

CHARLES ERIC 'CHARLIE' CARLSON
ELITCH GARDENS - 1925

The "ultimate" irrigation controller.

XERISCAPE:

The Journey from There to Here!

City of Fort Collins Environmental Program
Series

March 24, 2010



BEAUTIFUL



LANDSCAPES

IN ALL SEASONS





AND



FOR





MANY



REASONS

IT ALL **BEGINS** WITH

SEVEN EASY FUNDAMENTALS:

- ❖ **PLANNING AND DESIGN**
- ❖ **SOIL IMPROVEMENTS**
- ❖ **LIMITED TURF AREAS**
- ❖ **USE OF MULCHES**
- ❖ **USE OF LOW WATER DEMAND PLANTS**
- ❖ **EFFICIENT IRRIGATION**
- ❖ **APPROPRIATE MAINTENANCE**

So, The Journey Begins!

Design and Maintenance are **inextricably** linked!

- “If the intensity of care required in the landscape by the original design is not provided over the long term, Mother Nature will reclaim the landscape and instill, over time, the natural aesthetic ‘SHE’ intended for this region.”

**ONLY 3 ½
PERCENT OF
THE WATER ON
EARTH IS
AVAILABLE
FOR HUMAN
CONSUMPTION**



LET'S USE IT WISELY

A David Winger Photo

Why Take This Journey????

IN RESIDENTIAL SETTINGS, OVER 50% OF ALL WATER USED IS FOR LANDSCAPE PURPOSES. SAVING WATER HERE ALLOWS WATER FOR OTHER ENVIRONMENTAL NEEDS.

AS POPULATIONS GROW COMPETITION FOR WATER BECOMES INCREASINGLY INTENSE. (So Will Water Rates!)



WILL IT BE A JOURNEY OF
"BEEN THERE DONE THAT'S"?

Nah,
it's perfect as is.





A JOURNEY OF "JUNIPERS" ?



A GRANDCHILD'S MAZE?



OR SUN SHADE?



or, Seuss-scape????



A WELCOME HOME?





