



Net Blue in the Age of CodeNEXT: White Paper

by Dave Anderson, P.E., D.WRE, CFM, CPESC
Director of Land Use, Drenner Group, P.C.

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The Rethink White Papers offer up fresh, innovative thinking to Austin citizens and decision-makers about the future of our City. They are intended to present some of the best sustainability thinking from Austin's thought-leaders in a way that is fresh, accessible and compelling. We hope the Rethink White Papers will inspire us all to take action for a bright green future for Austin.

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The mission of the Office of Sustainability is to provide leadership, influence positive action through engagement, and create measurable benefits for Austin related to climate, food, resource efficiency, and resiliency.



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Introduction

Imagine Austin, the City's Comprehensive Plan, challenges citizens, neighborhood activists, elected officials, technical professionals, environmentalists, race and culture experts, development interests, and many others to think about how to accommodate the continued population growth that is projected for our city. The body of a healthy city can only grow and mature if it is built on the healthy skeleton of the natural environment. Creeks and streams, aquifers and watersheds, soil and geology, flora and fauna, air sheds and scenic vistas alike must be understood, respected, and integrated into our planning as we prepare for the arrival of another 800,000+ people by the year 2039.

Imagine Austin identified eight [Priority Programs](#) that provide structure and direction for effective plan implementation. These programs build on existing initiatives as well as community input provided during the creation of Imagine Austin. Highlighting the importance of sustainability principles to Austin residents, water and environmental issues comprise two of the eight priority programs.

Water

The central goals of this Priority Program are to conserve water resources and improve watershed health. Bringing together current efforts that address all aspects of Austin's water resources should create integrated strategies for water supply, quality, conservation, public health, and recreation.

Environment

A primary goal of this Priority Program is to manage Austin's urban and natural ecosystems in a coordinated and sustainable manner by increasing protection of environmentally sensitive land, improving tree cover in every neighborhood, improving the health of the watershed, increasing access to parks, and linking these resources throughout the city.

The concept of water neutral development, or Net Blue development, presents an opportunity to directly address both the Water and Environmental Priority Programs identified in the Imagine Austin Comprehensive Plan.

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Net Blue and Water Demand Offsets

[Net Blue](#) is a collaborative initiative of the [Alliance for Water Efficiency](#), the [Environmental Law Institute](#), and [River Network](#) to support sustainable community growth. The Net Blue initiative developed a model ordinance that communities in different regions throughout the United States can tailor and customize to create a water demand offset approach that meets local needs.

In its simplest form, Net Blue provides municipalities with tools to incentivize or require that new development (infill or greenfield) has a neutral impact on the water resources required to accommodate that development. This is accomplished by offsetting water demand through the use of on-site or off-site conservation or reuse programs. The basic components of a water demand offset policy include:

- A condition that triggers incentives or requirements for a water demand offset (e.g., new development and/or expanded use of an existing connection)
- Water demand projections for new development
- Methodology for estimating on-site or off-site efficiency savings
- Calculations for the water demand offset ratio (e.g., a ratio of 1:1 would require 100 percent of the projected demand to be offset)
- Demand mitigation implementation options, such as:
 - On-site efficiency measures
 - Off-site efficiency measures
 - On-site recycled water use
 - Possible fee option in lieu of developer-implemented efficiency measures
- Administrative fees and other costs
- Verification of demands and implementation of efficiency measures
- A rule that ensures demand reductions are permanent

For an in-depth discussion of the Net Blue concept, see the Alliance for Water Efficiency's [Water Offset Policies for Water-Neutral Community Growth: A Literature Review and Case Study Compilation](#).

