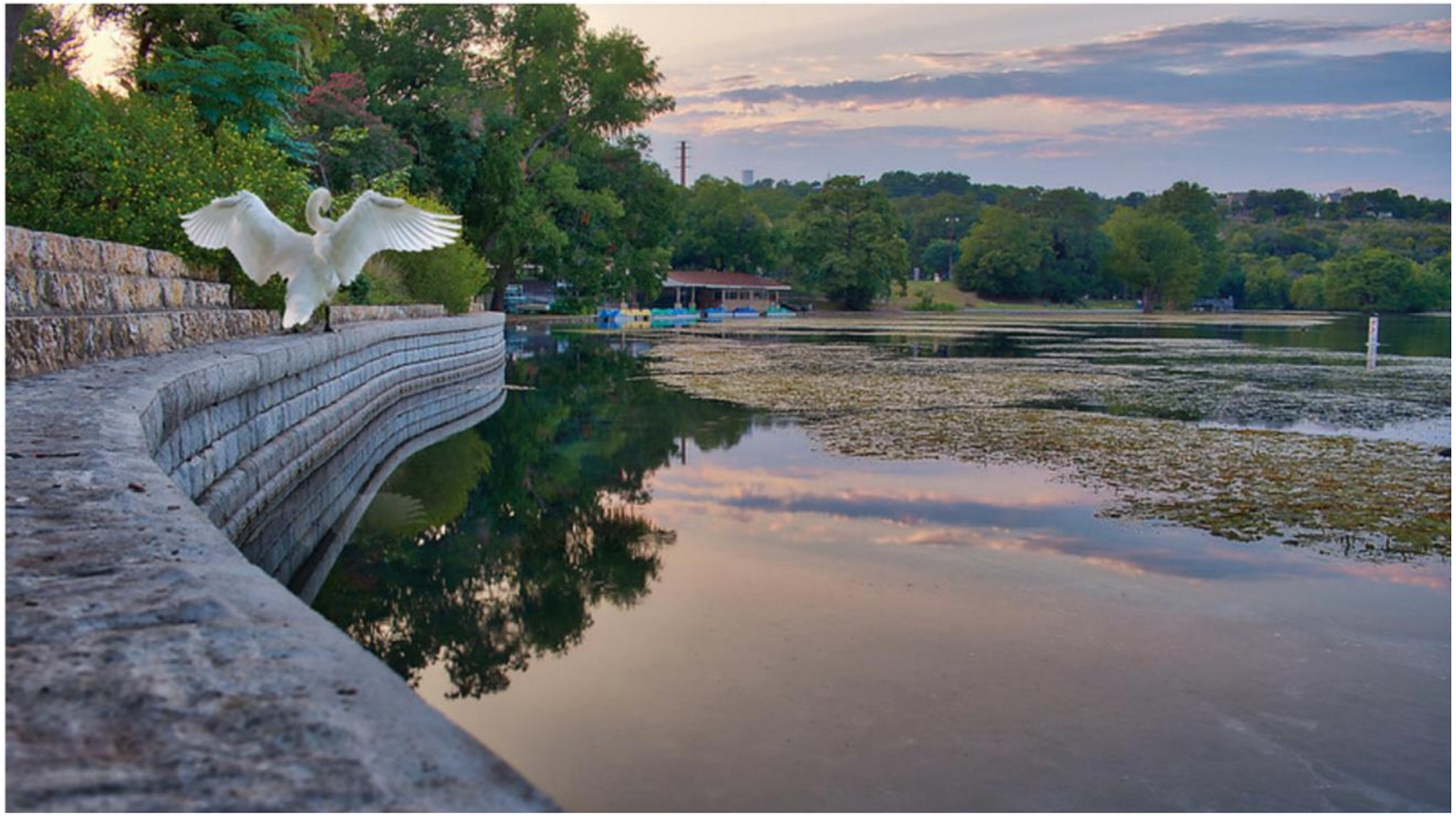
Attachment 1

NEW BRAUNFELS ONE WATER ROADMAP



The vision of One Water New Braunfels is to ensure that water remains a celebrated and protected feature of our community by collaboratively managing our water resources to safeguard watersheds, waterways and groundwater.

