MEMORANDUM

To: Mayor and Council Members

CC: Marc A. Ott, City Manager
Robert D. Goode, P.E., Assistant City Manager

From: Greg Meszaros, Director, Austin Water

Date: September 25, 2014

Subject: Plan for Implementing Key Austin Water Resource Planning Task Force Recommendations

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As directed by City Council in August through Resolution No. 20140807-090, Austin Water has developed the attached plan for implementing key recommendations of the Austin Water Resource Planning Task Force. The report includes schedule information, available preliminary budget information and plans for stakeholder input.

We appreciate the guidance provided by Council and the Task Force and are committed to moving forward toward an even more water-efficient and water-resilient future.

Proposed Schedule, Plan, and Budget for Implementing Key Recommendations of the Austin Water Resource Planning Task Force

Report to City Council

September 2014

(Council Resolution No. 20140807-090)

Austin WATER

Austin Water Resource Planning Task Force (AWRPTF)

The Austin Water Resource Planning Task Force (Task Force) was created by City Council (Resolution No. 20140410-033) in April 2014 to evaluate the City's water needs, to examine and make recommendations regarding future water planning, and to evaluate potential water resource management scenarios for Council consideration. The Task Force was charged with making recommendations on any alternative water sources including conservation, reuse, regional transmission systems and partnerships, groundwater, aquifer storage, as well as other potential sources in the region. Austin Water and Watershed Protection provided departmental support to the Task Force's efforts.

The Task Force convened its first meeting on May 5, 2014 and met intensively through June 25, 2104 to execute their charge. The Task Force's July 2014 final report and recommendations to Council is available on-line at:

http://austintexas.gov/sites/default/files/files/Water/AustinWaterResourcePlanningTaskForce_ReportToCityCouncil.pdf

August 7, 2014 Council Resolution (Resolution No. 20140807-090):
On August 7, 2014, City Council passed a resolution (Resolution No. 20140807-090) directing the City Manager to report back to Council by September 25, 2014 with a proposed schedule, proposed plan, and proposed budget for implementing key recommendations from the Task Force report and to include a plan for a stakeholder process. Council Resolution No. 20140807-090 is available on-line at:

http://www.austintexas.gov/edims/document.cfm?id=214617

Proposed Plan, Schedule, and Budget for Implementing Key Recommendations:

Austin Water has classified the Task Force Key Recommendations into the following categories for purposes of planning and budgeting.

1) Short-term demand-side management strategies
2) Short-term supply-side management strategies
3) Proposed code and rules changes
4) Feasibility and engineering analysis for supply-side strategy grouping
5) Integrated Water Resources Plan

Each of the following sections details proposed schedule and budget where available, and provides information on the plan for each key recommendation, including planned stakeholder processes. (Parenthetical notations refer to the item's location in the Austin Water Resource Planning Task Force Recommendations report to Council, July 2014.) Note that schedule references to a given year in this report represent the calendar year, as opposed to a fiscal year, unless otherwise noted.

Short-term Demand-side Management Strategies (SD)

These are conservation and water loss reduction efforts that are considered, "go-do" strategies for which implementation is on-going or can soon begin, prior to completion of an Integrated Water Resources Plan (IWRP).

SD1. Develop benchmarks for conservation *(Section IV. 3.1.2, pg. 13)*
Austin Water has developed benchmarks, in coordination with the Resource Management Commission, that reflect the value of reduced water and wastewater treatment and distribution and collection, plus the benefit of delaying additional raw water payments to LCRA. Austin Water will continue to use those benchmarks for program selection pending development of broader supply and demand benchmarks through the IWRP (also see IWRP section below).

SD2. Invest in water report software or services *(Section IV. 3.1.2, pg. 14)*
Austin Water has been exploring water use report service options. After resolving issues related to data transfer and customer privacy, AWU will proceed with a pilot project to evaluate the benefits and determine what steps will be necessary to implement this strategy on a citywide scale. AWU estimates that this pilot program can be underway in 6 to 9 months. In the interim, we will continue to provide customers with 13 months of usage data on their monthly bills to allow self-comparison.

