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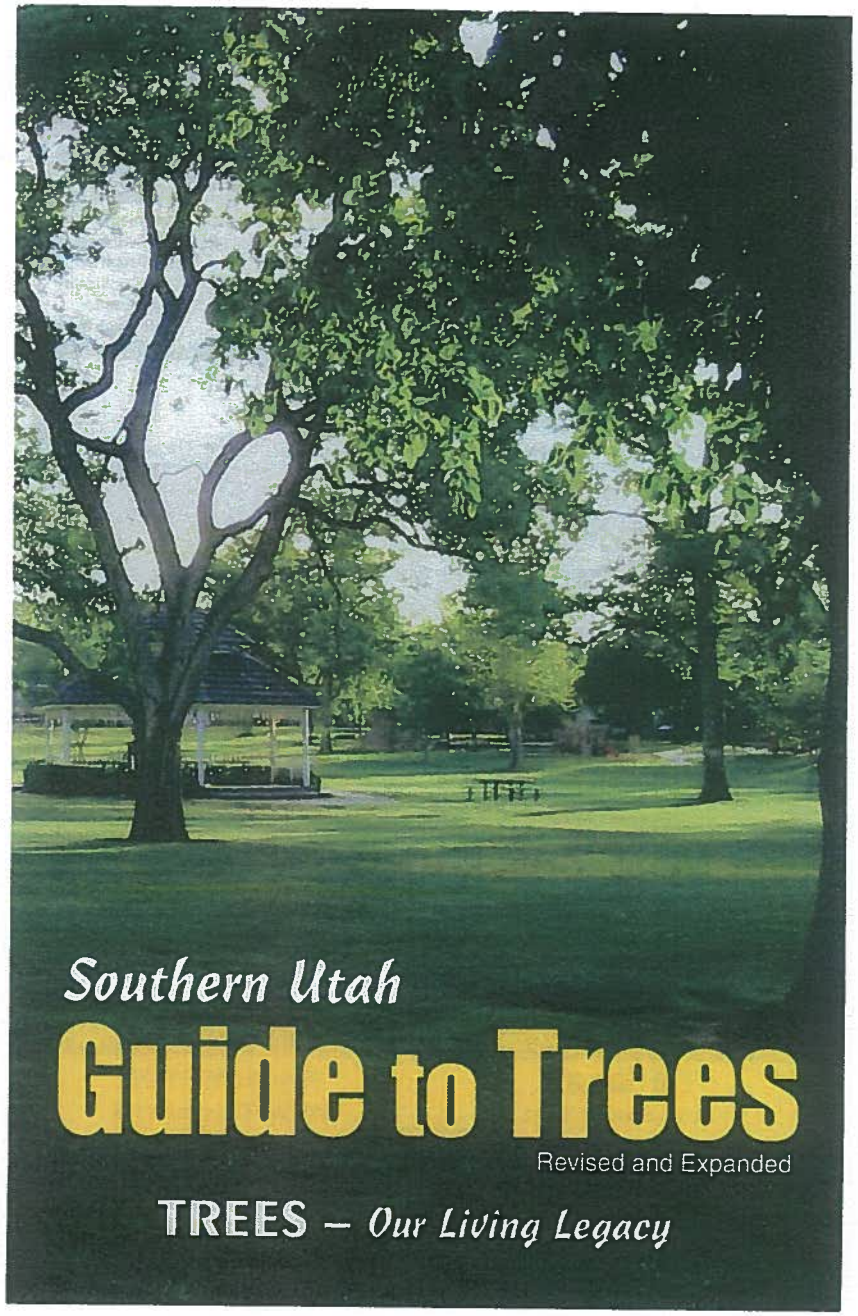

Southern Utah

Guide to Trees

Revised and Expanded

TREES – *Our Living Legacy*

Star NURSERY

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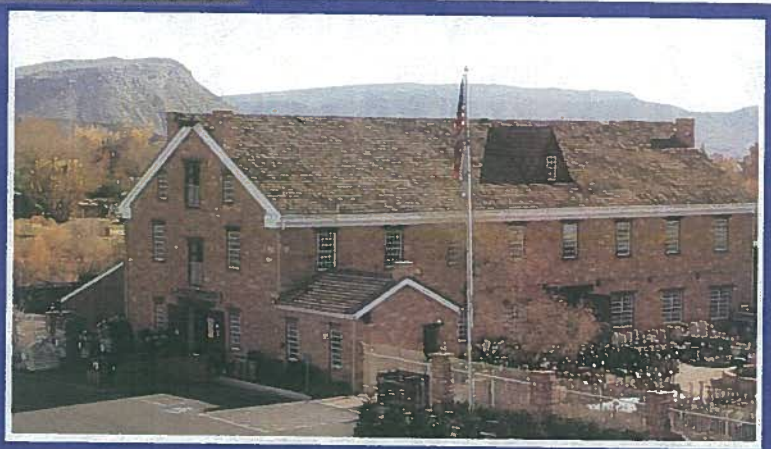

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Our sprinkler experts can custom design an irrigation system to meet the needs of your landscape.

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For more gardening information, Visit us online at: WWW.STARNURSERY.COM

SERVING S. UTAH FOR OVER 10 YEARS!

How You Can Help

This booklet has presented a large amount of information on many aspects of choosing, planting and caring for trees and has listed resources and agencies that are involved in tree planting and care. How can you help? Here is a checklist of things you can do to make our Southern Utah home a better and greener place to live:

- If you own or manage a business, plant a tree there. If you don't, try to get your employer to plant a tree.
- Buy a living Christmas Tree this year. If you don't have a place to plant it after Christmas, donate it for public planting.
- Take time to teach your children about trees, including those in your neighborhood.
- Work with your local school to plant a tree on campus.
- Volunteer for local tree planting and education projects such as Arbor Day, 4th of July, Armistice Day, Flag Day, etc.
- Visit a local botanical garden to educate yourself about gardening in Southern Utah.
- Get your church, scout groups, or community groups involved in tree planting and education.
- Question elected and appointed officials about their attitudes toward trees, open space, parks & environmental protection.

Whatever you do, the most important thing to remember is

PLANT A TREE!!

With power poles located down the center of the road, trees never interfered with power lines. St. George Boulevard looking west toward "Airport Hill." Donor: Archie Wallis.

Resource Groups & Agencies

WASHINGTON COUNTY EXTENSION AGENT (435) 628-5815
197 E. Tabernacle, St. George, UT 84770 extension.usu.edu/cooperative
The local arm of the State Extension Service offers classes and workshops for homeowners and professionals covering many aspects of gardening and home care. Also, it provides a telephone hotline for questions on gardening in Southern Utah. Extension Agent Rick Hefelbower (628-5815) participates in a number of community education programs and also writes a very useful gardening column for the Wednesday Spectrum. The sponsor of the Master Gardener Program.

UTAH DIVISION OF FORESTRY/SOUTHWESTERN AREA (435) 586-4408
585 N. Main, Cedar City, UT 84720
Primarily geared to the management of State range and forest resources, the Division of Forestry also helps local landowners with conservation and tree-related problems. It is also quite active with education programs in schools for students and teachers, including Project Leatning Tree.

UTAH DIVISION OF AGRICULTURE
197 E. Tabernacle, St. George, UT 84770
This broad reaching agency is of most interest to homeowners in two of its functions: insect identification and nursery regulation. You can bring a specimen of any insect (properly constrained) to the Division to find our what it is. Please call for collection details. They also license and regulate local retail nurseries and consumers have recourse through the Division if they feel they have been defrauded or improperly dealt with.

ST. GEORGE SHADE TREE & BEAUTIFICATION BOARD (435) 634-5869
340 East 200 South, St. George, UT 84770 www.ci.st-george.ut.us
An organization to promote appreciation and proper care and maintenance of Southern Utah's urban and community forests. Provides education opportunities to the community, and is an advisory board to the City's Forestry Program.

STATE TREE NURSERY (801) 571-0900
Lone Peak Conservation Nursery Fax (801) 571-1468
14650 South Prison Road, Draper, UT 84020
This branch of the Utah Division of Forestry grows native and adapted plants in small sizes for use in conservation and reclamation. Property owners with an acre or more can qualify to buy plant material for these purposes.

WATER CONSERVANCY DISTRICT (435) 673-4896
136 North 100 East, St. George, UT 84770 www.conservewater.com
Xeriscape means dryscape or low water-use landscaping. Xeriscapes are designed through wise planning, plant and construction materials selection, and proper installation to provide beautiful water efficient and low maintenance landscape.

BUREAU OF LAND MANAGEMENT (435) 688-3246
345 E. Riverside Dr., St. George, UT 84770

INTERNATIONAL SOCIETY OF ARBORICULTURE (217) 355-9411
P.O. Box GG, Savoy, IL 61874-9902 www.isa-arbor.com
Organization that tests and certifies arborists. I.S.A. also serves as a source of information for arborists and tree people.

TREES
Our Living Legacy

PUBLISHED BY
City of St. George
in cooperation with
City of St. George
Shade Tree and
Beautification Board

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Star Nursery

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SOUTHERN UTAH

Guide to Trees

This booklet is meant to assist newcomers and old timers in how to Select, Plant, and Care for trees.

Some of Southern Utah's best tree people and others have worked hard to gather this information. This book contains many trees that you will enjoy, all of which can be found at your local nurseries. Please be sure to Plan Before You Plant! Understand the trees you select so you plant the right tree in the right place.

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TREE SELECTION GUIDE

Individual tree descriptions are located on page # listed below.

	Scientific Name	Common Name	Page #	Codes
LARGE TREES	*Catalpa speciosa*	Western Catalpa	16	V L
	Eucalyptus microtheca	Blue Ghost	16	T
	Eucalyptus polyanthemos	Silver Dollar Gum	16	T
	Fraxinus oxycarpa 'Raywood'	Raywood Ash	16	M P
	Fraxinus velutina	Arizona Ash	16	M I
	Fraxinus velutina 'Glabra'	Modesto Ash	16	M I
	Fraxinus velutina 'Rio Grande'	Fan-Tex Ash	17	M
	Morus alba	Fruitless Mulberry	17	V
	Pistacia chinensis	Chinese Pistache	17	V L
	Platanus acerifolia	London Plane Sycamore	17	V L
	Populus candicans	Cottoniess Cottonwood	18	V P
	Populus fremontii	Western Cottonwood	18	V P
	Salix babylonica	Weeping Willow	18	V P L I
	Salix matsudana 'Navajo'	Navajo Globe Willow	18	V P L I
	Sophora japonica	Japanese Pagoda	18	V L
	Ulmus parvifolia	Lace Bark Elm	19	M
MEDIUM TREES	*Betula pendula*	European White Birch	19	V P I
	Fraxinus greggii	Littleleaf Ash	20	M DT
	Gleditsia triacanthos 'Shademaster'	Shademaster Locust	20	V L
	Gleditsia triacanthos 'Sunburst'	Sunburst Locust	20	V L
	Koelreuteria bipinnata	Chinese Flame	20	M L
	Melia azedarach 'Umbraculiformis'	Texas Umbrella	21	M L
	Prosopis alba	Argentine Mesquite	21	T DT
	Prosopis chilensis	Chilean Mesquite	21	T DT
	Prosopis glandulosa	Texas Honey Mesquite	21	M DT
	Prosopis glandulosa torreyana	Western Honey Mesquite	21	M DT
	Prosopis pubescens	Screwbean Mesquite	21	M DT
	Prosopis velutina	Arizona Velvet Mesquite	21	T DT
	Quercus buckleyi	Red Rock Oak	22	V
FLOWERING	*Albizia julibrissin*	Silk Tree	23	V L
	Caesalpinia gilliesii	Yellow Bird-of-Paradise	23	M DT
	Cercis canadensis	Eastern Redbud	23	V P
	Cercis mexicana	Mexican Redbud	23	V
	Chilopsis linearis	Desert Willow	24	M DT L
	Chitalpa tashkentensis	Chitalpa	24	M DT
	Cotinus coggygria	Purple Smoke Tree	24	V
	Lagerstroemia indica	Crape Myrtle	24	M

Books, Tree Care, and Websites

Western Garden Book
Sunset Editors, paperback, 624 pages, Sunset Books Inc, 1995. www.sunset.com

Plants for Dry Climates: How to Select, Grow and Enjoy
Mary Rose Duffield, Warren D. Jones, paperback, 216 pp, 2001.

Desert Gardening: Fruits & Vegetables
George Brookbanks, paperback, Perseus Books Group, July 1988. www.perseusbooks-group.com

Desert Gardener's Calendar: Your Month-by-Month Guide
George Brookbanks, paperback, 159 pp. Univ of Arizona Press, August 1999. uapress.arizona.edu

Desert Landscaping: How to Start & Maintain a Healthy Landscape in the Southwest.
George Brookbanks, paperback, Univ of Arizona Press, Sept. 1992. uapress.arizona.edu

Gathering the Desert
Gary Paul Nabhan, paperback, Univ of Arizona Press, 209 pp, 1985. uapress.arizona.edu

Gardening in Dry Climates
Scott Millard, Cedric Crocker, Paperback, Meredith Books, October 1989. meredith.com

Landscape Planning for Energy Conservation
Gary O. Robinette, Charles McClenon, 224 pp, 1983.

Tree Basics
Alex Shigo, Shigo and Trees, Associates, paperback, 1996.

A New Tree Biology
Alex Shigo, hardcover, 619 pp, Shigo & Trees, Assoc., 1986.

Modern Arboriculture
Alex Shigo, hardcover, 424 pp, Shigo and Trees, 1991.

Tree Pruning: A Worldwide Photo Guide
Alex Shigo, paperback, 186 pp, Shigo and Trees, 1989.

New Tree Health
Alex Shigo, paperback, Shigo & Trees, Associates, 1989.

