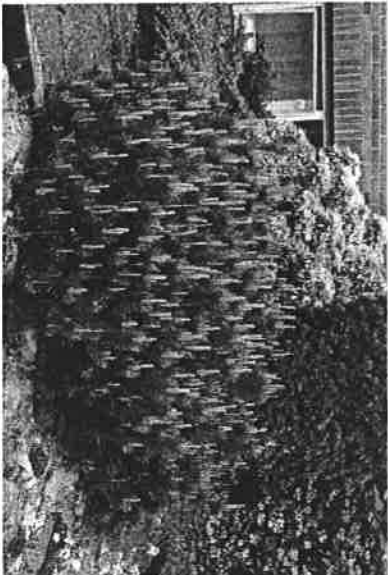
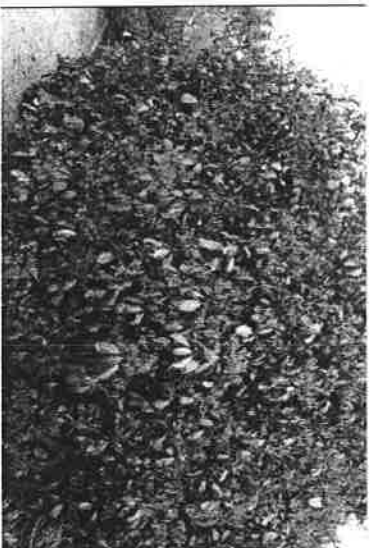


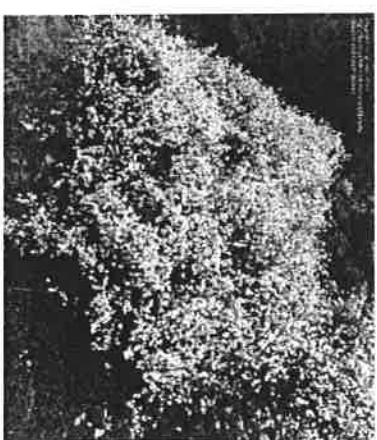
Plant Identification



Mugo Pine



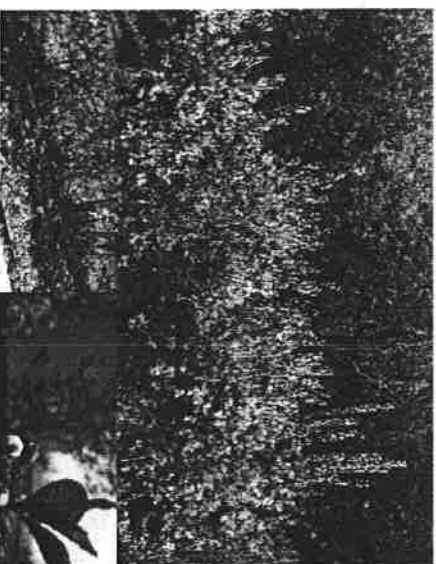
Red Tip Photinia



Scotch Broom



Barberry



Dwarf Red
Leaf Plum



Yucca

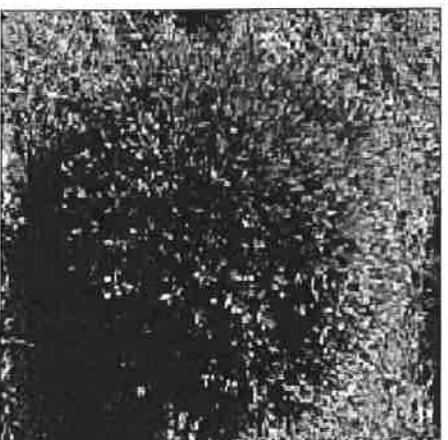
Plant Identification



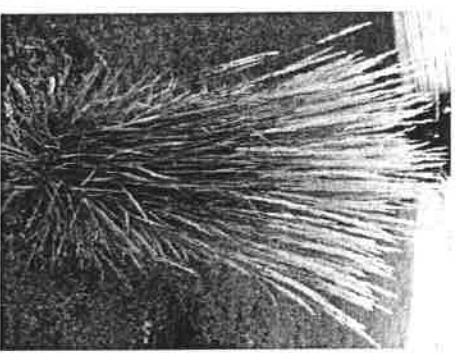
Lilac



Red Twig
Dogwood



Boxwood



Ornamental
Grass



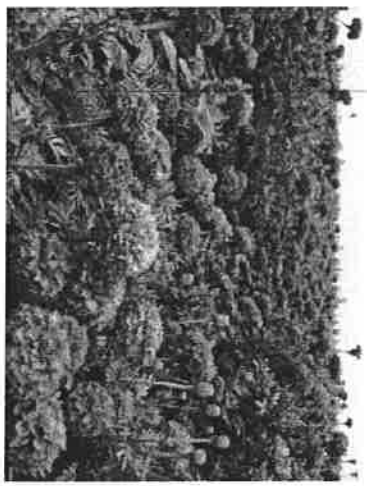
Blue Mist Spirea



Bridal Veil Spirea

Annuals & Perennials

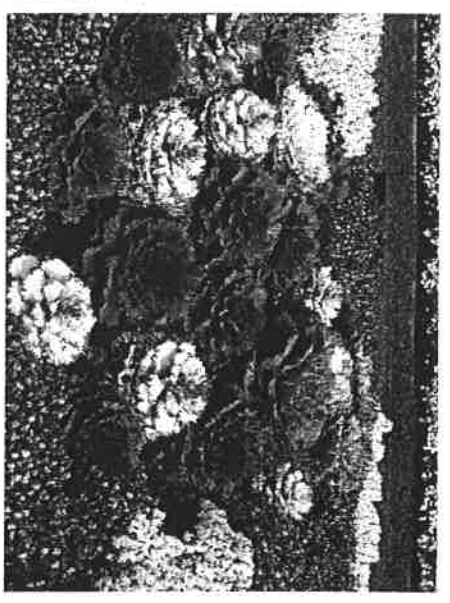
- ▶ Provide instant curb appeal
- ▶ Provide color during the fall & winter months.
- ▶ Replaced yearly
- ▶ Fall & Winter color
 - Ornamental Kale
 - Pansies
- ▶ Summer Color
 - Petunias
 - Zinnias
 - Marigolds
 - Impatiens



Marigolds



Impatiens



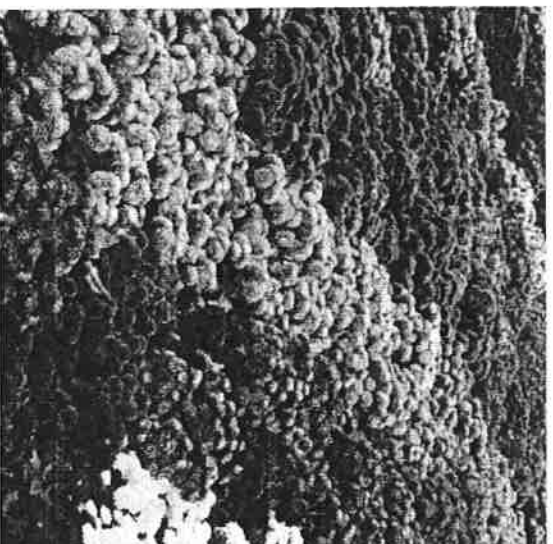
Kale



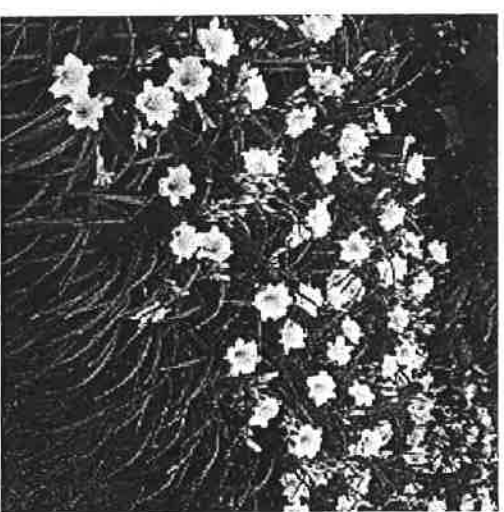
Pansies

Perennials

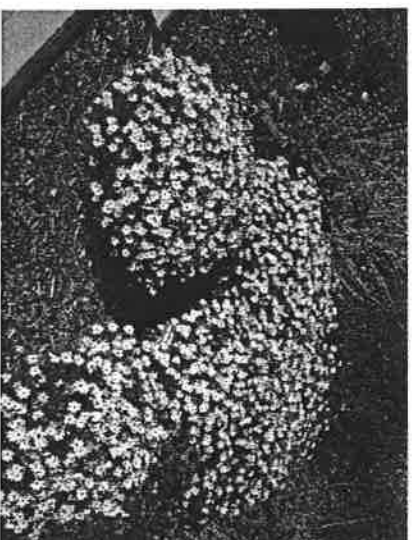
- ▶ Don't have to replace them every year
- ▶ 3-4 weeks of color
- ▶ Summer Blooming
 - Gaura
 - Coreopsis
- ▶ Spring blooming
 - Stella De Oro
 - Salvia
 - Coreopsis
 - English Lavender