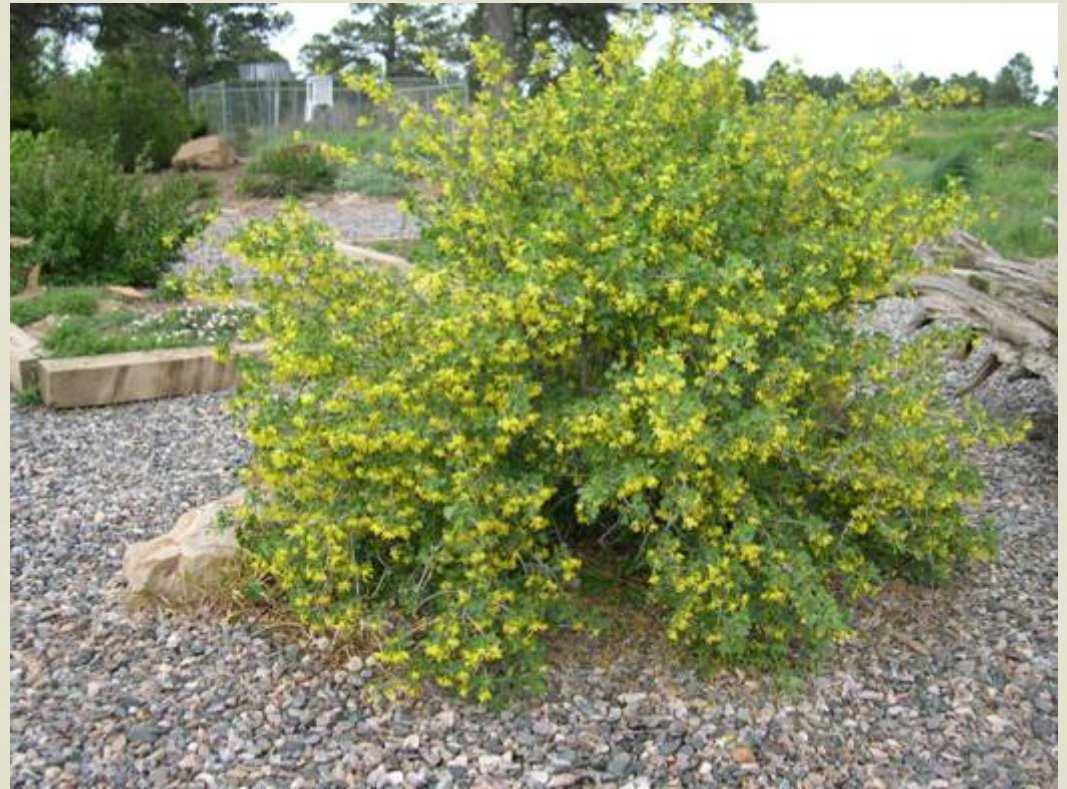


A Simple Swap

To Shear?



Or Not?



Plan for the maximum mature size of each plant



NOT!!



To Mow?



Or Slide?



Are we Having Any Fun Yet?



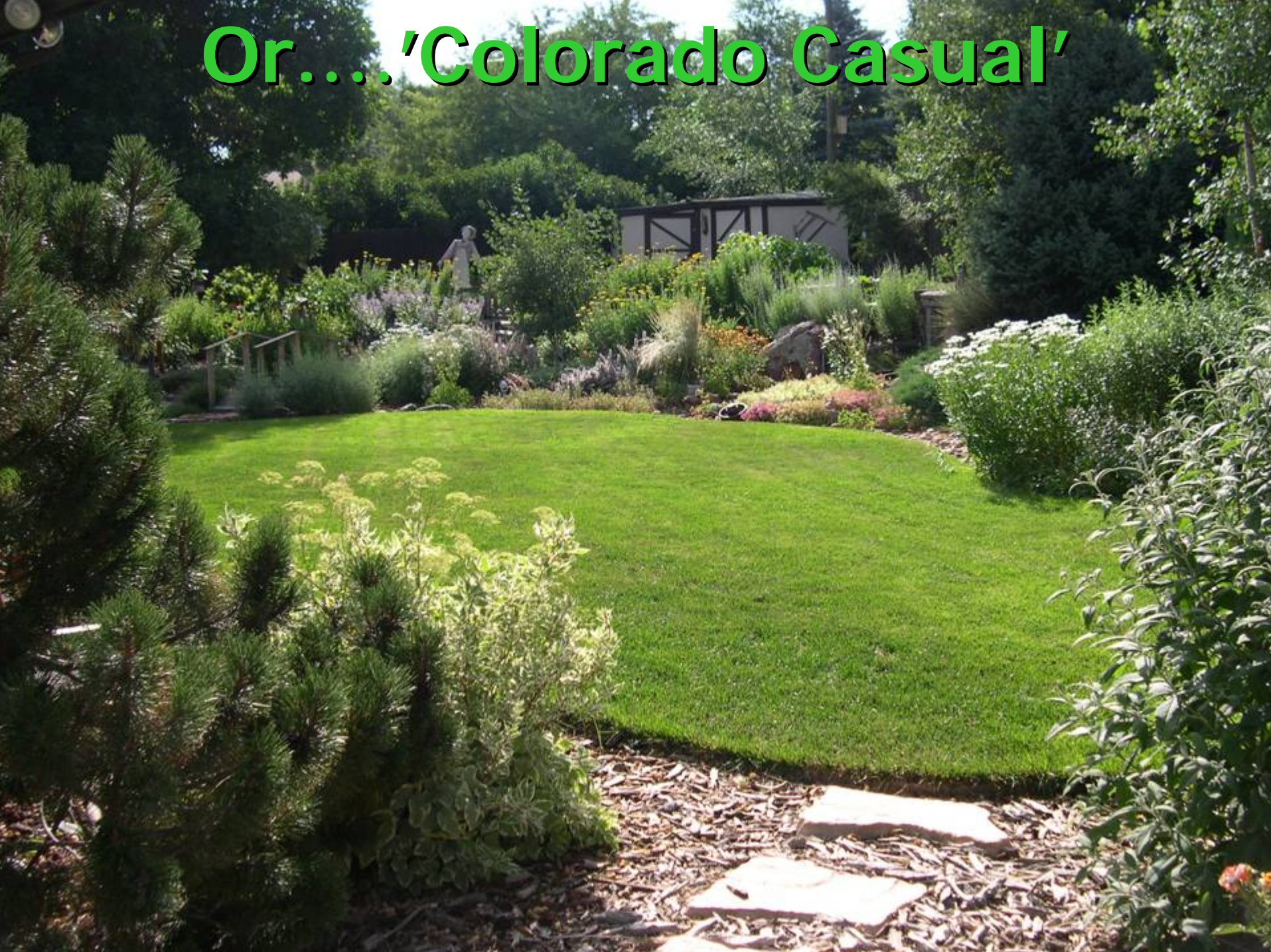
CLASSIC FORMAL...



