

Austin Integrated Water Resource Planning Community Task Force

Packet Index

May 2, 2017

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Austin Integrated Water Resource Planning Community Task Force May 2, 2017 – 6:00 p.m. Waller Creek Center, Room 104 625 East 10th Street Austin, Texas 78701

For more information go to: <u>Austin Integrated Water Resource Planning Community Task Force</u>

AGENDA

Voting Members:

Sharlene Leurig - Chair Jennifer Walker – Vice Chair Todd Bartee Clint Dawson Marianne Dwight Diane Kennedy Perry Lorenz Bill Moriarty Sarah Richards Lauren Ross Robert Mace

Ex Officio Non-Voting Members: Austin Water: Greg Meszaros Austin Energy: Kathleen Garrett Austin Resource Recovery: Sam Angoori Neighborhood Housing and Community Development: Rebecca Giello Office of Innovation: Kerry O'Connor Office of Sustainability: Lucia Athens Parks and Recreation: Sara Hensley Watershed Protection: Mike Personett

1. CALL TO ORDER – May 2, 2017, 6:00 p.m.

2. CITIZEN COMMUNICATION

The first 10 speakers signed up prior to the meeting being called to order will each be allowed a threeminute allotment to address their concerns regarding items not posted on the agenda.

3. APPROVAL OF MEETING MINUTES

a. Approval of the meeting minutes from the April 18, 2017 Task Force meeting (5 minutes)

Austin Integrated Water Resource Planning Community Task Force Regular Meeting May 2, 2017

4. STAFF BRIEFINGS, PRESENTATIONS, AND OR REPORTS

- a. Presentation on preliminary characterization of Demand Management Options Consultant Team (60 minutes)
 - i. Task Force Discussion and Input
- b. Presentation of Task Force Responses to IWRP sub-objectives weighting survey City Staff (60 minutes)
 - i. Task Force Discussion and Input
- c. Informational presentation on South Central Waterfront Initiative City Staff (30 minutes)
 - i. Task Force Discussion and Input

5. SUBCOMMITTEE REPORTS

6. VOTING ITEMS FROM TASK FORCE

7. FUTURE AGENDA ITEMS

8. ADJOURN

Note: Agenda item sequence and time durations noted above are subject to change.

The City of Austin is committed to compliance with the American with Disabilities Act. Reasonable modifications and equal access to communications will be provided upon request. Meeting locations are planned with wheelchair access. If requiring Sign Language Interpreters or alternative formats, please give notice at least 2 days (48 hours) before the meeting date. Please call Austin Integrated Water Resource Planning Community Task Force, at 512-972-0194, for additional information; TTY users route through Relay Texas at 711.

For more information on the Austin Integrated Water Resource Planning Community Task Force, please contact Marisa Flores Gonzalez at 512-972-0194.

MINUTES



The Austin Integrated Water Resource Planning Community Task Force convened in a Special Called Meeting on April 18, 2017 at Waller Creek Center, Conference Rm 104, 625 E 10th Street, in Austin, Texas.

Members in Attendance:

Sharlene Leurig - Chair Jennifer Walker – Vice Chair Todd Bartee Diane Kennedy Perry Lorenz Robert Mace Sarah Richards Lauren Ross

Ex-Officio Members in Attendance:

Mike Personett

Staff in Attendance:

Daryl Slusher, Kevin Critendon, Teresa Lutes, Marisa Flores Gonzalez, Mark Jordan, Prachi Patel, Jeff Fox, Mateo Scoggins, Chris Herrington, Matt Hollon, Katherine Jashinski, Joe Smith, Ginny Guerrero, Shannon Halley

Additional Attendees:

Ron Anderson, Bill Millican, David Venhuizen, Craig Smith

1. CALL TO ORDER

Sharlene Leurig, Chair, called the meeting to order at 4:07 p.m.

2. CITIZEN COMMUNICATION: GENERAL None

3. APPROVAL OF MEETING MINUTES

The meeting minutes from the April 11, 2017 Austin Integrated Water Resource Planning Community Task Force regular meeting were approved on Member Mace's motion and Member Lorenz's second on a 6-0-0-5 vote with Members Dawson, Dwight, Kennedy, Moriarty and Walker absent.

4. STAFF BRIEFINGS, PRESENTATIONS, AND/OR REPORTS

- a. A presentation of draft weightings for the integrated water resource planning objectives and sub-objectives was provided by Marisa Flores Gonzalez, Senior Planner, Austin Water. This briefing was followed by a Task Force discussion including questions and answers.
- b. A progress update presentation on geospatial analysis of decentralized options (including rainwater, stormwater, graywater, onsite blackwater reuse, and wastewater scalping or sewer mining) was provided by Marisa Flores Gonzalez, Senior Planner, Austin Water and members of the Consultant team including Chris Kurtz from CDM Smith (joining remotely from Colorado) and Ryan Brotchie and Kate Williams from GHD (joining remotely from Melbourne, Australia). This briefing was followed by a Task Force discussion including questions and answers.

5. SUBCOMMITTEE REPORTS None

6. VOTING ITEMS FROM TASK FORCE

None

10. FUTURE AGENDA ITEMS

None

Chair Leurig adjourned the meeting at 6:11 pm.