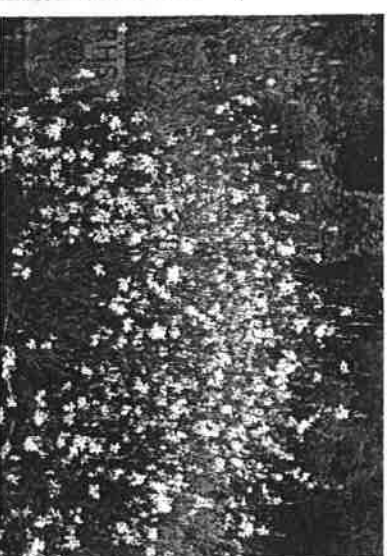
Chrysanthemums



Stella De
Oro Day Lilly



Coreopsis

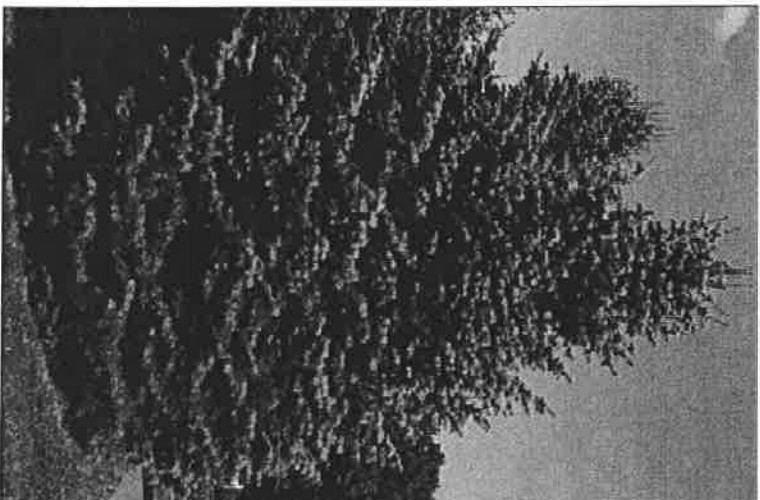


Gaura

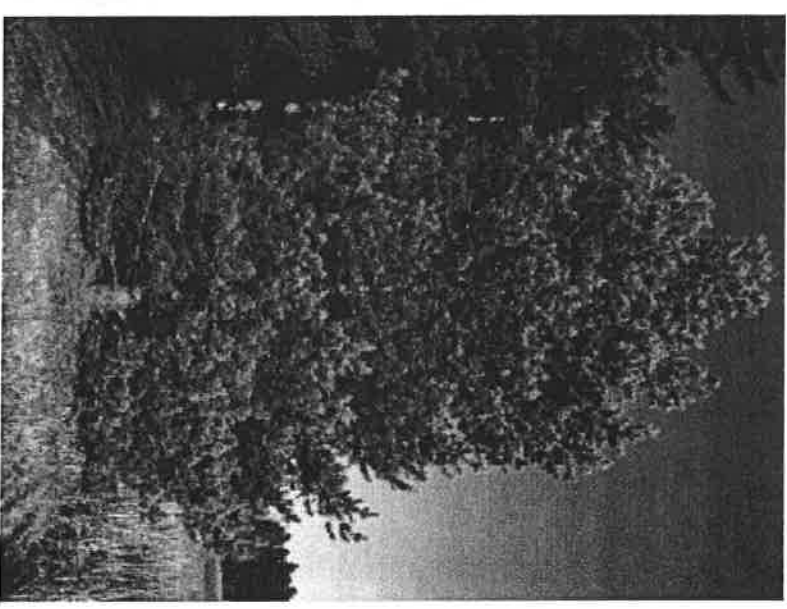
Tree Identification

▶ Pine & Spruce Trees

- Medium Water
- Full Sun
- Lift lower
branches only if
needed



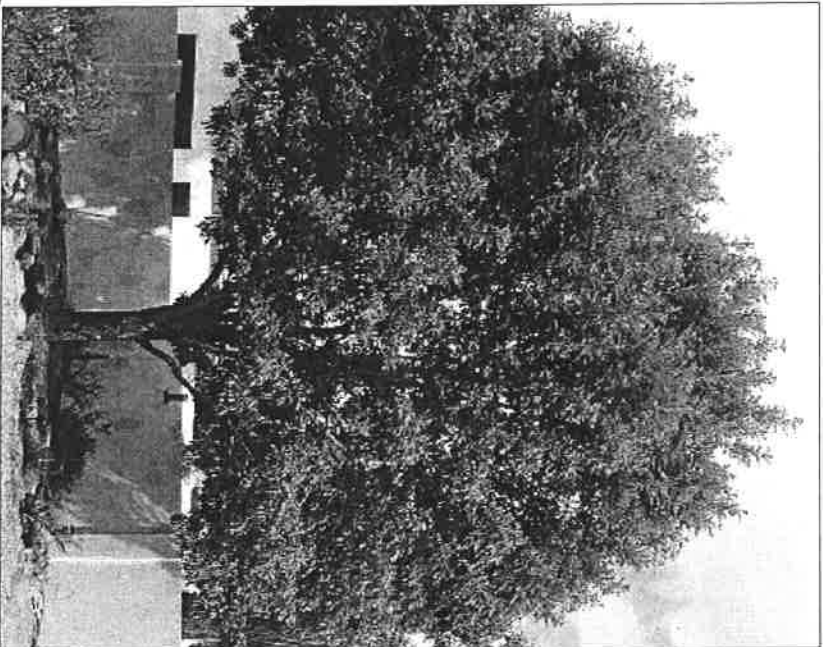
Spruces have
short and stiff
needles



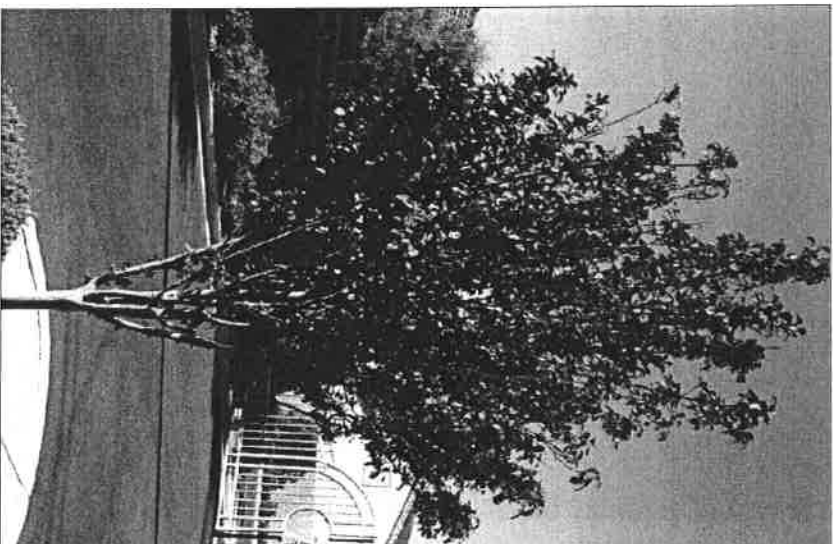
Long needled pine

Tree Identification

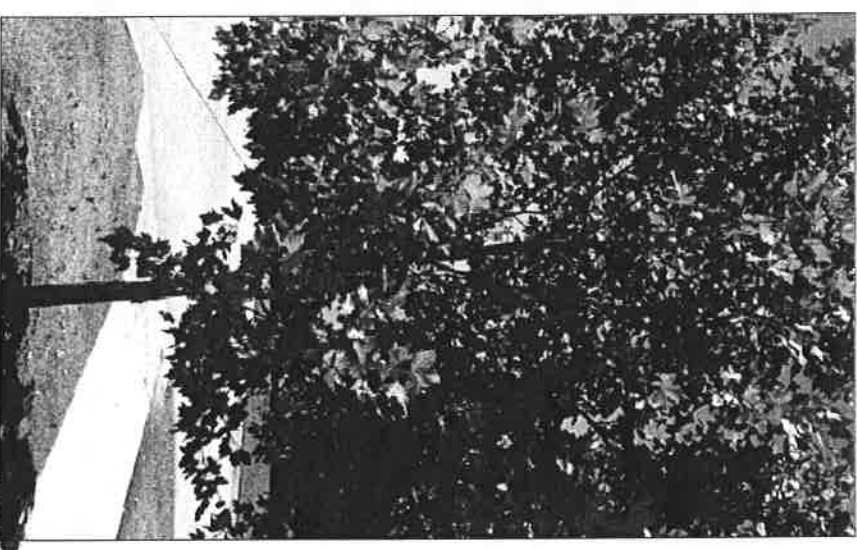
Ash Tree



Flowering
Plum Tree

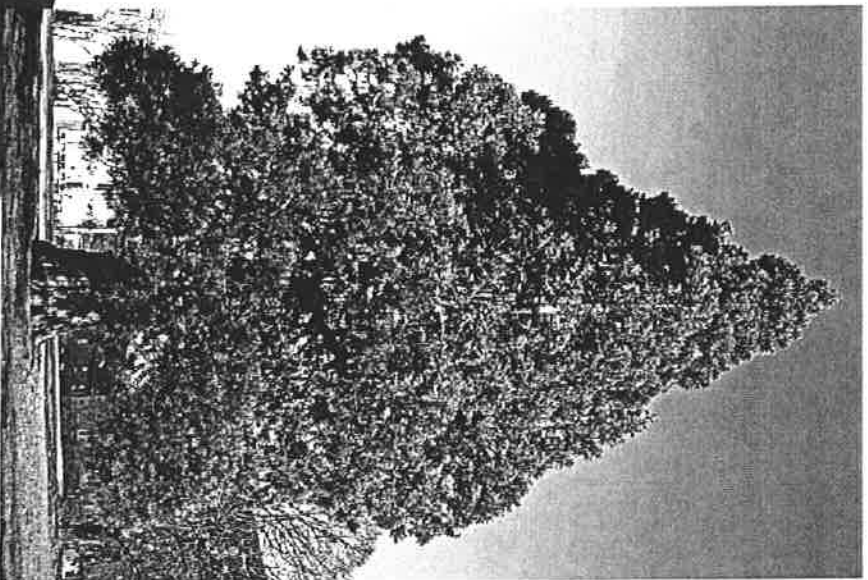


Sycamore



Tree Identification

Sequoia



Sun Locust



Cottonwood



Flower & Fruit Bearing Trees

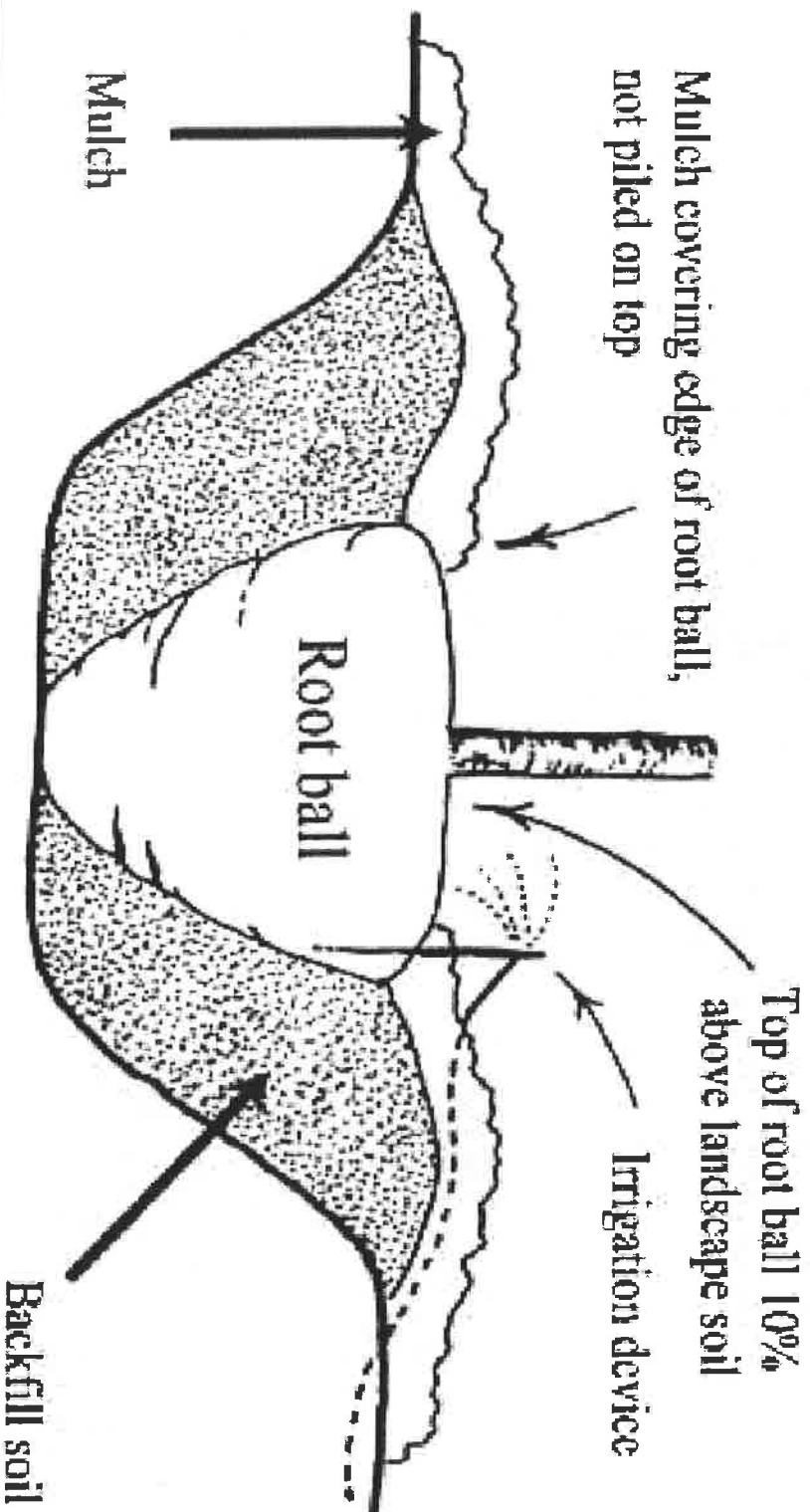
- ▶ Fruit Bearing Trees include:
 - Crabapples
 - Flowering Plum & Pear trees
 - Pear trees
 - Apple trees
 - Cherry Trees

Fruit can be controlled by spraying chemicals

- ▶ Some trees have now been genetically grown to not bear fruit.



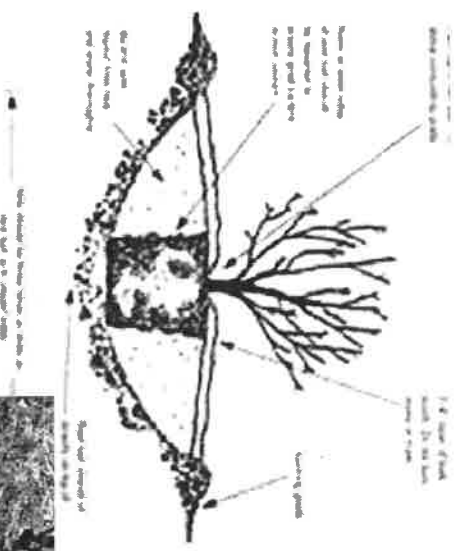
Proper Planting hole



Don't put a \$100 tree in a \$10.00 hole!