The following key objectives were identified as essential achieve this vision:

- Plan for and manage water resources holistically and sustainably
- Maximize environmental, social, and economic benefits to New Braunfels
- Ensure water remains a celebrated feature of our community
- Build a community of water-conscious citizens
- Provide a sustainable and resilient water supply for people
- Ensure high-quality drinking water & water quality that meets the standards for its intended use
- Improve health of local watersheds, waterways, and groundwater resources

The above listed seven objectives and associated strategies to achieve them have been grouped into five “action areas” as listed in the following pages.

For additional background on the development of the New Braunfels One Water Roadmap, please view the *New Braunfels One Water Roadmap Report*.

ACTION AREA 1: PLAN FOR AND MANAGE WATER RESOURCES HOLISITICALLY AND SUSTAINABLY

Vision Element	Objective	Strategic Direction	Indicators	Targets	Action Plan
Collaboratively manage our community's water resources	To plan for and manage water resources holistically and sustainably by…	1)Increase understanding of holistic water challenges and opportunities within agencies working within 2 geographic scopes: greater New Braunfels area; and upper Guadalupe watershed	One Water and Water Resource fluency becomes common language Planning processes initiated and attended by stakeholders fluent in One Water	• Develop One Water knowledge poll • Poll delivered to key staff across stakeholder teams • Develop and implement One Water/Water Resource training • Measure year over year knowledge gains of key staff • Increase % score on knowledge poll	<u>Short-term</u>: • Develop knowledge poll <u>Mid-term</u>: • Conduct pre-education poll to capture baseline Develop agency staff training on One Water and regional Water resources <u>Long-term:</u> • Deliver and assess One Water knowledge poll
		2) Increase coordination and cooperation within and between public agencies working within 2 geographic scopes: greater New Braunfels area; and upper Guadalupe watershed	Increase cross-collaboration on projects Number of cross-agency projects developed and delivered year over year. Cross agency benefits identified and articulated	• Cross-agency opportunities identified • Record number of cross-agency projects executed • Assess impacts resulting from the collaboration • Year over year increases in cross-agency project • Increased benefits from collaborative projects identified	<u>Short-term:</u> • Hire/onboard dedicated One Water Manager and support staff • Identify stakeholders, determine which agencies will participate, such as Comal County, water suppliers • Assemble Working Group to further develop any collaboration opportunities • Establish a decision tree for collaboration between agencies (triggers for communication) • Determine most strategic/impactful actions supported by collaboration **<u>Continuous:</u>** • Launch One Water webpage, include "all" One Water projects, ways to get involved, benefits • Develop Library of Plans and Information

ACTION AREA 2: MAXIMIZE ENVIRONMENTAL, SOCIAL, AND ECONOMIC BENEFITS (TRIPLE-BOTTOM LINE) BENEFITS TO NEW BRAUNFELS

Vision Element	Objective	Strategic Direction	Indicators	Targets	Action Plan
Maximize environmental, social, and economic benefits to New Braunfels	Maximize environmental, social, and economic benefits to the greater New Braunfels area by…	1) Prioritizing projects, programs and policies that consider and balance these goals. This includes current and future programs, policies, and projects within the proposed geographic area.	Adoption of Triple-bottom line project scoring matrix Increase use of scoring matrix on all projects	• Develop triple bottom line matrix • Develop evaluation plan • Show year to year improvement in project selection that are put through the matrix • All new projects in pipeline have scores at or above XX (number tbd by the working group)	<u>Short-term</u>: • Work with One Water Manager to identify elements of matrix <u>Mid-term</u>: • Through community and stakeholder engagement process, develop triple-bottom-line matrix and scoring criteria • Identify which plans, departments and entities will apply this scoring framework to guide decision making processes • Score select current projects and proposed projects to determine baseline scores • Set score targets for future years based on baseline findings • Develop an Implementation Plan • Begin implementation • Develop Process Evaluation – what worked and what needs improvement <u>Long-term:</u> • All new projects in pipeline have scores at or above X, or increase by X% <u>Continuous</u>**:** • All new projects in pipeline have scores at or above X, or increase by X%
		2) Identify benchmark universe of potential solutions for consideration	Robust library of projects for reference	• Exemplary list of One Water projects researched, curated and published on One Water website for access by community.	<u>Short-term:</u> • Create shared resources library <u>Continuous:</u> • Identify and add new One Water projects to website