SD3. "Complete the Core" of the Reclaimed Water System *(Section IV. 3.1.2, pg. 14)*
The reclaimed water master plan includes approximately $41.4 million in capital improvement projects in an on-going staged construction program over the next 5 to 7 years to finish, including "Completing the Core." Once each segment is on-line Austin Water will be able to provide reclaimed water to customers served in that segment area. All of the Completing the Core projects, some of which are in design now and some are under construction, are expected to be completed by approximately 2020.

Note that there are other reclaimed water projects, beyond completing the core, discussed below in the "Feasibility and Engineering Analyses for Supply-Side Strategy Grouping (FEA)" section, that could be accelerated due to the current drought. These potential drought response strategies, including Lake Long enhanced off-channel storage (FEA1) and indirect potable reuse (FEA2), include construction of additional reclaimed water system infrastructure components contained in Austin Water's reclaimed master plan

Austin Water and Watershed Protection have begun coordinating, along with PARD, on best management practices to minimize the impacts of reclaimed water use in the Critical Water Quality Zone and the 100-year floodplain.

SD4. Leak/water loss reduction: Continue, enhance leak and pipe failure detection & remediation *(Section IV. 3.1.2, pg. 14)*
Austin Water will work to continue and enhance efforts to reduce leaks and system losses from AWU infrastructure. These efforts are coordinated through AWU's leak detection, pipe condition assessment, and remediation programs (repair and replacement). The Utility will develop and share the relationship between water loss

reductions and costs of implementing leak reduction programs. The Utility will continue to work to develop best practices for determining an economic level of water loss in coordination with national industry organizations.

Short-term Demand-side Management Strategies (SD) Summary		
Strategy	**Schedule**	**Budget**
SD1. Benchmarks	On-going – also see IWRP section below	In-house resources to be utilized – also see IWRP section below
SD2. Water report software/services	Pilot can be underway in 6 to 9 months	Preliminary estimate for pilot: approximately $25,000 (subject to change)
SD3. Reclaimed: Completing the Core	On-going construction program with staged project completion over the next 5 to 7 years. Once projects come on-line during that time, Austin Water will be able to provide reclaimed water service to customers in that project area. Note: There are other reclaimed water projects, beyond completing the core, discussed below in the "Feasibility and Engineering Analyses for Supply-Side Strategy Grouping (FEA)" section, that could be accelerated due to the current drought. These potential drought response strategies, including Lake Long enhanced off-channel storage and indirect potable reuse, include construction of additional other reclaimed water system infrastructure components contained in Austin Water's reclaimed master plan.	Capital Projects: $41.4 million (in current CIP plan)
SD4. Leak/water loss reduction	On-going leak detection, pipe condition assessment, and remediation programs; develop and share cost relationship information by end of 2015	Continue to fund efforts through annual O&M and CIP budget process; use in-house resources for developing cost relationship information

Short-term Supply-side Management Strategies (SS)

These are "go-do" projects to maximize existing water resources and which are underway or can soon begin implementation.

SS1. Enhance Longhorn Dam gate operations *(Section IV. 3.2.1, pg. 15)*
Initial dam gate valve adjustments for flow modification have been completed and bascule gate improvements are currently underway. These enhancements are expected to be sufficient to achieve the desired improved hydraulic performance from the existing structure and gates without fully automating the dam's knife gates (also referred to as "key hole" gates). Austin Water will continue to coordinate with Austin Energy and LCRA to refine gate outlet flow rates and improve the hydraulic efficiency of the system to the extent practicable, while continuing to evaluate the possible need for future improvements.

SS2. Off-Channel Storage at Walter E. Long Lake (existing capacity) *(Section IV. 3.2.1, pg. 15)*
Coordinate with Austin Energy (AE) and LCRA, and others, as necessary, to operate Walter E. Long (Decker) Lake with a 3-foot variation in lake level, if feasible. The goal of the approach is to save more water in lakes Travis and Buchanan through strategic lake refill operations in wetter conditions in coordination with LCRA. Plan is to add an operational supplement to AE's pro-rata curtailment plan for Decker that generally outlines a procedure for AE to get credit towards AE's pro-rata curtailment plan for stored water saved by operating in this manner.