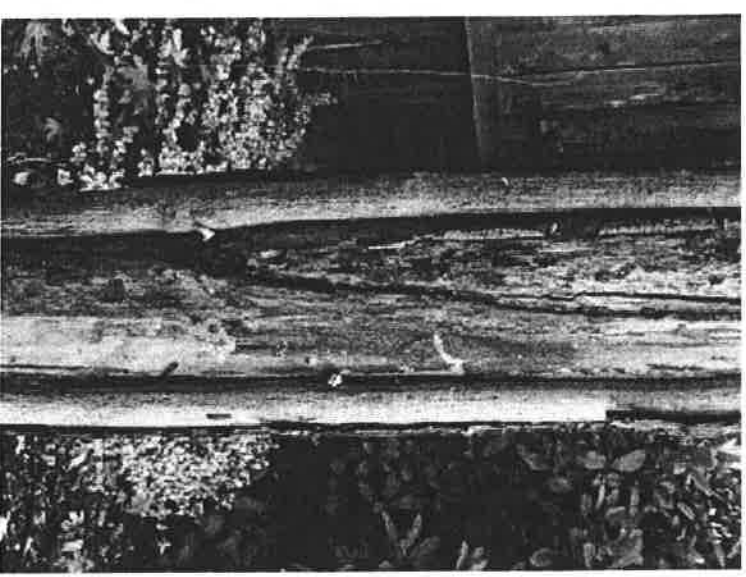
Correct Planting



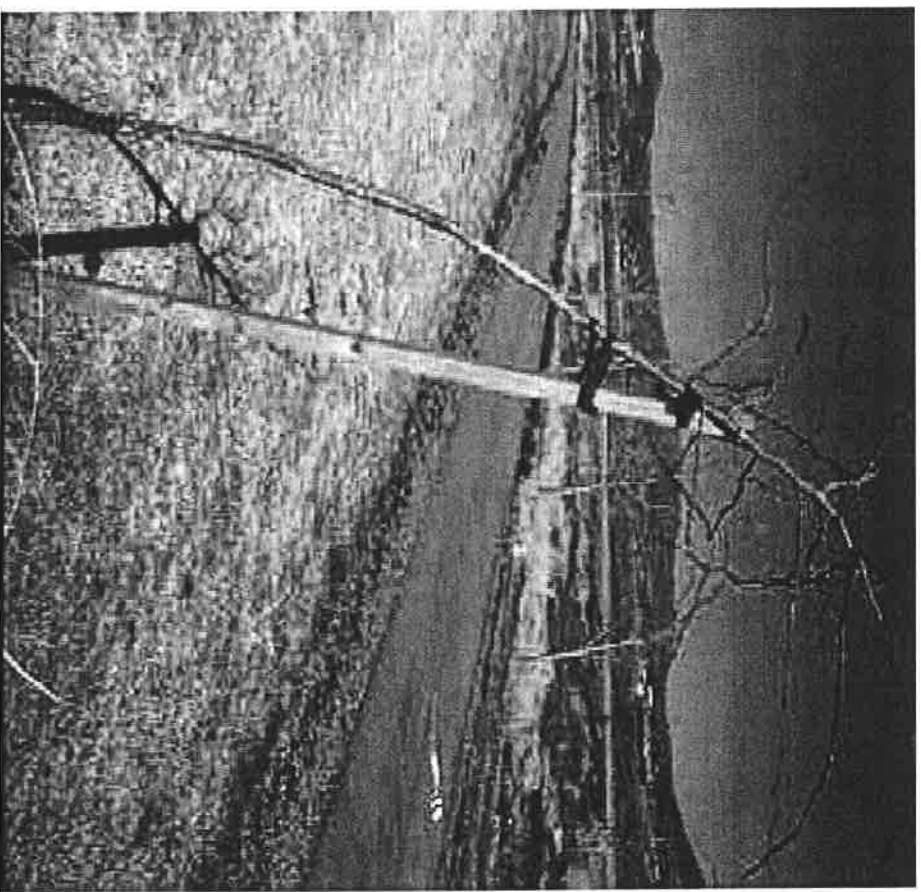
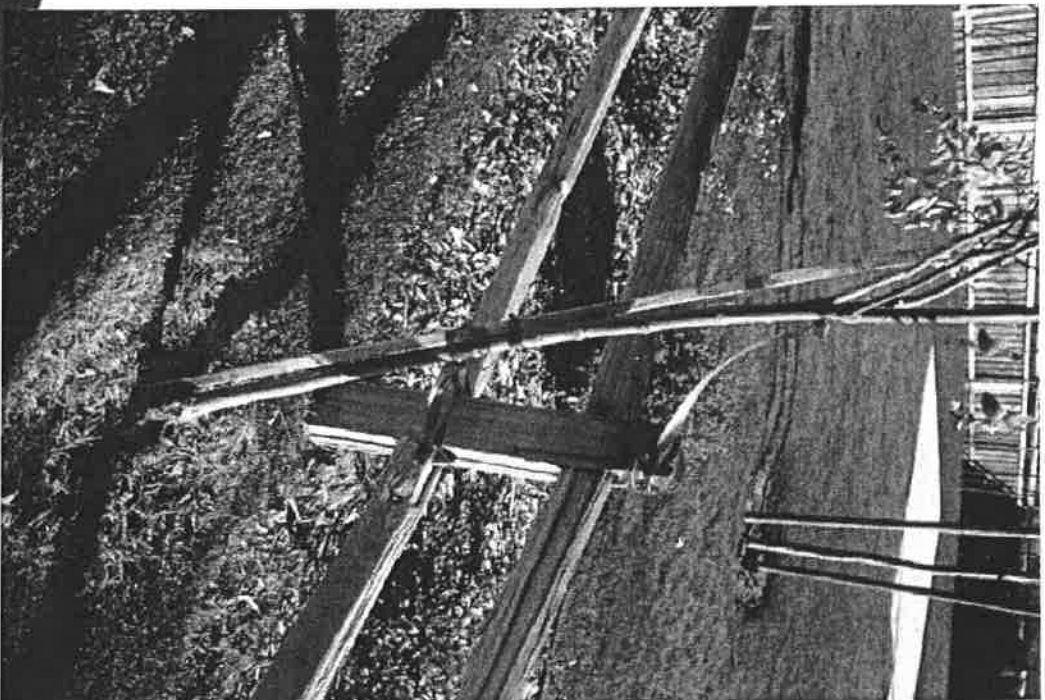
Remove and tease out circling roots

Environmental Damage South West Exposure

- ▶ Causes Sunscald on Trees
- ▶ Hottest part of the day occurs on the Southwest side.
- ▶ Occurs between 1:00 pm to 5:00 pm or later in the summer not at noon!

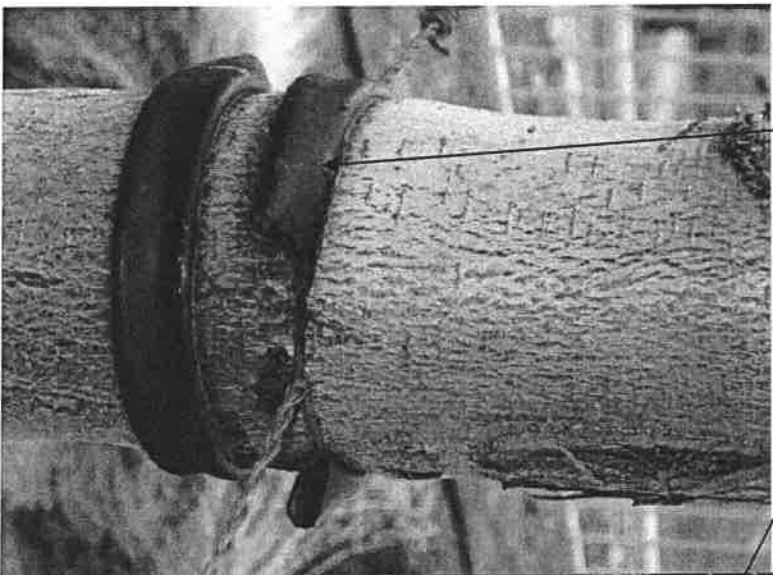


Improper Staking



Wire Ties

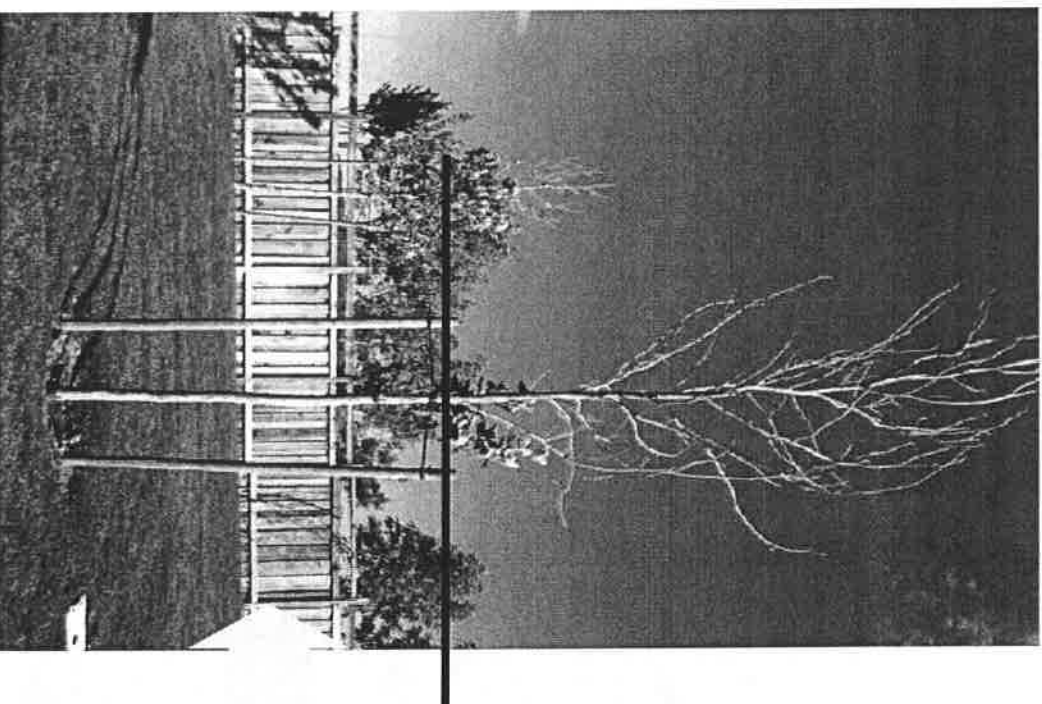
Wires left
on a tree will
eventually
kill it!



Proper Staking

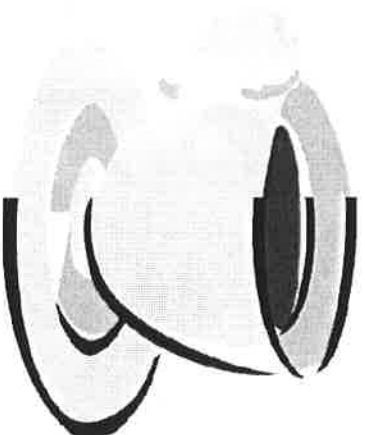
Proper two - stake technique. Stakes are outside of the rootball.

Tree should be able to stand on its on after 2 years.



Place stakes perpendicular to the wind.

10 Minute Break



Questions?

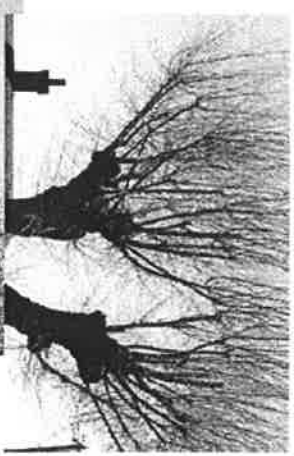
Tree Care and Pruning

- ▶ What to Prune?
- ▶ When to Prune?
- ▶ Where to Prune?



Badly Pruned Trees

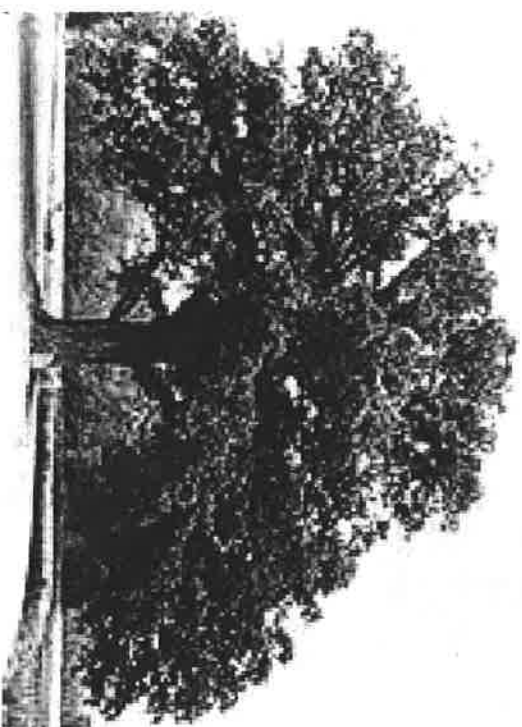
- ▶ Don't Top Trees
 - ▶ Topping:
- ▶ Reduces property value
- ▶ Reduces curb appeal
- ▶ Shortens the life of a tree
- ▶ Creates a hazardous tree



Lion Tailing

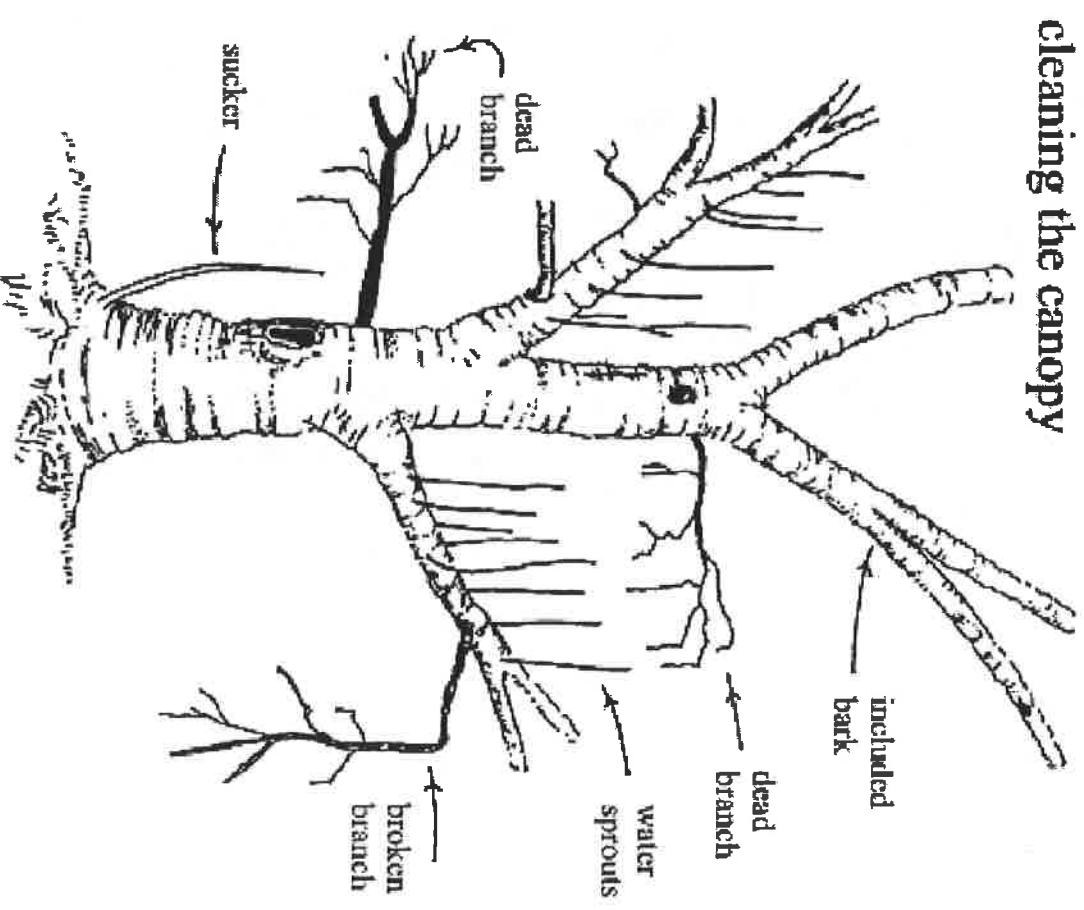
Properly Pruned Trees

- ▶ No Topping!
- ▶ Thinning
- ▶ Remove only:
 - Dead
 - Dying
 - Diseased wood
 - Suckers
 - Sprouts