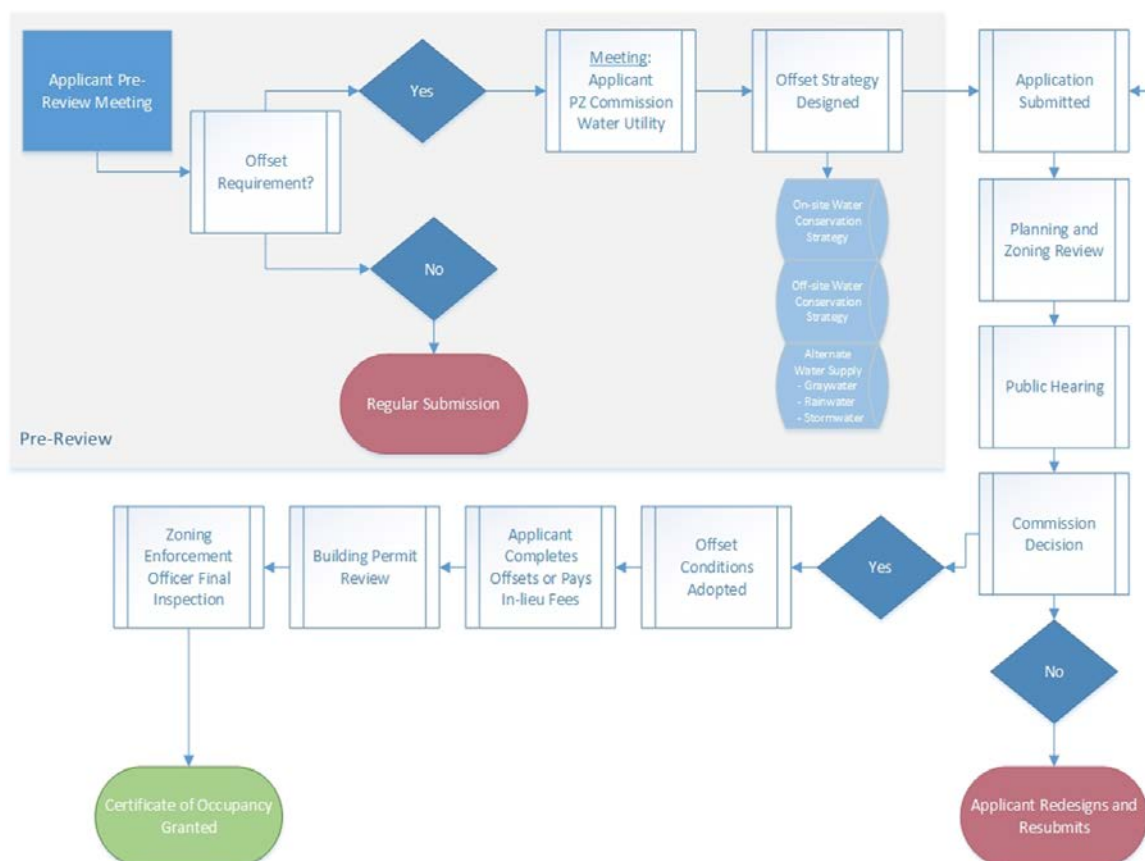
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By implementing water demand offset policies, new development has the potential to minimize impacts on local and regional water resources, thus helping to achieve the goals of the Water and Environment Priority Programs listed in the Imagine Austin Comprehensive Plan.

Net Blue Model Ordinance

The Net Blue project team also developed a template for a [model ordinance](#) that requires or incentivizes offsetting the impact of a new development's water use via water efficiency measures. Figure 1 depicts how an offset ordinance might be incorporated into a municipal Planning and Zoning process.

Figure 1. Model Ordinance Flow Chart¹



¹ <http://www.allianceforwaterefficiency.org/net-blue-ordinance.aspx>



The [model ordinance](#) is in the form of a dynamic worksheet, User's Guide, and ordinance examples:

- **The Model Ordinance worksheet** leads the user through sections of the ordinance and flags decisions that need to be made to develop a tailored product that addresses the specific challenges and circumstances of the locality.
- **The Model Ordinance User's Guide** details how the worksheet functions, explains various cues, and provides tips for maximizing the potential of the worksheet.
- **Three Net Blue ordinance examples** demonstrate the diverse outputs of the worksheet and some of the many problems, actors, and constraints that it can accommodate.

The Net Blue project team also developed an [Excel Offset Methodology](#) spreadsheet to accompany the Model Ordinance that provides a user-friendly structure for calculating offsets from off-site water conservation retrofits, rainwater harvesting, and stormwater capture. The Offset Methodology spreadsheet can be used by planning and zoning staff, development applicants, attorneys, water utility staff, and others in the community.