ACTION AREA 3: ENSURE WATER REMAINS A CELEBRATED FEATURE OF NEW BRAUNFELS

Vision Element	Objective	Strategic Direction	Indicators	Targets	Action Plan
Ensure water remains a celebrated, protected feature of the greater New Braunfels area enjoyed by a community of water conscious citizens	To keep water a safe, healthy and prominent natural feature of our community by…	1)Provide leadership within the region on One Water best practices.	New Braunfels Area One Water group is recognized as leader in One Water best practices.	• Increase attention through industry groups and media on best practices being demonstrated in New Braunfels area. • Requests for information sharing from other agencies and communities. • Number of regional trainings, speaker series, education events held in New Braunfels on One Water.	<u>Short-term:</u> • Participate in One Water Alliance • Participate in Regional One Water Working groups <u>Mid-term:</u> • Host One Water summits, speaker series in New Braunfels. • Develop tours and outreach on high-profile One Water project.
		2) Increase number of public and private infrastructure projects including One Water elements.	Increased visibility of water smart projects throughout the area and surrounding communities.	• Year over year Increase in number of One Water projects. • Develop strategy for communication on importance and impact of One Water projects for economic, social and environmental benefits. • Increase in public support for water sensitive projects.	<u>Short-term:</u> • Identify all current One Water projects • Work on One Water website • Develop public facing communication on definition and importance of One Water roadmap. <u>Mid-term:</u> • Community understands and supports value of One Water projects Long-term: • Communication and engagement on One Water built into fabric of community outreach.
		3)Engage in conversations around green infrastructure concepts, (which includes open space) in order to define standards for One Water New Braunfels.	Adoption of plan for green infrastructure standards (including open space where applicable).	• Community and stakeholder understanding of need for green infrastructure standards • Inclusion of green infrastructure standards in all planning documents • Fair and equitable access to open space may include water access, where applicable.	<u>Short-term:</u> • Collect and review regional and national green infrastructure and open space standards. • Identify stakeholders to develop plan. <u>Mid-term:</u> • Define and develop green infrastructure standards. • Present plan to local governing bodies. <u>Long-term:</u> • Adopt green infrastructure standards.

	To build a community of water conscious citizens by…	1) Engage a diverse group of stakeholders, with attention to inclusivity and diversity, in One Water dialogue and project identification.	Number of communities, throughout area actively participating in One Water stakeholder group. Number of communities implementing One Water aligned projects. Increase platforms/methods through which value of water is shared (i.e. arts, music, infrastructure, parks)	• Set annual targets for programs and participation rates. • Increase in number of diverse stakeholders participating in One Water conversation. • Increase in ways value of water is shared in community. • Utilize arts and culture strategies to advance sustainable, integrated, and inclusive management of our water resources	<u>Short-term:</u> • Share One Water Roadmap and plan with core group of regional stakeholder groups working on shared goals of protecting water resources <u>Mid-term</u>: • Provide space and facilitate dialogue on One Water roadmap and plan for generating ideas and participation in One Water concepts. • Continually monitor and engage diversity of participants for social and economic inclusion. • Identify non-traditional methods for sharing One Water philosophy.
		2)Provide cohesive and collaborative water education programming across agencies through traditional and non-traditional methods.	Water related education opportunities and engagement increase across sectors and agencies.	• Define baseline knowledge of community around value of water. • Increase in number of education programs and avenues in which the value of water is shared. • Create measurable indictors to evaluate effectiveness of education programs in areas such as conservation, re-use, reduction in GPCD, and pollution in waterways.	<u>Short-term:</u> • Catalogue the available water-related program • Identify target audiences • Identify additional partners in developing/providing programming • Conduct poll strategy across demographic groups for determining baseline knowledge <u>Mid-term:</u> • Implement and assess baseline knowledge poll • Communicate opportunities materials available for water education • Provide education programs • Identify indicators in appropriate content areas for evaluation. • Create shared data base for communicating efforts on reducing water usage and pollution incidents. <u>Long-term</u>: • Develop strategy for monitoring/gathering number of programs provided on water education • Develop strategy for tracking overall knowledge base of community on water related issues

