**Taking advantage of the 2021 Extreme Drought, that is Unearthing Wildflowers in California grasslands. Plus, permanently lowering grassland fire fuels by 98%.**

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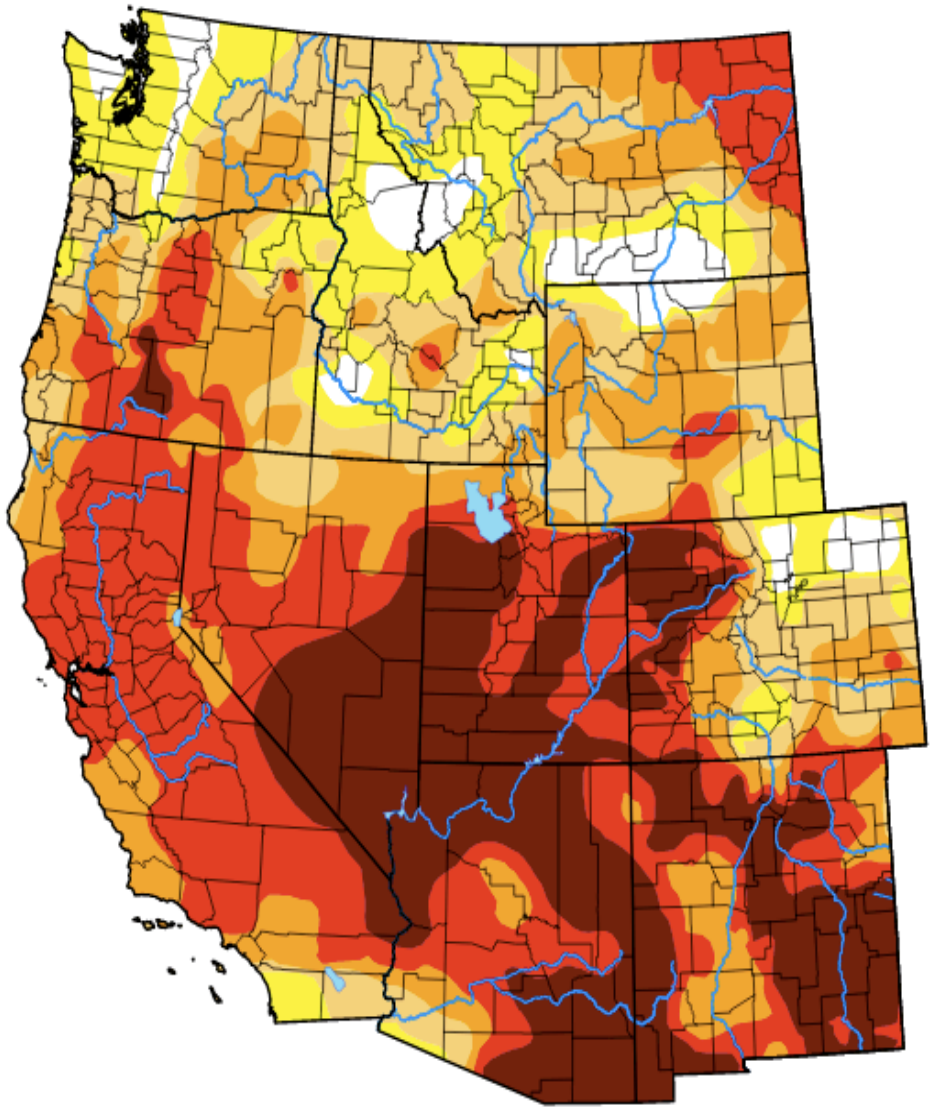
***Wildflower seedling sprouting in yellow star thistle thatch at Russian Ridge.***

