areas should encourage additional dense mixed-use development in these areas.

THE CITY OF  
**NORFOLK**

Find more information at  
[www.norfolk.gov/vision2100](http://www.norfolk.gov/vision2100)

Norfolk Vision 2100 Plan



# Green Infrastructure



Citywide...



... to green stormwater infrastructure (City of Philadelphia)





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*Creating Great Communities for All*

David Rouse, FAICP, ASLA  
[drouse@planning.org](mailto:drouse@planning.org)