ACTION AREA 4: PROVIDE SUSTAINABLE & HIGH-QUALITY WATER FOR PEOPLE

Vision Element	Objective	Strategic Direction	Indicators	Targets	Action Plan
Water supply is reliable and resilient, and water quality meets the standards for its use	Provide a sustainable & resilient water supply for people by...	***Within Zone One (defined as NBU Service Area):*** 1) Refining water planning goals, processes, procedures and timelines to align with the One Water program	Increased references to One Water goals and objectives in NBU's water plans Increase in One Water-aligned projects moving to implementation	• All current plans incorporate One Water goals, processes, and timelines • Progress toward delivering additional plans of relevance (such as a reuse or reclaimed water master plan) • Additional study of alternative sources and conservation compared with traditional supply conducted to consider economic impacts to developers, rate payers and the utility	Continuous: • Incorporate One Water into NBU's Conservation Plan, Water Resources Plan, Water & Wastewater Master Plan, Capital Improvement Plan, and Impact Fee Study Short-term: • Determine what resources are needed to conduct a water balance, economic impact study and other additional plans of interest (such as reclaimed/reuse master plan) Mid-term: • Track implementation of projects aligned with One Water • Review all current planning processes for alignment with One Water goals, processes, and timelines • Develop additional plans needed to meet One Water goals
		2) Diversifying NBU water supply and management options	NBU water supply and management strategies meet demand during a repeat drought-of-record Percent of total NBU source water available by source/type	• NBU Water Resources Plan updated; NBU's water supply and management portfolio meets One Water goals • Completion of the NBU Aquifer Storage and Recovery (ASR) Program and Wellfield Expansion	Continuous: • Continue annual NBU Water Resources Plan updates Short-term: • NBU Water Resources Plan update • Continue NBU's ASR Demonstration Study • Complete the NBU Water Supply Resiliency Study • Complete the SWTP No. 2 Feasibility study Long-term: • Complete NBU's ASR Demonstration Study
		3) Improving NBU's aging infrastructure	Reliability of NBU delivery infrastructure NBU water storage and delivery capacities meet peak demands	• NBU Asset Management program developed and implemented • NBU Water Master Plan updated • NBU CIP plan addresses infrastructure replacement needs	Continuous: • Continue NBU's leak detection program • Continue regular Water Master Plan updates Mid-term: • Continue development of NBU's Asset Management program and conduct condition assessments • Continue/improve NBU's Non-Revenue Water analytics dashboard
		4) Maximizing conservation, efficiency, and fit-for-purpose water in NBU's service area	Per Capital Demand Volume of non-potable water available	• NBU Conservation Plan updated • Progress toward meeting NBU's goal of 120 GPCD by 2043	Continuous: • Continue and expand NBU's water conservation program