Five Minute Tree Care
Alex L. Shigo, paperback, 8 pp, Shigo & Trees, Assoc., 1992.

Earth-Friendly Desert Gardening
Cathy L. Cromell, paperback, Arizona Master Gardeners Inc, May 2003.

Collins Tree Guide
David More, Owen Johnson, hardcover, Collins, September 2004. www.harpercollins.com

Landscape Plants for Western Regions
Bob Perry, Land Design Pub., 318 pp, 1992.

The Ortho Problem Solver, Sixth Edition
Michael McKinley, hardcover, 871 pp, Meredith Books, March 2003. meredith.com

Landscaping to Save Water in the Desert
David G. Harbison, Eric A. Johnson, Museum of New Mexico Press, 1985.

Southwestern Landscaping that Saves Energy and Water
McPherson, E. Gregory and Charles Sacamano, 64 pp. Univ. of Arizona, 1989. cals.arizona.edu

Southwestern Landscaping with Native Plants
Judith Phillips, paperback, 160 pp, Museum of New Mexico Press, 1987.

Successful Gardening with Limited Water
Margaret Tipton Wheatly, 128 pp, Woodbridge Press Pub. Co; 1978.

Taylor's Guide to Water-Saving Gardening
Gordon P. Dewolf, paperback, 447 pp, Houghton Mifflin, 1990.

Water Conservation in Landscape Design and Management
Gary O. Robinette, hardcover, Thomson Learning, Nov. 1984.

Waterwise Gardening
Lauren Springer, paperback, Macmillan General Reference, January 1994.

The Complete Encyclopedia of Trees and Shrubs
Ernie Wasson, hardcover, 928 pp, Thunder Bay Press, 2003.

The Complete Encyclopedia of Garden Flowers
Kate Bryant, hardcover, 704 pp, Thunder Bay Press, 2003.

Waterwise Landscaping with Trees, Shrubs & Vines
Jim Knopf, paperback, Chamisa Books, 1999.

Web Sites

Shade Tree & Beautification Board www.ci.st-george.ut.us

Utah Community Forest Council www.ucfc-isauc.org

Utah State University
extension.usu.edu/cooperative

International Society of Arboriculture
www.isa-arbor.com

Star Nursery
www.starnursery.com

Desert Watering Guide - Phoenix www.desertgardens nursery. com/WateringGuideline

Southern Nevada Water Authority www.snwa.com

Educational Web Site
www.treetures.com

Slow the Flow
www.slowtheflow.org

Southwest Trees and Turf
www.swtreesandturf.com

The Irrigation Association
www.ia.org

Gardeners Web Sites
www.dixiegardener.org
www.gardenweb.com

Tree Information
www.treesaregood.com
www.treedictionary.com
www.treeutah.org
www.chesco.com/~treeman/SHIGO

Xeriscape Information
www.xeriscape.org

U of A College of Agriculture
ag.arizona.edu

Urban Forestry Resource
www.treelink.org

Texas A & M Horticulture Ext. Office
aggie-horticulture.tamu.edu/extension/publications.html

Average Monthly Temperatures

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
St. George	40	46	53	61	70	79	86	83	75	63	50	41
Hurricane	39	45	51	58	66	76	81	80	72	50	48	40
Orderville	31	36	40	48	57	66	72	71	63	53	41	33
Veyo	36	40	44	51	60	70	76	74	66	56	44	36
New Harmony	32	37	42	49	58	67	74	72	64	54	42	34
Enterprise	26	32	39	46	54	63	70	69	60	49	37	28
Cedar City	30	35	40	48	56	67	74	72	63	52	40	31
Zion Nat'l Park	40	45	50	58	67	78	84	82	75	63	50	41
Mesquite, NV	50	53	59	67	75	83	88	88	79	66	54	46
Kanab	34	40	44	52	60	69	75	73	67	56	44	36

Planting & Frost Information

Location	Elevation	Frost Dates	USDA Zone	Sunset Zone	Frost-Free Days	Min. Norm Temp.	Record Min.	Cold Hardy Code
St. George	2,624	Mar. 26, Nov. 1	8	10	216	27	-11	M
Hurricane	3,287	Apr. 12, Oct. 25	7	10, 3A	196	25	-2	M
Orderville	5,460	May 21, Oct. 3	5	2A	135	16	-25	V
Veyo	4,475	May 2, Oct. 10	6	3A	168	24	-10	V
New Harmony	5,310	May 11, Oct. 10	6	2B	151	20	-19	V
Enterprise	5,346	June 8, Sept. 14	5	1A	98	11	-34	V
Cedar City	5,810	May 19, Oct. 2	5	2A	135	17	-26	V
Zion Nat'l Park	4,050	April 15, Nov. 1	7	3A	200	28	-15	V
Mesquite, NV	1597	March 28, Nov. 3	8	10	238	49	NA	M
Kanab	4925	May 4, Oct. 28	7	3A	171	21	NA	M

V Very Hardy M Moderate T Tender DT Drought Tolerant P Pests L Liter I Iron

	Scientific Name	Common Name	Page #	Codes
FLOWERING	*Prunus cerasifera* 'Krauter vesuvius'	Flowering Plum	25	V P
	Pyrus calleryana 'Aristocrat'	Aristocrat Pear	25	V P I
	Pyrus calleryana 'Bradford'	Bradford Pear	25	V P I
	Pyrus calleryana 'Cleveland Select'	Cleveland Select Flowering Pear	25	V P I
	Robinia ambigua 'Purple Robe'	Purple Robe Locust	25	V
	Vitex agnus-castus	Chaste Tree	26	M DT
CONIFERS	*Cedrus atlantica* 'Glauca'	Blue Atlas Cedar	27	V
	Cedrus deodar	Deodar Cedar	27	V I
	Cupressocyparis leylandii	Leyland Cypress	27	M
	Cupressus arizonica	Arizona Cypress	27	M
	Cypressus sempervirens 'Glauca'	Italian Cypress	28	M P
	Pinus eldarica	Mondell Pine	28	M DT
	Pinus halepensis	Aleppo Pine	28	M
	Pinus pinea	Stone Pine	28	M
	Pinus thunbergii	Japanese Black Pine	29	V
[illegible]	*Ligustrum japonicum*	Japanese Privet	30	M
	Olea europaea 'Swan Hill'	Swan Hill Olive	30	T DT
	Olea europaea 'Wilson'	Wilson Olive	30	T DT
	Prunus carolliana 'Compact'	Compact Carolina Cherry	30	M
	Quercus ilex	Holly Oak	30	M DT
	Quercus virginiana	Southern Live Oak	30	M DT
PALMS	*Brahea armata*	Mexican Blue Fan Palm	31	T
	Butia capitata	Pindo Palm	31	T
	Chamaerops humilis	Mediterranean Fan Palm	31	M
	Phoenix canariensis	Canary Island Date Palm	31	T
	Phoenix dactylifera	Date Palm	31	T
	Trachycarpus fortunei	Windmill Palm	31	M
	Washingtonia filifera	California Fan Palm	31	T
	Washingtonia robusta	Mexican Fan Palm	31	T

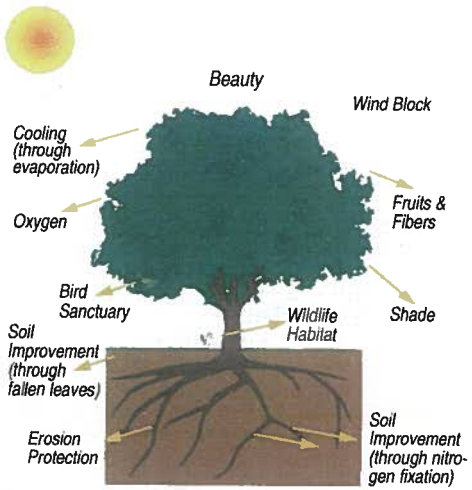
Legend for Tree Codes

WARNING: Trees are NOT recommended to be planted under power lines!

- V — Very cold hardy in all areas of southern Utah including Cedar City
- M — Moderately cold hardy in St. George and surrounding area
- T — Tender; hardy most years in St. George, except for coldest winters. Usually hardy in Mesquite, NV.
- DT — Drought tolerant; may be watered less often than most plants once established. Great for desert or xeriscape plantings.
- P — Prone to insect and/or disease pests.
- L — Will drop some litter such as seedpods or fruit.
- I — Sensitive to iron chlorosis. Will likely need iron supplements (chelates) to keep healthy.

Trees and the Earth

- Trees are the longest living organisms on earth.
- Trees have been called "nature's air conditioners," and "the lungs of the earth."
- Trees keep our air supply fresh and renew it by absorbing carbon dioxide and producing oxygen. Two mature trees can provide enough oxygen for a family of four. One tree produces nearly 260 pounds of oxygen each year. In one year, a single tree can absorb as much carbon as is produced by a car driven 26,000 miles. If every American family planted just one tree, more than 1 billion pounds (500,000 tons) of "pollutants" would be removed from the atmosphere every year.
- By cooling the air around them, the shade from trees helps cool the earth's temperature. In deserts, leaves absorb moisture from the dew and frost of the cool nights and release it to cool the air during warm days.
- Trees improve water quality by slowing and filtering rain water as well as protecting aquifiers and watersheds. The tree roots stabilize the soil and prevent erosion.
- Trees provide food and shelter for wildlife.
- Trees cut down noise pollution by acting as sound barriers.
- Trees enhance the aesthetics of our environment. Their grandeur, tenacity, and beauty are probably the most enjoyable aspects of trees.
- Tree bark and fruit have many medicinal properties which are still being discovered.
- There are about 60 to 200 million spaces along our nation's city streets where trees could be planted. This translates to the potential to absorb 33 million more tons of carbon dioxide every year, and a savings of $4 billion in energy costs!



benefit from the nitrogen you paid for when you bought fertilizer!

- Water only in the early morning when you lose less water to evaporation.
- Don't water when the wind is blowing.
- Any sprinkler which applies water close to the ground in large drops is more efficient than one which produces a fine mist and/or shoots water high in the air.
- Mulch your planting beds heavily (with organic material such as wood chips or bark). Not only will this keep weeds at bay, it will keep your roots cool and your soil moist-saving your back and your water!
- And remember - your neighborhood may have had more rain than was detected by our ET weather station.... or less. Watch your lawn for signs of drying. If it doesn't need water, don't water it. If it needs water, water it! After all, ET is a guide. ET can help you water efficiently, but it can't know your own yard like you do.

ET is really **about efficiency** - the wise use of water, time and energy. The ET guidelines can:

- Conserve water.
- Improve the overall health and appearance of the lawn.
- Save time and money spent on inefficient lawn care.

For more information, call:

Conservation Coordinator
René Fleming 674-4432
email: rsfleming@infowest.com

USU Washington
Extension Office 652-5815

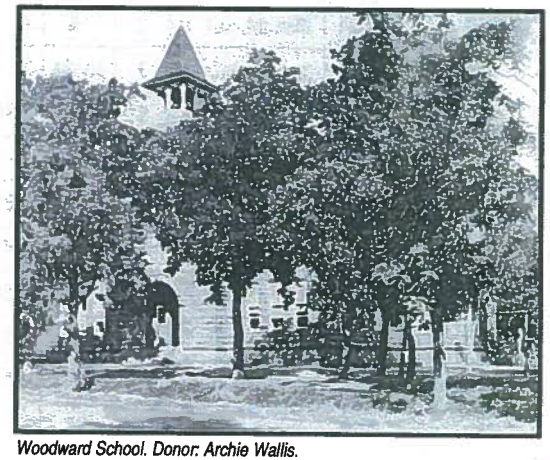
Washington County Water Conservancy
District 673-4896

City of St. George,
Parks Maintenance Division 634-5869

Look to the following sources for your daily ET numbers:

Newspaper
The Spectrum 674-6200

Internet www.dixiegardner.org



Woodward School. Donor: Archie Wallis.

- Or is it loose and gritty, impossible to form a a ball? This soil is SAND.
- For more information on soil testing: contact the Washington County/Utah State University Extension Office, 197 East Tabernacle (County Administration Building), St. George, Utah, 84770. You can also reach them at (435) 628-5815.

Soils take up water at different rates. Considerable water is wasted by applying water too fast (clay) or too long (sand).

In General:

- Clay soils absorb only about 1/4 inch of water in an hour.
- Sandy soils absorb as much as 2 inches of water in an hour.
- Clay and sand mixtures absorb an amount in between.

What Will Improve Sand and Clay Soils?

Both sand and clay may benefit from short periods of watering.

If you apply water at the ET rate and find that your grass is browning or water is running off, adjust your watering time. You may want to improve your soil condition as well.

Tilling. Mixing with other soils. Spading. Digging. Aerating. When you are planting a new lawn, break up the soil. Add organic material such as compost, manure or 1-3 inches of organic fine, well composted material found at the Washington County landfill, and the St. George City Green Reuse Center located at 575 E. Brigham Road, and till to a depth of 6 to 8 inches. This product is a combination of urban green waste and biosolids. Green waste is ground-up wood, leaves, grass clippings, etc. Biosolids are waste from the sewage treatment plant. The two are combined and composted to make a dark, rich organic amendment suitable for improving soil conditions. The cost of this compost is $30.00 a ton. They will load your truck and weigh it to determine the cost of your load.

The soil under an existing lawn can be improved by aeration which makes holes in the surface of your lawn for air and water to penetrate. Such techniques as plug pulling require special equipment. You can rent this equipment or have a landscape contractor do the job for you.