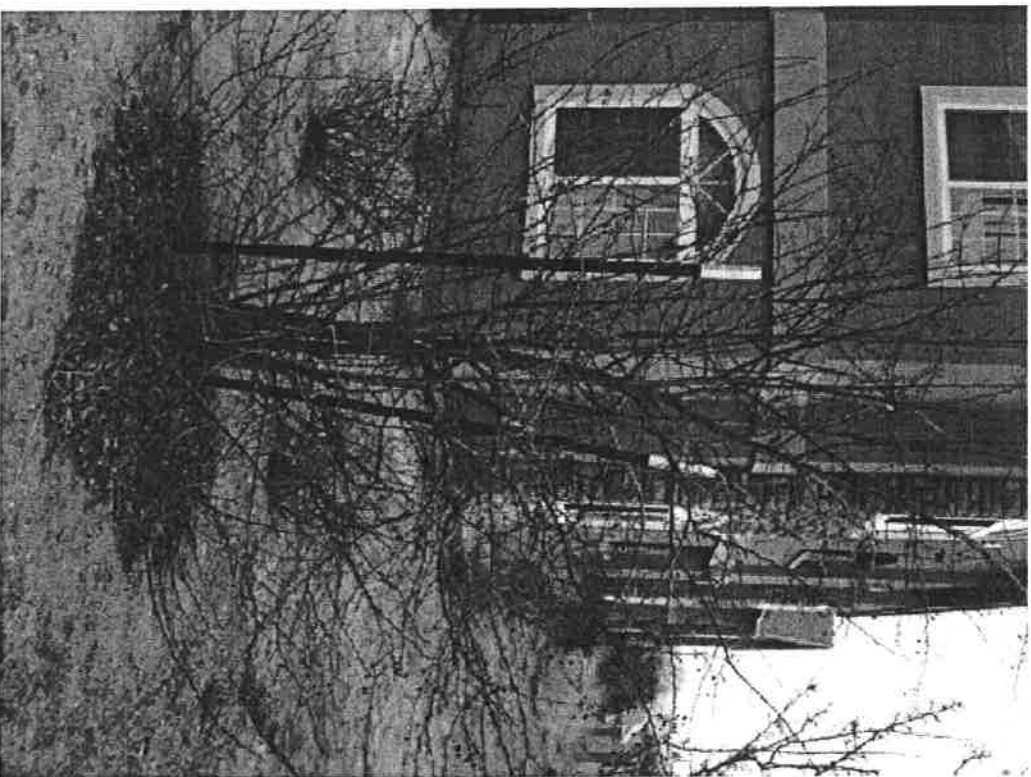
Properly Pruned Trees

- ▶ Only 10–15% should be removed at one time and 20% to 25% of the tree branches over a two year period.
- ▶ 2/3 of the leaf surface should be in the lower portion of the tree.
- ▶ Removing more will stress the tree and the tree will respond by producing suckers and sprouts.



Neglected Trees

- ▶ Tree has been neglected
- ▶ Reduces property value
- ▶ Unsightly curb appeal



Tree Fertilization

Granular vs. Deep Root

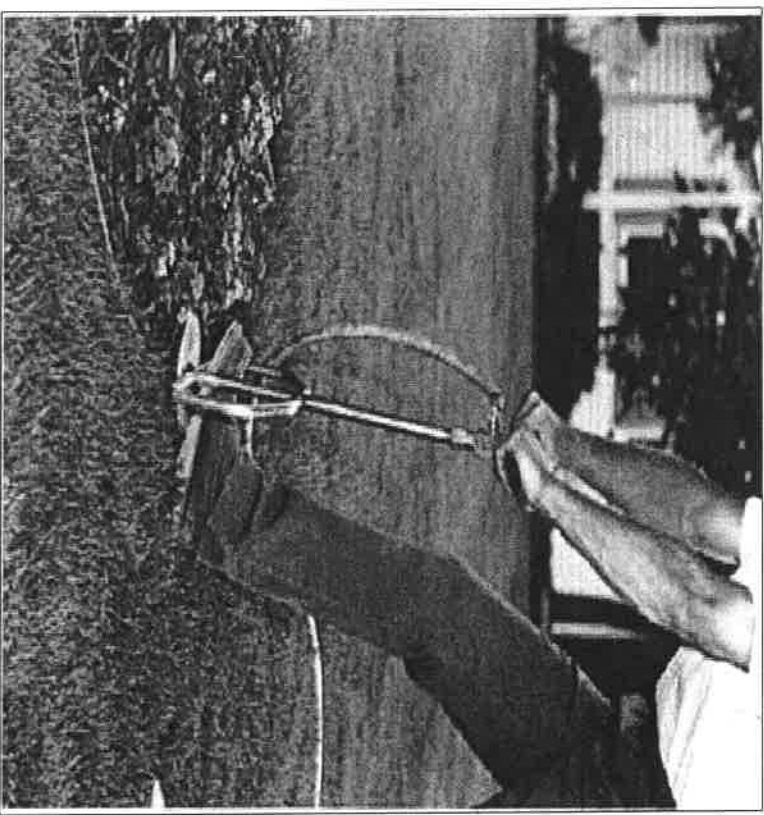
Granular

- ▶ Not ideal for northern Nevada due to lack of rainfall
- ▶ Slow adsorption
- ▶ Needs to be watered in
- ▶ Difficult to accomplish with drip systems



Liquid Tree Fertilization

- ▶ Deep Root Benefits
 - Available immediately through root adsorption.
 - Injected into the soil where roots are (6"–12")
 - Recommended spring and fall applications.
 - Different than lawn fertilizer.



Environmental Stress Affecting Plant Health and Vigor

- ▶ Compacted soil
- ▶ Reflective heat
- ▶ Sparse or excessive water supply
- ▶ Insufficient nutrients
- ▶ Chemical Damage (Weed & Feed fertilizer Herbicides)
- ▶ Poor emitter placement
- ▶ Soil problems (Salinity, Boron and high pH's)
- ▶ Vandalism, accidents, neglect

High Heat Exposure Damage



Salt Damage

- ▶ Leaf margin burn caused by road salts and deicing compounds (sodium chloride)



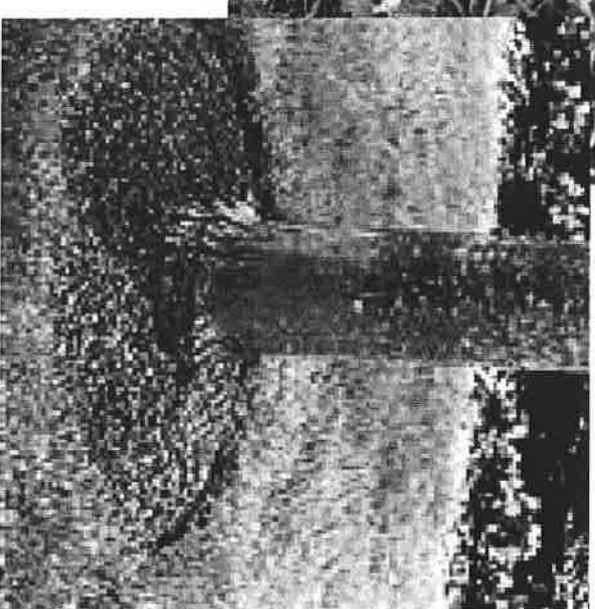
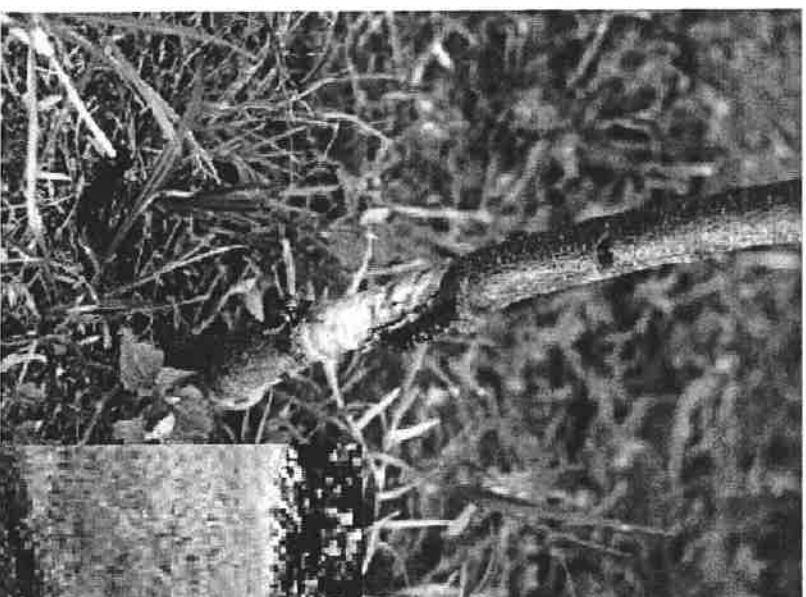
Water Stress

- ▶ Water stress on trees is seen in the middle of summer when water demand is high

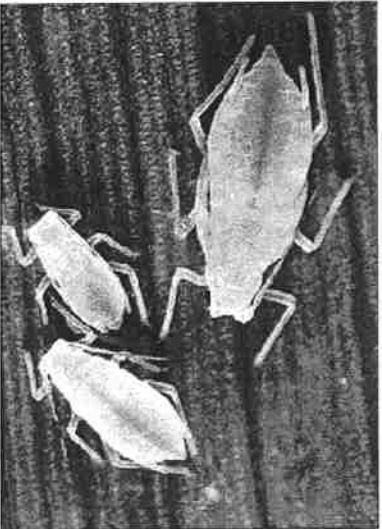


String Trimmer Damage

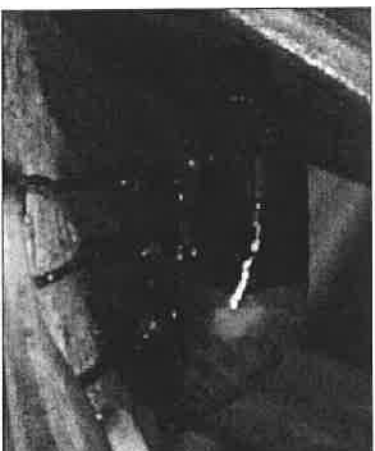
- ▶ String trimmer damage on newly planted tree. Eventually leads to the death of a tree.
- ▶ Make rings around three and mulch.



Insect & Diseases - Damage on Trees and Shrubs



Aphids



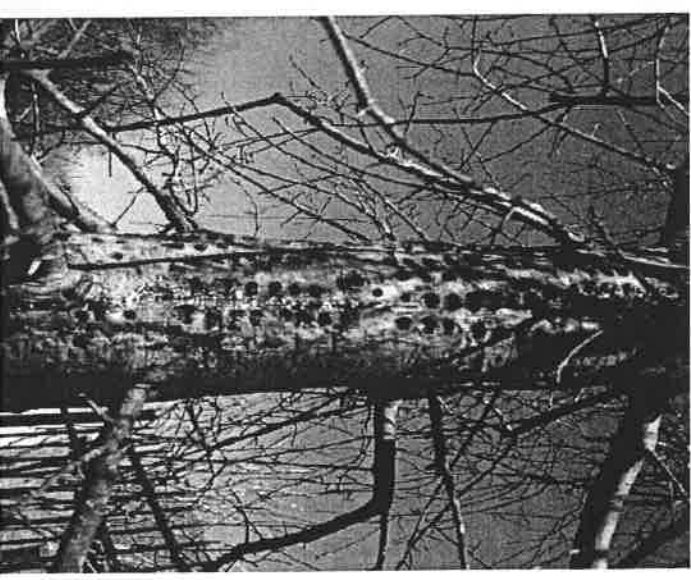
Spittle Bug



Borers



Mites



Sap Sucker
Damage

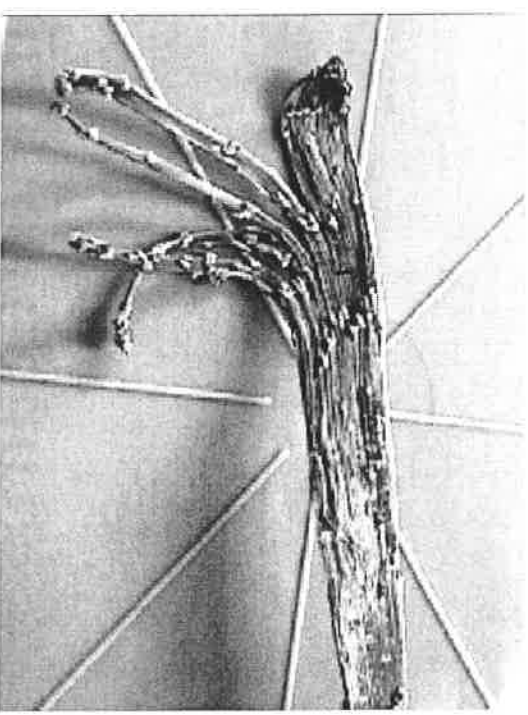
Landscape Disease and Diagnosis

Non Living “Abiotic”– plant problems

- Recent history of disturbances i.e., construction, paving, mainline repair.
- Herbicide spraying
- Recent climate conditions
- Flooding
- Drought
- Soil compaction

Landscape Disease and Diagnosis

- ▶ Abiotic causes
 - Climate
 - Lawn mower and string trimmer damage
 - Children
 - Improper handling and poor planting techniques
 - Poor plant selection and placement
 - Poor management practices



Faciation on Forsythia,
abiotic disorder

Landscape Disease and Diagnosis

- ▶ Biotic – Living organisms that attack trees under stress or susceptible plants
 - Occurs over a long period time.
 - Very few tree diseases in the area i.e.
 - Fire Blight
 - Gumosis
 - Powdery mildew
 - Cytospora Canker
 - Slim Flux, etc.