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PRESENTATION



Water Forward Austin's Integrated Water Resources Plan Task Force Meeting

April 18, 2017



Water Forward Austin's Integrated Water Resource Plan

Characterization of Austin Water Demand Management Measures

Peter Mayer, Water DM





Presentation Plan

- The IWRP Process
- Selected Demand Management Measures
- Yield Range
- Characterization Template
- Avoided Costs
- Information on Specific Measures
- Discussion and Next Steps



Demand Management Options Process





Water Use in Austin 2013-15



Austin



The water demand management measures considered, impact across every sector in Austin.



Planning for 100 Years – Targeting New Development



Demand Management Measures for Characterization

Austin

| Rank | Measure Name | Weighted Score |
|------|---|----------------|
| 1 | Landscape Transformation - Ordinances | 21 |
| 2 | Automated Metering Infrastructure (AMI) | 19 |
| 3 | Water Loss Control Utility Side | 16 |
| 4 | Landscape Transformation - Incentives | 16 |
| 5 | Irrigation Efficiency - Incentives | 15 |
| 6 | CII Ordinances - Cooling Towers and Steam Boilers | 15 |
| 7 | Alternative Water – Ordinances* | 14 |
| 8 | Development-focused Water Use Estimates/ Benchmarking - Plan Submittal | 14 |
| 9 | Alternative Water –Incentives* | 13 |
| 10 | Alternative Water Incentives – Graywater, Blackwater* | 10 |

*Alternative water measures are being characterized separately with geospatial modeling



Draft Water Savings Yield Range – Acre-Feet





Characterization Template

| Metric Name | Unit | Metric Definition |
|-------------------------|----------------------------|--|
| Average Annual Yield | AFY | The estimated average annual demand savings achievable by the measure (Total Yield over 100 years divided by 100) |
| Supply Type | Qualitative Selection | Annual or emergency/drought |
| Unit Cost | \$/AF | Total annual cost of the measure for both the utility and the customer divided by the estimated average annual yield |
| Benefit Cost Ratio | Ratio | Average annual cost benefits divided by the unit cost |
| Climate Resiliency | Qualitative Index | The relative susceptibility of an option to future hydrologic variability (Low, Medium, High) |
| Advantages | Qualitative Description | Narrative on positive attributes of option, including as it relates to portfolio evaluation sub-objectives |
| Disadvantages | Qualitative Description | Narrative on negative attributes of option, including as it relates to portfolio evaluation sub-objectives |



Avoided Costs

- Avoided costs are the "Benefit" in the Benefit-Cost Ratio
- Water Treatment Variable Cost taken from the 2016 Water Loss Report to TWDB (line 44); includes electrical and chemical treatment cost at water treatment plants
- Wastewater Treatment Variable Cost calculated from 2016 budget data; includes electrical and chemical costs at each treatment plant and lift station
- For some measures, additional "Other" avoided costs were identified from both the utility and customer perspective





Information on Specific Measures



- Many of these measures will require council approval
- Refinements and more detailed assessment will be required that



Draft - Landscape Transformation -Ordinances

| Metric | Score | Assumptions | Ordinances to promote |
|----------------------------|--------|---|---|
| Average Annual Yield | | Ordinances approved by Council and in place by 2025 – Apply to new development New landscapes will use half as much as average landscape today | water use efficiencies for outdoor landscaping through emphasis on landscape functionality |
| 2115 Yield | | Plantscape has a lower E1 Savings achievable per EPA Research Report on Turfgrass & EPA WaterSense Water Budget Tool | The goal is regionally appropriate landscapes |
| Unit Cost | Low | Staff to develop ordinances assumed to come from existing utility resources Customers have additional cost for installing | which are capable of thriving while relying largely on local |
| Benefit | Very | Proven cost reduction in maintenance of Xeriscape landscapes from Southern Nevada Water Authority study (Sovocool) | available precipitation and requiring less supplemental irrigation |
| Cost Ratio | High | Avoided water treatment costs applicable | largets all sectors |
| Climate Resiliency | Medium | Yield is associated with outdoor use which is susceptible to climate change | |



Draft - Benchmarking

| Metric | Score | Assumptions | Requirement of water |
|------------------------------------|--------|---|---|
| Average Annual Yield | | Water use estimate submittal requirement begins in 2020; marginal savings through information on ways to save water Development will meet or exceed benchmarks in | use estimate submittal for review and comparison against benchmarks. |
| 2115 Yield | | 2070; more substantial savings once water efficient building is requiredApplies to new development only | Transition to require new buildings to meet |
| Unit Cost Benefit Cost Ratio | Medium | Utility costs could potentially be high at first as staff will be needed to develop benchmarks, review submittals, and write recommendations Additional utility costs to assure benchmarks are met and customer costs to develop and submit water use estimates but then decline with time Avoided water treatment costs applicable to all savings; Avoided wastewater treatment costs applicable to indoor savings | or exceed benchmarks. Targets all sectors |
| Climate Resiliency | High | Not susceptible to future hydrologic variability Benchmarks can adapt to climate changes | |