# ***The current drought situation***—The Weekly Drought Monitor map



## Map released: Thurs. May 6, 2021

Data valid: May 4, 2021 at 8 a.m. EDT

### Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

### Authors

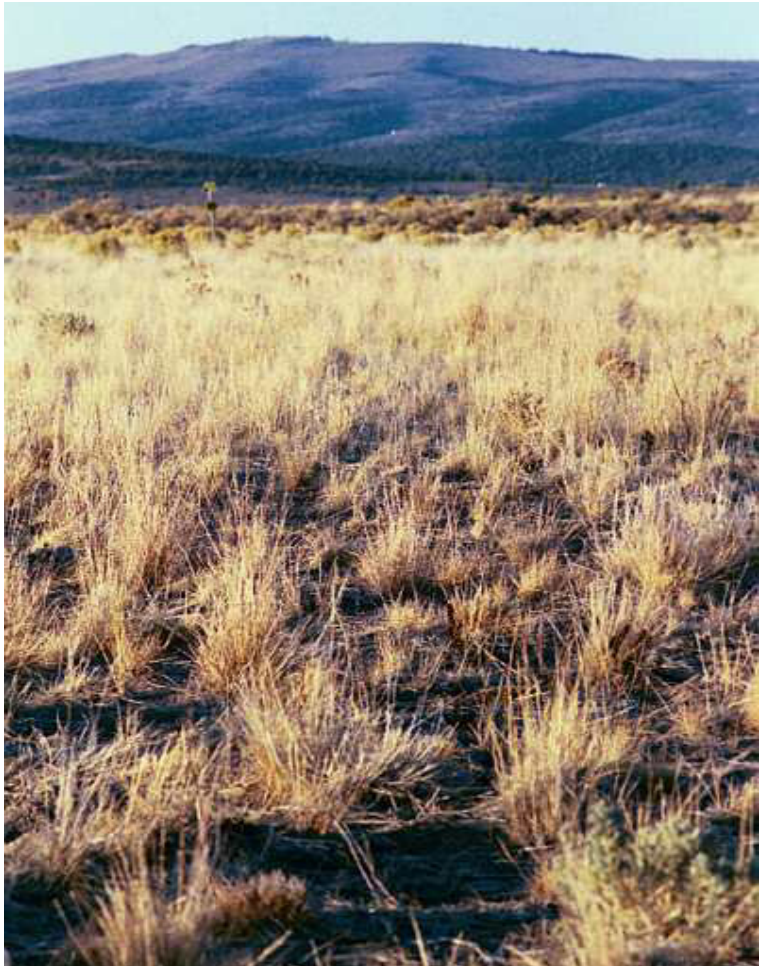
United States and Puerto Rico Author(s):
David Simeral, Western Regional Climate Center

Pacific Islands and Virgin Islands Author(s):
Richard Tinker, NOAA/NWS/NCEP/CPC

*The Drought Monitor focuses on broad-scale conditions.*

***My great-uncle Cu-sick*** from the painting by George Catlin in the Smithsonian Museum, son of a chief of the Tuscarora Nation, originally from North Carolina.

**PROJECT: 100 mile gas Pipeline sown north of Reno in 1993—**Zero cheatgrass in six months.
**Lesson learned** – *You can quickly convert weeds, to solid native cover*
by using the allelochemicals produced by the native seedlings as they sprout!
-- Bluebunch wheatgrass to the horizon, without a single cheatgrass plant in it.