Fire blight on Pear

Plant Disease Control

- ▶ To successfully control a disease, you need to identify the plant, recognize the disease, compare the diseased plant to a healthy one.
- ▶ Know the normal growth habits of the plant.
- ▶ Observe signs and symptoms.

Water Management & Irrigation



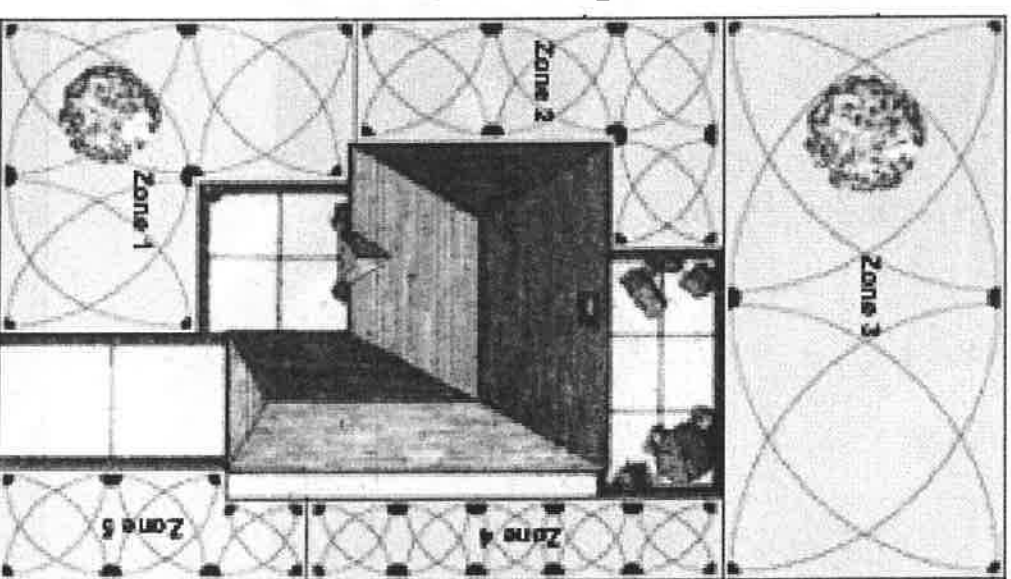
Irrigation is always
1st Step to
maintaining a
healthy
landscaping!

Irrigation

- ▶ Most important **“Life Blood”** of the landscape!
- ▶ Keep what you already have healthy to save money
- ▶ Often sprinklers are mixed and not matched to the precipitation rates
- ▶ System efficiencies
- ▶ Life span of an irrigation system

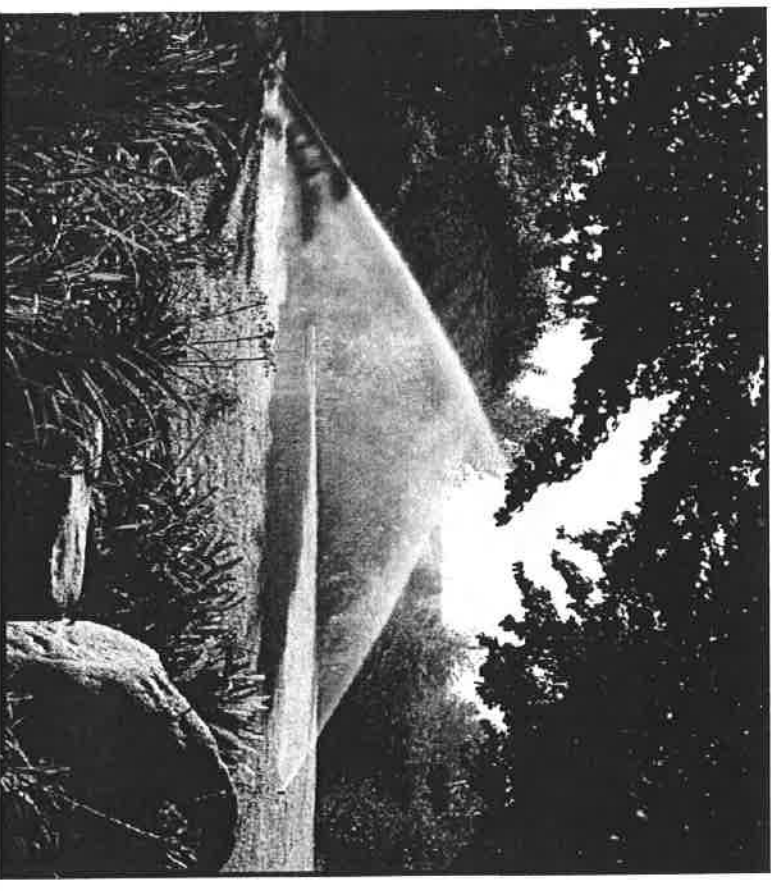
Irrigation Considerations

- ▶ Soil type
- ▶ TMWA watering restrictions
- ▶ Sun/shade
- ▶ Slope
- ▶ Coverage (irrigation uniformity)
- ▶ Head spacing
- ▶ Out date systems
- ▶ Low pressure
- ▶ Wind
- ▶ Evaporation
- ▶ Heat



Irrigation Considerations

- ▶ Timer and valve unknown locations
- ▶ Improper controller set-up
- ▶ Repairs ignored
- ▶ Short cuts
- ▶ Too many heads on one station!
- ▶ Mixed Heads
- ▶ Irrigation efficiencies
- ▶ System Life Span



Irrigation

- ▶ Avoid frequent shallow watering that may result in shallow roots.
- ▶ The average lawn needs between 1” to 1½” inches of water in the spring and during peak summer conditions up to 2½” or more.
- ▶ It takes about 2 hours to apply 1” of water with an average size hose and water pressure.

Water Requirements

How much water does a plant need?

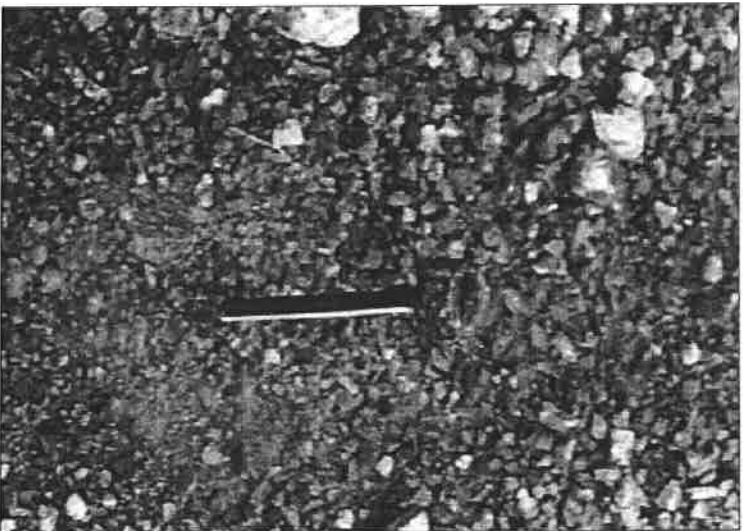


How much water does a plant need?

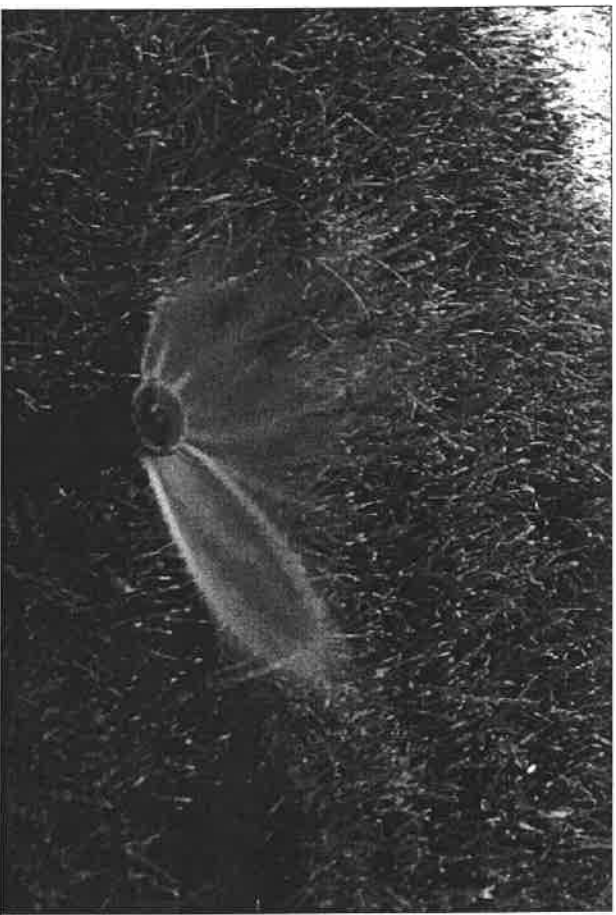
- ▶ No cut and dry answer.
- ▶ Depends on the plant. Each plant has its own water requirements.
- ▶ Depends on exposure, i.e., north side, or shady areas require less water compared to sunny locations.

Irrigation

Drip Irrigation



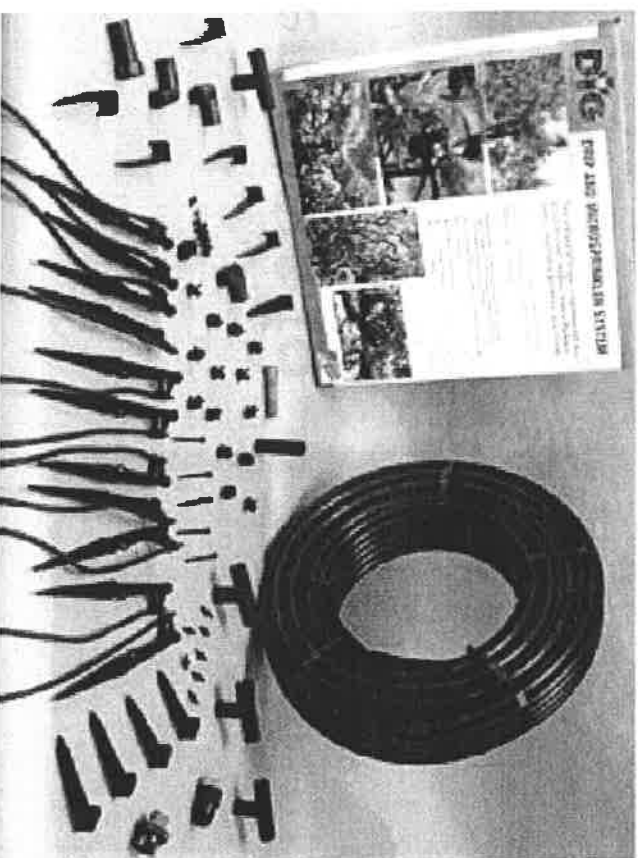
Spray Head Irrigation



Drip Irrigation Components

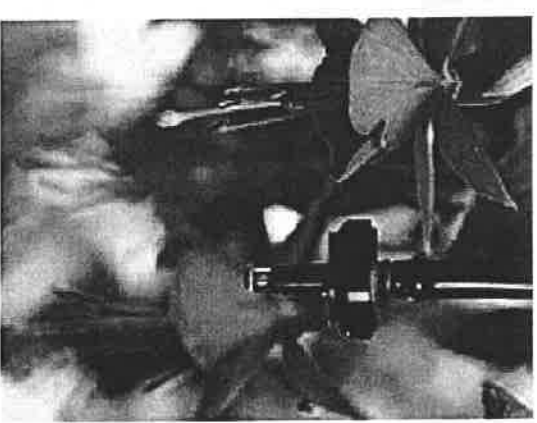
Components

- ▶ Valve
- ▶ Poly Tubing
- ▶ Connectors
- ▶ Spaghetti Tubing
- ▶ Emitters
 - (2 gallon, 1 gallon, etc.)
- ▶ Micro Sprays



Drip Irrigation Considerations

- ▶ Often, emitters not properly selected for plant size.
- ▶ Over watering
- ▶ Under watering
- ▶ Unsure of number of emitters to install.
- ▶ Often short cuts are taken on the number of emitters per plant
- ▶ Too many plants on the same station.



Common Drip Problems

- ▶ Not enough emitters per plant
- ▶ Too many emitters per station or drip tube.
- ▶ Over extended drip line, drip line too long and lose water pressure.