SS3. Vary Lake Austin operating level during non-peak months *(Section IV. 3.2.1, pg. 15)*
The Task Force recommended, and the Utility agrees, that this measure to operate Lake Austin within an approximate 3-foot operation range should be implemented during non-peak recreational months (October through May) after combined storage in the Highland Lakes falls below 600,000 acre-feet. On an ongoing basis, AWU will monitor LCRA combined storage projections to provide adequate opportunity to conduct a robust public outreach and education process in advance of possible implementation triggering.

Austin Water will prepare for possible implementation as soon as early 2015. Austin Water will coordinate with LCRA.

Note: for the plan, schedule, and cost information on the "Capture local inflows to Lady Bird Lake" option *(Section IV. 3.2.1, pg. 15),* see the "Feasibility and Engineering Analysis for Supply-Side Strategy Grouping" section, below.

Short-term Supply-side Management Strategies (SS) Summary		
Strategy	**Schedule**	**Budget**
SS1. Enhance Longhorn dam gate operations	Complete current dam gate improvement project by end of 2014. Conduct further gate adjustments, as needed, over the next several months. Continue to monitor and coordinate with LCRA – make further adjustments and plan for further improvements, as necessary.	Gate adjustments being done using in-house resources. Current dam improvement project being funded by AE through current CIP (~$650,000). Cost estimates for possible future improvements are yet to be determined.
SS2. Lake Long operating level (existing capacity)	Assess feasibility, negotiate, and complete pro-rata curtailment plan amendment, between AE and LCRA, target completion Fall 2014. Subsequently, begin operations as soon as practical, with a target of November 2014, in coordination between AE and LCRA.	In-house resources to be utilized.
SS3. Lake Austin operating level	Proposed to be implemented during non-peak recreational months (October through May) after combined storage in the Highland Lakes falls below 600,000 acre-feet. On an ongoing basis, AWU will monitor LCRA combined storage projections to provide adequate opportunity to conduct a robust public outreach and education process in advance of possible implementation triggering. Will prepare for possible implementation as soon as early 2015. Austin Water will coordinate with LCRA.	Coordination to be implemented using in-house resources. Austin Water may need to budget for professional public outreach resources to implement this strategy. However, a scope and budget for these resources has not yet been developed.

Proposed code and rules changes (CR)

These include recommendations to amend existing codes and rules, for which development and stakeholder involvement processes can begin prior to the completion of an IWRP.

CR1. Proactive Implementation of Drought Response Stages *(Section IV. 3.1.1, pg. 13)*
Austin Water will solicit public input to assess the potential for an additional restriction in Stage 3 that would allow hand watering only and thus could delay a Stage 4 condition. Stakeholders would also consider the lake levels appropriate to trigger implementation of the additional restriction, plus consider the appropriate Highland Lakes combined storage level to begin Stage 4. The task force recommended implementation of hand watering only at no later than 500,000 acre-feet and Stage 4 at no later than 400,000 acre-feet.

This will build on the public input process for code revisions competed in 2012 and final recommendations will be incorporated in the next scheduled update of the City's Drought Contingency Plan (DCP).

CR2. Replace inefficient toilets *(Section IV. 3.1.2, pg. 13)*
Austin has required high efficiency toilets in new construction since 2010, prior to the state requirement in 2014. Toilet incentive programs were in place from the 1990s to 2011, ending after saturation rates exceeded 75% across sectors (the state BMP recommends a goal of 50%). To capture savings from remaining inefficient toilets, Austin Water will work with stakeholders to develop code language and an implementation plan to require retrofits in the commercial and multifamily sectors, either upon resale or by date-certain. The process is expected to take up to 9 months, with a target to seek Council action on proposed code amendments in late 2015.

CR3. Capture cooling tower condensate in new facilities *(Section IV. 3.1.2, pg. 13)*
Air conditioning condensate capture and use in cooling towers is incentivized for commercial use by AWU. Austin Water will begin work with stakeholders in 2015 to develop requirements for new facilities in preparation for the next scheduled plumbing code update, anticipated to occur in 2016.