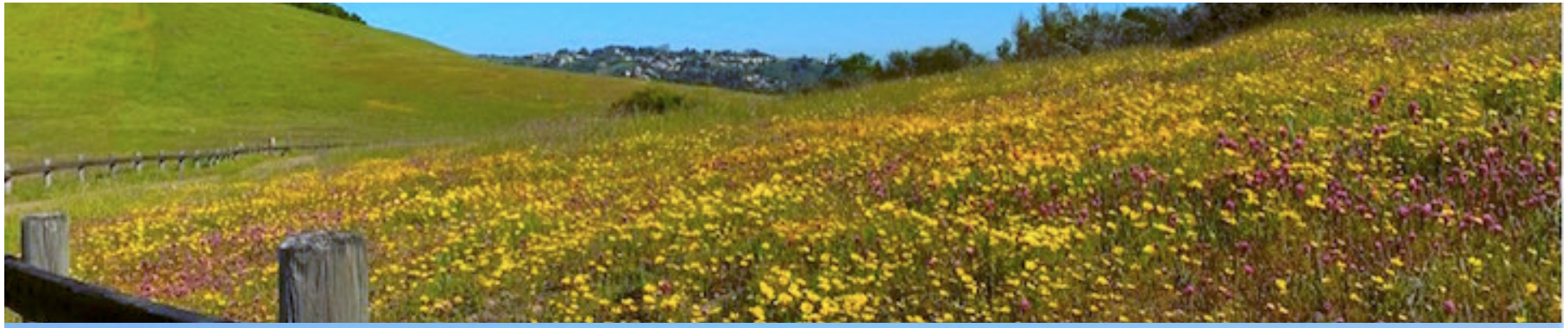


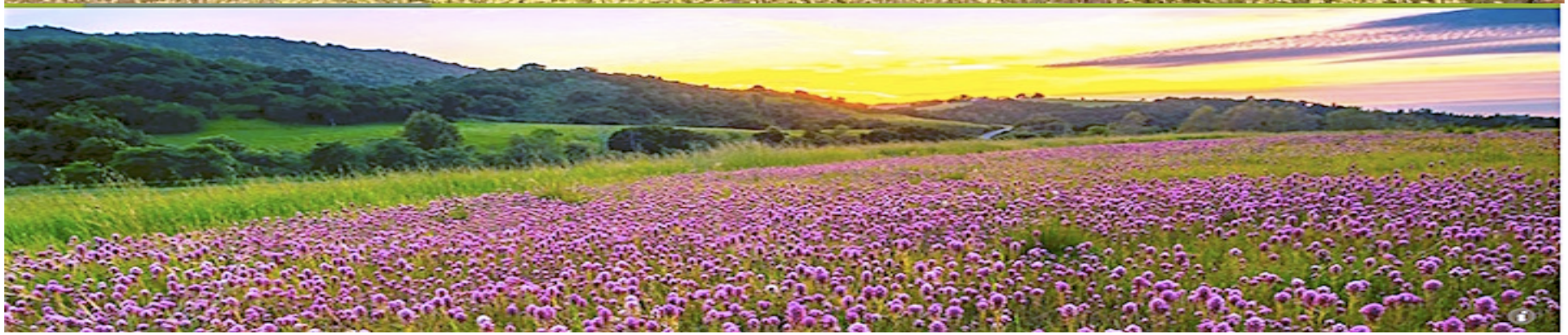
**Current Project**: 14-acre Kite Hill serpentine grasslands in Woodside, across from 144 Alta Mesa – **Before-and-after using monthly mowing,**
to unearth the 100-250 year old dormant native seeds in the soil.