Draft - AMI

| Metric | Score | Assumptions | Customer-facing real |
|------------------------------------|-------------|--|---|
| Average Annual Yield | 6 | Studies show 4.6% to 10% reduction in water use from AMI messaging and reporting Yield analysis assumes SFR and MFR homes will use less than the current | time water information and metering through AMI |
| 2115 Yield | | Average CII customer assumed to reduce water use from current Primarily targets indoor/outdoor leaks and enhances other program effectiveness | Targets all sectors |
| Unit Cost Benefit Cost Ratio | Low High | Initial cost for meters and infrastructure Battery replacement ~15 years; Data hosting cost Avoided water treatment costs applicable to all savings; Avoided wastewater treatment costs applicable to indoor savings | |
| Climate Resiliency | High | Majority of savings are indoor and not susceptible to climate change | |



Draft - Water Loss Control - Utility

| Metric | Unit | Assumptions | Enhanced utility side water |
|----------------------------|--------|---|---|
| Average Annual Yield | | Expanded and enhanced water loss control measures. Baseline Infrastructure Leakage Index is 3.53 | loss control programs designed to reduce real losses over time. |
| 2115 Yield | | Current program goal is to reduce ILI to 2.7 Annual yield calculation Yield analysis results in consistent annual savings. | largets utility distribution system |
| Unit Cost | Low | Costs are entirely on the utility side Cost to achieve ILI improvement in development Only incremental costs above and beyond current | |
| Benefit Cost Ratio | Medium | water loss and line replacement efforts are considered. | |
| Climate Resiliency | High | Water loss control measures not susceptible to climate change | |



Draft - Landscape Transformation -Incentives

| Metric | Score | Assumptions | Implement incentives to |
|----------------------------|--------|---|---|
| Average Annual Yield | • | Program starts in 2020 and targets existing development Transformed landscapes will require, on average, 30% less water than turf to maintain plant health (i.e., the transformed plantscape have a lower evenetropeniration (ET) and lower watering | encourage water use efficiencies and reduce water needs for outdoor irrigation and other goals through regionally |
| 2115 Yield | ۵ | evaporranspiration (ET) and lower watering requirement) Savings are based on the Southern Nevada Water Authority study | with an emphasis on landscape functionality |
| Unit Cost | Medium | Assumes customer incurs costs to convert existing landscape to a WaterWise landscape Utility would have costs for the rebate funding and one many invalues at tion | Targets SFR, MFR, and COM sectors |
| Benefit Cost Ratio | High | Customer will incur less annual maintenance costs Avoided water treatment costs applicable | |
| Climate Resiliency | Medium | Yield is associated with outdoor use which is susceptible to climate change | |



Draft - Irrigation Efficiency Incentives

| Metric | Unit | Assumptions | |
|------------------------------------|---------------|---|---|
| Average Annual Yield | ۵ | Expand rebate programs to include irrigation system controllers that respond to leaks, high pressure, and soil moisture; Incentivize retrofit of grandfathered irrigation systems to encourage | Expand current program to include smart controllers and more participation |
| 2115 Yield | ۵ | more efficient irrigation systems. In Austin ~89,300 existing residential irrigation systems and ~3,000 commercial irrigation systems greater than 1 acre. Analysis of cost and yield is in progress. | Targets outdoor use and automatic irrigation in all sectors |
| Unit Cost Benefit Cost Ratio | Medium Low | Incentive may not cover the entire cost of either a smart controller or upgrades to irrigation systems. Participation levels for current program suggest higher incentives may be required, which reduces B/C ratio. | |
| Climate Resiliency | Medium | Measure impacts outdoor use which is climate- sensitive. Climate-based controllers can help customers adapt to changing conditions. | |



Draft - CII Ordinances for Cooling Towers

| Metric | Score | Assumptions | Require older cooling |
|----------------------------|--------|--|--|
| Average Annual Yield | ۵ | Code tentatively set for Council action in June Assumed 400 cooling towers going from 3 to 5 | towers to meet efficiency standards |
| 2115 Yield | ۵ | cycles of concentration when in compliance Savings assumed for 9 months of operation. | Requires makeup and blowdown submeters. |
| Unit Cost | High | Assumes the customer pays the cost to retrofit, which is \$5,000 on average (California Urban Water Conservation Council). | conductivity controller, drift eliminator and overflow alarm and |
| Benefit Cost Ratio | Low | Control and sensors lasts only 7 years. Difficult to estimate costs as cooling tower retrofit varies according to manufacturer. | achieve 5 cycles of concentration |
| Climate Resiliency | Medium | Cooling demand could increase with climate change. | Targets COM sector |



Next Steps

- Detailed characterization information presented at July meeting
- Development of IWRP portfolios that combines conservation measures in a manner consistent with the portfolio theme



Demand Management Options Process



Thank you!



Peter Mayer, P.E.





