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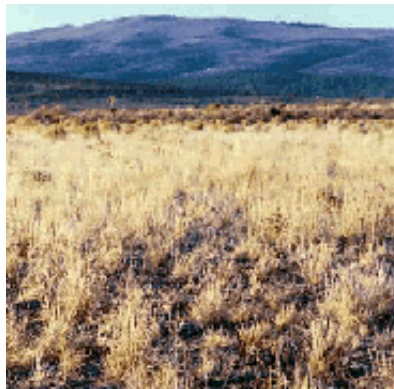
**Great Basin native-seeding conferences - The "SAGEFIX" workshop.**

**BEFORE sowing more NATIVE SEEDS in sagebrush or sage grouse habitat, Learn Craig's "EIGHT easy tests" and check Craig's "Grow-Flow-Chart" and try Craig's "Fertilizer Protocols" to produce successful native plantings.**

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**ONE DAY WORKSHOP Tuesday OCTOBER 23, 2018 in Carson City 9AM-4 PM at the Gold Dust West Casino, junction of US 395 and US 50 - \$400 per person.  
Please register by Friday October 19, 2018**

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**Natives grasses sown for the 100-mile Tuscarora gas pipeline project along US 395 north of Reno, in a cheatgrass area, and was 100% native-cover with no cheatgrass, five years later at <http://www.ecoseeds.com/greatbasin.html>**

Photo by Craig Dremann

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**Conducted by Craig Dremann, owner of Redwood City Seed Company and The Reveg Edge, P.O. Box 361, Redwood City, CA 94064 - Office phone - (650) 325-7333 - Inventing successful Ecological Restoration native plant techniques used by the BLM and USFS since 1990 and held 35 workshops that helped establish the 1990s USFS native ecotype seed program in nine Western States. FAX (650) 325-4056**

**These workshops received two USFS Regional Awards, plus two Forest Service citations and one BLM citation at [www.ecoseeds.com/classes.html](http://www.ecoseeds.com/classes.html)**

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**---WHILE WORKING, to invent the methods to replant the 100-mile Tuscarora pipeline in 1993, along US 395 between Susanville and Alturas through the BLM sagebrush lands, this workshop discusses the eight tests that were developed for that project, that made our native planting successful, and produce 100% native cover in six months.**

**Craig's "Grow-Flow-Chart" and Craig's "Fertilizer protocols", along with these eight questions**, could also be added to any weed management or range management, or sagebrush restoration or fire-rehab. project tool box.

**These eight questions can more accurately monitor rangelands** than the traditional methods, because you measure the soil nutrients that are being removed by grazing animals (plus the impacts of feral horses) and as you monitor the grassland-forb soil nutrient levels, you can make sure the soil levels do not drop below the thresholds needed for native seedling survival.

**The techniques invented for that pipeline project, resulting in 100% native cover in six months** in a cheatgrass-infested area, and the planting remained 100% native cover five years later, and is still 95% native cover 25 years later.

**Also, using these same methods**, the first successful native plant plots were planted in October 30, 1997 in the **Mountain Tarplant Barrens**, in Franklin Basin, Idaho at the Montpelier Ranger District of the Caribou-Targhee National Forest at 8,000 ft. elevation, to restore the original "Tall-Forb" community with Mark Booth (USFS Rangelands) When three generations of researchers spent their entire careers and failed to get anything to grow in that habitat.

**The 2017 USGS report** described a **70% native-seeding failure rate in the Great Basin**, in David Pilliot's land management article "Seventy Five Years of Vegetation Treatments on Public Rangelands in the Great Basin of North America." These vegetation projects in the Great Basin, "represent one of the largest vegetation manipulation and restoration efforts in the world" according to the report. ([Online USGS](#)).

**Do you want to see 100 successful native seeding project out of the next 100 plantings in the future**, instead of **70% failures?!** This workshop will give you the step-by-step methods we invented and used to successfully plant that 100-mile Tuscarora gas pipeline project 25 years ago.

**Plus, if you are monitoring your rangelands--Have you ever checked** to see if your soil nutrient levels have dropped below what the local native seedlings need to survive?

**And, if you are fighting cheatgrass and other "invasive" weeds**, are these invasives moving into areas where soil nutrient levels, have been removed by grazing animals, below those thresholds needed for local native seedling survival? See where this nutrient-removal happened in the soils along the Tuscarora gas pipeline route at <http://www.ecoseeds.com/good.example.html>.

**THIS WORKSHOP** can potentially fix each of those issues, with **Craig's Eight Easy Tests**, and the **tests only cost a few hundred dollars in materials to conduct**.

Also go through **Craig's Grow-Flow-Chart** to avoid major mistakes, before planting any native seeds in the Great Basin.

**Make Craig's Eight Easy Tests** (below), plus [Craig's Grow-Flow-Chart](#) and [Craig's Fertilizer Protocol](#) part of your regular native seed planting projects, your rangeland monitoring program, and your exotic plant management programs this year!