***I-280 in the background, cancels the theory that atmospheric nitrogen impacts natives.***

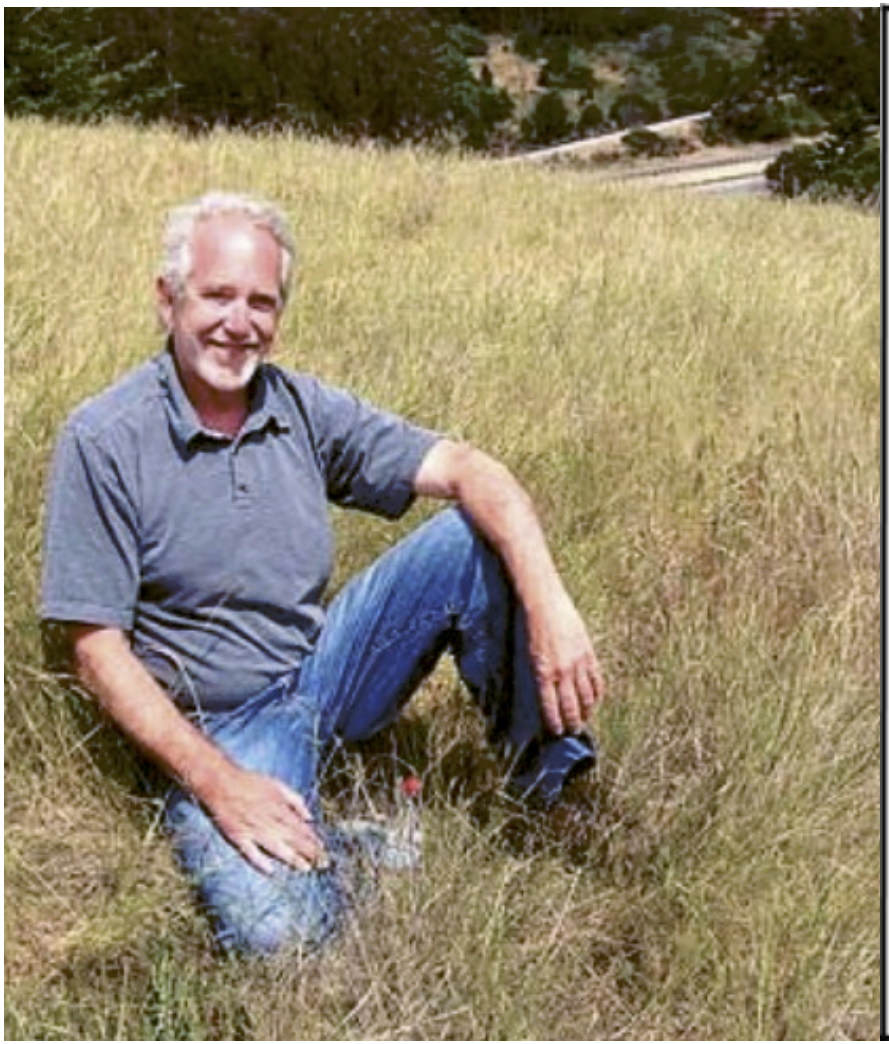
**Native American perspective: Adam and Eve…thought they got kicked out of the Garden of Eden,** whereas, Native peoples of the Americas, ***never left the garden…*** ***If lands and their plants and animals are considered sacred or not, can have a huge influence your management!***

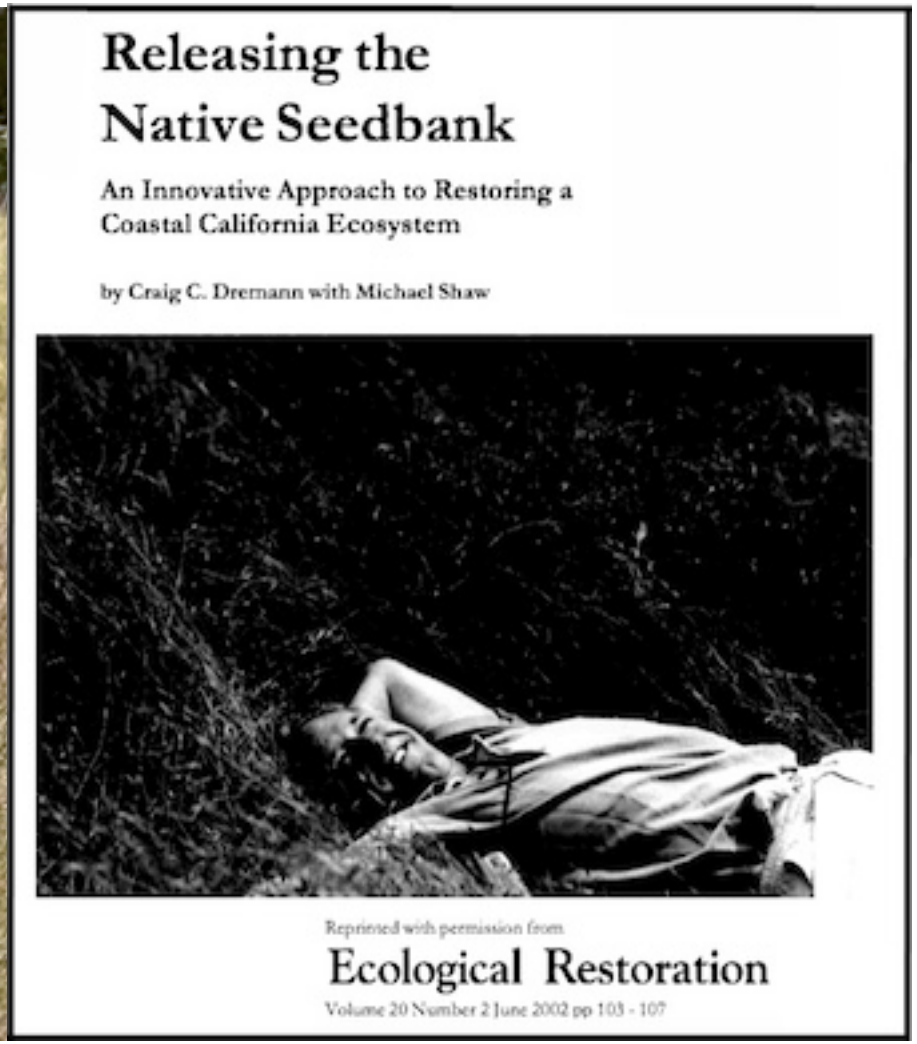
**Ohlone-Muwekma Nation, with a few remains of their sacred "Garden of Eden"**—It is very hard to imagine ALL of California looked like this only 200 years ago, and could easily look that way again, ***just by unearthing dormant native seeds?*** Edgewood Preserve, Jasper Ridge and Mid-Pen. lands.