Draft Weightings For Objectives And Subobjectives



Outline

- Portfolio Evaluation Process Overview
- Objectives and Sub-objectives Weighting Survey Feedback
- Task Force Discussion and Input



Multi-Criteria Decision Analysis (MCDA) is a powerful approach in ranking portfolios





Example Use of Multi-criteria Software to Rank Alternatives





Ranking sensitivity can help determine which portfolios are more robust

| | Portfolio Rankings (1 = best, 5 = worst) | | | | |
|--------------------------|--|-------------|---------------------|-------------|--------|
| Ranking Sensitivity | High Resiliency | Low Cost | Most Sustainable | Low Risk | Hybrid |
| Baseline Weights | 4 | 5 | 2 | 3 | 1 |
| Equal Weight | 5 | 1 | 3 | 4 | 2 |
| Implementation Weight | 2 | 5 | 3 | 4 | 1 |
| Economic Weight | 1 | 4 | 2 | 5 | 3 |
| Average Ranking | 3.2 | 4.2 | 2.0 | 3.8 | 1.8 |
| | | | | | |
| | Two Most Robust Portfolios | | | | |

Draft Water Forward Objectives and Subobjectives Weighting

| Primary Objective | Objective Weight | Sub-Objective | Sub- Objective Weight | Defining Question | Performance Measure | Overall Weight | | | | | | | | | | | | | | | | | | | |
|---------------------------|---------------------|--|---|---|--|--|---|-----|---|-----|--|--|-------|-----|-----|-----|-----|-----|-----|-----|--|-----|--|--|--|
| Water Supply Benefits | 30% | Maximize Water Reliability | 50% | How does the portfolio perform in terms of reliability (how often is there shortage), vulnerability (how large is the shortage), recovery (how fast is the recovery from shortages) under various hydrologic conditions, including climate change scenarios? | Water Supply Index (0 to 1) based on WAM modeling results | 15% | | | | | | | | | | | | | | | | | | | |
| | | Maximize Local Control | 25% | To what extent does AW have control over the quantity and storage of water and operation of options (especially during drought periods) included in the portfolio? | Proportion of total supply yield from locally controlled sources | 7.5% | | | | | | | | | | | | | | | | | | | |
| | | Maximize Supply Diversification | 25% | How many independent water supply and demand-side management options above a minimum yield threshold are included in the portfolio? | # of supply/demand-side management sources (above minimum yield threshold) | 7.5% | | | | | | | | | | | | | | | | | | | |
| Economic Impacts | 20% | Maximize Cost- Effectiveness | 75% | What is the total capital (construction) and operations/maintenance costs of all projects/programs in the portfolio over the lifecycle, divided by the sum of all water yield produced by the portfolio? | Unit cost (\$/AF) expressed as a present value sum of all costs over the lifecycle, including utility and customer costs. | 15% | | | | | | | | | | | | | | | | | | | |
| | | Maximize Advantageous External Funding | 25% | Does the portfolio have an opportunity for advantageous external funding from Federal, State, local, and private sources? | External Funding Score (1-5), where 1 = low potential and 5 = high potential | 5% | | | | | | | | | | | | | | | | | | | |
| Environmental Impacts | al 20% | 20% | 20% | Minimize Ecosystem Impacts | 40% | To what extent does the portfolio positively or negatively impact receiving water quality (e.g., streams, river, lakes), terrestrial and aquatic habitats throughout Austin, and net streamflow effects both upstream and downstream from Austin? | Ecosystem Impact Score (1-5), where 1 = high combined negative impacts and 5 = high combined positive impacts | 8% | | | | | | | | | | | | | | | | | |
| | | | Minimize Net Energy Use | 30% | What is the net energy requirement of the portfolio, considering energy generation? | Incremental net change in kWh | 6% | | | | | | | | | | | | | | | | | | |
| | | Maximize Water Use Efficiency | 30% | What is the reduction in potable water use from water conservation, reuse and rainwater capture for the portfolio? | Potable per capita water use (gallon/person/day) | 6% | | | | | | | | | | | | | | | | | | | |
| Social Impacts | 15% | 15% | Maximize Multi-Benefit Infrastructure/Programs | 35% | To what extent does the portfolio provide secondary benefits such as enhanced community livability/beautification, increased water ethic, ecosystem services, or others? | Multiple Benefits Score (1-5), where 1 = low benefits and 5 = high benefits | 5.25% | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | Maximize Net Benefits to Local Economy | 35% | To what extent does the supply reliability and water investments of the portfolio protect and improve local economic vitality, including permanent job creation? | Local Economy Score (1-5), where 1 = high negative impact and 5 = high positive impact | 5.25% | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | Maximize Social Equity and Environmental Justice | 30% | To what extent does the portfolio support social equity and environmental justice, with emphasis on underserved communities? |
| Implementation Impacts | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | Minimize Implementation Challenges | 35% | What implementation challenges will the portfolio face in terms of public acceptance, regulatory approval, and legal/institutional barriers? | Implementation Uncertainty Score (1-5), where 1 = high combined challenges and 5 = low combined challenges | 5.25% |
| | | Maximize Scalability | 35% | To what extent can the portfolio be incrementally sized over time in terms of supply capacity and demand management? | Scalability Score (1-5), where 1 = small incremental sizing potential and 5 = high incremental sizing potential | 5.25% | | | | | | | | | | | | | | | | | | | |
| | | Minimize Technical Feasibility Challenges | 30% | To what extent does the portfolio rely on emerging and/or unproven technologies? | Technical Feasibility (1-5), where 1 = high reliance on emerging or unproven technologies and 5 = low reliance on emerging or unproven technologies | 4.5% | | | | | | | | | | | | | | | | | | | |