Here are some suggestions to help you get the most from the ET guidelines:

- Check your sprinkler's performance. Are there areas that aren't getting watered? Your system may need adjusting. Make sure you are not watering streets and sidewalks. Avoid wasting water by putting it on non-growing surfaces!
- Let your grass grow a little longer to 3-1/2" and mow only 1/3 of the blade length at a time. Then, either leave your grass clippings on the lawn or put them in a compost heap. Lawn clippings put an unnecessary burden on landfill sites. If you leave them on the yard or compost them, you get more

The Urban Heat Island Effect

High temperatures in some of the more developed areas can often soar ten degrees above the "official" temperature. Large volumes of concrete and asphalt can absorb heat all day and radiating it all night, keeping overall temperatures higher than they would be on the open desert.

This tendency of cities to be hotter than the surrounding countryside is called the "urban heat island effect." It is a key factor in making urban life difficult for living things. Properly chosen, planted and cared for, trees help lower temperatures by shading the ground and cooling through evaporation.

Tree Facts

- The average tree in a metropolitan area survives only about 8 years!
- A tree does not reach its most productive stage of carbon storage for about 10 years.
- It has been shown that workers who view trees on their commute are more productive and experience less stress on the job. Studies show that the greenery and scenery of trees sped up recovery and decreased medication use by patients in hospitals.
- Trees increase property values by 5 to 20% due to their landscaping value.
- In 50 years, one tree recycles more than $37,000 worth of water, provides $31,000 worth of erosion control, $62,000 worth of air pollution control, and produces $37,000 worth of oxygen.
- People who plant trees become healthier, better looking, richer, and have more friends (well maybe that's stretching it a bit!) - plant a tree and find out!

Plan Your Landscaping

Save Energy With Trees

Preliminary Site and Design Conditions

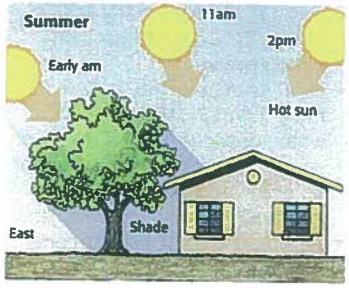
Homes can be designed and oriented to maximize and take advantage of trees. Solar heat passing through windows and being absorbed through the roof is the major reason for air conditioner use. Shading is the most cost-effective way to reduce solar heat gain and reduce air-conditioning costs. The following guidelines are suggested:

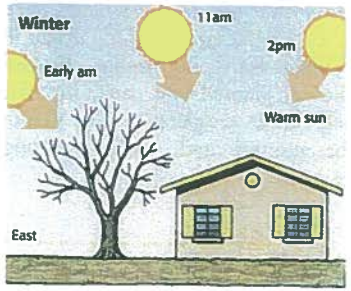
- Note exposure to sun, wind, and water.
- Identify locations of fences, adjacent buildings, and trees.
- Study wind patterns, shadows, and seasonal changes to site.
- Note window locations and try to shade while protecting views.
- Use deciduous trees to create summer shade and allow winter warmth.
- To deflect winds, use coniferous trees.

Take into consideration the site and climatic conditions of your home site. Whether building a new home or live in an existing home, study the conditions and use trees and plant material to benefit your living environment and enhance its beauty.

Planning and Design

After you have considered the existing site and climatic conditions, create a plan for your homesite showing these conditions. Show existing walls, utilities, driveways, patios and all features pertinent to your homesite. Place arrows on the plan showing prevailing winds, sun orientation, and desirable views. After noting existing conditions on the plan, place circles representing trees to facilitate the site conditions. Locate trees to provide





Deciduous trees shield the home during summer, while allowing sunlight to shine through and warm the home during winter months. Trees also prevent glare off hard surfaces from reflecting into windows. (Diagrams from "Plants for Dry Climates" by Mary Rose Duffield and Warren Jones.)

water a little bit every day. You should train your grass roots to go looking for water rather than the roots staying near the top always expecting the easy drink.

Water deeper & less frequently by applying 1 inch of water every 4 days

Remember that healthy grass will help defend weeds and insects.

Local ET numbers can be found on the Internet @ WWW.DIXIE-GARDNER.ORG

TIMER CHART

Save Water - Reset your sprinkler s timer

You can save up to 50% of lawn irrigation water by following this graph. Instead of once-a-year settings, your timer needs to be changed according to these standards.

Month	Days between watering
JAN	15 days
FEB	7 - 10 days
MAR	7 - 10 days
APRIL	4 - 5 days
MAY	3 - 4 days
JUNE	3 - 4 days
JULY	3 - 4 days
AUG	3 - 4 days
SEPT	5 - 7 days
OCT	7 - 10 days
NOV	10 - 14 days
DEC	15 days

Turn on sprinkler about February 15, depending upon warm weather. Slowly, deeply and periodically water trees, shrubs and flowers during the summer. They need deep, regular watering every 7-10 days. Be sure to water these plants and your grass in the winter, especially if it has been warm, dry and windy. Pay special attention to south and southwest facing slopes. "Winter kill" is usually a result of not enough water during warm, windy weather.

CAN SOIL MAKE A DIFFERENCE?

Yes! Soils in Southern Utah vary greatly. Desert soils are almost totally void of organic matter. They are often high in sand or clay, but they generally lack the nutrients plants need for growth and development. To receive the greatest benefit from the ET program, you should know something about your soil. You can determine the kind of soil you have by making this simple test.

- Pick up a moist ball (not wet!) of soil and squeeze it.
- Does it feel smooth or sticky? Can you roll it into a pencil shape? If so, it probably contains a considerable amount of CLAY.
- Is it smooth, slick, somewhat gritty and sticky? Does it form a ball that won't hold together? If so, it's probably a mixture of sand and clay (sometimes called LOAM).

HOW MUCH WATER DOES YOUR LAWN NEED?

ET IS YOUR NUMBER

Evapotranspiration (ET) is a weather-based tool used to estimate daily water loss by plants and the surrounding soil, which needs to be replaced by irrigation water. Washington County is a semi-arid climate and generally receives about 8 inches of precipitation each year. Our lawns require more than that to thrive, but they may not need as much as we give them.

The ET number is part of a good lawn care system. It will help determine how much water your turf grass needs.

ET, or Evapotranspiration, is one of the most important things to consider when scheduling run times for your irrigation system. An efficient irrigation scheduling technique is to readjust your system run times to match the actual plant water needs.

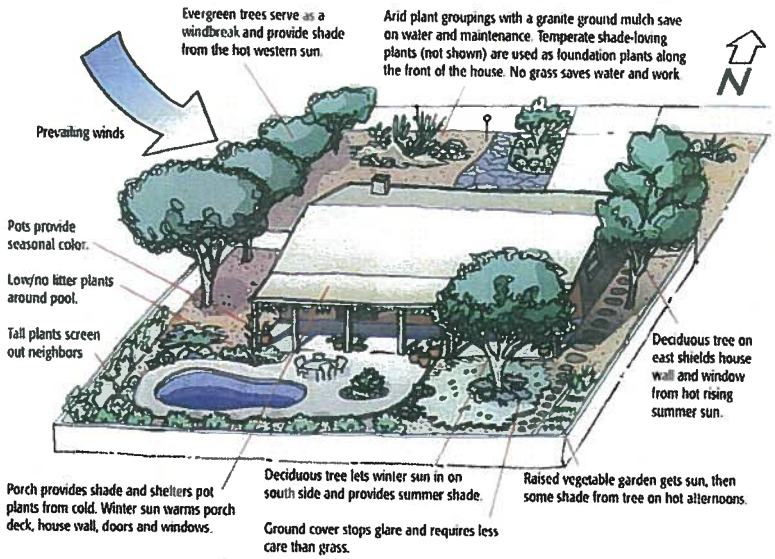
To use the ET number, you'll need to know how much water your sprinkler system delivers and your soil condition.

HOW TO PERFORM A SIMPLE WATER AUDIT

Start the process by setting out at least four containers in the area of the yard to be evaluated. These containers can be any straight-sided container like a soup, orange juice can, or water audit cups. The irrigation system is run for 15 minutes. Then compare the amount of water in the containers. If the containers all have about the same amount of water, the system is performing satisfactorily. If one of the containers has considerably more or less water than the others, the system is not applying the water evenly. Repairs or adjustments are made and the test is repeated to assure that the irrigation system is applying water uniformly.

The homeowner then marks either a 1/2-inch or 5/8-inch depth on the containers, depending upon historic ET data. Then turn on the water and observe how long it takes to fill the containers to the marks. You now know how long the system should be run each irrigation to apply either 1/2-inch or 5/8-inch of water. To prevent runoff from sloped ground or from soils that absorb water slowly, the time required to fill the containers to the marks is divided by three so the water can be applied in three, shorter applications. For example, in one test it took 15 minutes to fill the containers to the marks. Dividing 15 minutes by 3 equals 5 minutes. The irrigation system would then be run for three 5-minute periods separated by 1-hour soak periods. This strategy works for all soil types.

It is preferable to water for a longer time every 3-4 days than to



Your own yard has areas with different climatic conditions, called microclimates. Variables in sunlight, temperature, humidity and wind make each home landscape different. Understanding your microclimates will help ensure success with your landscape plants. For example, cold-tender, sun-loving plants will perish if located in cool, shaded areas. Plants not adapted to high temperatures will die when exposed to the intense reflected heat from a south or west wall.
(Diagram and information from "Plants for Dry Climates" by Mary Rose Duffield and Warren Jones.)

shade, screen wind, and so forth. After determining locations, select species for those locations that best serve the need.

When selecting trees for the landscape, consider the following:

- Know the mature size of the tree relative to the given space.
- Know the shape characteristics of the tree – i.e., low branching, multi-trunked, etc.
- Give adequate clearance to roof eaves, utilities above and below ground, walkways and driveways.
- Consider color, density, shape, shade pattern, as well as flowering characteristics, and litter production.
- Know the water requirements of the tree before determining location.
- In groupings, create diversity of species to provide year-round interest and interesting composition.

The Oasis Concept

Oasis landscaping is based on a concept of zones, with the highest water-using plants (including turf) closest to the house, medium-use plants next, with the toughest and most water-efficient plants ringing the outside of the lot. Consider the following:

- Turf takes up to 30% of the landscape, and is placed in the most visible, usable area.

- Courtyards, patios, and entries, are accentuated with more exotic and colorful plants.
- Trees and shrubs are located to give shade, deflect wind, and provide interest in the landscape.
- Water-wise and native plants are used in the remaining landscape to fill in the yard.
- Either rock or bark mulch should be used to preserve soil moisture.

The goal of oasis landscaping is to give the most visual and environmental pleasure to the homeowner, using water wisely to create a living desert oasis and adding to the value of the home.

Xeriscape Planning

The word xeriscape is derived from the greek word "xeros" which means dry. The concept and principles of xeriscaping were created in the early 1980s by a consortium of water managers and green industry professionals in the Denver area. The introduction of the xeriscape concept was specifically for popularizing water conservation in the landscape. The seven xeriscape principles were developed. They are:

1. planning and design
2. soil analysis
3. appropriate plant selections
4. practical turf areas
5. efficient irrigation
6. use of mulches
7. appropriate maintenance

Xeriscape does not mean gravel and cactus nor is it a "lawn-less" landscape. It's simply the application of the above principles related to creating an aesthetically pleasing and water efficient landscape.

Selecting Trees at the Nursery

After you've decided which tree is best suited to your yard, needs and tastes, your next task is to choose among the various individual trees at your local nursery. When choosing a tree in a nursery, look for the following:

- Trunk free of gouges or missing bark;
- Symmetrical, well branched head that takes up close to a third of the height of the tree;
- A good root ball with no exposed roots or major roots coming out of the drain holes;
- Tree should not rock in bucket.

Getting the most for your money demands attention and care, but the long-term result is a healthy, happy tree, shade, and a better environment.

First, run the system for a specified time, then use a probe to check soil moisture. A metal rod or screwdriver will insert easily into well-watered soil. The depth of watering can be checked by seeing how far down the probe will go without too much effort. Water the complete root zone each time you irrigate. Short watering intervals that do not allow the water to go down deep will encourage shallow roots. Surface roots will cause problems later on and can interfere with mowing.

How often should I water?

Once trees are established, a good rule of thumb is to water one to three times a week in summer (depending on your soil) and once a month in winter. Newly planted trees will need more frequent watering particularly during the first summer until they have replaced tiny root hairs lost from transplanting. Early morning is the best time to water, allowing time for the water to "soak into the soil" before temperatures rise and evaporation is high.

Providing adequate irrigation really begins in the planning stage. ***An irrigation system should be designed to meet the needs of the desired plants for establishment and especially for the future.*** In order to do an adequate job, water delivery will have to be increased as the tree gets bigger. It is always beneficial for trees to have their own line or valve where the water can be adjusted specifically for the trees needs rather than relying on irrigation from the lawn or other landscaped areas.

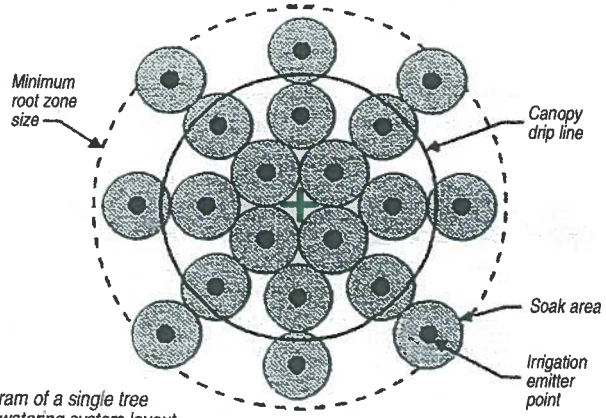
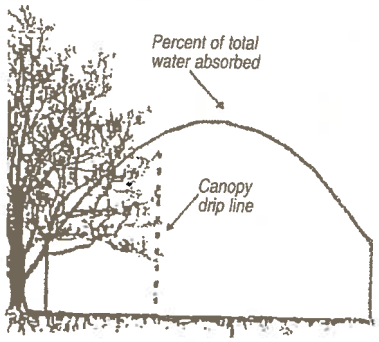


Diagram of a single tree with watering system layout.