CR4. Gray water system requirements *(Section IV. 3.1.2, pg. 13)*
The City has been actively engaged in identifying and removing any impediments to graywater systems while still protecting public health and safety and consistent with state regulations. A work group has addressed this issue and a consultant's report with recommendations has been completed. Proposed code changes are planned for Council action in late October 2014. Addressing any additional state required impediments unnecessary to protect public health has been identified as a part of the City's agenda for the 2015 legislative session, as directed by City Council Resolution No. 20140807-094.

CR5. Irrigation and system-related measures *(Section IV. 3.1.2, pg. 14)*
Following the 2014 implementation of mandatory irrigation inspections for commercial and multi-family properties, Austin Water began working with LCRA and homebuilders to voluntarily limit irrigated area and include drought resistant landscaping in new buildings. Additionally, Austin Water is developing a commercial program to incentivize improvements that go beyond current code requirements. AWU will develop a plan to further engage with home and commercial builders regarding options and alternatives to in-ground irrigation systems, incorporating Watershed Protection, Planning and Development Review and the general public.

The Task Force recommended that impact fees should be higher for new construction built with irrigation systems and other features that use more water and lower for water efficient or water neutral new construction. As Council has recently approved changes to raise all impact fees to the maximum allowable amount, Austin Water will consult with the Impact Fee Advisory Committee prior to bringing forward additional recommendations.

Proposed code and rules changes (CR) Summary

These include recommendations to amend existing codes and rules, for which development and stakeholder involvement processes can begin prior to the completion of an IWRP.

Strategy	Schedule	Budget
CR1. Drought response stages	Stakeholder process to begin Fall 2014; will prepare for possible implementation in 2015.	In-house resources to be utilized
CR2. Toilet replacement	Code amendments before Council in late 2015	In-house resources to be utilized
CR3. Cooling tower condensate	Work with stakeholders in 2015 to incorporate in City's regular plumbing code update	Coordination to be implemented using in-house resources.
CR4. Gray water amendments	Amendments planned to go to Council late October 2014	In-house resources to be utilized for remaining work
CR5. Irrigation-related measures	Work with stakeholders and report back to Council in late 2015 with recommendations	In-house resources to be utilized

Feasibility and Engineering Analyses for Supply-Side Strategy Grouping (FEA)

These are supply-side strategies recommended by the Task Force for implementation and/or further study. AWU plans to conduct next step feasibility and engineering analyses for these strategies in 2015 to develop key information required to implement these concepts in a timely manner in view of the on-going historic drought conditions. Other supply-side strategies recommended by the Task Force for further study will be included in the IWRP process (see IWRP section, below).

The strategy grouping listed below is a combination of strategies recommended in the Task Force report from several different sections. The first two, FEA1 and FEA2, are from the Task Force report's "Mid-term Strategies" section. FEA3 is from the report's Section V., "Recommended Strategies for Study" and FEA4 is from the report's "Short-term Strategies" section.

The proposed plan is to conduct feasibility and engineering analyses for the following water supply strategies as a set or grouping. This is due to their similarities in terms of source water supplies (enhanced use of treated wastewater effluent and storage), similar piping and pumping systems, and/or the need to conduct similar water quality evaluations for permitting.

- Key aims of these engineering analyses include: further evaluate the project concept and feasibility, develop preliminary cost estimates, define major project components, develop schedule and timing information, conduct water quality modeling and assessments for future permitting, and evaluate permitting requirements of these strategies.
- Austin Water and Austin Energy will continue to coordinate on feasibility and engineering analyses related to the enhanced off-channel storage at Walter E. Long Lake strategy (Decker Lake).
- Austin Water will coordinate with Watershed Protection Department on scope of work development for the water quality analyses for these strategies.
- Austin Water will plan to present the results of the feasibility and engineering analyses to provide the public and stakeholders an opportunity to provide input.