Water Supply Benefits

| Objective | Objectiv e Weight | Sub-Objective | Sub- Objective Weight | Overall Weight | Comment Summary |
|--------------------------------------|----------------------|------------------------------------|-----------------------------|-------------------|---|
| Water Supply Benefits | 30% | Maximize Water Reliability | 50% | 15% | Support higher weight for sub- objective (x1) |
| Summary: Support higher weight | | Maximize Local Control | 25% | 7.5% | |
| for objective (x1) | | Maximize Supply Diversification | 25% | 7.5% | Support lower weighting for this sub- objective (x1) |



Economic Impacts

| Objective | Objectiv e Weight | Sub-Objective | Sub- Objective Weight | Overall Weight | Comment Summary |
|---------------------|----------------------|--|-----------------------------|-------------------|---|
| Economic Impacts | 20% | Maximize Cost- Effectiveness | 75% | 5% | Support lower weight for this sub-objective (x1) Support higher weight for this sub-objective (x1) |
| | | Maximize Advantageous External Funding | 25% | 15% | Support higher weight for this sub-objective (x1) Support lower weight for this sub-objective (x1) |


Economic Impacts

| Objective | Objectiv e Weight | Sub-Objective | Sub- Objective Weight | Overall Weight | Comment Summary |
|---|----------------------|----------------------------------|-----------------------------|-------------------|---|
| Environmental Impacts Comment Summary: Support higher weight for objective (x1) | 20% | Minimize Ecosystem Impacts | 40% | 8% | |
| | | Minimize Net Energy Use | 30% | 6% | |
| | | Maximize Water Use Efficiency | 30% | 6% | Support higher weight for sub- objective (x1) |



Social Impacts

| Objective | Objectiv e Weight | Sub-Objective | Sub- Objective Weight | Overall Weight | Comment Summary |
|-------------------|----------------------|---|-----------------------------|-------------------|--|
| Social Impacts | 15% | Maximize Multi- Benefit Infrastructure/P rograms | 35% | 5.25% | Support evenly distributing weight among sub- objectives (x1) |
| | | Maximize Net Benefits to Local Economy | 35% | 5.25% | Support evenly distributing weight among sub- objectives (x1) |
| | | Maximize Social Equity and Environmental Justice | 30% | 4.5% | Support evenly distributing weight among sub- objectives (x1) |



Implementation Impacts

| Objective | Objectiv e Weight | Sub-Objective | Sub- Objective Weight | Overall Weight | Comment Summary |
|---------------------------|----------------------|--|-----------------------------|-------------------|--|
| Implementation Impacts | 15% | Minimize Implementatio n Challenges | 35% | 5.25% | Support evenly distributing weight among sub- objectives (x1) |
| | | Maximize Scalability | 35% | 5.25% | Support evenly distributing weight among sub- objectives (x1) |
| | | Minimize Technical Feasibility Challenges | 30% | 4.5% | Support evenly distributing weight among sub- objectives (x1) |



Next Steps

- Deadline extended on Task Force member weighting survey – please provide your feedback by May 23rd
- Input will be compiled and revised weightings will be presented at June Task Force meeting



Questions



Informational presentation on South Central Waterfront Initiative

SOUTH CENTRAL WATERFRONT VISION FRAMEWORK PLAN

A IT O IT & R

Austin Integrated Water Resource Planning Community Task Force – May 2, 2017



Stephanie Bower | Architectural Illustration

SCW TODAY: Location, Location, Location



SCW TODAY: Location, Location, Location



SCW YESTERDAY: Not even on the map:1839



SCW YESTERDAY: Sand Beach (1872 Survey)



SCW YESTERDAY: "New" 1910 Concrete Bridge



SCW YESTERDAY: Cattle and Spinach



SCW YESTERDAY: 1930 Flood



SCW YESTERDAY: 1949 Zoning Map



SCW YESTERDAY: 1950's





South Central Waterfront Today

- Strategic
 location –
 Redevelopment
 Pressures
- Lack of Infrastructure, Connectivity
- Patchwork of Private Parcels

SCW TODAY: Change is Happening



SCW TOMORROW: Bigger Changes are Coming



SCW TOMORROW: Under Current Entitlements



SCW TOMORROW: Financially Feasible Baseline



SCW TOMORROW: Under Current Entitlements



Imaging a better future: 2012 AIA | SDAT

DESIGNING SOUTH SHORE CENTRAL





Imaging a better future: 2013 UT | HUD Study



Imaging a better future: 2014 Interim Report



City of Austin Planning and Development Review Department Urban Design Division

Imaging a better future: 2015/16 EPA Study



March 2016 www.epa.gov/smartgrowth



Greening America's Capitals

GREENING THE SOUTH CENTRAL WATERFRONT *AUSTIN, TEXAS*

Engaging the Community: 6 Walkshops



Engaging the Community: 6 Public Lectures



Wednesday, May 6th 2015 | 7 pm | Doors at 6:30 pm Mexican American Cultural Center | 600 River St.