Modern Oriental?



Or....'Colorado Casual'



Begin With **KNOWLEDGE!**

- SEMINARS AND CLASSES
- SELECTED READINGS/CATALOGS/PAMPHLETS
- NETWORKING
- INTERNET-WORKING
- DEMONSTRATION GARDENS (What better place than CSU and the W. D. Holley PERC?)
- DESIGN SESSIONS
- PLANNING
- PHASING
- CONSULTING
- WORKING!!
- **ENJOYING!**

■ SELECTED READINGS/CATALOGS/PAMPHLETS



Bibliography



LOCAL COVENANTS, GUIDELINES AND LAWS

- NETWORKING

- INTER-NET WORKING

■ DESIGN SESSIONS



■ DEMONSTRATION GARDENS (What better place than CSU and the W. D. Holley PERC?)





■ PHASING



■ CONSULTING

(DO YOU HAVE GARDENING BLOCK?)



■ WORKING and



KNOWING YOUR LIMITATIONS



■ ENJOYING!



SERIOUS ISSUES COME FIRST

LIKE DRAINAGE AND GRADING



THE LAWN

LAWN REDUCTION



18 gal./SF/yr

- PHYSICALLY REDUCE THE LAWN AREA
- HOW MUCH LAWN IS **REALLY** NEEDED?
- CHANGING GRASS SPECIES



COST PER SQUARE FOOT TO MAINTAIN:

- MOWING TIME - 45 SECONDS.
- TRIMMING TIME - 30 SECONDS.
- CLEAN UP TIME – 20 SECONDS.
- TRAVEL & SET UP TIME-- 1.5 HOURS.
- BILL TO CLIENT: - \$1,650.00/YR OR, \$13.75/ SF



WE ALWAYS
WANTED A
NICE
FRONT
LAWN.

WATER USE/REDUCTION

TRADITIONAL REQUIREMENTS

- LAWN AREAS: $(SF \times 18) = \text{GALLONS /YEAR}$
- BED AREAS: $(SF \times 12) = \text{GAL./YR}$
I.E. $5,000 \text{ SF} \times 18 = 90,000 \text{ GAL./YR}$

CONSERVATION GOAL: 50% LESS

- LAWN AREAS: $(SF \times 9) = \text{GALLONS /YEAR}$
- BED AREAS: $(SF \times 9) = \text{GAL./YR}$
- I.E. $5,000 \text{ SF} \times 9 = 45,000 \text{ GAL./YR}$

100% IS POSSIBLE. . .?



AND, CAN BE ECOLOGICALLY PRODUCTIVE



PLANNING FOR LAWN AREA REDUCTION















EDGES ARE IMPORTANT



DESTINED TO DOOM?





TALL FESCUE - 13 GAL.



BUFFALOGRASS – 6 GAL.

FRUGAL ALTERNATIVES TO BLUEGRASS



CANADIAN BLUE FESCUE – 11 GAL.



BLUE GRAMA – 6 GAL.

TEXAS HYBRID BLUEGRASS



'Reveille'

Also: 'Thermal Blue', 'Thermal Blue Blaze',
'Solar Green', 'Dura Blue'.

'BELLA BLUE'

LOOKS LIKE REVEILLE

COMING SOON!