FEA1. Enhanced off-channel storage at Walter E. Long Lake (Decker Lake) *(Section IV. 3.2.2, pg. 15)*

With potential replacement of Decker Power Station in the future plan of the City, this strategy is to use Walter E. Long Lake as enhanced off-channel storage for water supply augmentation. The project would only operate with the Decker Power Station Plant off-line. Given the financial and reliability impacts of Decker, this strategy must be carefully studied/planned to ensure that electric reliability is not compromised. Mothballing/decommissioning Decker is a lengthy and costly process that will require market review by Austin as well as regulatory review and authorization by the Electric Reliability Council of Texas (ERCOT). Austin Water and Austin Energy are coordinating on feasibility and engineering analysis related to this strategy.

The project, which would utilize Colorado River water and reclaimed water, would result in operating Long Lake as an off-channel storage reservoir to benefit the LCRA and City of Austin with increased storage levels in lakes Travis and Buchanan. Enhanced operations of Lake Long, which holds approximately 30,000 acre feet when full, would allow more fluctuation in the lake level than current operations, up to approximately 25 feet. The strategy concept would allow water from Lake Long to be released to meet downstream needs, including environmental flows and other uses, which would otherwise need to be released from lakes Travis and Buchanan. This strategy would require making improvements to increase the capacity to refill Lake Long through a combination of Colorado River water and reclaimed water. Project improvements would include increasing pumping capacity at Lake Long's Colorado River pump station and building a reclaimed water main from Walnut Creek WWTP to Lake Long. A reclaimed water main along this general route is included in the Reclaimed Master Plan and would also be used for other customers.

FEA2. Indirect Potable Reuse *(Section IV. 3.2.2, pg. 15)*
This project would convey a portion of the South Austin Regional (SAR) Wastewater Treatment Plant (WWTP) discharge to Lady Bird Lake (LBL). This strategy would require acceleration of reclaimed water mains identified in the Reclaimed Master Plan. Water would then be withdrawn from LBL via a floating pump intake barge below Tom Miller Dam. This strategy would require construction of pumping facilities and pipeline to pump water from LBL into the Ullrich WTP intake system. This operational configuration would only operate when downstream demands are being met. This project would require nutrient removal at SAR WWTP for the treated WWTP effluent water to be discharged into LBL.

The use of LBL to convey treated wastewater effluent from the South Austin Regional Wastewater Treatment Plant to an intake for the Ullrich Water Treatment Plant represents a significant departure from historical practice. The Task Force recommended that the City of Austin consider exercising this option in the event of 400,000 acre feet of combined storage in lakes Travis and Buchanan (20% of full storage) or less and that discharge into the lake should occur for the shortest possible time. AWU concurs with these recommendations regarding this potential severe drought response strategy. In its recommendations report Task Force advised that Council should recognize that permitting for the treated wastewater effluent discharge permit into LBL could take a considerable amount of time. While the triggering conditions for this strategy will hopefully not occur, due to the on-going severe drought and implementation lead time, AWU plans to commence the feasibility and engineering analyses, including analyses required for TCEQ project permitting, as appropriate next steps.

FEA3. Reclaimed Water Infiltration *(Section V. pg. 16)*
This project would involve the spreading of treated wastewater effluent from the South Austin Regional (SAR) Wastewater Treatment Plant (WWTP) in an infiltration basin, which would then recharge into the local Colorado Alluvium formation. Then the water would be recaptured in alluvial wells along the river. Once the water is recaptured, it would be pumped to the water treatment plant through a pipeline. Note that this strategy is

in the AWRPTF Recommendations Report's Section V., "Recommended Strategies for Study". Austin Water will include the Watershed Protection Department in the analysis of this option. This strategy is being included in this feasibility and engineering analyses set or grouping due to the similarities outlined above.

FEA4. Capture Lady Bird Lake inflows *(Section IV. 3.2.1, pg. 15)*
This strategy would include installation of a floating pump intake barge below Tom Miller Dam and a transmission main to pump water from Lady Bird Lake (LBL) into the Ullrich Water Treatment Plant intake line for treatment and delivery into Austin's water distribution system. This project would allow for the capture of spring flows, including flows from Barton Springs that flow into LBL, and other storm flows when they are not needed downstream for environmental flow maintenance or for downstream senior water rights.