Tree Watering Guidelines

How much water does my tree need?

Proper irrigation of trees is essential for good establishment and future growth. During the first year, watering in and just outside the original root ball is important to relieve transplant shock and stimulate the development of new roots. After the first year, it is important to begin to move irrigation out to the edge of the rooting area. The rooting area is usually defined as the space which radiates out from the trunk to somewhere just outside of the "canopy drip line" (edge of the branches). Most of the water absorbed by the roots will occur in the area just outside of the canopy drip line (see diagram). Although rooting depth may vary somewhat depending on tree species and soil type, most of the roots are found in the top two feet of soil.



Most water used by trees and shrubs is absorbed outside the canopy drip line.

What type of system do I use?

Delivery of water within the rooting area may be achieved in a number of ways. Sprinklers, bubblers, and drip emitters are the most common methods of delivery. Sprinklers tend to spray a portion of the water off the target area and lack efficiency. Bubblers can be effective if the water is channeled to stay in the rooting zone. With bubblers, it is important that the water not be delivered so quickly that much of it runs outside the target area. Drip emitters are the most efficient method of irrigation. In general, they should be placed two feet apart within the drip line canopy and radiate out from the trunk like the spokes of a wheel (see diagram at right). Delivery rates of emitters vary beginning with one gallon per minute and going up. One gallon per minute is adequate for clay soils. Sandy soils may require two gallon per minute emitters in order to keep up with the faster infiltration rate. Applying water directly to the trunk is harmful and will often result in disease problems later on.

How long should I water?

Your water run time will be determined by how long it takes the water to reach the entire root zone. This will take some experimenting.

Building Your Soil

Desert soils are not very "plant friendly!" You need only to observe the natural vegetation to realize that very little will grow here without serious modifications to the soil and climate. The most obvious obstacle is the lack of moisture, which can be helped with irrigation. The next obstacle is the poor soils which are much more difficult to correct.

High pH, high salts, and low organic matter characterize soils in the southern part of Utah. The high pH is derived from the breakdown of minerals that comprise our parent soil materials. As rock weathers from freezing, thawing and erosion, soil is slowly formed over many years. For example, if you live near a sandstone cliff, your soil is going to be high in sand. Salts are also a natural component of the minerals that make up our soils. Low rainfall allows the salts to accumulate over time. They often go unnoticed in areas of the country with higher rainfall because there is sufficient moisture to dilute them and even wash most of them away.

Before you begin planting, it is wise to check your soil conditions by running a soil test. Information on soil testing can be obtained from the Utah State University Extension Office located at 475 S Donlee Dr., St. George, UT 84770. By knowing your soil conditions before you begin planting, you can add anything that may be lacking. This way, there will not be any sur-prises if something is way out of line that may prevent you from growing certain types of plants.

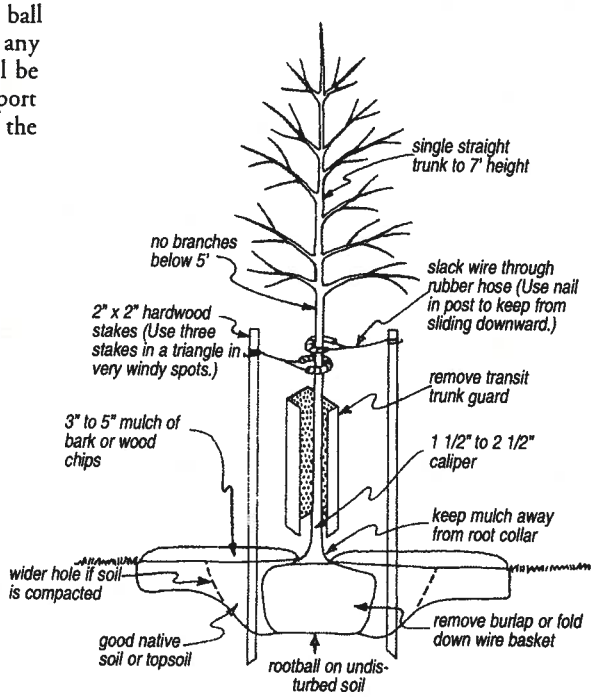
One thing is for sure, you will not go wrong by adding organic matter. Typically our soils contain less than one percent. Good plant growth is achieved when there is at least five percent. There are many sources where organic matter can be obtained. Nurseries and garden centers carry items such as peat, cow manure, "Paydirt" and other amendments designed to improve soil. If you plan to do a large area all at once, it may be more economical to contact a local source such as a farm, the fair grounds or the county landfill. First-time applications should consist of 2-3 inches applied to the top and worked 4-6 inches into the soil. In successive years, apply 1-2 inches. Even established lawns benefit from organic matter. After aeration, apply 1/2 to 1 inch and rake or sweep into the aeration holes. Organic matter will improve water uptake and allow salts to be released from soil particles and be washed through the soil profile more easily. Over a number of years, as the organic matter breaks down, pH will improve. Nutrients needed for plant growth, and development will slowly become more available.

Suggestions:

1. Test your soil.
2. With recommendations in hand, determine what needs to be added.
3. Choose trees and landscape plants that are suited to your soil conditions.
4. Use water responsibly by installing an efficient irrigation system, and water as needed.

Planting A New Tree

- Dig your hole at least twice as wide and no deeper than the root ball of the tree.
- Reserve the displaced soil, removing rocks.
- Fill the hole with water. If it drains within two hours, proceed. If not, dig a chimney tunnel at the base of the hole to break through to a more porous level.
- Add soil amendments if needed. It is best for the tree to adapt to the native soil as soon as possible.
- Never add more than 30% amendments to the soil mix.
- Set the root ball and also any stakes you will be using to support the tree. Fill the hole, tamping lightly as you go. Bring filled soil level even with the top of the root ball. If you are using slow-release fertilizer tablets, add them at this time.
- Build a 4-inch high ring of soil up around the tree, about 1-1/2 feet from the trunk. Fill with water. Let settle, add additional soil to compensate. Do not mound soil up above the level of the root ball. Tie tree to stakes as necessary.



Growing Fruit

Back yard gardeners seem to have a passion for growing fruit. Since not every area is suited to fruit growing, here are a few tips to help you decide what to grow.

Apples and Pears

Apples and pears will not perform well in the valley where summer temperatures are consistently 100 degrees or higher. They require adequate chilling in the winter months in order to set fruit and need relatively cool temperatures in the fall to ripen properly. Areas that support good apple and pear production include Cedar City, Enterprise, Veyo and New Harmony. To insure adequate pollination, you should always plant more than one variety of apple and pear.

Peaches and Apricots

Peaches and apricots prefer consistently warm temperatures and are well suited to the southern valleys. They are not adversely affected by the heat and cannot handle extremes in cold, even during the winter, or the buds may be damaged. Peaches and apricots will grow well in St. George, Washington, Santa Clara, Hurricane. Peaches and apricots are self-fertile and do not need more than one variety for pollination.

Grapes

Grapes have a long history of excellent production in the St. George area. Vines live to be many years old and will remain productive if given minimal pruning. Since buds are somewhat tender, winter damage may occur if temperatures drop more than 10 degrees below zero. In higher elevations, plant vines on south-facing slopes where soil and air temperatures warm more quickly in the spring.

Pomegranates and Figs

Pomegranates are well adapted to the desert. Grown more as a bush than a tree, they require almost no care and still remain productive. They seem to thrive in the heat and produce best if given consistent watering. Figs will also handle the desert climate well. They may achieve tree-like size, but most are maintained as a large bush or small tree. Both pomegranates and figs will not tolerate much cold and may be killed to the ground if temperatures dip into single digits.

Berries

Fruits such as raspberries and strawberries require soils that are high in organic matter and have a slightly acid pH. Most soils in southern Utah will take a lot of amending before they are suitable. Berry plants will not bear during periods of high heat. They may perform OK if allowed to set and mature fruits before temperatures reach the high 90s. In general, berries are not adapted to the desert environment. They will do better in areas where soils are rich and temperatures are cool, provided the growing season is long enough.

Soils

Nearly all fruits, with possibly the exception of pomegranates and figs, are sensitive to soils with a high pH and high salts. You may want to conduct a soil test before planting (see "Building Your Soil" on pg. 11). Fruits will always benefit from the addition of organic matter. Use generously at planting to encourage root development and help provide adequate drainage.

Palm Tree Planting & Care

Planting

Palm trees respond best to all cultivation practices during periods of warm weather when the trees are actively growing. This includes planting. The best "window of opportunity" is normally considered from April through September. Palms normally respond well to transplanting during this period and become established much quicker with a higher rate of survival than those planted during winter months.

Although most palms are tolerant of poor soils, drainage is essential. If hardpan layers or caliche are encountered at the site, provisions for drainage are necessary. This may include the creation of a "chimney" in the bottom of the planting hole. Most palms tolerate some change in depth at the time of planting, but it is not recommended. The back fill mix is a highly debated area. Some say that native soil is best, while others claim that pure washed sand is the best medium for planting. For some, organic matter is also optional. Either way, provide good drainage and ample water. Remember that palms harvested from established plantings require the development of a completely new root system. Palm fronds are tied up to protect the young heart bud from desiccation by the sun and wind. Prop trees correctly to keep from blowing over in high winds. Never nail anything directly into the trunk.

Watering

Palms respond well to deep watering on a regular basis. The growth rate may be controlled by the amount of water provided. Young plants, particularly in sandy soils, may need copious amounts of water on a daily basis. Judge the amount according to weather and size of the plant. Less water is required when the weather cools. Palms tend to do poorly when soils are saturated, with nutrient deficiencies becoming more frequent in wetter soils.

Pruning

The removal of fronds is dependent on the owner. Some prefer the natural look of old fronds developing a "skirt" of thatch. Others find the thatch creates a shaggy, unkempt appearance. In some areas, insects, mice, and rats may become a nuisance if skirts are left in place.

The pruning of palms requires some skill and is potentially dangerous. Sharp spines, heavy growth, and in some cases scary heights make this task out of reach for many. If you hire out to prune your palms, be sure to check credentials. Make sure that the operator has experience in palm pruning, utilizing the proper techniques and equipment for safe trimming.

One should never over-prune palm fronds. The removal of fronds higher than the 9 o'clock and 3 o'clock position is considered unhealthy for the tree as it removes the beneficial fronds that protect the bud and provide nutrition for the tree. Over-pruning will weaken the tree to insects and disease. Remove the flower spikes prior to fruiting. They are messy and take nutrition from the tree.

Palms should not be climbed with climber's spikes or gaffs unless absolutely necessary. The spikes produce wounds that never disappear. In fact, repeated spiking makes climbing unsafe. Often when a spike enters an old hole, it may kick out causing a potentially fatal fall. Use high lift equipment whenever available to maintain palms instead of spikes.

Topping Hurts Trees

Topping is defined as the removal of a tree's leaf-bearing crown. Topping cuts are usually indiscriminate and are not made at specific junctures. A tree's natural defense system does not have the ability to close wounds that are the result of topping.

Topping trees is very harmful and disfiguring. Topping disrupts the normal biology of trees, due to the fact that trees feed themselves through photosynthesis. (The leaves are the "food factories" of a tree.) When trees are defoliated as in topping, the survival of the tree depends on the amount of food energy stored in the remaining trunk and limb tissue and the underground root system. Some tree species have more of an ability to survive this harmful practice than others, however; all trees suffer irreversible damage following total tree topping. Topped trees can experience several years of declining health and eventual death.

Some argue that because a tree re-grows the removed foliage following topping, that the tree was not harmed. Others believe that because the canopy is replaced so fast, that topping actually adds vigor and is beneficial to the tree. What is not totally understood is that the tree is replacing its canopy just to survive, and expending the energy to replace its canopy puts the tree into a survival stress mode. A stressed tree is more vulnerable to other secondary harmful effects such as disease and insect infestations. Each stub or heading cut made to top a tree can be an invitation to disease and insects to enter the tree to decay or feed on the tree's internal tissues.

TREES CANNOT BE UNTOPPED

Most trees have the ability to close wounds if cuts are made at specific junctures. The average home owner, given the right information, can make correct cuts on their own landscape trees. However; the safest and best way to ensure proper tree care is to hire an educated and experienced arborist. An educated and experienced arborist can advise as to the extent of pruning necessary. The St. George Shade Tree and Beatification Board as well as the Utah State University Extension Service recommend hiring an arborist that has been certified by the International Society of Arboriculture (ISA). This certification insures the homeowner that the arborist has been educated to understand the biology of trees and the tree's responses to pruning. An arborist must have a City license and

(Continued on next page.)

be insured to perform tree maintenance within St. George City. Other cities may have similar ordinances. The Shade Tree and Beautification Board and Utah State University Extension recommend that pruning guidelines as defined in publications by the ISA and the American National Standards Institute, [ANSI / A-300 standard], be adhered to when pruning is necessary. For more information and/or free ISA Publications, contact St. George City Parks Division Office, located at 390 North 3050 East, 435-634-5869.

Protecting the urban forest will benefit all of us that live within the community.

Pruning and Fertilizing

Pruning

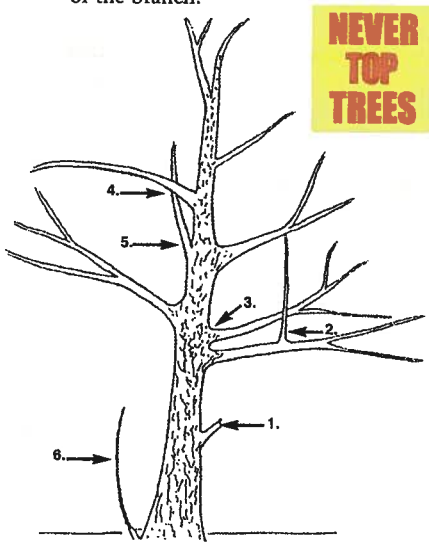
Remove the following:

- Dead or dying portions of the tree
- Rubbing branches
- Narrow-angled branches from the main trunk
- Crowding branches - remove less desired branch
- Sprouts and suckers
- Portions of tree interfering with road, house, sidewalks, etc.