CANADIAN BLUE FESCUE
CLIENT

KENTUCKY BLUEGRASS BLEND
NEIGHBOR



(FIELD NOTE: Edging helps keep Bluegrass out)

CONVERSION COSTS

LAWN TO NEW SOD:

ABOUT \$1.35 PER SQUARE FOOT INSTALLED
(DIY - ABOUT \$0.65 PER SQUARE FOOT)

LAWN TO SEEDED:

ABOUT \$0.55 PER SQUARE FOOT INSTALLED
(DIY - ABOUT \$0.35 PER SQUARE FOOT)

LAWN TO MULCH:

ABOUT \$0.55 PER SQUARE FOOT INSTALLED
(DIY - ABOUT \$0.35 PER SQUARE FOOT)

LAWN TO PLANTS:

ABOUT \$4.00 TO \$4.25 PER SQUARE FOOT
(DIY - ABOUT \$3.00 to \$2.50/ SF)

MULCHING



**LANDMASTER POLYPRO 55
OR, DEWITT PRO 5**

FUZZY SIDE UP



HOW TO HAVE AN URBAN MEADOW

SITE PREP:

- A. Kill existing vegetation.***
- B. Till soil and add compost (3 CY/1000SF).***
- C. Rake out debris and smooth soil surface.***

BY SEEDING:

- D. Equal parts of Durar Hard and Covar Sheep Fescue For Shady Areas.***
- E. 'Hachita' Blue Grama Grass For Sunny Areas.***
- F. Seed at a rate of 2 pounds of seed per 1000 SF.***
- G. Rake seed into top ¼ inch of soil.***

BY SODDING:

- H. Install Canadian Blue Fescue sod (Turfmaster LTD sod farm, Fort Collins) or, DRS sod (Green Valley Turf, Co., Littleton) per suppliers' instructions for shade.***
- I. Install 'Legacy' Buffalograss sod per suppliers' instructions for sun.***

CREEPING RED FESCUE AS A GROUND COVER



CANADIAN BLUE FESCUE SOD, OR "DRS" FESCUE SOD.



AS A LAWN





AS AN URBAN MEADOW



A GRASS SO FINE AND SOFT THAT IT FORMS A VERY CASUAL, INTERESTING, AND WATER EFFICIENT LANDSCAPE AREA.



**SUMMER/WINTER
MEADOW**

BLUE GRAMA GRASS

BLUEGRASS NEEDING REPLACEMENT



FROM SEED



DURING RESTRICTIONS.

ESTABLISHES QUICKLY

June 4



July 4



August 4



'HACHITA' BLUE GRAMA GRASS



AS A LAWN



AS AN URBAN MEADOW





AS A BACK YARD OASIS

SEEDING METHODS



(HAND BROADCAST)



(DRILLED)
(HYDRO SEEDING, ALSO)



(SLIT SEEDED)

SOIL ?