Common Drip Problems

**Drip emitters
too close
to the trunk.**

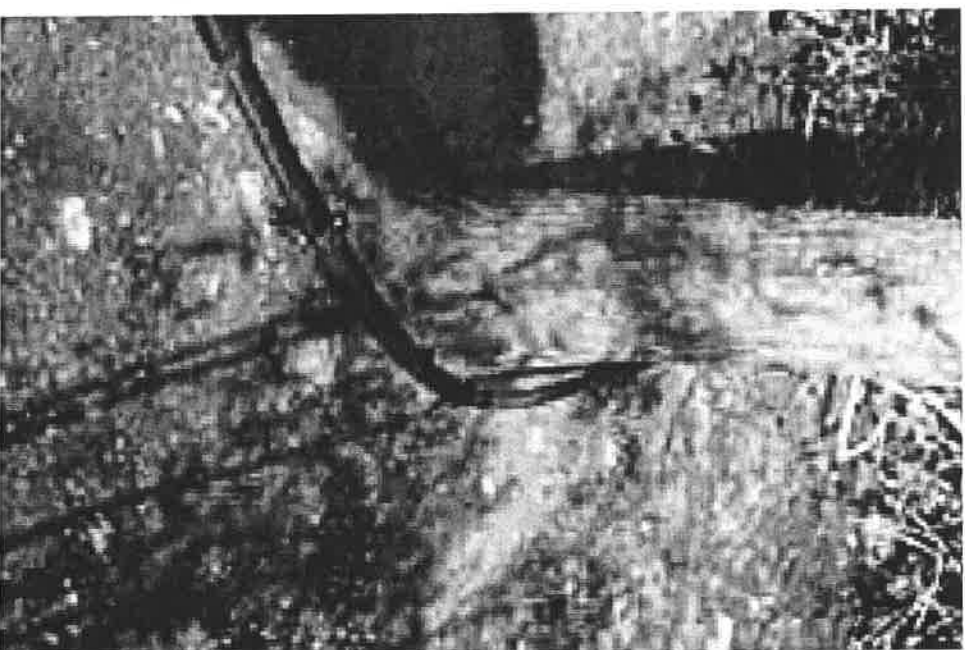


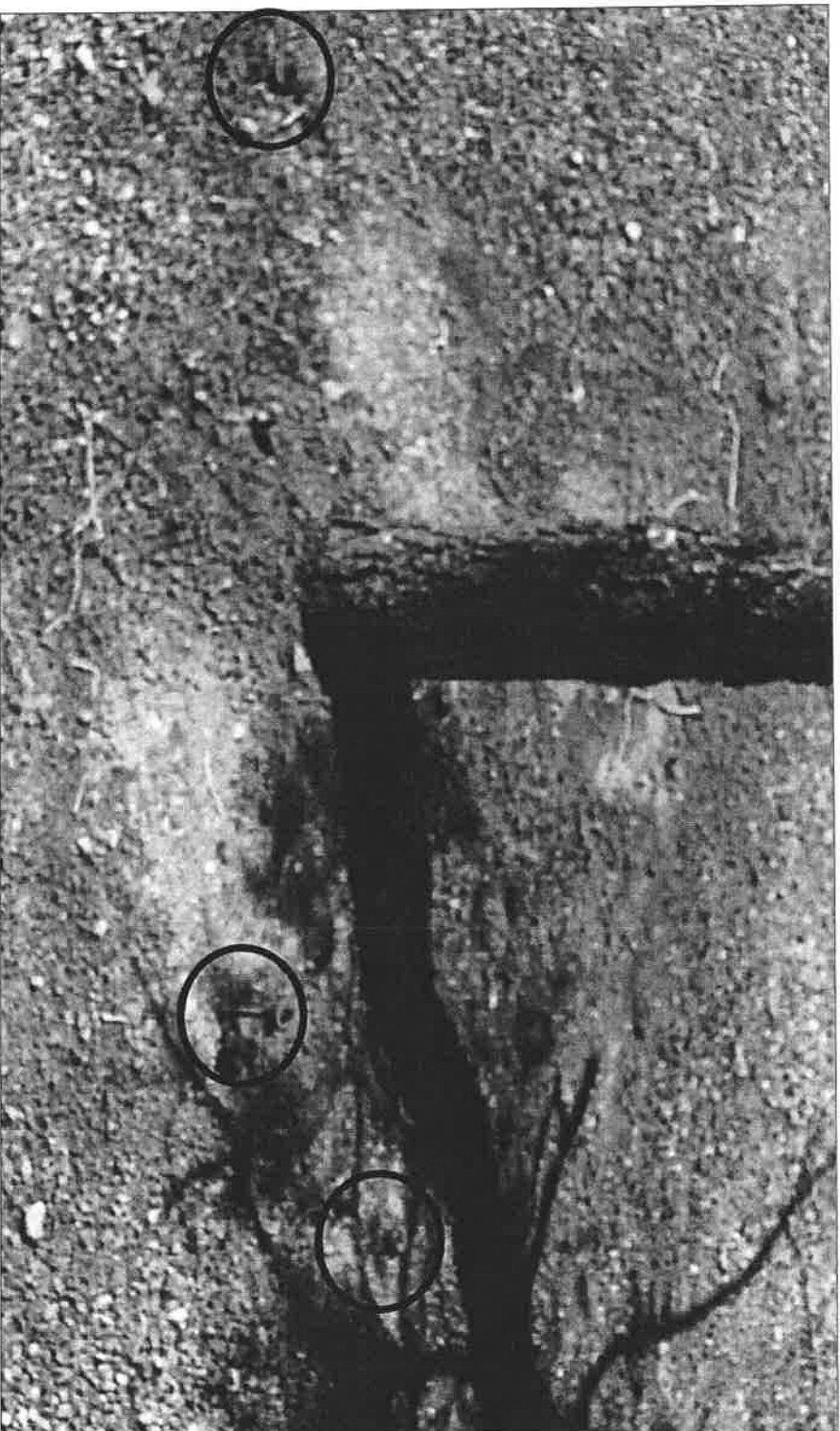
Photo Courtesy of Brian Dean

NEVADA CHAPTER

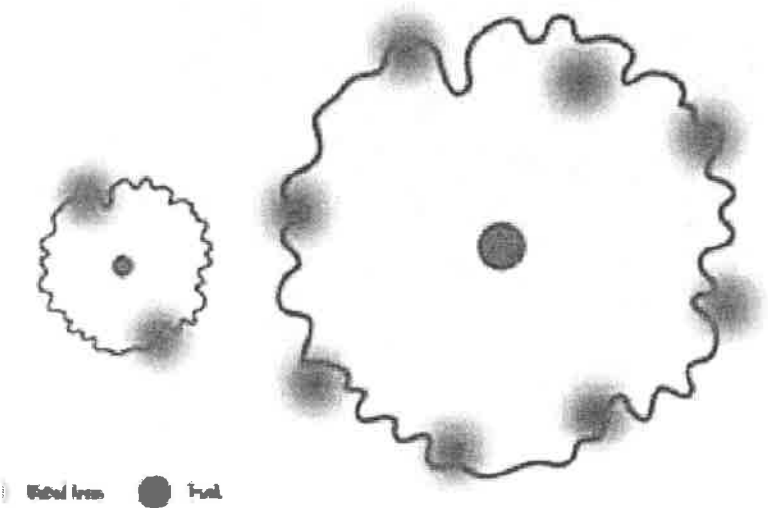
community
ASSOCIATIONS INSTITUTE



Misplaced Emitters



Proper Emitter Placement



Emitter placement

Different Types of Sprinklers



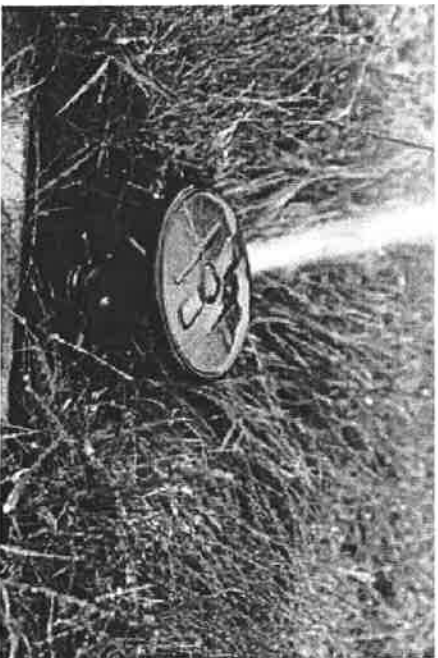
Pop ups



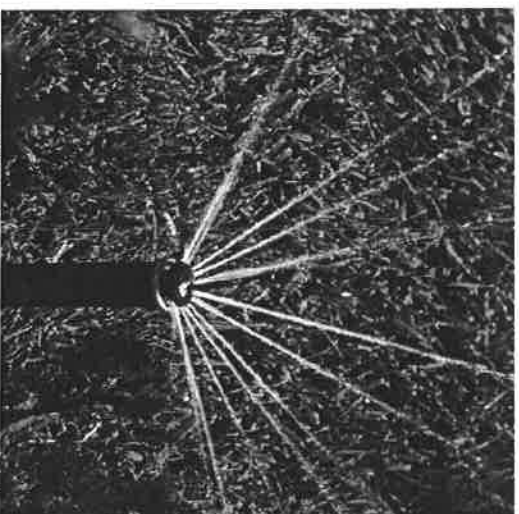
Rotors



Maxipaws



Impact Heads



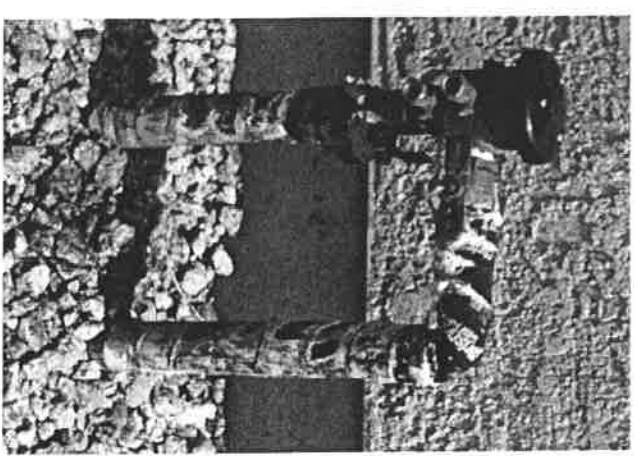
MP Rotator
Nozzles

Mainline Irrigation Components

- ▶ Water District Connection / Meter
- ▶ Main Line Pipe
- ▶ Theft / Protection

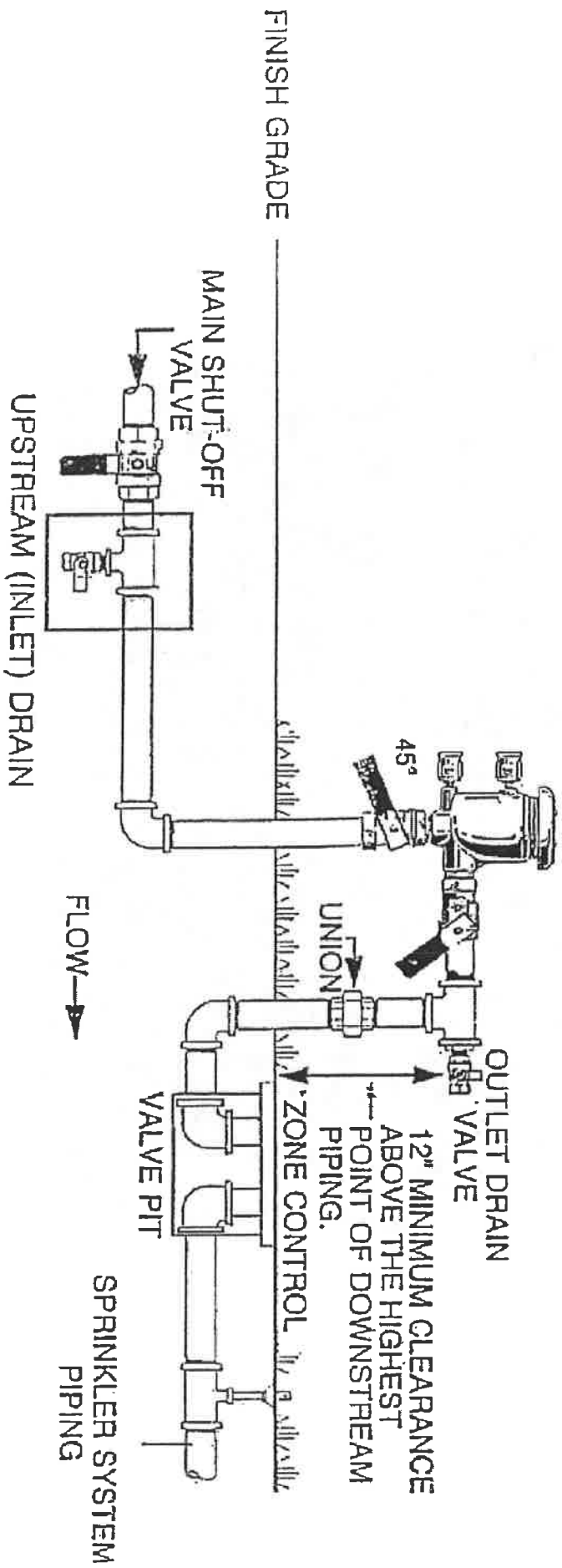


Clock / Timer



PVB / Backflow
Preventer

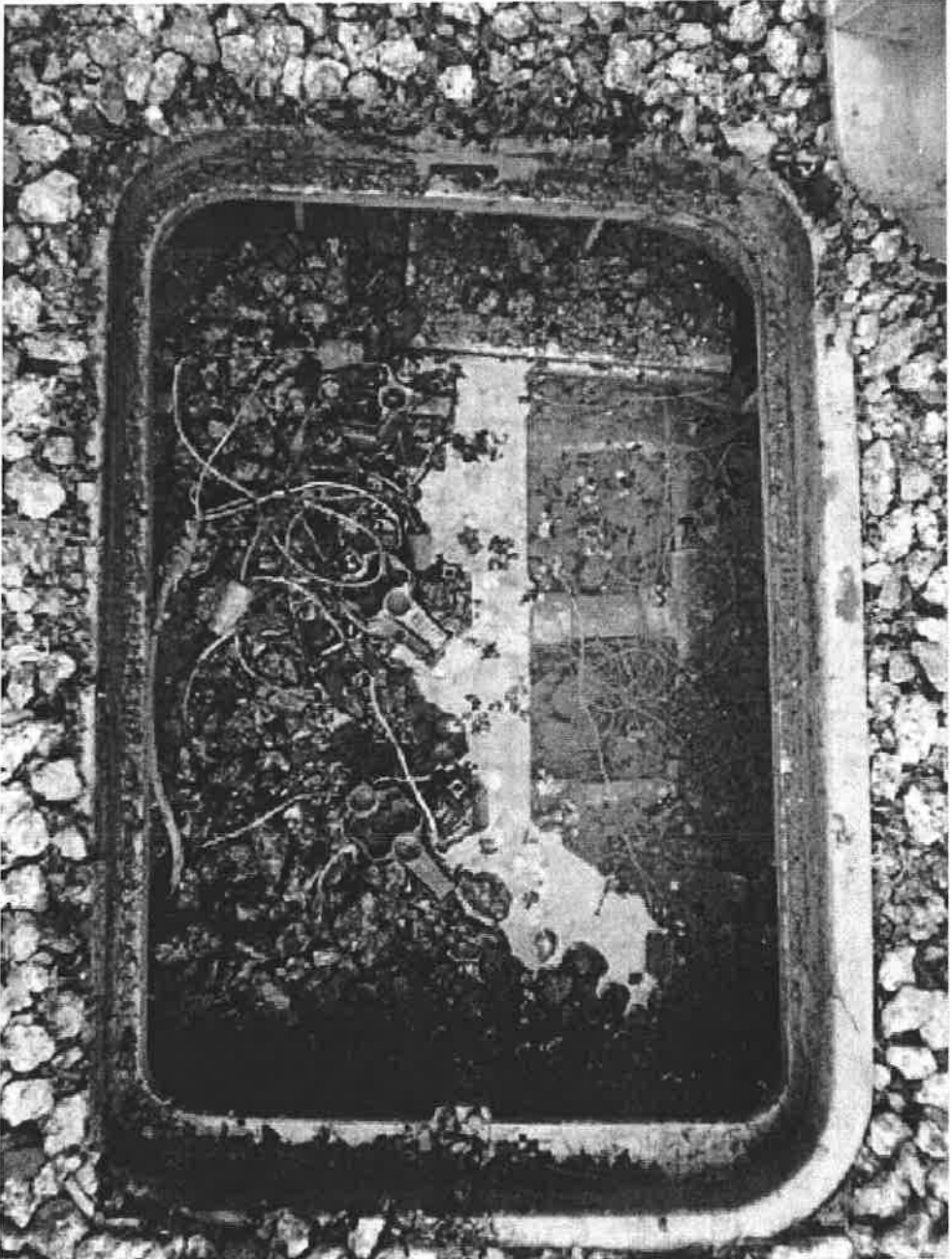
Reverse Backflow Prevention Device



Valve with Filter & Pressure Regulator



Valve



Irrigation Basics

- ▶ Sprinkler coverage is paramount, uniformity and distribution is key to maintain a healthy lawn
- ▶ Seventy percent coverage is standard
- ▶ Irrigate early in the morning
- ▶ Early evening
- ▶ Try not irrigate at night
- ▶ Don't water in the middle of the day

TMWA Water Requirements

<http://tmwa.com/>



TMWA Water Restrictions

- ▶ Winter Watering
- ▶ Spring / Fall Watering
- ▶ Summer Watering

• Sprinkler irrigation is **prohibited** between the hours of noon and 6 p.m. from Memorial Day through Labor Day.
• **Monday** is not an optional watering day during the spring and fall.

Watering Group	Winter (Irrigation system is winterized)	Spring / Fall (March – April / Sept – Oct)	Summer (May – Aug)