Mr. Krieger is a principal at NBBJ, a global architecture and planning firm, and a professor at the Harvard Graduate School of Design, where he has served as the head of the Urban Design Program. His many publications include Remaking the Urban Waterfront and 10 Principles for Waterfront Development. He is a frequent advisor to mayors and their planning departments, has served as director for the National Endowment for the Arts' Mayors' Institute on City Design, lectures frequently at conferences and universities in the US and abroad, and was appointed to the US Commission of Fine Arts by President Obama

Waterfront Talkabout 5





Scott Cataffa, a Principal at CMG Landscape Architecture, a nationally awarded design firm based in San Francisco, will speak on landscape as a framing device for new urban development. He will show examples of how green infrastructure enriches the urban landscape and highlight

Designing Urban Landscapes For People and Nature

vative funding model for buil



Waterfront Talkabout 6







Learn about the SCW Vision Framework Plan, and hear from key

Margaret Robinson PLA, co-founder and Principal of Asakura Robinson, an award-winning landscape architecture planning, and urban design firm.

physical framework for the SCW Plan to create a great public realm for the district



Dr. Abe Forkos | Director of Development Services at ECONorthwest | Portland, OR,

Abe is an expert in finance, real estate development, and crafting urban development partnerships nationwide. His firm has helped create the financial framework for the SCW Plan. The financial framework sets strategies to fund the vision of



A Vision Framework Plan for the South Central Waterfront

The SCW Vision Framework Plan is the result of a multivear effort of planning and community engagement. The Plan sets aspirations and recommendations to help ensure that expanded park spaces. public gathering places, green streets, and affordable housing are central to the future redevelopment of this rapidly changing area. The City Council will consider adopting the Plan at a June 9th public meeting.

consultants who have contributed to the making of the plan:

Asakura Robinson has helped craft the









Pittsburgh, Detroit, Montreal, and the enovation of Shanghai's riverfront Bund.



the Urban Waterfront

Engaging the Community: Charrettes







Engaging the Community: Vision Sessions





Engaging the Community: Open Houses











Engaging the Community: 1600+ people



| DATE | ATTENDANCE | EVENT |
|---------------------|------------|--|
| February 27, 2012 | 75 | Waterfront Talk with SDAT leader Harris Steinberg |
| June 4, 1012 | 80 | SDAT Roundtables |
| June 4, 2012 | 125 | SDAT Kickoff |
| June 6, 2012 | 170 | SDAT Final Presentation |
| May 13, 2013 | 155 | Sustainable Places Project Presentation |
| January 11, 2014 | 174 | WALKabout #1 |
| January 21, 2014 | 116 | TALKabout #1 |
| February 12, 2014 | 73 | TALKabout #2 |
| March 24, 2014 | 78 | TALKabout #3 |
| April 5, 2014 | 55 | WALKabout #2 |
| April 25 - 28, 2014 | 170 | Vision + Design Intensive |
| May 6, 2015 | 130 | TALKabout #4 |
| July 8, 2015 | 105 | TALKabout #5 |
| August 29, 2015 | 16 | Artists Walkshop #1 |
| September 1-3, 2015 | 125 | EPA Vision + Design Intensive |
| September 24, 2015 | 15 | Artists Walkshop #2 |
| October 18, 2015 | 12 | Artists Walkshop #2 |
| May 1, 2016 | 120 | Open Air Open House |
| May 23, 2016 | 30 | TALKabout #6 |



All Together Now: 2016 SCW Vision Framework Plan



SCW Framework Plan: Adopted June 2016



SCW Framework Plan: The three legged stool

Three requirements for successful transformation:

- A Physical Framework: green streets, pedestrian connections & open space for a great public realm.
- A Financial Framework: district-wide value capture, strategic capital investments and bonus entitlements to fund public realm and affordable housing.
- A Proactive City Framework: public-private partnerships and leverage city assets in order to achieve community goals.

PHYSICAL FRAMEWORK: A network of streets, pedestrian connections and open spaces for a great public realm


Public Realm First for Rational Development

- 1. Expanded Waterfront Open Space
- 2. Catalyst Open Space, Trails & Green Streets
- 3. Developer added Green Streets
- 4. Existing Roadway Improvements
- 5. Public Realm Framework for development

Key Placemaking Prospects: Catalyst Anchors

- 4 LADY BIRD LAKE BLUNN CREEK 1. Trail @ the Texas School for the Deaf **Barton Springs Plaza** 2.
 - 3. Crockett Square
 - 4. Open Spaces @ Statesman site 32

Key Placemaking Prospects: Bouldin Creek Trail

* Image below included in the adopted City of Austin SCW Plan



Key Placemaking Prospects: Bouldin Creek Trail

* Image below included in the draft Texas Facilities Commission TSD Master Plan

Texas School for the Deaf | 2016 Campus Master Plan





Executive Summary | A4

Key Placemaking Prospects: Bouldin Creek Trail



Looking from Congress Avenue to the Texas School for the Deaf (Bouldin Creek @ right)

Key Placemaking Prospects: Barton Springs Plaza

4 LADY BIRD LAKE BLUNN CREEK 3 1. Trail @ the Texas School for the Deaf **Barton Springs Plaza** 2. **Crockett Square** 3.