Branches that are removed should be cut just outside of the swollen area near the trunk of the tree. This is called the branch collar. The idea for good pruning is to cut as close to the trunk as possible without taking off the branch collar.

When removing large limbs, THREE cuts are necessary to avoid tearing the bark. The first cut should be made on the underside of the branch, 1 to 1 1/2 feet from the trunk. Cut only 1/3 of the way through on this cut. The second cut should be made on the top of the branch, one to two inches further out than the first cut. Cut until the branch breaks free. The third and final cut is made by the trunk, just outside the branch collar or branch bark ridge, to remove the rest of the branch.

NEVER TOP TREES



A Tree With Typical Pruning Problems

1. Stub
2. Watersprout
3. Closely parallel branches
4. Rubbing branches
5. Narrow crotch
6. Sucker

Palm Trees

Water palms deeply and infrequently when established unless otherwise noted. Fertilizing needs vary; check with your local arborist or nursery.

Mexican Blue Fan Palm *Brahea armata* (T)
Slow growing palm to 20-30 feet. Takes drought, heat and wind.

Pindo Palm *Butia capitata* (T)
Slow growing, upright, single trunk, graceful palm to 10-15 feet. Does well in containers or landscape. Full sun or light shade. Graceful arching fronds are silvery-green color.

Mediterranean Fan Palm *Chamaerops humilis* (M)
Slow growing, clumping palm to ±15 x 10 feet. Multi-trunked base is attractive as specimen or accent plant. Drought and wind resistant. Great for containers or dry landscapes.

Canary Island Date Palm *Phoenix canariensis* (T)
Slow growing palm to ±40 feet. Also known as Pineapple Palm. Dark, spiny fronds form atop a thick trunk. Will take poor soil and drought. A variety of this palm is the **Date Palm** *Phoenix dactylifera.*

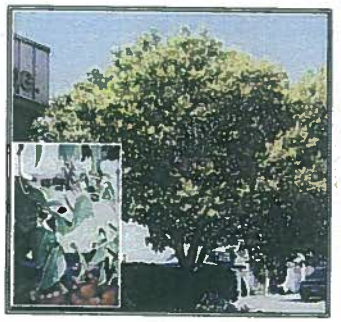
Windmill Palm *Trachycarpus fortunei* (M)
Single trunked palm with fuzzy 'coconut hair,' grows slowly to ±20 feet. Very adaptable– does well in afternoon shade. (Shown at right)

California Fan Palm *Washingtonia filifera* (T)
Grows moderately to ±40 feet. Green fronds form wide sprays from crown. Takes heat and drought, but thrives in moist, well-drained soil. Has much thicker trunk than Mexican fan palm – give it some room. Prune fronds only when completely brown. (Shown at top)

Mexican Fan Palm *Washingtonia robusta* (T)
Very fast growing, taller, more slender-trunked palm to ±80 feet. Hybridizes with California Fan Palm to create palms with both parent traits. Takes poor soil and drought. Prune fronds only when completely brown. (Shown at right)

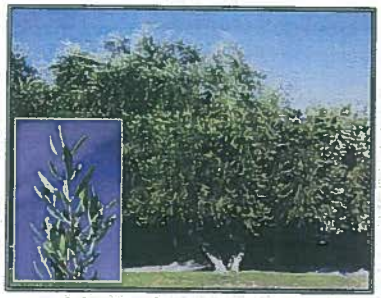
V Very Hardy M Moderate T Tender DT Drought Tolerant P Pests L Liter I Iron

Broadleaf Evergreens



Japanese Privet M
Ligustrum lucidum
Excellent round-headed patio or landscape tree to ±20 x 10 feet. Takes full to part sun, amended soil with good drainage and deep, infrequent water when established.

Compact Carolina Cherry M
Prunus caroliana 'Compact'
Denser variety to ±10 x 10 ft. makes a good formal accent. Best with afternoon shade, rich, well-drained soil and moderate summer water. Leave natural or prune to shape. Use chelated iron to combat chlorosis and don't over water.



Swan Hill Olive T DT
Wilson Olive T
Olea europaea
Essentially fruitless and mostly pollenless variety to ±20 x 20 feet makes an excellent traditional or dry landscape accent or street tree. Good performer in heat, wind and poor soil. Give deep, infrequent water when established. Will freeze to ground in colder winters.

Holly Oak *Quercus ilex* M DT
Neat, formal variety grows moderately to ±40 x 30 feet and blends well with any landscape. Best with full sun, amended soil, good drainage and deep, infrequent water when established. Prune for form & control. Virtually pest free.

Southern Live Oak M DT
Quercus virginiana
Sturdy, adaptable tree grows moderately to ±40 feet. Has broad, spreading crown. Prefers amended soil, good drainage, and deep, infrequent water. Good accent in many landscapes.

Helpful Hints

- NEVER TOP TREES
- Most trees can be pruned year round.
- Once conifer limbs are removed, they will not grow back in that spot.
- Young trees should not be pruned until one year after planting.
- Never remove more than 1/4 of a tree.
- It is better to leave a tree alone than to top or improperly prune it.
- Flowering trees should be pruned after they are done flowering.
- Fruit trees should be pruned after the leaves fall off in winter.

Fertilizing

Trees require certain elements, known as macronutrients, in relatively large quantities. The most important of these is nitrogen (N). Nitrogen is a constituent of proteins and chlorophyll, and is critical to photosynthesis and other plant processes.

Much of the nitrogen in soil is lost due to leaching or to volatilization (the return of nitrogen to the atmosphere in its gaseous state). The removal of leaf litter and other natural sources of nitrogen can disrupt the cycling of nitrogen in the soil. Annual raking and leaf removal typically takes 1-3 pounds of nitrogen per 1,000 sq. ft. out of the cycle.

Nitrogen deficiency shows up as slow growth, small leaves, and yellowing (chlorosis) of the leaves, especially older leaves. On nitrogen-deficient plants, sometimes the newer, developing leaves appear greener than the older ones because nitrogen is somewhat mobile in plants, allowing it to be directed toward new growth. However, these symptoms may also be due to a variety of other problems that affect root health and element uptake. Because nitrogen is the element most likely to be deficient in trees, fertilizer specifications usually focus on this element.

The elements phosphorous (P), potassium (K), and sulfur (S) also are required in relatively large quantities. These elements often are present in the soil in adequate amounts for trees and large shrubs. The secondary nutrients include magnesium (Mg) and calcium (Ca), which are required in moderate quantities. Although these elements are called secondary, severe deficiencies can result in loss of the plant. Magnesium deficiency is a serious problem in palms.

Other elements, known as micronutrients, are required in lesser quantities. Although these elements are not required in large amounts, a deficiency of any one can have profound effects on the health of the tree. For example, iron chlorosis is a condition that results when a tree is not absorbing sufficient quantities of iron, usually due to high soil pH. Young leaves are small and chlorotic (yellow), often with green veins, while older leaves tend to be darker green. Iron deficiency can eventually kill a tree. Like iron, manganese and zinc may at times be deficient in a tree.

The goal of fertilization is to supply nutrients that have been determined to be deficient in your trees or shrubs. Trees with satisfactory growth and not showing problems of nutrient deficiency may not require fertilization. Contact your local nursery or arborist for help in determining the need for, and type of fertilizer required for your landscape plants.

Large Trees

Raywood Ash
M P

Fraxinus oxycarpa 'Raywood'

Compact, round-headed tree, grows rapidly to ±30 x 25 feet. Fine-leafed foliage turns purple red in fall. Excellent accent in many landscapes. Full sun, amended soil with moderate water in growing season. Good drainage is a must.

Arizona Ash
M I

Fraxinus velutina

Vigorous, well-adapted variety grows rapidly to ±40 x 30 feet. Yellow foliage in fall. Excellent shade tree for our climate. Full sun, amended soil, good drainage and deep, infrequent water when established.

Fan-Tex Ash
M I

Fraxinus velutina 'Rio Grande'

Extremely tough tree to ±30 x 30 feet, has thicker leaves and more open habit than other ash varieties. Especially useful for shade in hot desert climates and poor soils. Best with full sun, good drainage and deep, infrequent water when established.

Japanese Black Pine
V

Pinus thunbergii

Decorative, slow-growing tree to ±20 feet. Unusual, free-form landscape accent. Does best in full to part sun, amended soil with good drainage and moderate water. Prune carefully to maintain form.

MORE TREE FACTS

World's Biggest
The Big Tree Sequoia called General Sherman, in California.

World's Oldest
Bristlecone Pines in the White Mountains, CA/NV; over 4500 years old.

Fastest Growing
Very likely the Leadtree from the tropics, capable of growing up to 24 feet in a year.

Utah's State Tree
Blue Spruce - *Picea pungens*

Utah's Largest
A Fremont cottonwood - *Populus fremontii* - located on the BYU campus. The tree is 427 inches in circumference, 136 inches diameter and 101 feet tall with a 90 foot spread.

Oldest Southern Utah Tree
Bristlecone pine - *Pinus aristata*

Deforestation Rate
Based on figures for the tropics for 1989, the average rate is 9,272,727 acres per year, equivalent to almost 40 square miles each day, or over 17.5 acres per minute.

Average Cooling
A 50 year-old tree cools as much in 24 hours as 5 tons of air conditioning running 20 hours.

Estimated Value
A 50 year-old tree in an urban setting is valued at approximately $57,000. This reflects environmental value only, not esthetic.

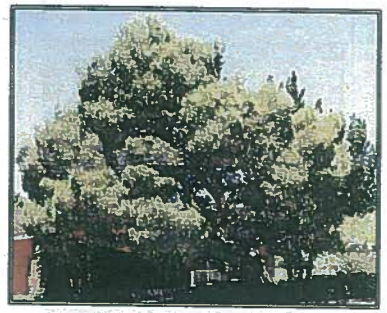
Source for non-local data: *American Forests*

With no air conditioning, early settlers were making the most of their trees. View of St. George taken from the top of the temple. Donors: USHL and Juanita Brooks.

Italian Cypress
M P

Cypressus sempervirens 'glauca'

Dense, narrow evergreen grows rapidly to ±50 x 5 feet. Excellent accent tree. Full sun, good drainage, deep, infrequent water when established. Don't crowd row planting. Wash foliage monthly to control spider mites.



Aleppo Pine
M

Pinus halepensis

Tough, well-adapted desert pine grows rapidly to ±50 x 40 feet with a round top. Thrives in desert heat, drought, and wind. Lighter color. Deep, infrequent water. Use iron to improve color if needed.

Mondell Pine
M DT

Pinus eldarica

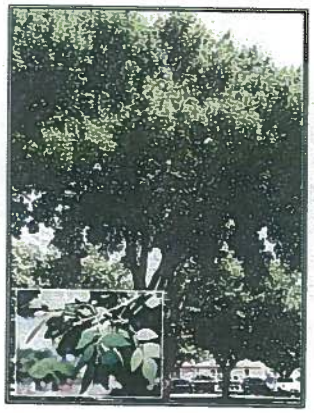
Superb desert pine with rapid growth to ±50 x 20 feet. Thrives in heat, drought, wind and poor soil. Water deeply and infrequently. Use iron to improve color if needed.

Stone Pine
M

Pinus pinea

Rounded pine grows moderately to ±40 feet. Takes heat and drought when established. Water deeply and infrequently.

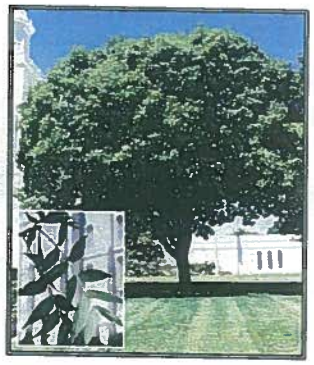
V Very Hardy M Moderate T Tender DT Drought Tolerant P Pests L Liter I Iron



Modesto Ash
M

Fraxinus velutina 'Glabra'

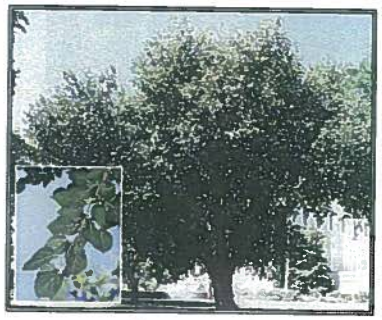
Vigorous forms of Arizona Ash to ±30 x 30 feet has a formal head with yellow foliage in fall. Excellent shade tree in a variety of landscapes. Full sun, amended soil, good drainage and moderate water. May scorch in strong, hot winds, but recovers nicely.



Chinese Pistache
V L

Pistacia chinensis

Sturdy, slow-growing shade tree to 40 x 35 feet has interesting bark and multi-colored fall foliage. Excellent accent, specimen or street tree. Adapts well to poor soils but needs good drainage. Best in full sun with deep, infrequent water when established.



Fruitless Mulberry
V

Morus alba

Easy to grow, this tough, vigorous tree to ±40 x 30 feet has large, deeply cut, dark green leaves. Gives excellent shade in many settings. Water deeply during growing season to prevent surface roots. Do not top this tree.

London Plane Sycamore
V L

Platanus acerifolia

Classic shade tree to ±50 x 40 feet has maple-like leaves and attractive bark. Very adaptable. Good street or yard tree in varied landscapes. Best with full sun, amended soil, good drainage and moderate water.