Even	(0, 2, 4, 6 or 8)	Tues, Thurs, Sat	Any Day
Odd	(1, 3, 5, 7 or 9)	Wed, Fri, Sun	Any Day

If today is your watering day,
water for a total of:

September 24, 2002

POP-UP	22 min.
IMPULSE	55 min.
ROTOR	26 min.

STREAM SPRAY

Split up the watering times into
three to five cycles or more per day.

Irrigation rates based on manufacturers information,
local weather stations and sprinklers operating
at 85% efficiency.

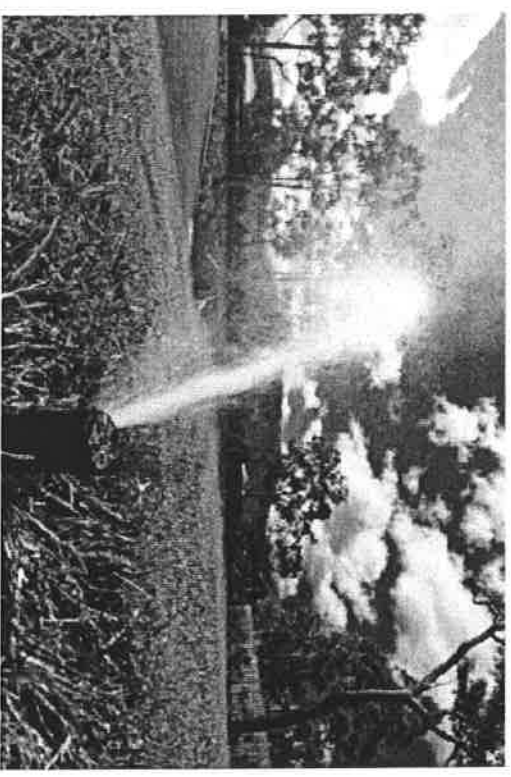
For more information call:
University of Nevada Cooperative Extension
784-4848

Irrigation Scheduling

- ▶ Spring, Summer and Fall Settings
- ▶ Seasonal timer adjustments
- ▶ Licensed Landscape contractors should only make these adjustments

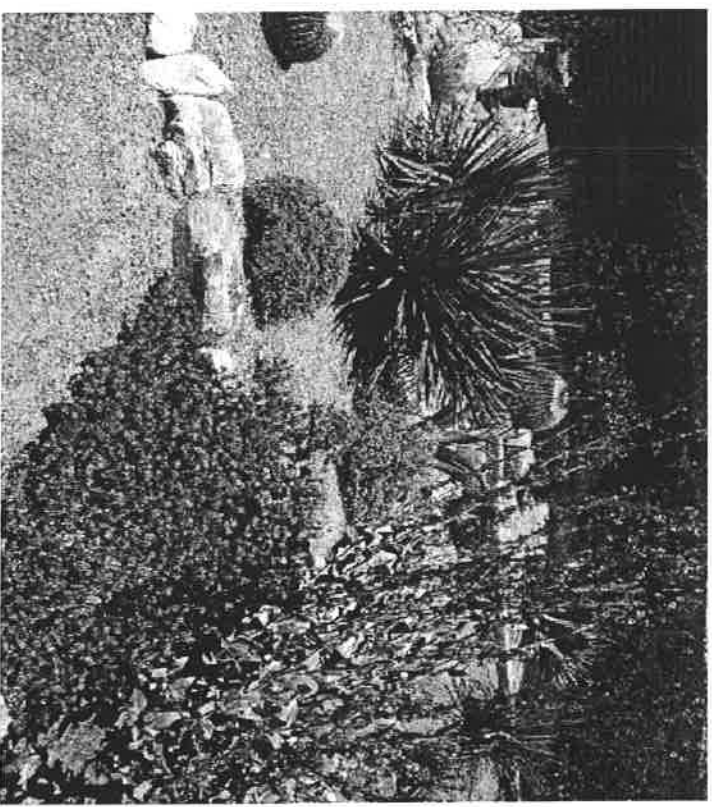
Irrigation Summary

- ▶ Turf adds to curb appeal of a property
- ▶ There will always be run-off and overspray
- ▶ Expect heat stress in the middle of summer
- ▶ Lawn irrigation systems run at best 75% efficiency. We found irrigation systems run between 40% to 60% efficiency.



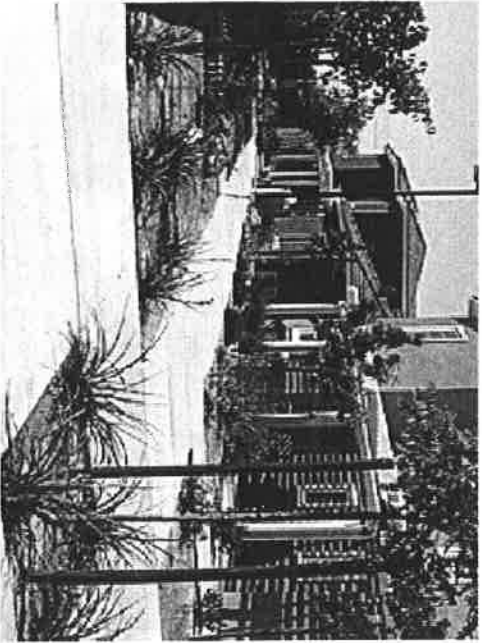
Xeriscapes

- ▶ What is Xeriscape?
- ▶ Seven Principals of Xeriscape.
 - Good Landscape Design
 - Functional lawn areas
 - Efficient irrigation system, drip.
 - Low water use plants
 - Soil Improvement!!!
 - Use of mulches
 - Maintenance!



Because it's low maintenance doesn't mean
it's "No Maintenance".

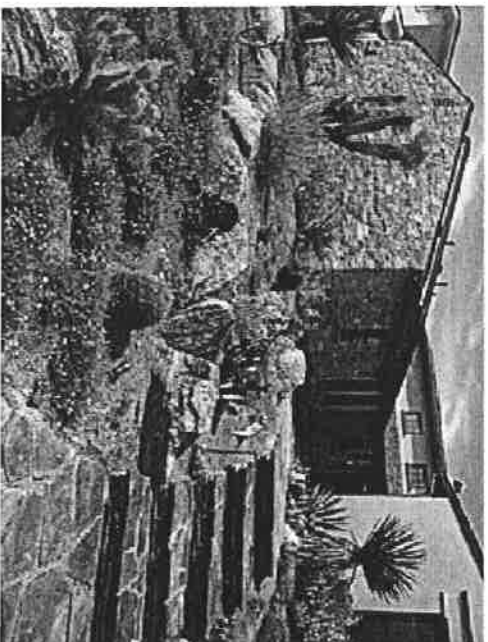
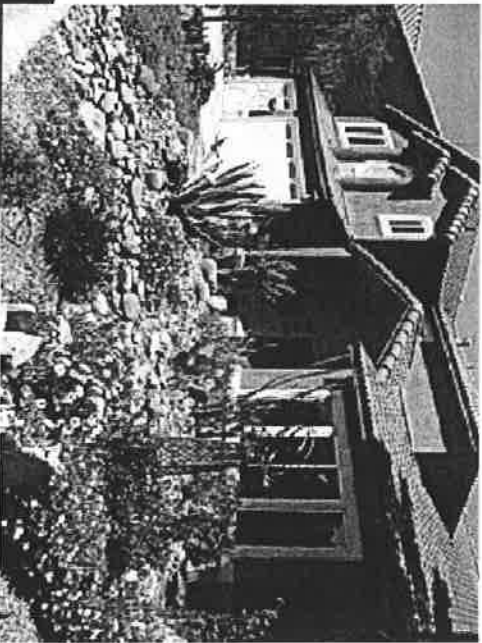
Xeriscapes



Can be as

Basic

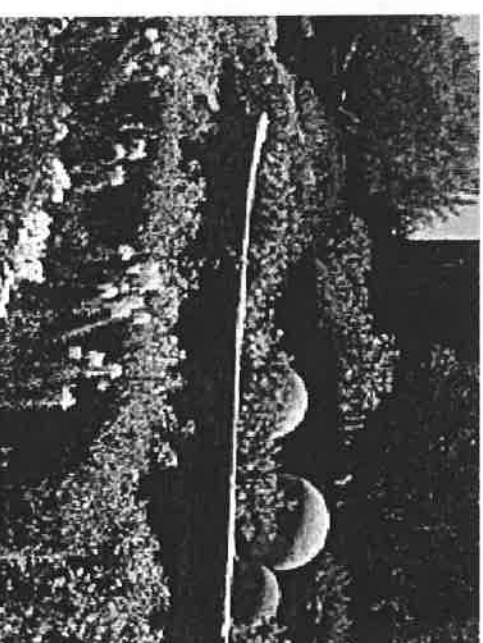
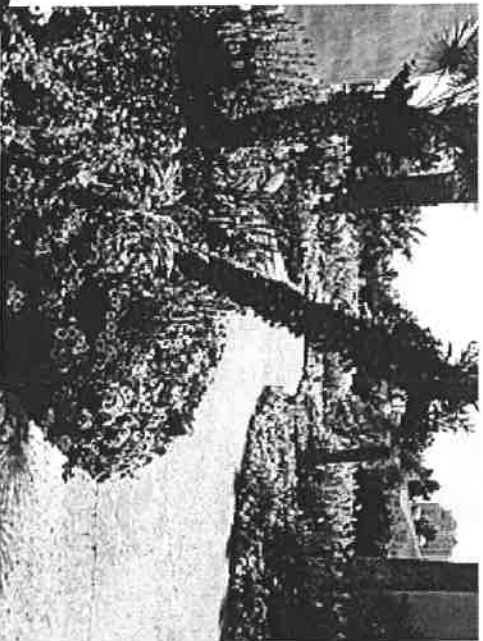
Or.....