Austin Water, working with a consulting team, has developed preliminary estimates of the cost and yield of this option. The preliminary capital cost estimate is in the range of approximately $2-$3 million, as a stand-alone project (floating pump intake barge and transmission main to plant intake line). Additional, more detailed, project cost estimates will be developed as part of the feasibility engineering analysis and could include land acquisition costs and other project implementation costs. Note that the size, scope, and cost of the infrastructure in this option is subject to change based on capacity requirements when considered in possible combination with other options such as FEA2 and FEA3 above.

The range of the annual yield for this strategy is estimated to be between 0 and 6,000 acre feet per year through a repeat of all hydrologic conditions with an estimated annual average of 1,000 to 3,000 acre feet per year. It should be noted that water availability for this option would be intermittent and seasonal, with availability more likely in the months of November through February when downstream agricultural irrigation operations are offline and environmental flow requirements are the lowest for the year.

Next step is to move forward with more detailed feasibility and engineering analyses for the project. This work is to be done in coordination with other feasibility and engineering work on other strategies that involve pumping water from Lady Bird Lake into the Ullrich Water Treatment Plant for treatment and distribution.

Feasibility and Engineering Analyses for Supply-Side Strategy Grouping (FEA) Summary		
Strategy	**Schedule**	**Budget**
FEA1. Lake Long enhanced	Complete feasibility and engineering analyses, including water quality modeling and assessments in 2015. Note that permit requirement consultations with TCEQ will be on-going in 2015.	To be determined (TBD) based on scope of work, to be developed.
FEA2. Indirect potable reuse	Preliminary engineering for the reclaimed water pipelines associated with this option is currently underway and a Preliminary Engineering Report (PER) is expected to be completed by the end of 2015. Complete additional feasibility and engineering analyses, including conduct water quality modeling and assessments, in 2015. Note that permit requirement consultations with TCEQ will be on-going in 2015.	Current PER budget is $300,000. Additional feasibility and engineering analyses budget requirements are TBD based on scope of work, to be developed.
FEA3. Reclaimed water infiltration	Complete feasibility and engineering analyses, including conduct water quality modeling and assessments, in 2015. Note that permit requirement consultations with TCEQ will be on-going in 2015.	TBD based on scope of work, to be developed.
FEA4. Capture Lady Bird Lake inflows	Complete feasibility and engineering analyses, including conduct water quality modeling and assessments, in 2015. This work is to be done in coordination with other feasibility and engineering work on other strategies that involve pumping water from Lady Bird Lake into the Ullrich Water Treatment Plant for treatment and distribution.	TBD based on scope of work, to be developed.

Integrated Water Resources Plan (IWRP)

A full evaluation of and plan for implementing water resource options for a 50-100 year timeframe and incorporating results from prior categories, is expected to be a robust and lengthy process.

Austin Water anticipates following SAWS' model of IWRP development, to draw from industry experts and academic partners and use in-house resources to conduct the project in combination with independent consultants for key tasks that require specialized knowledge or when other additional resources are needed. In addition to public participation and stakeholder input throughout the project, the project will include review by applicable Boards and Commissions prior to City Council presentation.

The IWRP will build upon the City's existing integrated resources planning efforts through its participation in the state regional planning (Region K) process to evaluate and prioritize water supply and management options. This, in addition to Austin's firm water supplies from the Colorado River, has included identifying aggressive water conservation and reuse as Austin's primary means of meeting increased water demands through at least 2050.

The project will expand upon the Water Conservation and Supply Project Evaluation Matrix developed by the Task Force to establish uniform ranking criteria for evaluating potential water supply projects, and prioritize them based on the highest benefit.

The IWRP project will include an independent assessment of conservation programs to identify the potential water supply benefits of implemented and non-implemented conservation programs, and include a cost-benefit analysis. Austin Water will research similar assessments performed for other cities to develop a scope of work for the project. The Utility will reach out to peer organizations and/or conservation leaders, San Antonio Water System (SAWS) for example, in seeking an independent entity to conduct this objective assessment.