V Very Hardy M Moderate T Tender DT Drought Tolerant P Pests L Liter I Iron

Western Cottonwood
Populus fremontii

Southwest native distinguished from others by broad crown and thicker leaves. Grows quickly to ±50 x 40 feet. Has clear yellow fall color. Great shade tree for large areas, not for small yards. Full sun, good drainage and deep, infrequent water when established.

Cottonless Cottonwood
Populus candicans

Fast-growing, ±50 x 40 feet tree gives excellent shade in large landscape areas. Not for small yards. Full sun, good drainage, and deep, infrequent water when established.

Weeping Willow
Salix babylonica

Tree with weeping branches grows quickly to ±40 x 40 feet. This one has a large root system so give it plenty of room. Short lived in our climate. Give full sun, good drainage, regular feeding and lots of water. Allow to branch low to shade trunk.

Navajo Globe Willow
Salix matsudana 'Navajo'

Fast growing tree to ±50 x 40 feet, short lived in our climate, is named for its globe-like shape. Best true willow vari-ety for our climate. Full sun, amended soil, good drainage and regular water. This one has a large root system, give plenty of room.

Japanese Pagoda
Sophora japonica

Tough adaptable shade tree grows moderately to 40 x 40 feet with yellow flowers in clusters in spring. Full sun, good drainage and deep, infrequent water when established.

The goal of planting deciduous trees is to gain maximum shade and cooling in the summer, and to allow winter sun in to passively heat in the winter.

Conifers

Blue Atlas Cedar
Cedrus atlantica 'Glauca'

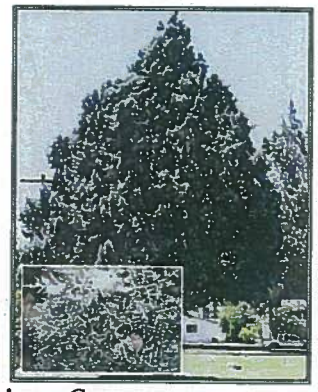
Slow growing conifer to ±50 x 30 feet is an excellent tree for our climate. It is a majestic landscape accent. Give full to part sun and well-drained soil. Wash foliage monthly to keep it looking sharp.

Deodar Cedar
Cedrus deodar

Attractive weeping cedar grows moderately to ±50 x 30 feet. Water deeply and infrequently. Tendency to die back in this area. Susceptible to borers.

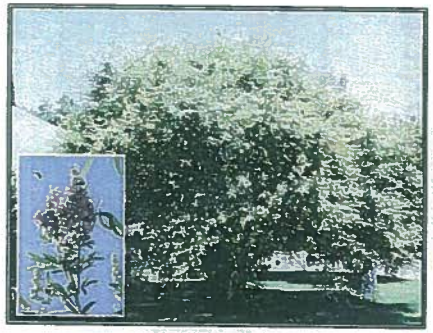
Leyland Cypress
Cupressocyparis leylandii

Attractive evergreen to ±30 x 20 feet with soft gray-green foliage. Good screen or accent. Takes full sun. Give amended, well-drained soil, deep, infrequent water when established.



Arizona Cypress
Cupressus arizonica

Fast-growing evergreen tree to 40 x 20 feet. Good for windbreaks or screens. Needs full sun, well-drained soil, little fertilizer. Very drought tolerant when established. Takes deep, infrequent water. Keep tree area clean, watch for spider mites.



Chaste Tree

M DT

Vitex agnus-castus

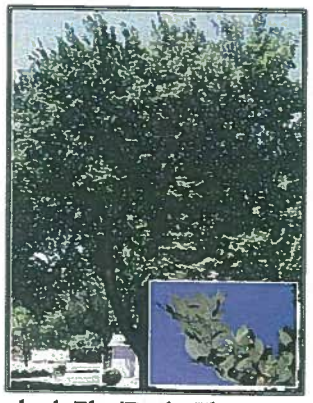
Deciduous shrub or tree to ±15 x 15 feet covered with spikes of lavender-blue flowers summer through fall. Full sun, well-drained soil, moderate to infrequent water. Adapts to nearly any situation. Prune to suite – hedge, shrub or tree.

V Very Hardy M Moderate T Tender DT Drought Tolerant P Pests L Liter I Iron

Indian camp in 1900 located between Tabernacle St. & First South and Third and Fourth East in St. George, Utah. Photo from Lynne Clark Collection, donor: Howard Starr.

Notice the lack of trees in the photo above. Then at right, notice the obvious canopy of trees located in the valley. Within as little as 10 years, the locals made a drastic change in the look and feel of the St. George area by planting many trees.

St. George from Sugar Loaf hill. Photo from Lynne Clark Collection, donor: Orpha Morris; circa: early 1910s.



Lacebark Elm/Drake Elm

M

Ulmus parvifolia

Tough tree with small, dark leaves and attractive bark grows rapidly to ±40 x 40 feet. Gives good shade in a variety of landscapes. Full sun, amended soil, good drainage and moderate to infrequent water when established. Stake well and prune for wind protection.

Guide to Selecting an Arborist

- Hire an arborist that is certified through the International Society of Arboriculture (ISA).
- A certified arborist should physically do, or directly oversee the tree work.
- Hire an arborist who is city licensed to prune trees.
- Hire an arborist that is insured and bonded.
- Don't hire someone that promotes tree topping.
- Beware of a tree contractor that solicits door-to-door.
- Ask for and check references.
- Contact your local City Forester for further information.

Medium Trees

European White Birch

V P I

Betula pendula

Accent tree to 30 x 15 feet is best in cooler areas of the southwest. Acclaimed for its snowy white bark which adds landscape interest year round. Full sun, rich soil with good drainage.

V Very Hardy M Moderate T Tender DT Drought Tolerant P Pests L Liter I Iron

Littleleaf Ash
M DT

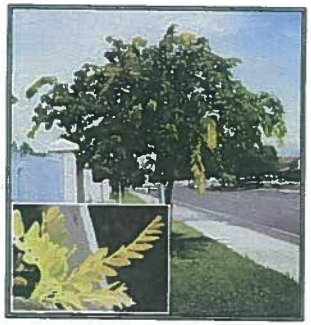
Fraxinus greggii

Large shrub or small tree to 15 feet tall and 10 feet wide. Drought tolerant when established. Protect from reflected afternoon sun. Give amended, well-drained soil, deep, infrequent water.

Shademaster Locust
V L

Gleditsia triacanthos 'Shademaster'

Fast growing variety reaches 30 x 20 feet. Excellent shade tree in many settings. Full sun, amended soil, good drainage and deep, infrequent water when established.



Sunburst Locust
V L

Gleditsia triacanthos 'Sunburst'

Unusual variety characterized by golden yellow new growth. Leaves darken with age. Good accent in traditional landscapes. Full sun, amended soil, good drainage and regular water.

Chinese Flame
M L

Koelreuteria bipinnata

Spreading tree to 30-40 feet has flowers in spring followed by multicolored seed capsules in fall. Full sun, amended soil, good drainage and deep, infrequent water when established.

V Very Hardy M Moderate T Tender DT Drought Tolerant P Pests L Liter I Iron

Flowering Plum
V P

Prunus cerasifera 'Krauter vesuvius'

Decorative tree to 18 x 12 feet is darkest of fruitless, flowering plums. Has pink flowers in March, followed by deep burgundy-purple leaves which hold color throughout the season. Super landscape accent. Full sun, amended soil, good drainage, and moderate water.

Aristocrat Pear
V P I

Pyrus calleryana 'Aristocrat'

Ornamental, pyramid shaped variety to 25 feet has clusters of white flowers in spring and pretty red foliage in fall. Likes sun, amended soil, good drainage, and moderate water.

Bradford Pear
V P I

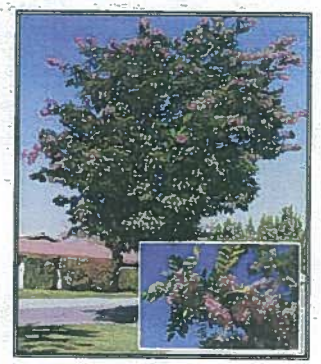
Pyrus calleryana 'Bradford'

Strongly branched tree to ± 30 x 30 feet has clusters of white flowers in spring and pretty red foliage in fall. Likes sun, amended soil, good drainage, and moderate water.

Cleveland Select Flowering Pear
V P I

Pyrus calleryana 'Cleveland Select'

Dense, cone-shaped variety to 30 feet has abundant white flowers in spring and purple to reddish-orange fall foliage. Likes sun, amended soil, good drainage and moderate water.



Purple Robe Locust
V

Robinia ambigua 'Purple Robe'

Shapely tree to 40 x 30 feet has clusters of purple flowers in late spring. Great landscape specimen. Adapts well to hot, dry climates. Likes amended soil and good drainage, deep, infrequent water when established.

Desert Willow
M DT L

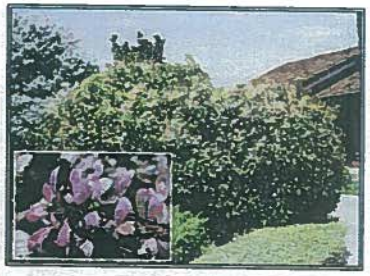
Chilopsis linearis

Hybrid variety to 25 x 20 feet with reddish purple, orchid-like blooms all summer. A hardy addition to any desert garden. Full sun, well-drained soil, deep, infrequent water when established. Remove seed pods for more blooms. Prune as needed for form and control.

Chitalpa
M DT

Chitalpa tashkentensis

Unusual hybrid cross between the native Desert Willow and the Eastern Catalpa. Clusters of large, fragrant, pink flowers all summer. Full sun, well-drained soil, deep, infrequent water when established. Striking specimen for dry or transitional areas.



Purple Smoke Tree
V

Cotinus coggygria

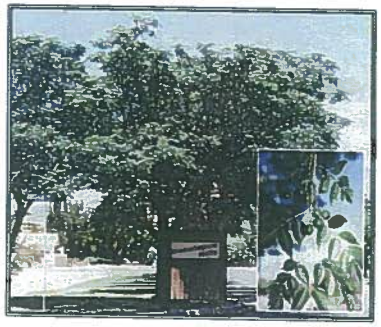
Unusual large shrubor tree to 20 x 20 feet has clusters of purple flowers in spring and bright orange-red foliage in fall. Great for desert areas. Full sun, tolerates poor soil, good drainage, and deep, infrequent water is best.

Crape Myrtle
M

Lagerstroemia indica

Trees to 15 x 12 feet are favorites for their bright summer blooms in colors like pink, white, red and lavender. Full to part sun, amended soil with good drainage, moderate water, and regular feeding in growing season. Prune back in January to increase flowers.

V Very Hardy M Moderate T Tender DT Drought Tolerant P Pests L Liter I Iron



Texas Umbrella
M L

Melia azedarach 'Umbraculiformis'

Tough, umbrella-shaped tree to 30 feet gives dense shade in the hottest, driest climates. Fragrant purple flowers in spring followed by berry-like fruit. Best in full sun, any soil with deep, infrequent water when established. Prune to shape and open canopy as needed. Often short lived in this area.

Mesquite Trees

Upright tree with weeping habit. Often multi-trunked with large spreading crown. Some varieties may have thorns. Full sun, well-drained soil, deep, infrequent water when established.

Argentine Mesquite
T DT

Prosopis alba

Most vigorous variety for landscape use. Grows rapidly to ±30 x 20 feet. Will take lots of water, but deep, infrequent watering makes strongest trees. Prune regularly to open canopy and prevent wind damage.

Chilean Mesquite
T DT

Prosopis chilensis

This complex hybrid of many species is the most frequently used landscape variety. Grows rapidly to ±20 feet; young trees may have thorns. Prune to open canopy and prevent wind damage.

Texas Honey Mesquite
M DT

Prosopis glandulosa glandulosa

Tough, thorny tree to 25 x 30 feet. No problem with heat, wind, cold, or drought. Has fragrant yellow flowers in spring.

Western Honey Mesquite
M DT

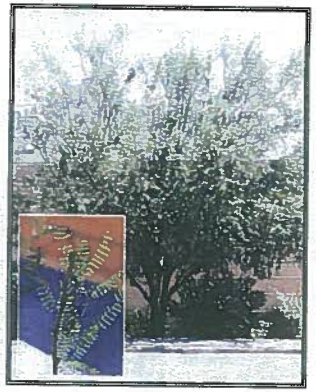
Prosopis glandulosa torreyana

Mojave native mesquite to 20 x 25 feet. No problem with heat, wind, cold, or drought. Has fragrant, fuzzy yellow flowers in spring.

Screwbean Mesquite
M DT

Prosopis pubescens

Smaller southwestern native grows moderately to ±10 feet. Named from coiled seed pods. Superb accent or specimen in any dry area. Hard to get; if you see one, buy it! Best without pruning.



Arizona Velvet Mesquite
T DT

Prosopis velutina

Fine, velvety hairs cover young growth of this versatile tree. Grows moderately to ±15 x 15 feet with fragrant yellow flowers in summer. Desert accent or patio shade tree. Prune for form and control.

Red Rock Oak

Quercus buckleyi

New desert-adapted variety to 25 feet has large leaves shaped like traditional oak, but tougher and wind-resistant. New leaves are rich burgundy red, turning deep green. Full sun, amended soil, good drainage, and deep, infrequent water when established.

V Very Hardy | M Moderate | T Tender | DT Drought Tolerant | P Pests | L Liter | I Iron

MEMORIAL TREES

Planting a tree in memory of someone you loved is a time-honored practice. The City of St. George Parks, as well as other local parks departments, have established programs for memorial tree planting. Call your local department for details.