			Nonrevenue water indicators	• A decrease in water use across NBU customer classes (annual demand per account or household) • Increase in the volume available and use of non-potable water • Optimized non-revenue water considering the economic value of each water source	<u>Short-term:</u> • Continue/improve NBU's non-revenue water analytics dashboard and identify cost-effective strategies for reducing non-revenue water <u>Mid-term</u>: • Develop a robust conservation, non-potable water, and reuse plan, including strategic policies, standards, ordinances, and regulations (such as establishing/revising landscape requirements) • Broaden NBU's impact fee study to consider/include non-potable and reuse water
		<u>Within Zone Two (actual geographic region to be determined)</u>: 1) Monitoring the availability of water resources within the broader region	Water supply availability Returns (quantity) to surface and groundwater sources Number of communities/entities engaged in implementing a regional water resources plan	• Net neutral or net positive impact to water supply availability • Region-wide water availability protection plan developed and implemented	<u>Mid-term</u>: • Define the Zone Two geographic region and stakeholders • Define measurable targets for Zone 2 <u>Long-term:</u> • Conduct a community water balance • Develop a tracking process and begin tracking • Establish and implement a region-wide plan for protecting water resources
	Ensure high quality drinking water and water quality meets the standards for its intended use by…	***<u>Within Zone One/NBU service area:</u>*** 1) Maintaining NBU's water system's Superior Drinking Water Rating	Water quality parameters	• Drinking water meets or exceeds TCEQ's primary and secondary standards and NBU's distribution water quality goals • Evaluate new water sources relative to NBU's distribution system water quality goals prior to contracting • Updated water quality monitoring plan	<u>Continuous:</u> • Continue to track water testing occurrence and results relative to TCEQ standards and NBU's water quality goals <u>Short-term</u>: • Update NBU's drinking water quality monitoring plan to reflect industry best practices
		***<u>Within Zone Two (actual geographic region to be determined)</u>*:** 1) Protecting the quality of water resources (Edwards Aquifer, River Basins, etc.) within the broader region	Water quality parameters Number of communities/entities engaged in implementing a regional water resources plan	Net neutral or net positive impact to water quality Region-wide water quality protection plan developed and implemented	<u>Mid-term:</u> • Define the Zone 2 geographic region and stakeholders • Define measurable targets for Zone 2 <u>Long-term</u>: • Develop a tracking process and begin tracking • Establish and implement a region-wide plan for protecting water resources

ACTION AREA 5: ENSURE HEALTHY WATERSHEDS, WATERWAYS & GROUNDWATER RESOURCES

Vision Element	Objective	Strategic Direction	Indicators	Targets	Action Plan
Ensure healthy watersheds, waterways and groundwater resources	Ensure healthy watersheds, waterways, and groundwater resources by…	***Within Zone One (defined as Greater New Braunfels Area i.e. Guadalupe River Basin from Canyon Lake to Seguin):*** 1) Generate a resource guide that provides an overview of what is being done locally to monitor, maintain and/ or improve watersheds, waterways and groundwater resources of the Greater New Braunfels area.	Increase the understanding of the actions and management measures needed to protect watershed, waterways and groundwater resources.	• Communicate and education provided through One Water Manager on best practices to all cross-agency stakeholder teams.	Short-term: • Compile all plans, reports and monitoring efforts related to watersheds, waterways and groundwater resources within the Greater New Braunfels area.
		2) Determine baseline conditions of local waterways and aquifers. Develop desired future conditions for local waterways and aquifers	Routine analysis and evaluation of surface water quality and groundwater monitoring data. To include data for the Guadalupe River, Comal River, Alligator Creek, Cry Comal Creek, Edwards Aquifer and Trinity Aquifer.	• Achieve Texas Surface Water Quality Standards and/ or desired future conditions for selected waterbodies • Ensure groundwater withdrawals do not negatively impact spring flow at Comal Springs.	Short-term: • Research and obtain case studies regarding potential impacts to local waterways and groundwater resources resulting from rapidly increasing urbanization and water demands • Prepare GIS map, report and presentation summarizing all existing and planned monitoring and watershed/ groundwater protection efforts and potential long-term threats to local surface water quality and groundwater resources. • Share findings with management and governing bodies of local entities Mid-term: • Watershed Task Force to develop and adopt desired future conditions for local waterways and groundwater resources. • Work with Task Force to identify gaps and develop plans to help mitigate threats to waterways and springs within the geographic area.