STRIP AND STOCKPILE



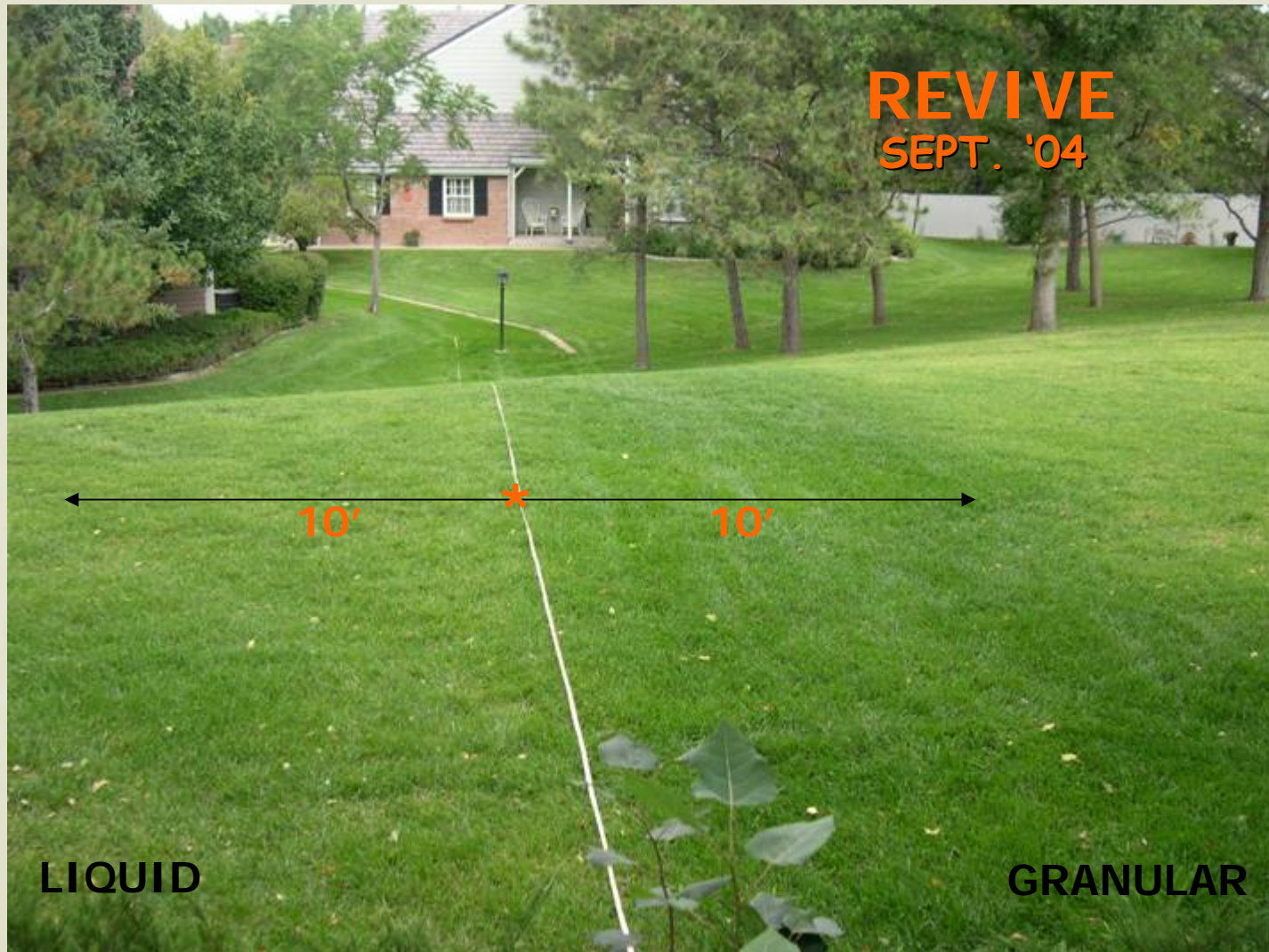


CLASS I COMPOST

RIP, PLACE, AND TILL



TOP DRESSING



HOMESTEAD VILLAGE II HOA
CENTENNIAL, COLORADO

6785 Salvia Court

HOMESTEAD II VILLAGES	
Lab	Field

HOMESTEAD II VILLAGES			
IDENTIFICATION			
Lab No.	Field Number	alt	Angle
H2698	A	7.8	0.5
H2708	B	7.4	0.5

COOPERATIVE EXTENSION SERVICE
AND EXPERIMENT STATION
WATER & PLANT TESTING
COLORADO STATE
COLLEGE

SOIL TEST REF

STATE UNIVERSITY OF COLORADO
SOIL TEST REPORT
Location
Route

SOIL TEST REPORT									
CLIENT TESTING LABORATORY									
COLORADO STATE UNIVERSITY									
FORT COLLINS, COLORADO 80521-1120									
FAXED		NUMBER OF SAMPLES 4		DATE RECEIVED		DATE REPORTED		COUNTY	
10/21/2004		10/28/2004		Arapahoe					
ROUTINE SOIL TEST RESULTS									
SAR		Organic Matter %		Nitrate N ppm		Phosphorus P ppm		Potassium K ppm	
1.0		2.1		7.4		6.2		254	
2.1		1		6.2		271		1.9	
								53.2	
								22.2	
RECOMMENDED FERTILIZER (LBS/A)									
Proposed Crop		Yield Goal		N		P ₂ O ₅		K ₂ O	
Turfgrass									

WHY FINISH THE JOURNEY WITH IRRIGATION?

- IMMEDIATE, SIMPLE, LOW COST WATER SAVINGS OF 30%, POSSIBLY MORE.
- SAVED \$ CAN BE DIRECTED TO OTHER IMPROVEMENTS.
- ELIMINATE MISUSE AND OPTIMIZE USE OF WATER.
- WATER APPLICATIONS CAN BE CONTROLLED.
- ENHANCE PUBLIC IMAGE.
- REDUCE DAMAGE TO SITE IMPROVEMENTS.
- **AND, TO BUILD HEALTHIER LANDSCAPES**

SAVINGS POTENTIALS:





EVEN MORE

SWITCH TO NEW TECHNOLOGY



MP ROTATOR®
Resource Guide for MP Rotator
Sprinklers & Accessories

**THE WORLD'S
SMALLEST
ROTORS**

MP ROTATOR® MOUNTING OPTIONS

- POP-UP**
In a conventional
pop-up spray head
- RISER**
On a riser with
shrub adapter
- RISES ON SLOPE**
On a riser with ACME adapter &
MP Regulator (Drain Check option)

Watts Watts
Sprinkler Company

Watts Watts Sprinkler Company 3480 Airport Road Watts Watts WA 99152 2014 U.S.A.
Tel: 509 225 7600 Fax: 509 225 7360 info@watts-watts.com www.mprerator.com

MICRO-IRRIGATION

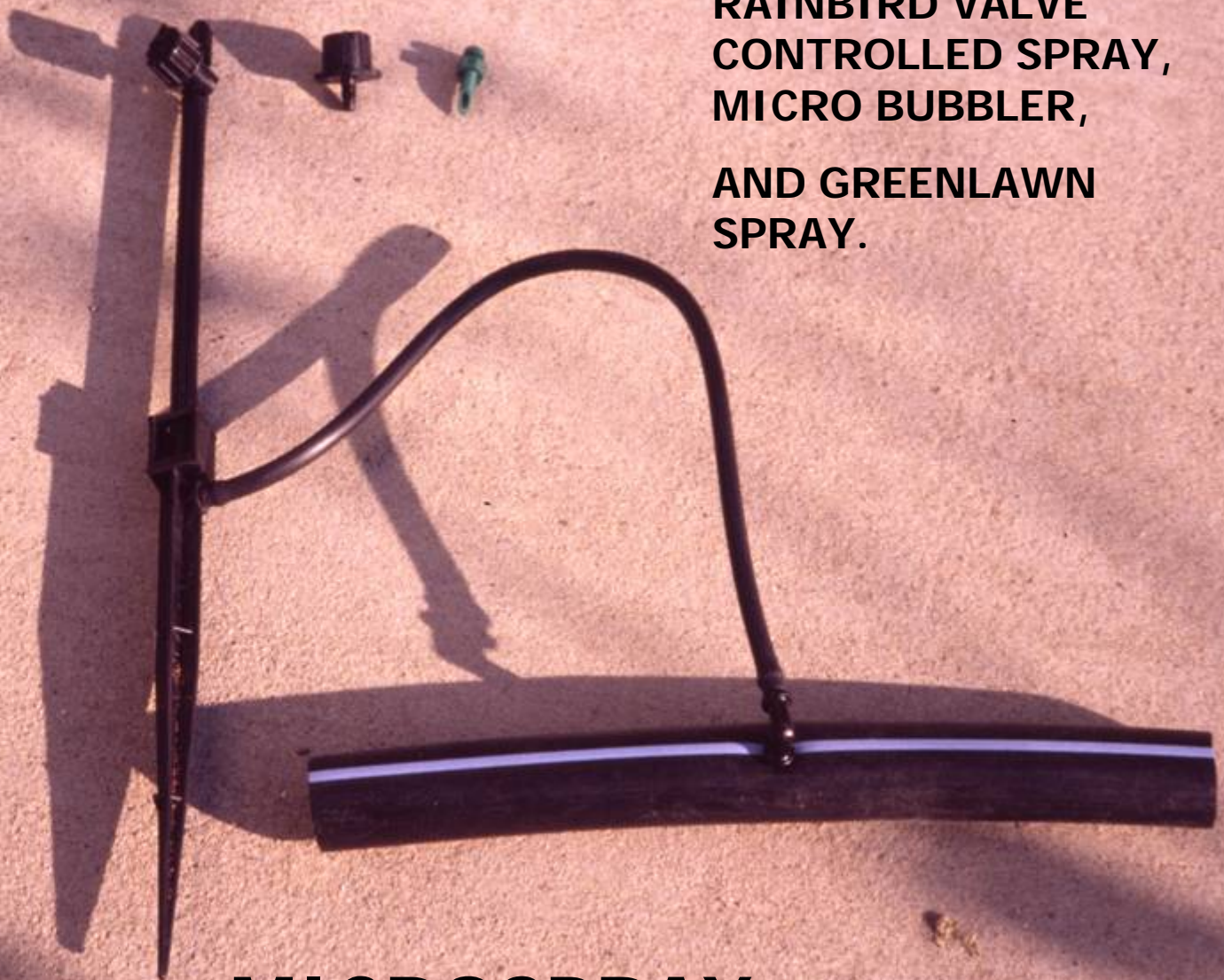


(FIELD NOTE: Water harvesting will work!)