1992

2004

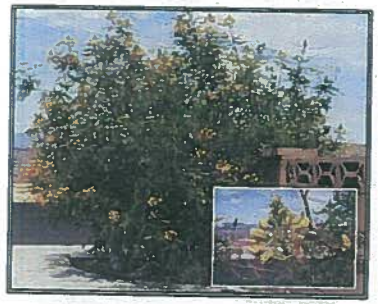
Living Christmas Trees were planted by the Bluff Street Fountain by several local volunteers. Lorin Richards (shown above, planting the first live Christmas Tree), is one of those many volunteers. He was also a key figure in the City of St. George, Mayor's Shade Tree Board. The photo to the right is the same corner on Bluff Street as it looks today.

Flowering Trees

Silk Tree

Albizia julibrissin

Grows rapidly to ±40 x 40 feet with fluffy, fragrant pink flowers in summer. Excellent choice for our climate. Full sun, amended soil, good drainage, and deep, infrequent water when established.



Yellow Bird-of-Paradise

Caesalpinia gilliesii

This tough, versatile plant reaches ±10 feet with clusters of yellow, red-centered flowers. Great accent or specimen. Full sun, amended soil, deep, infrequent water when established.

Eastern Redbud

Cercis canadensis

Eastern variety to 25 feet is most apt to take tree form. Has pink flowers on bare branches followed by heart-shaped leaves in spring. Best with morning sun, amended soil, good drainage, and moderate water. Good accent or patio tree. Protect from hot sun and winds.

Mexican Redbud

Cercis mexicana

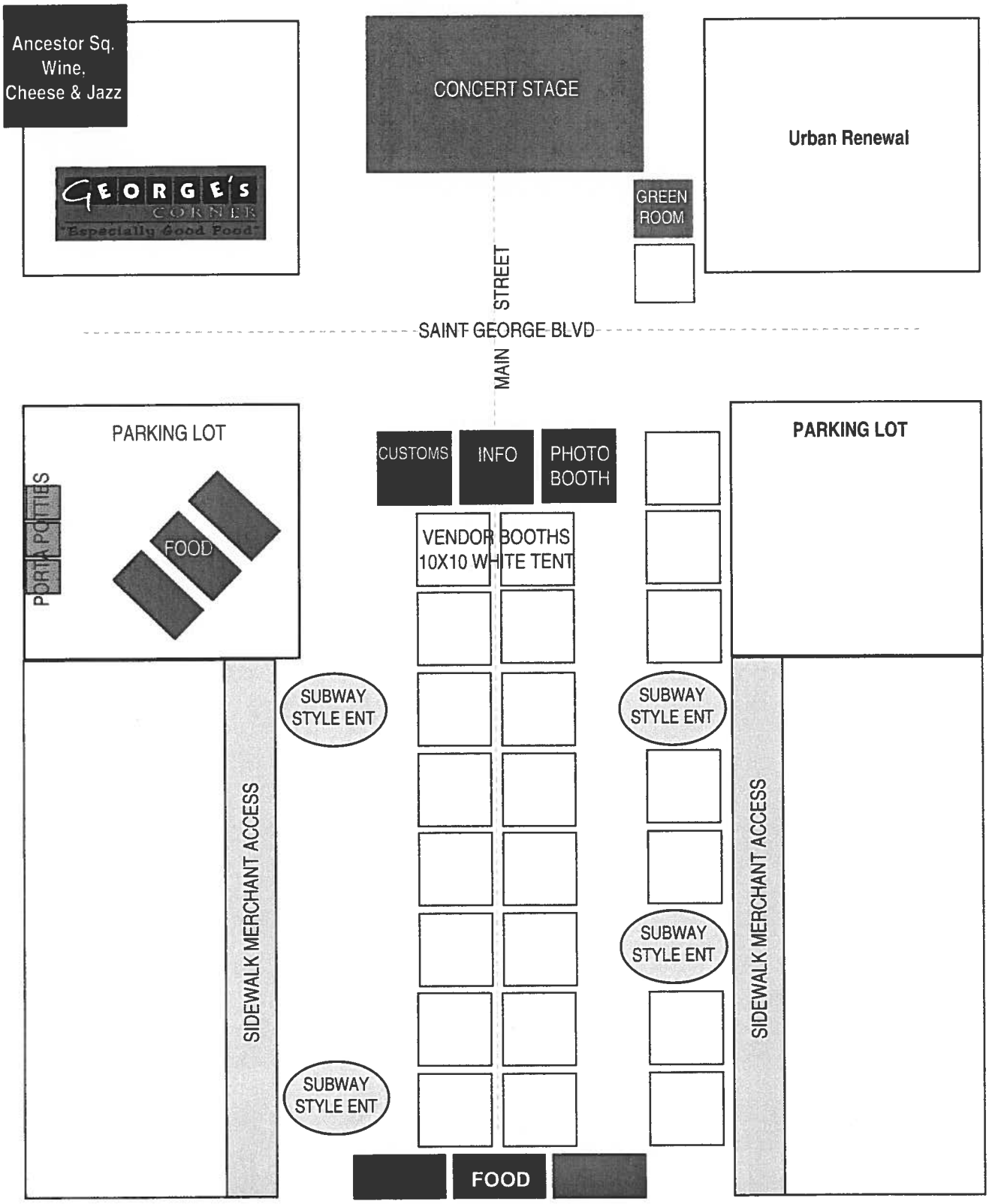
Superb flowering shrub to 10 x 10 feet covered with pink blooms in spring. Great drought resistant accent. Best when protected from reflected afternoon sun. Likes amended, well-drained soil, deep, infrequent water when established.

VISIT HISTORIC DOWNTOWN ST. GEORGE

george STREETFEST ON MAIN

EMCEE media & events

PRELIMINARY EVENT MAP



George
Street Fest on Main

Master Event Plan

Event Purpose

George Streetfest on Main is a monthly first Friday celebration designed to promote the city's downtown historic/business district, and to increase traffic to businesses with membership in Downtown Merchants Group. Objectives for the event include generating patronage for downtown businesses, promoting local artists, drawing tourism, and providing a consistent and reliable gathering place/event for families on a monthly basis. The goals of George Streetfest on Main are to increase downtown economy, build a rich sense of community in the heart of the City, and to provide a a clean and safe nightlife entertainment option for local residents and tourists. The event features a signature street concert, buskers, goods sold by local artists, farmers and merchants, and a community engagement Passport to the City program.

Scope of Event

Building on the success and model of Gingerbread Tour 2015, First Friday LIVE On Main event is proposed to be a monthly community celebration in the form of a first Friday, monthly event on Main Street. The event is designed to generate patronage for downtown businesses, draw tourism and provide a consistent and reliable gathering place/event for families on a monthly basis. Also, to provide an after hours, safe and festive community gathering place in conjunction with coordinated events and existing community celebrations (Movie in the Park, Ironman, St. George Marathon, art festivals, etc.). The event is intended to be family friendly. The primary target audiences for this event are families with children enrolled in k-12, teenage/college age students 17-25. And adult audience will be targeted for the Ancestor Square Wine, Cheese & Jazz Garden.

We are requesting that Main Street be blocked off to accommodate vendors of arts, farmer's market and other goods for sale. We also request that a stage be placed at the top of Main Street, well lit, with a backline and PA system to accommodate concert performers. We will solicit sponsors to assist with cost of marketing and promoting the event, and to book bands and entertainment.

In addition to the main street concert on stage, we will solicit subway-style entertainment for lower Main Street including jugglers, a trash can band, and other types of street performers.

Proposed Alternate Stage Location: Tabernacle Street at Electric Theater

Promotion

GeorgeTV will be broadcast LIVE at 5 p.m. from George's Corner every first Friday. At the close of the broadcast, George and news anchors will join the event emcee on stage to start the event at 6 p.m.

A Passport to the City coupon book to encourage economic engagement with Main Street businesses, collector series posters and T-shirts to will be unveiled at each month's event.

We are requesting that the event be broadcast LIVE and archived on Southern Utah LIVE, and KTIM Radio.

While PR will be the primary tactic for promotion, an advertising and social media promotion mix will be included.

Event Design

Name: George: Streetfest on Main

Key words/phrases: Street Festival, Street Concert, First Fridays, After Hours, LIVE on Main

Target Audience: While the event is designed to be family-friendly, two additional demographic buckets will be targeted:

1. Teens and young adults ages 17- 25
2. Beer, wine and jazz enthusiast adults

Street Concert: This event design includes a well lit main stage on Main Street north of the Boulevard with a band playing. Bands will be selected to appeal to the demographic ages 17-25 upon agreement of clean entertainment. Initially, the event will take place on lower Main between the Blvd. and Tabernacle with the stage set in the street between Zions Bank and Bear Paw parking lot. It is the goal of this event to expand within 6 months to move the stage to upper Main between Blvd. and 200 North.

Jazz Garden: Ancestor Square will offer an environment for adults offering beer, wine, cheese and jazz musicians. This provides a significant financial contribution to the event design and has been created to engage patrons at Ancestor Square for after-hours shopping and socializing. Live jazz musicians will be selected from the local community. Any non-commercial vendor selling produce or hand-crafted items may utilize designated Farmer's Market space on a first-come, first-reserved basis for a $20 fee. Farmer's Market vendors will follow the same approval process as all other vendors and be under the same contract and terms. Farmer's Market vendor booths will be located along the north and east sidewalks of the central courtyard.

Vendors

Vendor booths will be located down the middle of Main Street and on the East side of Main. Sidewalks on the West side of main will be reserved for Main Street business access for setting out sidewalk displays.

Booths: Invited to participate will be vendors, artists, performers, farmer's market, schools and non-profit organizations. Booths will be uniform 10x10 white tents with a 5-foot table and chairs. Vendors may rent or provide their own booths as long as they meet event standards to promote clean, uniform event integrity.

Sidewalk Vendors: 5 x 10 sidewalk space rental (20 per event) on north & east side of Main

Non-profits: Non-profit vendors may utilize sidewalk vendor space on a first come, first reserved basis without the obligation of payment for space rental. Non-profit vendors may also reserve booth space at a 50 percent discount and will follow the same approval process as paying vendors and be under the same contract and terms. Non-profit are encouraged to participate in providing carnival type entertainment, games, or activities where the collection of pre-sold tickets will accumulate and be remunerated to the non-profit organization name post event. Space is limited to 6 non-profit groups. Remuneration is 20 cents per ticket.

Farmer's Market: Non-commercial vendor selling produce or hand-crafted items may utilize designated Farmer's Market space on a first-come, first-reserved basis without the obligation of payment for space rental. Farmer's Market vendors will follow the same approval process as paying vendors and be under the same contract and terms.

Street Booth Vendor: $40 per 10 x 10 space rental (30 max non-food booth vendors per event)
Sidewalk Vendor: $30 per 5 x 10 space rental (20 per event) – skirted table required
Red Wagon Vendor: $20 per wagon (max of 10 per event)
Jazz Garden Farmer's Market Vendor: $20
Food Vendors*
Food Booth: $50 per 10 x 10 space rental (6 max per event)
Food Truck: $75 per 30 X 50 space rental (6 max per event)
*pre-packaged commercial food products do not qualify as a food vendor, only items prepared or assembled on site

Vendor rental:
Tent rental $125: _____
Table/chair rental $60: _____
Skirt rental $10: _____
Electricity $25: _____

Passport

To fuel participation with downtown businesses, an event passport is being created for each of the first 5 First Friday events. At each event, patrons can have their passport stamped by business owners who have been challenged to prepare for crowds and to engage them to help meet their business goals. In the back section of the passport, members of the Downtown Business Merchants will have first option to include coupons valid on First Fridays. This is intended to provide additional draw for patrons to spend downtown on First Fridays. An event Customs Tent will be located near the event info booth for managing passports and prizes.

Partnerships/Sponsors

An event sponsorship program will be solicited to provide support and funding: i.e. Provo - Zions Bank, Provo City, UVU, Dillards. Financial partners in putting on this event include Convention & Visitor's Bureau, Downtown Business Merchants, and proposed St. George City. A financial and economic structure is currently being developed for this event with the goal of becoming self-sufficient within one year of event launch in June.

Request for St. George City Support

As with Gingerbread Tour 2015, we are requesting that the City of St George partner with the Downtown Business Merchants Group and Emceesquare Media & Events to bring our community an ongoing, monthly event.