The IWRP is also expected to encompass evaluation of:

- Additional conservation efforts, including code requirements, customer behavior modification tools and information, education on the value of water and/or conservation rebates and incentives to develop a culture of water stewardship;
- Development of benchmarks, including cost and other factors, for conservation and other demand-side management strategies and supply-side strategies;
- Decentralization, including reclaiming storm water and rainwater catchment for beneficial purposes and promoting on-site capture and reuse, and further exploring gray water and decentralized wastewater concepts;
- Diversification of supply sources, including brackish groundwater desalination and aquifer storage and recovery (ASR), and other new ideas;
- Maximizing Colorado River supplies, including Barton Springs flow augmentation, a permanent intake to capture spring inflows from Lady Bird Lake, potentially paired with other strategies such as indirect potable reuse and reclaimed water

infiltration, and continuing coordination with LCRA on regional water management plans
- Development of a water demand projection model that reflects disaggregated use, climate, land use and pricing trends in various customer sectors

In the IWRP process, Austin Water will include the perspectives of the Watershed Protection Department (WPD) and Planning and Development Review Department (PDRD) in developing any proposed code amendments for decentralized, on-site storm water management options (on-site beneficial use of storm water). Austin Water will explore ways to expand use of rainwater catchment and storm water reuse, plus explore ways to tap the cityscape as a water source, which is a concept that the Task Force explored in their report to Council *(Section VII. 3.0, pg. 20)*. Austin Water plans to explore these options in a partnership with Watershed Protection. Note: In coordination with the IWRP, WPD, AWU, and PDRD, and others, as appropriate, will coordinate the inclusion of decentralized on-site storm water management options with the Watershed Protection Ordinance (WPO) Phase 2 and CodeNEXT revisions.

Austin Water will include the Watershed Protection Department in the analysis of options identified in AWRPTF Recommendations Report Part V. *Recommended Strategies for Study*, including brackish groundwater desalination and aquifer storage and recovery (ASR).

To align the IWRP process with Imagine Austin, where there are opportunities, AWU will coordinate with other departments, including Parks and Recreation Department (PARD), and with the Office of Sustainability. Austin Water will work with Austin Energy, and others, as appropriate, to incorporate planning for water needs associated with power generation and further explore energy-water nexus opportunities.

Integrated Water Resources Plan (IWRP) Summary

Strategy	Schedule	Budget
IWRP1. Integrated Water Resources Plan Project will include a Conservation Potential Assessment	Project planning and scoping: currently underway Conduct project over approximately the next 2 years with substantial completion by the end of 2016	FY 2015: $500,000 plus in-house and other resources - additional funding is expected to be needed in future fiscal years - to be determined through project planning and scoping process.

Continued Drought Response Modeling

As the current drought continues and to prepare for future droughts, Austin Water will continue to integrate various strategies being considered and/or implemented into the Colorado River Basin Water Availability Model (WAM) for Conditions Reliability Model (CRM) analysis. This modeling tool is highly valuable in analyzing basin-wide effects of strategy implementation. This type of modeling and analysis provides the City with a standard format to analyze changing conditions in demand and supply including analysis of climate adaptation strategies and other factors.

Summary

In closing, to facilitate implementation of the proposed plans included in this report, Austin Water has organized the Task Force Key Recommendations into five main categories. These categories generally focus on:

- "Go-do" strategies for water conservation (demand-side)
- "Go-do" strategies for supply-side
- Proposed code and rules changes;
- Feasibility and engineering analyses for specific supply-side strategies;
- Developing the Integrated Water Resources Plan.

As indicated in the Task Force report to Council and this report, there are multi-layered complexities to be worked through in the process of implementing these plans. AWU is committed to working through these complex projects in manageable pieces, with robust stakeholder and community input, engagement, and communication. As noted in this report, AWU will work in conjunction with other departments including Watershed Protection, Austin Energy, Parks and Recreation, and the Office of Sustainability, to incorporate multiple City-wide perspectives and key expertise.

Austin Water appreciates the work of the Task Force created by Council and the process the Task Force went through in developing their recommendations. The Task Force process, supported by Austin Water and the Watershed Protection Department, included considerable stakeholder input and highlighted the need to continue to explore ways to adapt and plan for a sustainable future while in the midst of an historic drought.