4. Open Spaces @ Statesman site

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Key Placemaking Prospects: Barton Springs Plaza



Looking from Congress Avenue towards Barton Springs Road (@ location of existing "free right")

Image from EPA Report & the SCW Plan

Key Placemaking Prospects: Barton Springs Plaza



Looking from Congress Avenue towards Barton Springs Road (@ location of existing "free right")

Image from Lake | Flato Fall 2015

Key Placemaking Prospects: Barton Springs Plaza



Looking from Congress Avenue towards downtown (Barton Springs Road to left)

Image from Lake|Flato Fall 2015

Key Placemaking Prospects: Crockett Square

4 LADY BIRD LAKE **BLUNN CREEK** 1. Trail @ the Texas School for the Deaf **Barton Springs Plaza** 2. **Crockett Square** 3. 4. Open Spaces @ Statesman site 40

Key Placemaking Prospects: Crockett Square



Key Placemaking Prospects: Statesman Open Spaces

4 LADY BIRD LAKE **BEUNN CREEK** 1. Trail @ the Texas School for the Deaf **Barton Springs Plaza** 2. **Crockett Square** 3. 4. Open Spaces @ Statesman site 42

Key Placemaking Prospects: Statesman Open Spaces



Key Placemaking Prospects: Bat Theatre



Key Placemaking Prospects: Great Lawn



Key Placemaking Prospects: Pontoon Landing



Existing Conditions & Alternative Futures: The Public Realm (open spaces & public right-of-ways)



Placemakers + Green Streets: The Public Realm







BAGBY STREET Houston, TX



Asakura Robinson / Design Workshop / Walter P Moore





Circulation & Transportation: Street Classification



Core Transit Collector Local Street Shared Street

Physical Framework

Collector

Circulation & Transportation: Street Classification







Stared Street

Circulation & Transportation: Layered Connectivity

Trails

Bike Lanes

Protected Bikeways

Circulation & Transportation: Transit

Auditorium Shores Station

Metro-Bapid

Loca Sus (1, 7, 10, 20)

MetroArport Flyer

Cand Reserved for Potential Future Bail Transit Station

Other District-Scale Possibilities: Water Resources



Framework **Other District-Scale Possibilities:** Water Management Physical BI A/C Diverted Rooftop Primary Condensate from Filtration Capture Capture streets Under Plaza Storage Plaza Offsite Bioswale Municipal Wetland Treatment Treatment Treatment Plaza/Park Streetscape DISTRICT - WIDI Irrigation Irrigation

GROUNDWATER / LADY BIRD LAKE / CISTERN



IDRAIN TO LAKE

DISTRICT TREATMENT [BIOSWALES]

[DRAIN TO GROUND WATER]

Other District-Scale Possibilities: Water Resources



Building Rainwater Reuse



District Stormwater Reuse



Reclaimed Water



District Cooling

Other District-Scale Possibilities: Electric



District Solar



District Charging (PEV)

SCW Framework Plan: The three legged stool

Three requirements for successful transformation:

- A Physical Framework: green streets, pedestrian connections & open space for a great public realm.
- A Financial Framework: district-wide value capture, strategic capital investments and bonus entitlements to fund public realm and affordable housing.
 - A Proactive City Framework: public-private partnerships and leverage city assets in order to achieve community goals.

Estimated Costs: Value of a quality of Public Realm

| Т | otal Cost | = \$99 Million |
|-----|------------------|------------------|
| | New Streets | = \$44.8 Million |
| | Existing Streets | = \$33.4 Million |
| l 📄 | Open Space | = \$20.8 Million |
| | | |

Making Density Work: Value Capture & Cost Sharing

LADY BIRD LAKE

in = 300 ft

South Central Waterfront Vision Illustrative Plan

BLUNN CREEK

Making Density Work: Financial Toolkit

| | Transportation Infrastructure | Parks & Open Spaces | Affordable Housing |
|---|----------------------------------|------------------------|--------------------|
| Privately Funded | | | |
| Public Improvement District | ~ | ✓ | \checkmark |
| Transfer of Development Rights | | ~ | ✓ |
| Philanthropy | | ✓ | \checkmark |
| Publicly Funded | | | |
| Tax Increment Financing | ~ | ✓ | \checkmark |
| CIP Funds | ✓ | ✓ | |
| Parking Fund | ✓ | | \checkmark |
| Affordable Housing (tax abatements/credits, REIT) | | | \checkmark |

Making Density Work: Test Scenario for Development



Making Density Work: Testing Tax Increment







SCW Goal: 20% of net new units as affordable



SCW Initiative: Imagining the Future



Stephanie Bower | Architectural Illustration
SCW Initiative: www.austintexas.gov/waterfront