		3) Promote and implement One Water concepts that will aid in maintaining or improving local waterways and aquifers.	Tracking of One Water/ Green Stormwater Infrastructure/ Conservation projects that are aimed at maintaining/ improving watershed, waterway and groundwater resources	• XX number of One Water/ Green Stormwater Infrastructure/ Conservation projects implemented with the intent of protecting local waterways and groundwater resources.	<u>Mid-term</u>: • Assemble a One Water Watershed/ Groundwater Protection "Task Force" led by One Water Coordinator • Propose specific One Water concepts and/ or regulations that can be implemented/ enacted to help in protecting local watersheds, waterways and springs <u>Long-term:</u> • Generate report and presentation that sets forth group findings, alignment among various entities and steps to take among stakeholders to ensure healthy watersheds, waterways and groundwater resources • Share all the above with appropriate groups and entities such as City Council, local advisory boards, NBU Board, GBRA Board, etc. • Implement appropriate and agreed upon management measures and One Water concepts to mitigate negative impacts to local waterways and groundwater resources.
		<u>Within Zone Two (defined as Guadalupe River from Kerr Co. to City of Gonzalez BUT EXCLUDING the Greater New Braunfels area):</u> 1) Generate a resource guide that provides an overview of what is being done locally to monitor, maintain and/ or improve watersheds, waterways and groundwater resources of the Greater New Braunfels area.	Increase the understanding of the actions and management measures needed to protect watershed, waterways and groundwater resources.	Communicate and education provided through One Water Manager on best practices to all cross-agency stakeholder teams.	<u>Short-term</u>: • Compile all plans, reports and monitoring efforts related to watersheds, waterways and groundwater resources within the Greater New Braunfels area.

		2) Determine baseline conditions of local waterways and aquifers. Develop desired future conditions for local waterways and aquifers	Routine analysis and evaluation of surface water quality and groundwater monitoring data. To include data for the Guadalupe River, Comal River, Alligator Creek, Cry Comal Creek, Edwards Aquifer and Trinity Aquifer.	Achieve Texas Surface Water Quality Standards and/ or desired future conditions for selected waterbodies Ensure groundwater withdrawals do not negatively impact spring flow at Comal Springs.	<u>Short-term:</u> • Research and obtain case studies regarding potential impacts to local waterways and groundwater resources resulting from rapidly increasing urbanization and water demands • Prepare GIS map, report and presentation summarizing all existing and planned monitoring and watershed/ groundwater protection efforts and potential long-term threats to local surface water quality and groundwater resources. • Share findings with management and governing bodies of local entities <u>Mid-term:</u> • Watershed Task Force to develop and adopt desired future conditions for local waterways and groundwater resources. • Work with Task Force to identify gaps and develop plans to help mitigate threats to waterways and springs within the geographic area.
		3) Promote and implement One Water concepts that will aid in maintaining or improving local waterways and aquifers.	Tracking of One Water/ Green Stormwater Infrastructure/ Conservation projects that are aimed at maintaining/ improving watershed, waterway and groundwater resources	XX number of One Water/ Green Stormwater Infrastructure/ Conservation projects implemented with the intent of protecting local waterways and groundwater resources.	<u>Mid-term</u>: • Assemble a One Water Watershed/ Groundwater Protection "Task Force" led by One Water Coordinator • Propose specific One Water concepts and/ or regulations that can be implemented/ enacted to help in protecting local watersheds, waterways and springs <u>Long-term:</u> • Generate report and presentation that sets forth group findings, alignment among various entities and steps to take among stakeholders to ensure healthy watersheds, waterways and groundwater resources • Share all the above with appropriate groups and entities such as City Council, local advisory boards, NBU Board, GBRA Board, etc. • Implement appropriate and agreed upon management measures and One Water concepts to mitigate negative impacts to local waterways and groundwater resources.

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[1] The "XX" forecasted figures have been intentionally left blank as many of these goals listed are conceptual. As the project progresses, the goals will be established and the figures will be updated to give reasonable expectations.