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**WORKSHOP** Pre-work for participants, bring data to the workshop after completed one or more of these

tests, prior to the workshop date, so your data can be shared at the workshop--

**CRAIG'S EIGHT EASY TESTS** for successful native seedings, rangeland monitoring and exotic plant management, plus an Extra Credit Question Copyright © 2018 by Craig Dremann.

**1.) DO AGE PYRAMIDS of your native grass populations.** Measure the basal diameter of 100 plants in a population, and group the results into diameter-age-classes, like Up to 1/4 inch, 1/4-1/2 inch, 1/2 to 1 inch, 1-2 inches, 2-4 inches, 4-6 inches, etc., and then create an age-pyramid from the measurements, to see if the population is reproducing. The "pyramid" should be column-shaped with a pointy top, never an upside-down pyramid of old plants, that stopped reproducing a long time ago.

**2.) DO SOIL TESTS, the A-17 Waypoint Lab test,** with a one-quart soil sample from the top 2 inches and use a 1/4 mesh screen to remove rocks and vegetable matter, and for \$50 each from the Waypoint Lab, 1101 S Winchester Blvd. #G 173, San Jose, CA 95128. Phone: 408-727-0330, ask for your report to be "Data only in bar graph format".

Check the A-17 report for missing soil nutrients that will cause failures when you plant native seeds, as you can see what happened when the missing fertilizers were not applied to the box on the left at [www.ecoseeds.com/good.example.html](http://www.ecoseeds.com/good.example.html)

**3.) HARVEST A FEW OUNCES of several different easy-to-sprout native grass seeds,** or purchase some from a commercial seed grower like some Great Basin wild rye, Mountain brome, Idaho fescue, or Bluebunch wheatgrass for example. Plus, obtain one or two forbs like Grindelia or wild Sunflower seeds. Use these seeds to do the next two tests.

**4.) DO EX SITU TEST POTS PLANTED WITH NATIVE SEEDS** Fill containers with soil from a future planting site, plant with native seeds, and keep the planted containers watered each day outside your office. In one pot sow the native seeds in one pot without fertilizers and the other pot with fertilizers, based on A-17 Waypoint Lab test.

**5.) DO 12-HOLE CUPCAKE-TIN TEST, to check area for granivores.** Put a few tablespoons of native seeds, a different kind in each of the 12 cupcake tin holes, and set it out where you are going to sow those same native seeds, some day in the future. Snuggle the tin into the soil, so the lip is flush with the soil and then smooth out the soil for about 4 feet radius around the tin. Then, come back daily and see who is eating what and how quickly. Look for rodent trails, bird foot prints, etc.

**6.) CONDUCT MILE-BY-MILE VEGETATION MEGA-TRANSECT every 10 years,** along all of the Sage Grouse habitat major roadsides - Do 100 miles before the workshop, then do all the major roads in your area every five to ten years, so you can start to build trends. Also you can get the current "Spatially Extinct Understory" percentage as the starting point for future land management. See the 3,000 miles megatransect done through the Sage Grouse habitat in 1997 from California to South Dakota and back at [www.ecoseeds.com/megatransect.html](http://www.ecoseeds.com/megatransect.html) Available for licensed use, as the 1997 data could be a baseline, to measure future trends.

**7.) GET YOUR LOCAL NATIVE SEEDLING SOIL NUTRIENT THRESHOLDS determined,** using the A-17 Waypoint tests, for each native species you want to plant seed in the future. Find a reproducing population, and send in your soil sample for the A-17 test, to set your nutrient threshold for each species you want to plant.

**8.) MAKE A LIST ALL OF THE NON-REPRODUCING (Zombie) NATIVE SPECIES IN YOUR AREA**, based on the basal diameter measurements! Make a list of all of the native plant species in your area that are not reproducing, or "Zombie-species".

**Check all of the different perennial native grass species in the Sage Grouse habitat areas**, plus other native perennial plant species in the area, and if they are not reproducing, start applying Craig's Anti-Zombie Ecosystem-Apocalypse treatments.

**Do not allow Zombie-Ecosystems to run amok in your Sage Grouse habitats!** They are lurking there on BLM and USFS lands, in an out-of-control and unrestrained manner get them under control and fixed!

**-PLUS AN EXTRA CREDIT EXERCISE DETERMINE WHAT YOUR LOCAL PSEUDOMONAS NATIVE HOST PLANTS** are, and start planting a whole lot more. See the 2012 Discover Magazine article about the bacteria that live on the leaves of native plants, that produce the rain clouds at <http://discovermagazine.com/2012/apr/07-does-rain-come-from-life-in-the-clouds>

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--**Craig's GREAT BASIN Seed Planting GROW-FLOW-CHART** [download here](#)

--**Craig's FERTILIZER PROTOCOL** [download here](#)

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**>>>>NOTE TO RESEARCHERS, PROFESSORS, STUDENTS, and AUTHORS** of articles, reports and papers, Please NOTE If you utilize one or more of these eight tests and write up the results in any papers, articles, reports, or thesis, please cite the source of your Eight Test protocol. Or if you utilize **Craig's Grow-Flow-Chart** or **Craig's Fertilizer Protocol** in any of your studies, papers, articles, reports, or thesis, please also cite those references.