**Discovering & Unearthing dormant 100-250 year old native seeds for the first time** – at Michael Shaw's 74 acres at 300 Byers Lane in La Selva Beach-- Natives sprouted just by mowing the weeds – Our results published June 2002 on the front cover of the *peer reviewed scientific journal "Ecological Restoration"*





***In 2000 I was hired by BLM to consult on the Atwell Island Restoration Project –***
in the San Joaquin Valley at the edge of historic Tulare Lake. The project was to restore
**8,000 acres** of native valley grassland, a wetland, and alkali sink habitats—
***on alfalfa lands farmed continuously since 1890.***

**I was asked*, "How are we going to get native plants back on all of these thousands of acres?"***
I said, **"Turn the water off the alfalfa"**…then, a year later, **the natives started spouted up.**

**You may be able to unearth dormant seeds in areas where you would never expect to find them**… for example, **in *seemingly impossible weed patches of solid ripgut grass or wild oats…***

*Starting point of my Woodside project - Could native seeds be underneath that mess?*

**For every 15 acres you want to restore** - you will need 2-3 workers and $250 Echo-225 gas string-trimmers from Home Depot. Start by mowing monthly and trim off green seeds as they apprear...

**…In a short amount of time** with the monthly mowing—you will start unearth the dormant native seeds--poppies, tidy tips, clarkia, owls clover and native grasses…

Year 2 of the same site along Alta Mesa in Woodside, poppies start showing up.

Eventually, you will have permanently eliminated the weeds, and **unearthed all of the dormant native seeds, wherever they still exist in the soil.**

Year-3 -- As we stop the weed grasses from reproducing, the poppies take over!

**Eventually, you have unearth millions of native seedlings per acre!**

Tidy tip seedlings coming up at their natural density.

*The fire-proof  tarplants, coming up at the rate of one million seedlings per acre.*

***Miners lettuce will become your new best friend,*** producing a completely fireproof blanket underneath the oaks, and its allelochemicals keeps out weeds like the false brome**.**

# The various weeds in California grasslands were introduced decade by decade over time as "onion-layers"…

- **Newer weeds were able to spread**, by suppressing the last weed– like a game of poker —where a "wild oat" beats a "filaree" for example.
- Look at your mowing as **"peeling back the onion layers"***, and never give up.*
- **Example--once wild oats are gone, then annual rye pops up**. Once annual rye gone, then rose clover. Once rose clover gone, then, wild lettuce, etc.
  *Never give up, just keep peeling the layers.*
- **Consider if the native seeds in the soil** have already been dormant for 100-250 years, we need to get started **unearthing them right now, while they are still viable!**
  ***They have been waiting patiently for decades for us to pay attention to them.***
- **Set up permanent transect points in ALL grassland management projects,** *and measure before-and-after changes in the vegetation cover, to see if your management method actually works*. Many methods have been done in California for decades, without any data to prove if you are helping or damaging the native plant resources.
- **Abandon any grassland restoration methods, that have never produced 95%** or better native cover in less than 5 years, like burning and grazing.
- **Abandon the theory that atmospheric nitrogen** has any significant impact on natives! And instead, consider that ALL of the former Spanish Rancho Grant land in our County will probably need many pounds of fertilizers, to replace the soil nutrients that were removed by grazing over time.

