Preventing introduction and spread of invasive weeds via construction equipment and supply materials.

Leader: Wendy West, UC Cooperative Extension, El Dorado County
Notetaker: Athena Demetry, Sequoia/Kings Canyon National Parks

The group first did a round of introductions and stated their particular concerns and interests. Some issues arising from these introductions included:

- How clean is clean (after equipment is cleaned)? Is there any science? (Yosemite NP)
- For contracts that say "weed-free materials," need to ID vendors for that. Are the vendors certified? (PG&E)
- Best Management Practices: often incorporated into contracts but harder to incorporate into an organization's internal operations (e.g. park equipment is not cleaned when moving between sites). (NPS: Sequoia/Yosemite)
- Yosemite started equipment-cleaning on a project basis and it is now institutionalized. They have someone that does equipment inspections for contractors. At what point do you turn them around? How do you know what to do? In an informal nursery experiment of dirt collected at an equipment-cleaning, there was 90% germination. Need science.
- In El Dorado Irrigation District, there is an annual training of multiple inspectors by the county. So they now have "certified inspectors."
- For stinkweed movement in the Bay area, what is a reasonable and practical precaution to take for routine work? Haven't come up with anything (Point Reyes).
- In Hawaii for Miconia, they have really strong prevention measures. They divide equipment up into Miconia or No Miconia. One person is assigned to wash clothes and look for seeds after control work. This training has expanded outside of NPS, and there is high awareness now.
- PG&E is considering purchasing a portable washing station (chlorinated) for about $30,000. Some Cal-Fire washing stations cost up to $100,000.
- Is this issue something the Invasive Species Council could take on?

Further discussion on sand and gravel pit inspection/certification:

- Mendocino County is starting a sand and gravel pit certification program. Some pits are managed for no vegetation at all (low-hanging fruit in terms of certification). Others are more difficult to rate. Using the Yellowstone model; forms are available at the Center for Invasive Plant Management, and also using their survey protocol and rating key. Doing it as a voluntary certification program. If a pit doesn't come up to standards, they give input back on how to improve. The methods are out there—don't need to reinvent. This program has been adapted by NAWMA and by a majority of states.
- Who does the inspections? Yellowstone: counties do the inspections. Glacier National Park: park staff does the inspections.
- Challenges with the Mendocino program: Federal agencies are the best for requiring weed-free materials and are a good customer. If your area has a lot of federal agency demand for materials, you might have more success because you can get a critical mass of demand. With a lot of smaller, non-federal agencies in a county, it's more difficult to get that critical mass and to get buy-in. Cal Trans said that it's "a lot of trouble."

- In Mendocino, they inspect twice a year for growing plants. What about a seed bank? If there is a history of not seeing plants, then that's evidence that there's not a seed bank. For a known weed infestation, you could still scrape the topsoil, treat, and use the material underneath.
- How is the Yellowstone program doing? Answer: 20% of the quarries passed right away. The rest had more work to do to come up to cleanliness, but not a big deal.
- It takes four full days to do an entire inspection of a pit (Truckee – Teichert).
- The state is a long way from quarry cleanliness being made mandatory.

Prevention for mulch materials:

- Are there safe mulching materials? NPS just had a post-fire mulching with "CA certified weed-free hay" and several weeds came from that hay.
- Wendy West pointed out the weaknesses in the inspection process for CA certified weed free hay. Counties have the choice of doing bale inspections (1 bale per 100 bales sampled) or pre-harvest field inspections. Bale inspections are very weak, but faster so often chosen. It's not a science-based process and is dysfunctional.
- Suggestions: use rice straw (grown in an aquatic environment so there's as assumption that any weeds in there won't grow in dry sites). But others have seen some yellow star thistle coming in with rice straw (just a few plants), so it's not perfect.
- Suggestion: check with International Association of Arboriculture or Utility Arborist Association

Prevention during fires:

- Resource Advisor (READ) for weeds is critical. Just showing up and being an advocate accomplishes a lot. If you don't show up, they're not likely to follow any written BMPs. Having READs on firelines and on the ground is critical.
- LA Water & Power: provided an interesting case study of perennial pepperweed moved by equipment to 8 other sites and how he educated the operator to care.
- Post-fire surveys are important. Inspect dozer lines.
- For the Angora Fire, the USFS had prevention protocols and thought they were ready, but found that it's very hard to implement during a fire. Others seconded this.
- Have training for everyone on staff, not just specialists, so that they have a basic understanding of weed issues in advance.
- NPS holds READ training every year or two, and it's open to other agencies.
- Have prepared signs for staying off weeds. Put a price tag on it?
- Need an insider's view of how a fire camp works so you know where in the fire camp process to intercept crews for cleaning their equipment or vehicles.
- Have equipment washing contracts set up in advance at local car washes.

Group agreed: work to get prevention measures, contract language, etc. posted to Cal-IPC website to share resources already developed.