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**WORKSHOP COSTS, one day is \$400 per person.** Pay with credit card or mail in a check.

For the **October 23, 2018 Carson City Workshop**, please register by Friday October 19, 2018 by 5 PM PDT.

--Call with your credit card (650) 325-7333

--**October 23, 2018 CARSON CITY workshop registration form, click here.**

**You can call in your registration with a credit card, or mail in a check with the printed off registration form**, and please mail it, so that I receive it by Friday October 12th.

**And if your office still has a FAX machine**, you can fill out the registration form with your credit card information, and FAX it to 650-325-4056.

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**DO SOME TESTS FOR THE WORKSHOP?** Recommended each participant come to the workshop

**having complete all of some of the items #1-6, and bring results to workshop for discussion.**

**Plus, you can email your results to me by October 12, 2018, if you have completed any of them by then.**

**WORKSHOP REQUESTED TOPICS** You can make suggestions by sending me an email by October 19, 2018, of any topics you would like to see covered during the workshop that you attend. Please number each of the topics you would like covered, and I will see if I can work them into the workshop, to [craig@ecoseeds.com](mailto:craig@ecoseeds.com) or fill out Page 2 of the registration form.

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**CHECK-IN, the day of the workshop, will be from 8AM to 9AM.**

**---"Great Basin Native Seed Conferences 2019"** in Carson City, Burns, Boise, Winnemucca, Ely and Sparks.

**Workshop starts at 9:15AM, finishes at 4PM. There will be two breaks, one in the AM and one in the PM before we go out into the field, plus an hour break for lunch, on your own. The field time will be between 3PM and 4PM.**

### **AGENDA-- SAGEFIX workshop**

- 1.) Locating your reproducing desirable local native populations, and conducting an Age-Pyramid.**
- 2.) Running A-17 Waypoint soil tests** to determine what the nutrient threshold are for each species, using the Fertilizer Test Protocols.
- 3.) Why fertilizers are ALWAYS needed when sowing any native seeds in the Great Basin.**
- 4.) Conducting soil tests** in areas where you want your future natives to grow, like after fires, or in areas to replace cheatgrass with natives.
- 5.) How to set up small scale test plots, methods to harvest some local ecotype native seeds to sow those test plots, and adding the missing nutrients and sawdust with the seeds.**
- 6.) Setting up square-foot Ex-situ Test Boxes**, to run trials at your office, to test future sowing plans. See photos of Ex-situ Test Boxes at <http://www.ecoseeds.com/good.example.html>
- 7.) Setting out cupcake tins** with the native seeds, before sowing, to check for granivores.
- 8.) Why you NEVER sow any native seed mixes, individual species only.**
- 9.) Why you ALWAYS use local ecotype seeds, NEVER exotics or non-local cultivars.**
- 10.) Discussions of the questions**, previously submitted by the participants for the workshop.
- 11.) Why we never need to fear cheatgrass invasions** after sagebrush fires, ever again.
- 12.) Discussions of any field data brought in by the participants, from the Age pyramids or any A-17**

**tests conducted**, bring the data to share at the workshop. The easiest to do are a few Age-pyramids for a couple of different native grass populations.

**13.) Harvesting one pound of local ecotype seeds**, and have the USFS professionals produce one ton for you under contract in two years -- the USFS nurseries growing it out for you at Lucky Peak in Idaho or J.H. Stone in Central Point Oregon.

**14.) Checking for Zombie Ecosystems**--What plant species are no longer reproducing in the Great Basin?

**15.) The value of periodic mile-by-mile vegetation megatranssects**--see Craig's 1997 Great Basin at <http://www.ecoseeds.com/megatransect.html>

**16.) The value of the Pseudomonas host plants**, to keep the rain falling in the arid West. How do we determine which ones they are, and how do we protect and increase their numbers for the future?

**17.) After lunch, out into the field locally.**

**18.) Questions at any time during the day, are very welcome.**

**19.) Filming, photos, or recording, at any time during the workshop is OK.**

**20.) Download the Sage Grouse habitat survey form, to produce rapid surveys in the field, and see vegetation trends, at <http://www.ecoseeds.com/sage-grouse-habitat-survey-form.pdf>**

**21.) Prior to the workshop, if you can travel to visit the original gas pipeline project, and the test plot site at US 395 in Lassen County at Post mile 100.00 and the junction of Ramhorn Road, that may be useful to see the native seeding results that I am expecting **everyone should be able to produce**, after attending the workshop.**

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**SAGEFIX WORKSHOP-- Cut off for registration is Friday October 19 at 5 PM PDT.**

**---CARSON CITY "SAGEFIX" Tuesday October 23, 2018 Gold Dust West Casino in the Juniper Room, 2171 US Hwy 50 East, at Junction of US 395 - (775) 885-9000 - LIMITED to 35 attendees.**

**A block of rooms have been reserved at the discount rate of \$90 a night, and that includes a hot breakfast in the casino cafe.** To get the room rate, let the desk know you are going to attend the SAGEFIX conference.

**[Registration form for workshop here](#)**

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Updated October 13, 2018