Net Blue Application in the City of Austin

The concept of Net Blue development can be implemented within the confines of existing local, state, and federal regulatory environments. Several cities across the country have implemented these types of programs².

In Austin, private property owners have the right to develop their property within the rules and regulations stipulated by Austin's current Land Development Code and other local, state, and federal laws. The City of Austin is also required by state law to provide water and wastewater service to property owners within its full-purpose jurisdiction.

It is reasonable to assume that there are situations where the concept of Net Blue development can be implemented to be compatible with Austin's existing rules and regulations as well as proposed changes that are part of CodeNEXT while achieving superior environmental results. These may include:

² Identification of Water Demand Offset Policies in the United States:
<http://www.allianceforwaterefficiency.org/water-offset-report-Jan-2015.aspx>



- Development in environmentally sensitive areas;
- Planned Unit Developments;
- Development in areas where water supplies are scarce; and
- Development in drought prone areas.

Incentives for the development community or homeowners to undertake water neutral development could include:

- Entitlement bonuses;
- Rebate programs;
- Fee waivers;
- Dedicated review teams; or
- Expedited review times;

The time is right for consideration of a water offset policy that is complementary to the Water Forward plan being developed under the leadership of the Austin Water Utility. At a minimum, an evaluation of this opportunity should take into consideration the following:

- Projected impacts to local and regional water supplies;
- Projected impacts to the local environment, including groundwater, surface water, and local flora and fauna;
- Potential impacts on dwelling unit affordability (and affordability as a general concept city-wide);
- Potential impacts to Austin Water's ability to meet its water supply requirements as required by state law;
- Austin Water enterprise fund revenues; and
- How best to integrate these concepts into the Land Development Code.

It is important to note that some concepts related to water demand offsets and beneficial reuse of water resources on-site are already proposed as part of CodeNEXT. For instance, Section 23-3D-6030(C) of the draft code requires that a portion of water quality effluent remain on-site for beneficial use, which could be considered an offset demand mitigation component.

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As CodeNEXT becomes a reality, there is no better time to consider the Net Blue approach to managing local and regional water resources. As citizens of Austin, we owe it to those who are here now, and those who plan to make Austin their home in the future, to do all we can to provide adequate tools that promote responsible development throughout our city.

Dave Anderson is the Director of Land Use at the Drenner Group, where he brings strong environmental credentials and an intense passion for responsible land-use planning to the Firm's already outstanding practice. Mr. Anderson consults with public and private entities on progressive code and ordinance development, provides insight as a former Commissioner on land-use and entitlement cases in and around Central Texas, and serves in leadership roles on urban planning and development issues. He has practiced Civil Engineering in Texas and around the United States for almost 25 years.

He holds a B.S. in Engineering from the Colorado School of Mines and an M.S. in Water Resources Engineering from the University of Texas at Austin. He is a registered Professional Engineer in the State of Texas and is nationally recognized as a Diplomate - Water Resources Engineer by the American Academy of Water Resources Engineers.

Mr. Anderson has served as an appointee to the Good Neighbor Environmental Board, a U.S. EPA Federal Advisory Group that provides the United States Congress and White House with technical and policy expertise on environmental issues on the U.S.-Mexico Border, and he is the former Chairman of both the City of Austin Planning Commission and Environmental Board. His combined City of Austin Commission service exceeds 19 years.

He currently serves on the Advisory Committee for the Texas Integrated Urban Water Management program being jointly implemented by Boston University's Institute of Sustainable Energy and the Cynthia and George Mitchell Foundation. In 2015, he served on the Project Advisory Committee for the Net Blue project, a collaboration between the Alliance for Water Efficiency, the Environmental Law Institute, and River Network to develop water offset tools to promote water-neutral development in local jurisdictions throughout the United States.

He has also served as a Vice President on the Board of Directors for Envision Central Texas and has contributed time to other Austin endeavors through his involvement on the Boards of Directors for the Hill Country Conservancy, the Texas Foundation for Innovative Communities, and as a McBee Fellow with the Austin Area Research Organization, among others. He is a graduate of the Leadership Austin class of 2004.

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