***Taking advantage of the current drought: Examples of* Russian Ridge's usual vegetation cover** – During last 20 years and with normal rainfall—
massive amounts of weeds and fire fuels are produced.
Solid Italian thistle to the horizon.

**Yellow star thistle field at Russian Ridge**—*who could imagine, there could be ANY dormant wildflower seeds here--- underneath this prickly mess?*

***Weed grass straw at Russian Ridge*** – producing tons of fire fuel each year, and remains flammable all summer and fall. Plus, allelochemicals in the weed straw are leached into the soil by the winter rains, suppressing native seeds from sprouting.

***The 2021 spring Extreme drought***, stopped 95% of the weed seedlings from sprouting at Russian Ridge—Fortunately, enough rain fell for the wildflowers to sprout—
and these *flowers have not been seen in this abundance for decades.*

**Be sure to NEVER burn a native grassland if it contains more than 30% weed grass cover,** because you will kill the perennial natives. The Russian Ridge 2007 controlled burn, killed 2 million native plants, and then allow 2 million weeds to move into the burned area.


***Fire damage data from my Russian Ridge Vegetation Cover transects conducted 2003 to 2021, unpublished.***

***Extreme 2021 drought unearthing a poppy field in Olema,*** at the Point Reyes Nat. Seashore HQ
***—To make this poppy meadow permanent--start mowing off the weed grass seeds while they are still green, and repeat every month until they give up!***

***Let's take advantage of this 2021 Extreme drought***, and manage the weed grasses over the next couple of years, and unearth the wildflower fields in our County, and get them back permanently?

***This former weed patch, has been converted back to wildflowers in only three years in Woodside***.

**San Mateo County public and private-land grassland managers…** *Could reduce grassland fire fuels by 98%,* by each unearthing at least 100 acres of wildflowers over the next 5 year--mowing with string trimmers. Mid-Pen, Stanford, Jasper Ridge, SF Crystal Springs, Edgewood Preserve, POST, San Bruno Mountain, State Parks, GGNRA…

***I am very confident that EVERYONE can do this, or at least TRY!***

***Lessingia -- only 100 plants remained 5 years ago, went to 300,000 in Year-5, to one million today***

## *Craig's grassland restoration project locations*

- **600 acres and 100 miles of Tuscarora gas pipeline** between Susanville and Alturas east side of US 395, my **test plot site** preserved at the **junction of Ram Horn Road.**

- **74 acres Michael Shaw's at 300 Byers Lane**, La Selva Beach at the San Andreas exit off Highway One. Property is currently for sale, call **831-901-4771 for a tour.**

- **3 acres Portola Valley meadow along Los Trancos Road,** across from **Buck Meadow Drive**, five miles up from Alpine Road, where 5 foot tall wild oats have been converted back to native grasslands--***watch for rattlesnakes and poison oak*.**

- **Kim Scott's home,** at the **corner of Anacapa and Viscaino**, one acre in Los Altos Hills, old Spanish Rancho Grant land on steep hillsides, ***now solid native cover.***

- **14 acres Woodside across from 144 Alta Mesa** in serpentine grasslands, in Year-6 and about 85% completed. Where wildflowers have been unearthed and replaced weed grasses, a ***permanent 98% fire fuel reduction has been made.***

- ***Craig can come and train your own crew to do his method, or can bring a crew on Saturdays to get your grassland wildflower unearthing project started!***

*This Powerpoint presentation is at*

www.ecoseeds.com/WMA-talk.pptx

***Lewisia on serpentine rocks at Woodside project.***