Xeriscapes

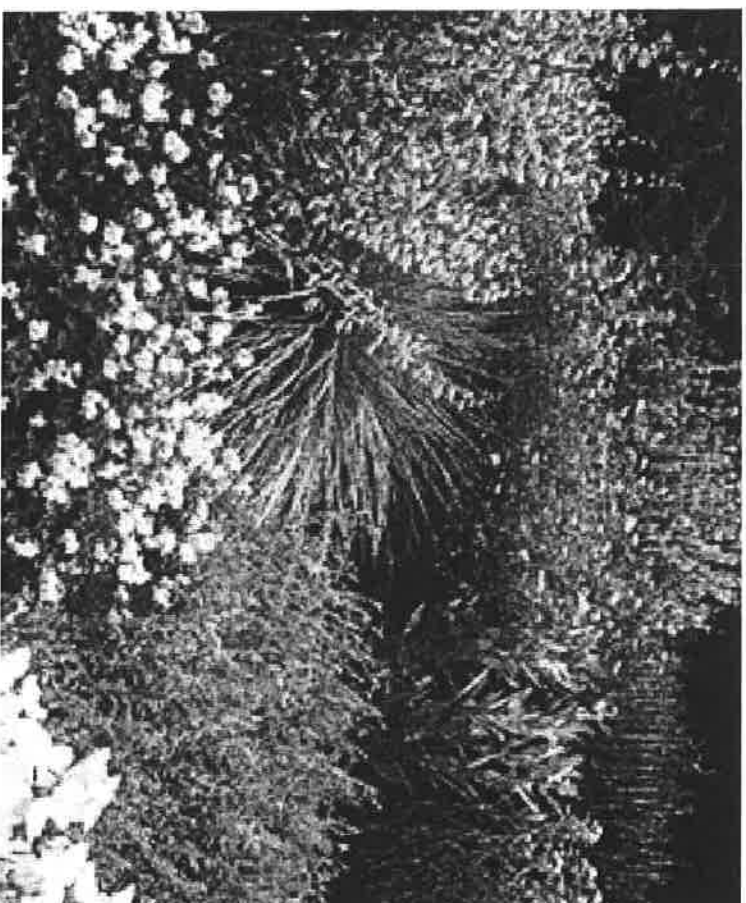


**as *Elaborate*
as you design
them to be !**



Xeriscapes

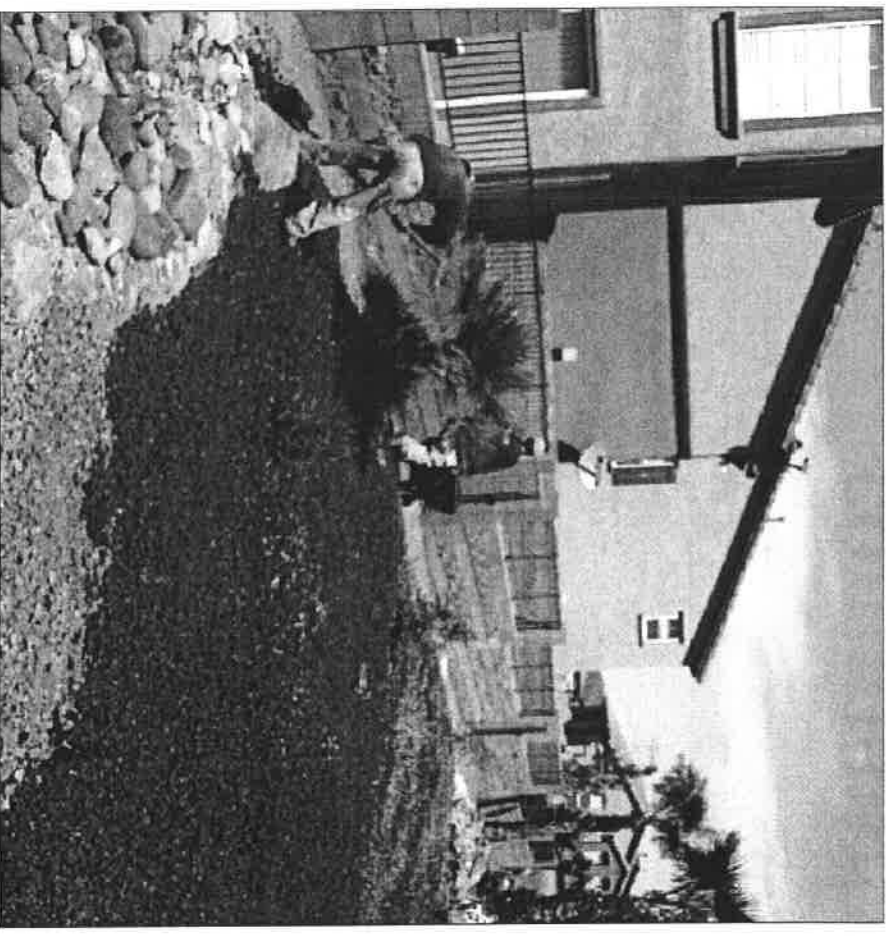
- ▶ Immediate Benefits
 - Saves water
 - Mowing cost
 - Lawn maintenance, i.e., fertilization, aeration etc
 - Long term savings



Xeriscapes

Cons:

- ▶ Initial cost
- ▶ Aesthetics
- ▶ Constant monitoring
- ▶ Creates heat sinks
- ▶ A/C cost Dust
- ▶ Annual Pre-Emergent Application
- ▶ Weeds always present
- ▶ Requires maintenance
 - ▶ Hand weeding, Pruning, Leaf clean-up, Raking, etc.

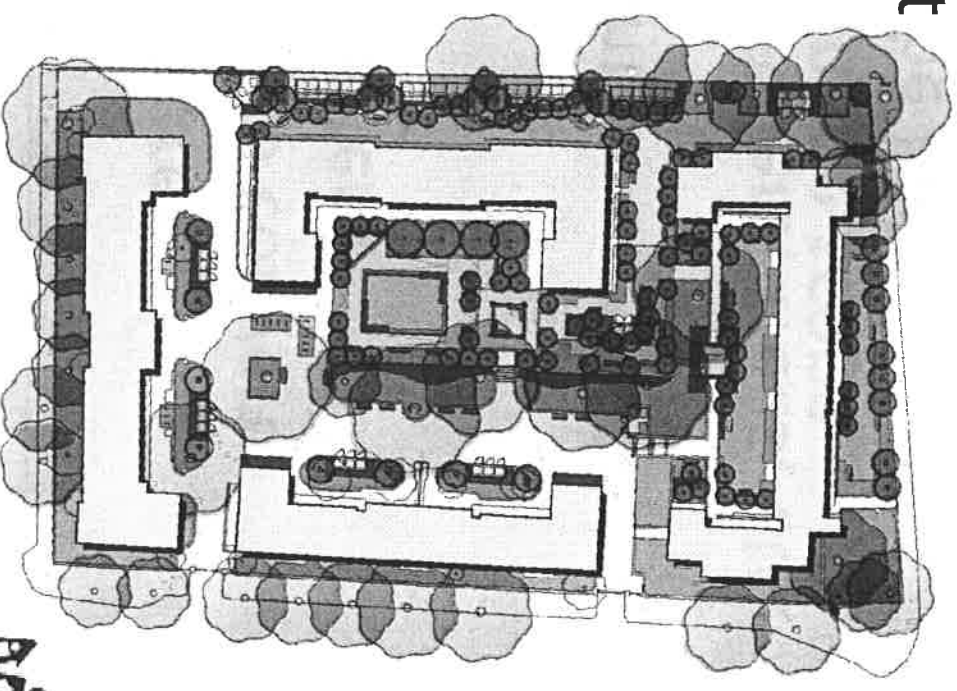


- ▶ Drip repairs, irrigation is not visible
- ▶ Add mulch every year or every other year



Landscape Upgrades / Renovations

- ▶ Irrigation – Always comes first
- ▶ How is the landscape going to be used
- ▶ What are the goals?
- ▶ Aesthetics
- ▶ Future board decisions
- ▶ Cost & Budgeting
- ▶ Need a 3 – 5 year plan!
- ▶ Site Selection & plant material



NEVADA CHAPTER

community
ASSOCIATIONS INSTITUTE

What to include in your Scope

Xeriscaping / Landscaping

- ▶ Identify Goals & Future use of the area
- ▶ Identify the areas you are looking to convert
- ▶ Condition of existing Irrigation system
- ▶ Determine budget up front
- ▶ Include timeline for completion
- ▶ Determine if contractor will maintain converted area(s)
- ▶ Include any particular plants, boulders, trees, etc. that you want to be considered in the scope
- ▶ Ensure irrigation is included in the bid
- ▶ Ensure maintenance specs are provided at time of completion
- ▶ Verify warranty in writing

Contractor Selection



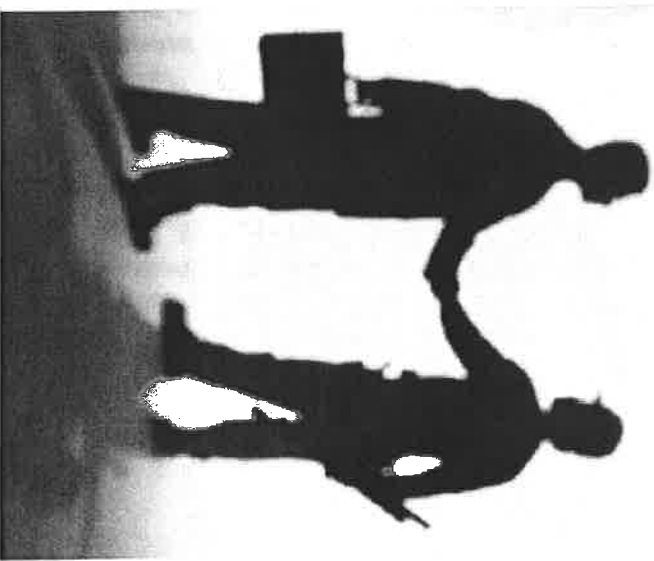
Do you **LIKE** your Contractor?

License...

Inurance...

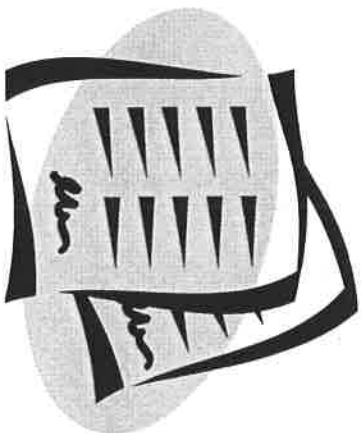
Knowledge...

Experience...



Licenses

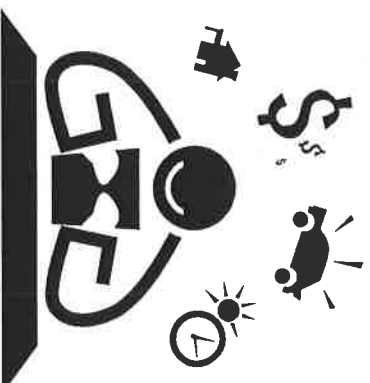
- ▶ Business License
- ▶ Contractors License, C-10
- ▶ Additional Licenses for specialty items
i.e.
 - Pavers
 - Pesticide
 - Arborist
 - Backflow Testing, etc



Insurance

General:

- ▶ Liability
- ▶ Workers Compensation
- ▶ Bonded



Knowledge

- ▶ Education
 - Arborist
 - Irrigation
 - Pest Control Applicator
 - University Green Industry or Nursery Worker Training

Bidding process

- ▶ Establish a deadline to receive bids
- ▶ Set a date for bid review
- ▶ Determine if interviews will be held
- ▶ Establish date and time for interviews
- ▶ Determine your scope of work

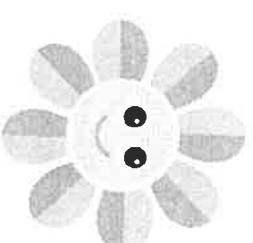


Communication

Communicate with your contractor

▶ Establish:

- Standard for communication – cc'd emails?
- Process for service request
- Deadlines for resolution
- Guidelines for disputes
- Summary of notes or comments since request from Board meetings



Summary

- ▶ Know the goals for the board before getting bids.
- ▶ Determine a general idea of the budget.
- ▶ When using different contractors. communicate, makes transitions easier.
- ▶ Request for previous landscaper assistance;
 - Locate timers, RPA's, keys,
 - Special request from maps