BACKUP MATERIALS

| Objective and Weight | Subobjective and Weight | Clint Dawson | Robert Mace | William Moriarty | Sarah Richards | Perry Lorenz |
|--|------------------------------|--------------|---------------------------------|-------------------------|-----------------------------------|-----------------------|
| | Maximize Water Reliability | | Should be a higher % of | | | |
| | Subobjective Weight - 50% | | the score; it's the key | | | |
| | Overall Weight - 15% | 15 | metric. | | | |
| | Maximize Local Control | | | | | |
| Water Supply Benefit | Subobjective weight - 25% | | | | | |
| | Overall weight - 7.5% | 7.5 | This is fine. | | | |
| | Maximize Supply | | | | | |
| | Diversification | | | | | |
| | Subobjective weight - 25% | | This is fine. Support | | | |
| | Overall weight - 7.5% | 7.5 | diversification. | 1% | | |
| | | | | | | |
| | | | | I think diversification | In agreement that this primary | |
| | Comments on the Weighting | | Need more weight for | chould be weighted | abiactive chould be the most | I have no reason to |
| | of this Objective as a Whole | | | | beswike weighted, at 20% | question any of these |
| | of this objective as a whole | | | | neavily weighted, at 50% | weightings. |
| | | | | | I don't think that the overall | |
| | | | | | weight of this subobi should be | |
| | | | | | equal to 'maximize water | |
| | | | | | reliability': i'd prefer that the | |
| | | | | | subobi weight should be | |
| | | | | | dropped to 60% and increase | |
| | | | | | 'advantages external funding' | |
| | | | | | to 40%; also energy use costs | |
| | | | | | should be included in the O&M | |
| Economic Impacts Objective Weight - 20% | | | | | costs and this cost | |
| | Maximize Cost-Effectiveness | | | | effectiveness unit cost should | |
| | Subobjective weight - 75% | | | | take into consideration external | |
| | Overall weight - 15% | 18 | | | funding that lowers cost to AW | |
| | Maximize Advantageous | - | | | | |
| | External Funding | | | | | |
| | Subobjective weight - 25% | | | | | |
| | Overall weight - 5% | 2 | | | | |
| | | | The second still second still s | | | I have no reason to |
| | comments on the weighting | | i nese relative weights | | | question any of these |
| | of this Objective as a Whole | | are fine. | JOK with this. | | weightings. |

| | Minimize Ecosystem Impacts | | | | | |
|--|--------------------------------|---|------------------------|----|-----------------------------------|-----------------------|
| | Subobjective weight - 40% | | | | | |
| | Overall weight - 8% | 8 | | | | |
| | Minimize Net Energy Use | | | | | |
| | Subobjective weight - 30% | | | | | |
| | Overall weight - 6% | 6 | | | | |
| | | | | | I think this subobj should be | |
| | | | | | more heavily weighted such | |
| | | | | | that the overall weight of this | |
| | | | | | subobj is on par with local | |
| | | | | | control & maximize | |
| Environmental impacts | | | | | diversification (7.5%); 'minimize | |
| Objective weight - 20% | | | | | net energy usage' weight could | |
| | Maximize Water Use Efficiency | | | | be decreased or overall weight | |
| | Subobjective weight - 30% | | | | of enviro impacts could be | |
| | Overall weight - 6% | 6 | | | increased | |
| | | | | | I'd prefer that enviro impact | |
| | | | | | obj be weighted higher than | |
| | | | | | economic impacts by at least | |
| | | | | | 5% (esp since negative enviro | |
| | | | | | impacts negatively impact the | I have no reason to |
| | Comments on the Weighting | | These relative weights | | city's economic potential and | question any of these |
| | of this Objective as a Whole | | are fine. | ок | success | weightings. |
| | Maximize Multi-Benefit | | | | | |
| | Infrastructure/Programs | | | | | |
| | Subobjective weight - 35% | | | | | |
| Social Impacts Objective Weight - 15% | Overall weight - 5.25% | 5 | | | | |
| | Maximize Net Benefits to Local | | | | | |
| | Economy | | | | | |
| | Subobjective weight - 35% | | | | | |
| | Overall weight - 5.25% | 5 | | | | |
| | Maximize Social Equity and | | | | | |
| | Environmental Justice | | | | | |
| | Subobjective weight - 30% | | | | | |
| | Overall weight - 4.5% | 5 | | | | |
| | | | | | | I have no reason to |
| | Comments on the Weighting | | These relative weights | | | question any of these |
| | of this Objective as a Whole | | are fine. | ОК | | weightings. |

| | Minimize Implementation | | | | |
|------------------------|--------------------------------|---|--------------------------|----|-----------------------|
| | Challenges | | | | |
| | Subobjective weight - 35% | | | | |
| | Overall weight - 5.25% | 5 | | | |
| | Maximize Scalability | | | | |
| | Subobjective weight - 35% | | | | |
| Implementation Impacts | Overall weight - 5.25% | 5 | | | |
| Objective Weight - 15% | Minimize Technical Feasibility | | | | |
| | Challenges | | Is this worded properly? | | |
| | Subobjective weight - 30% | | More points for | | |
| | Overall weight - 4.5% | 5 | unproven tech? | | |
| | | | | | I have no reason to |
| | Comments on the Weighting | | Overall, need more | | question any of these |
| | of this Objective as a Whole | | weight on reliability. | ОК | weightings. |