(NETAFIM OR, RAINBIRD LANDSCAPE DRIPLINE)



**RAINBIRD VALVE
CONTROLLED SPRAY,
MICRO BUBBLER,
AND GREENLAWN
SPRAY.**



MICROSPRAY
(OFF LINE)



ON LINE DRIP EMITTER



IRRIGATING TO
GET PLANTS
STARTED IS,

SOMETIMES,
ALL THAT
IS NEEDED





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SIMPLE SOLUTIONS

- ADJUST CONTROLLERS FREQUENTLY.
- ADJUST NOZZLES/PRESSURE TO ELIMINATE MISTING.
- SET HEADS PLUMB AND FLUSH WITH ADJOINING GRADE.
- ELIMINATE RAIN SHADOW EFFECT.
- CONFINE SPRAY TO LIVING PLANT MATERIAL AREAS.

TOUGHER TASKS

- MAKE CERTAIN ALL HEADS IN A SINGLE ZONE ARE IDENTICAL. DO NOT MIX ROTORS AND POP UPS!
- CHANGE HEADS AND/OR NOZZLES TO MORE EFFICIENT TECHNOLOGY.
- CONVERT ZONES FOR SLOPE, ASPECT, PLANT IRRIGATION NEEDS, **AND SAFETY**.
- CHANGE, OR ELIMINATE PLANT MATERIALS. REDUCE TURF AREAS.
- INSTALL SMART CONTROLLERS.

DEFENSIBLE SPACE



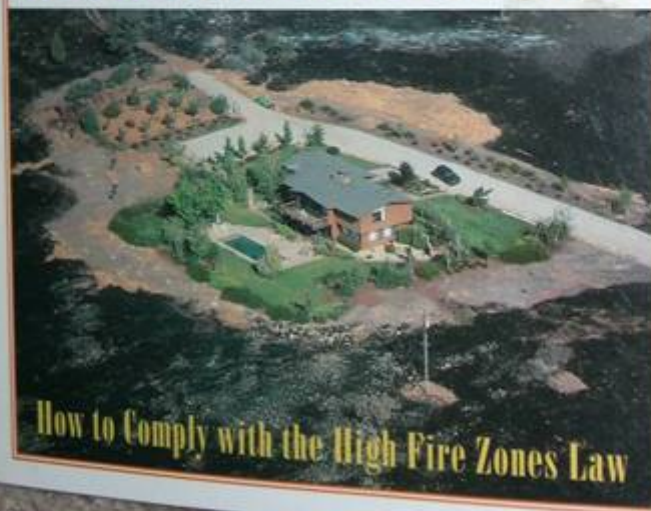
CALIFORNIA *wildfire* LANDSCAPING

CREATING BANDS OF PROTECTION WITH PLANTS

MANAGING NATIVE VEGETATION

GETTING HELP: PUBLIC AND PRIVATE RESOURCES

Maureen Gilmer



How to Comply with the High Fire Zones Law





IN CLOSING,
THE JOURNEY HAS BEEN, AND
ALWAYS WILL BE, A GOOD ONE, FOR
OUR VALUED SENSE OF
ACCOMPLISHMENT AND, FOR THE
WELL BEING FOR ALL.

IMAGINE A FUTURE OF
EXCITING COLOR, FORM,
TEXTURE, LINE, FRAGRANCE,
WILDLIFE, TRANQUILITY,
AND DIVERSITY FROM OUR
NEW GARDENS AS.....