- Block off Main Street from 200 N to the Blvd. and from the Blvd. to Tabernacle
  For the first 6 months, we propose keeping the event to Main between Blvd. & Tabernacle
  See Revised Map Appendix A
- Provide traffic control
- Provide stage and PA sound systems, flood lighting at stage
- Provide power to Main Street for vendor access
- Provide fire barrels in cold months with firemen to supervise
- Provide promotion on the City website and digital billboard
- Sponsor this event by contributing $2000 per month

Event Management Experience:
DOCUTAH, media and marketing coordinator
Art in Kayenta, press conference and marketing coordinator
Kayenta Street Painting Festival, media and marketing coordinator
Tuacahn Saturday Market, event design
Equality Utah South Celebration, press conference and crisis prevention
Heart Walk Foundation Gala, event design and media coordinator
"Soldiers' Sanctuary" documentary film premiere Microsoft Auditorium, Seattle, Wash., event design with Microsoft V.P. Office
The Great Big Barn Party (Big Brothers Big Sisters), event design, marketing and media
UVUPhoria University Status Celebration, event design
UVU President's Scholarship Ball, creative design and VIP support services
Utah Ballet Annual Gala, media coordination and PR
UVU Annual Auto Expo Car Show, event promotion and photography

George Streetfest on Main Event Staff:
Melynda Thorpe, event design/creator, sponsorships
Cindy Lewis, Director of Events, vendor coordinator
Lil Barron, account manager, passport coordinator
Tim Porter, entertainment booking
Amy Thorpe, volunteer manager
Christie Gubler, DSU student art intern, treasure hunt coordinator
Shara Dursteller, graphic design, passport coordinator assist
Keith Owen, video
EJ Saunders, streaming of concert via Southern Utah LIVE
Kylie Kennedy, DSU student film intern
Lance Claymore, DSU student film intern
Carie Konoulis, DSU student social media intern

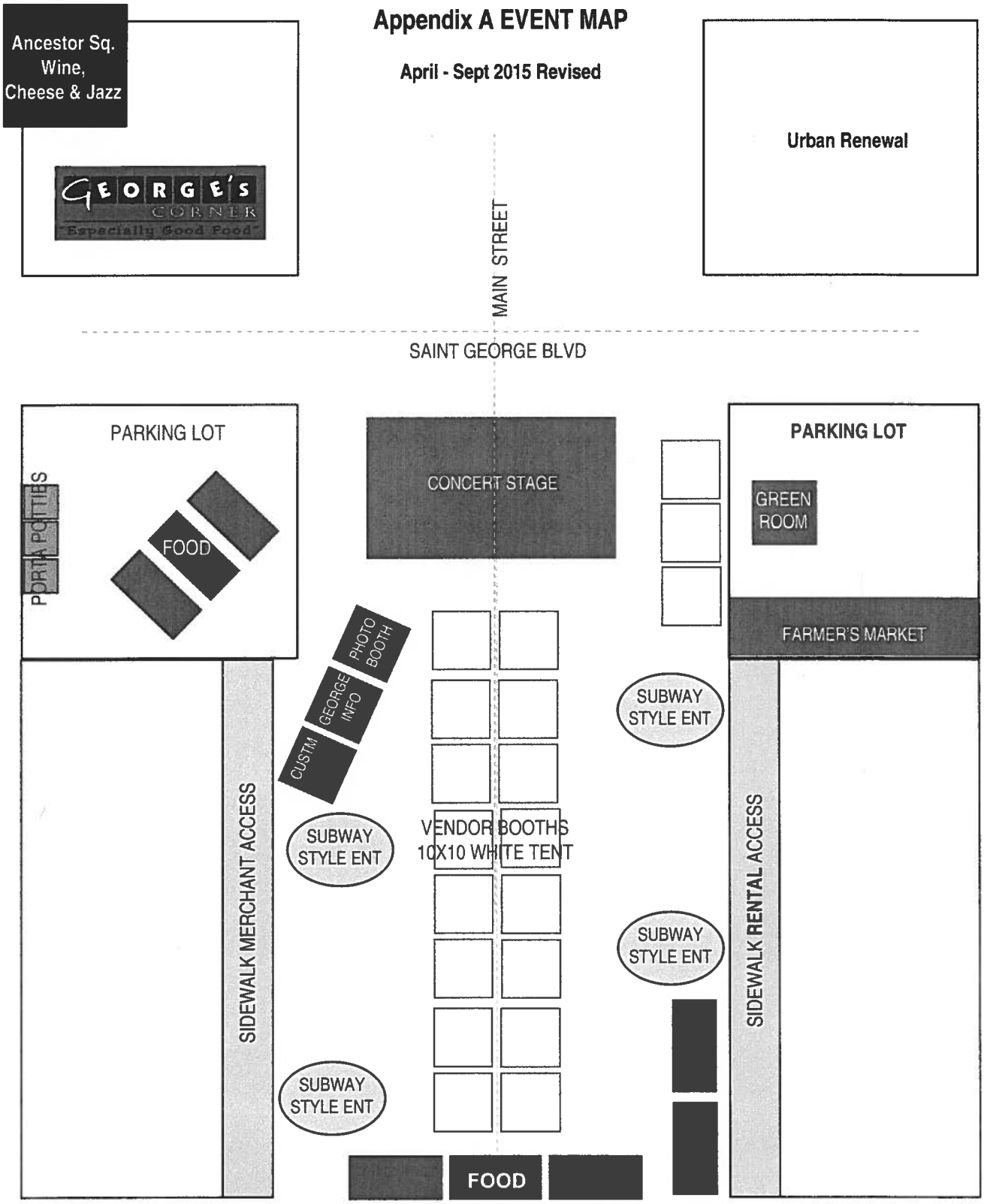
VISIT HISTORIC DOWNTOWN ST. GEORGE

george STREETFEST ON MAIN

EMCEE media & events

Appendix A EVENT MAP

April - Sept 2015 Revised



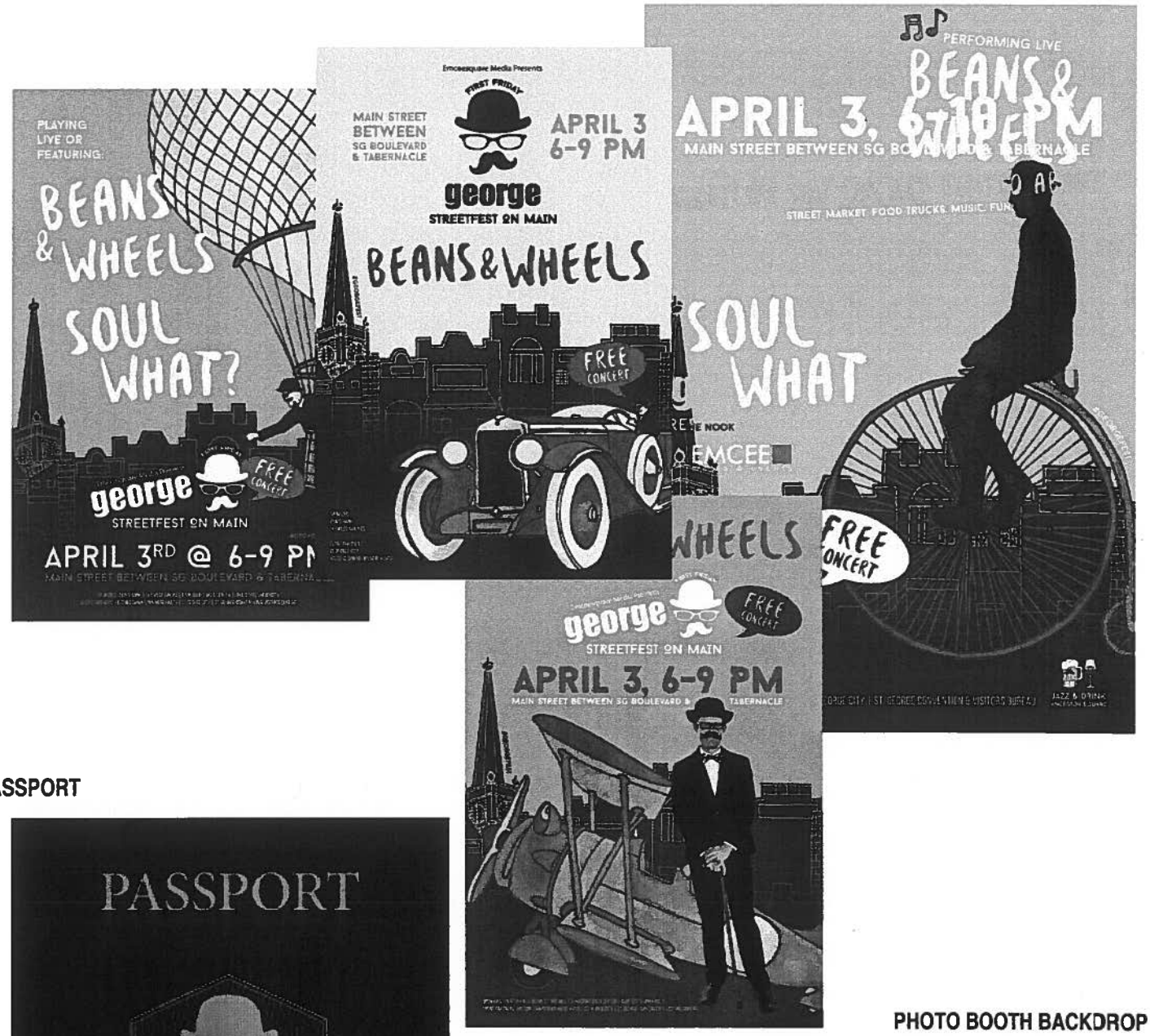
Appendix B BRANDING

LOGO HORIZONTAL

LOGO VERTICAL

OFFICIAL SEAL

POSTER SERIES



PASSPORT

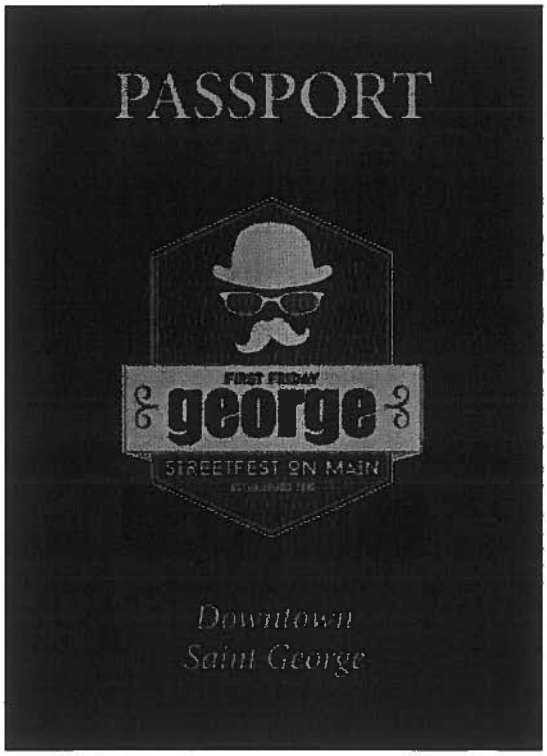
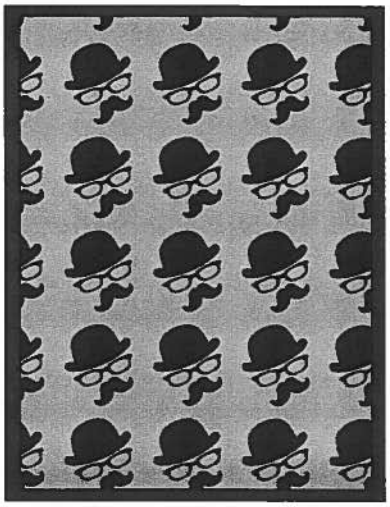


PHOTO BOOTH BACKDROP



NIGHT LIFE

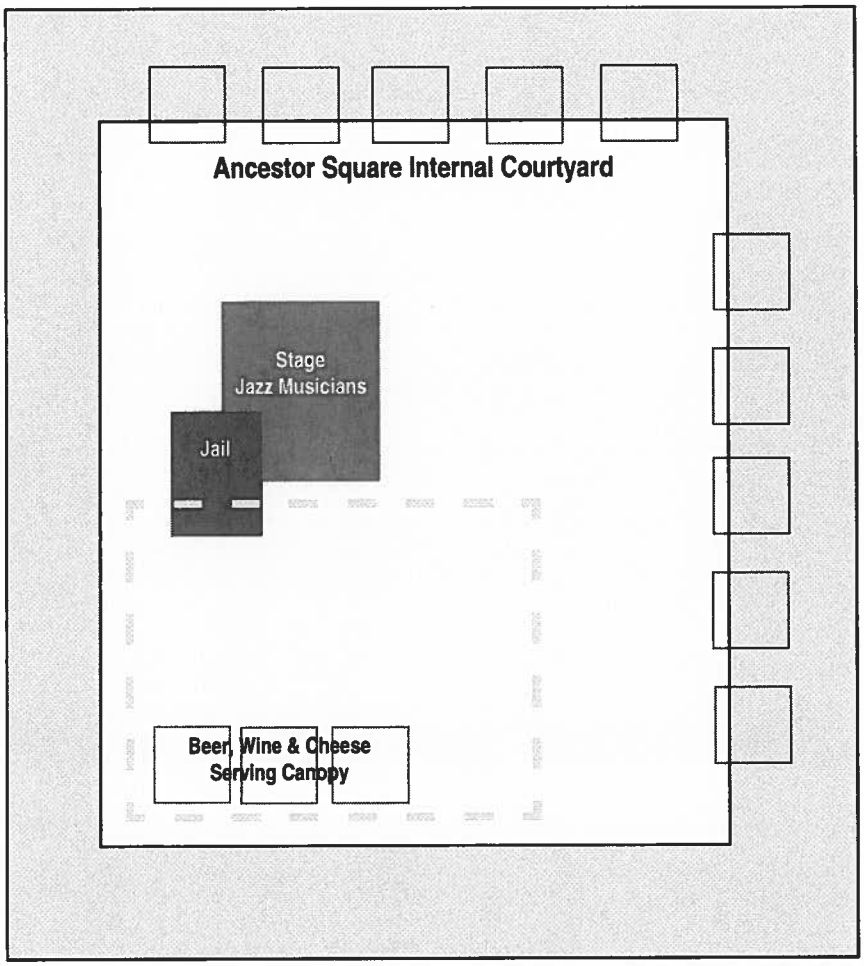
FIRST FRIDAY

george

STREETFEST ON MAIN

Jazz Garden

Ancestor Square will offer an environment for adults offering beer, wine, cheese and jazz musicians. This provides a significant financial contribution to the event design and has been created to engage patrons at Ancestor Square for after-hours shopping and socializing. Live jazz musicians will be selected from the local community. Any non-commercial vendor selling produce or hand-crafted items may utilize designated Farmer's Market space on a first-come, first-reserved basis for a $20 fee. Farmer's Market vendors will follow the same approval process as all other vendors and be under the same contract and terms. Farmer's Market vendor booths will be located along the north and east sidewalks of the central courtyard.

The Jazz Garden aspect of the George Streetfest on Main is intended to be able to function independent of the George Streetfest. It is proposed that the Jazz Garden open and run independently on the evening of the first Friday in April and May 2015, and then as part of George Streetfest thereafter.

Emceesquare will manage the Jazz Garden when it runs independently, or as part of the greater George Streetfest event.