'Mini-oases'

WHETHER SHADY

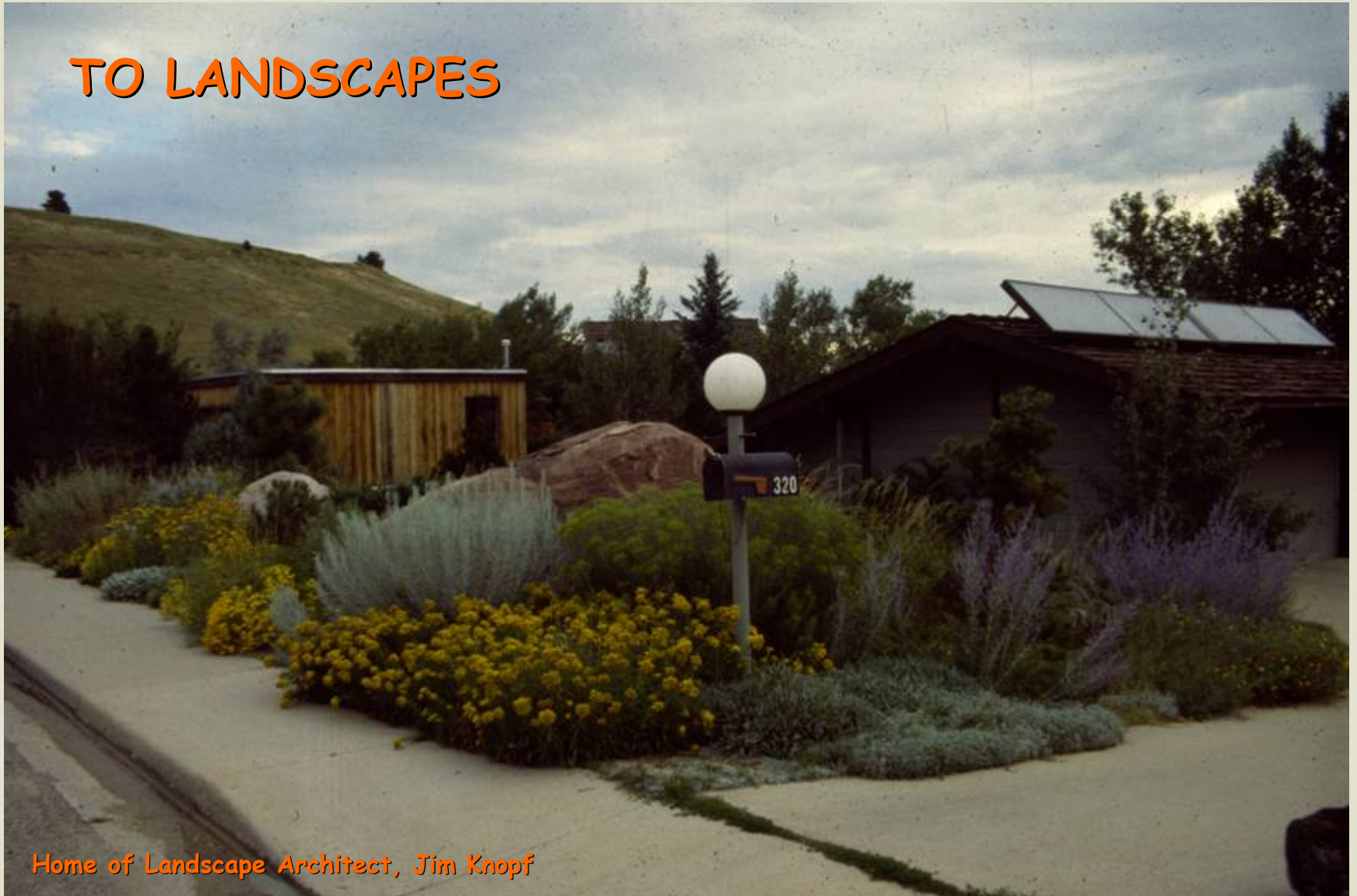


**OR A CONVERSION OF A (YAWN) LAWN,
TO A**

**DRAMATIC SUNNY
LANDSCAPE**



TO LANDSCAPES



Home of Landscape Architect, Jim Knopf

More Reflective of our Native Colorado



THE CHOICE IS OURS TO MAKE.

An aerial photograph showing a vast, textured landscape, possibly a field of low-lying vegetation or a desert, under a dramatic sky. The horizon is visible in the distance, with a bright sunset or sunrise creating a warm, orange glow that transitions into a darker blue sky. The overall mood is serene and expansive.

THANK YOU!

And,

Have a good evening!

Ken Ball, ASLA, RLA
MOUNTAIN SPIRIT STUDIO
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Arvada, CO 80007
303-403-1434