

NEPA REVIEW SCREENING FORM

I. Project Title:

Washington State University Pollinator Study - CX B3.8, "Outdoor Terrestrial Ecological and Environmental Research"

II. Project Description and Location (including Time Period over which proposed action will occur and Project Dimensions - e.g., acres displaced/disturbed, excavation length/depth, area/location/number of buildings, etc.):

An outdoor, terrestrial ecological research study on pollinator species on the Hanford Site and adjacent landscapes [e.g. McGee Ranch/Riverlands, Hanford Reach National Monument (Arid Lands Ecology Reserve, Wahluke, Saddle Mountain)] will be performed from calendar year 2013 through 2014. The study is a privately funded study conducted as part of a doctoral thesis being overseen by Washington State University (WSU) Pullman, with the approval of Washington River Protection Solutions LLC (WRPS) and the U.S. Department of Energy (DOE).

Pollinator communities are being rapidly influenced by global change and climate change, and therefore, a variety of abiotic, biotic, and anthropogenic forces (e.g., fires, land development) are operating in and rapidly modifying landscapes. Pollinators on the Hanford Site and surrounding areas are still poorly understood and are rarely studied. The role they may play in, or their importance to, various mitigation and revegetation efforts being conducted at the Hanford site as part of the site cleanup efforts is also poorly understood, yet they could play a key role in the success of such efforts.

Rapid census techniques for regional pollinator communities may be useful to allow development of ecological models and provide useful comparisons of habitats and landscapes in a regional setting. Citizen science may be one useful tool that can be used to engage a broader public in pollinator ecology and environmental issues and provide useful census information to help power the development of ecological models about an area's pollinator species. Citizen science projects on pollinators, much like the well known Audubon Christmas Bird Count, may be useful in: a) expanding knowledge of the dynamics of pollinator communities, b) engaging the public in a meaningful way in environmental education activities, and c) promoting conservation efforts in and near cities where half of the world's population lives.

This study will involve the use of carefully structured, artificial, and moveable floral resources (i.e., moderate to large containers of flowers containing a mix of mostly native flowering plant species or horticultural equivalents) that are designed to census a broad array of generalist, and potentially a few specialist pollinators. These floral "patches" will then be placed in stratified sampling locations on the landscape and manipulated through patch size (i.e., multiple containers) and time for pollinator discovery (i.e., time left in place) as needed to generate ecological comparisons of models predicting pollinator occurrence and abundance.

Forty sampling areas have been roughly identified at this time, with two collection points set to occur at each, for a total of about 80 overall sampling locations. See "DOE/CX-00096 Attachment 1" for a map showing the initial proposed sampling areas and a general description of each. At each sampling area, a sampling location point will be taken by going a set distance to either side of the road that typically divides most of the identified sampling areas. Researchers will access each of these sampling areas by getting as close as possible using existing roadways as much as feasible (based on fire danger/road maintenance or quality, other ongoing work or events, and as based on any relevant safety concerns). The vehicle will then be parked on the road or shoulder as required by relevant fire, worker, and safety concerns, and researchers will then walk to the desired sampling locations. Floral "patches" will then be carefully placed on the ground's surface at the sampling location so as to avoid impacts to any native resources (ecological or cultural) present in the area. Flagging or surveyor ribbon may be temporarily used during the study to help mark a sampling location for ease in consistently finding a site for repeated sampling efforts that will occur during the study, however, no equipment or items will be permanently placed or left on the landscape.

Site and environmental variables are recorded to evaluate ecological and landscape factors potentially related to pollinator visitation rates. Structured contrasts are thereby created for relevant environmental comparisons, such as: burned, restored, and unburned mature shrub-steppe habitats, including plant communities now occupied by invasive, non-native plants. Data on pollinator communities will be primarily collected from spring 2013 through winter 2013, and all collected data will be continuously fed into a functional model(s) as the project is conducted to provide close to real time results.

NEPA REVIEW SCREENING FORM (continued)

A secondary aspect of this study will be the conduction of a Citizen Science Project. In addition to conducting pollinator censuses on a series of habitat and landscape contrasts, a citizen science project is planned to be developed and implemented in conjunction with support from DOE and WSU to engage volunteers from the Hanford Site, local Tribal Nations, and the local WSU Tri-Cities campus to test the efficacy of using the general public to assist in data collection of this nature. The data collected by citizen scientists is then compared with that collected simultaneously by relative experts (regional faculty, biologists, entomology students, etc.) to determine the efficacy and scientific value of such data and procedures that may improve data collection in the future.

All required permits and approvals for conducting this study will be obtained from U.S. Fish and Wildlife (USFWS), DOE, and WRPS prior to the commencement of the study. No vehicle travel off of the existing roadways will be performed during this study, and no excavation or ground disturbance will occur beyond the minimal amount that may result due to walking to the location or as caused by placing a handful of moderately sized floral pots temporarily on the ground. No collection any flora or fauna is set to occur at this time, all data collected will be primarily via a combination of visual, photographic, and/or video surveys. The study will have no adverse ecological or cultural impacts, and any applicable specific requirements set by DOE, USFWS, and/or WRPS (such as safety/fire protocols, security restrictions, or regular results reporting, etc.) will be complied with whenever applicable.

III. Reviews (if applicable):

Biological Review Report #: N/A

Cultural Review Report #: N/A

Additional Attachments:

IV. Existing NEPA Documentation

Is the proposed action evaluated in a previous EA, EIS, or under CERCLA?

YES	NO
<input type="checkbox"/>	<input checked="" type="checkbox"/>

If "NO," proceed to Section V. If "YES," List EA, EIS, or CERCLA Document(s) Title and Number:

And then complete Section VI. Provide electronic copy of Initiator/ECO signed NRSF to DOE NCO for information only. DOE NCO signature is not required.

V. Categorical Exclusion

Does the proposed action fall within a class of actions that is listed in Appendixes A or B to Subpart D of 10 CFR Part 1021?

YES	NO
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Are there extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Is the proposal connected to other actions with potentially significant impacts or result in cumulatively significant impacts (not precluded by 40 CFR 1506.1 or 10 CFR 1021.211)?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
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List CX to be applied and complete Categorical Exclusion Integral Elements (where an action might fit within multiple CXs, use the CX that best fits the proposed action):

B3.8, "Outdoor Terrestrial Ecological and Environmental Research"

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Document ID Number:

DOE/CX-00096

Categorical Exclusion Integral Elements	YES	NO
Does the proposed action threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, or health, including DOE and/or Executive Orders?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the proposed action require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the proposed action disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the proposed action adversely affect environmentally sensitive resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the proposed action involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species such that the action is NOT contained or confined in a manner designed, operated, and conducted in accordance to applicable requirements to prevent unauthorized release into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If "NO" to all Categorical Exclusion Integral Elements questions above, complete Section VI, and provide to DOE NCO for final Approval/ Determination and signature in Section VII.

If "YES" to any of the Categorical Exclusion Integral Elements questions above, contact DOE NCO for additional NEPA Review.

VI. Responsible Contractor Signatures

	Name (Printed)	Signature	Date
Initiator	Holly Bowers	<i>Holly Bowers</i>	12/18/12
Cognizant Environmental Compliance Officer	Jessica Joyner	<i>Jessica Joyner</i>	12/10/12

VII. Approval/Determination

DOE NEPA Compliance Officer: Woody Russell

Based on my review of information conveyed to me and in my possession (or attached) concerning the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class of action:

NCO Determination - CX EA EIS

Signature: *Woody Russell*

Date: 12/18/12

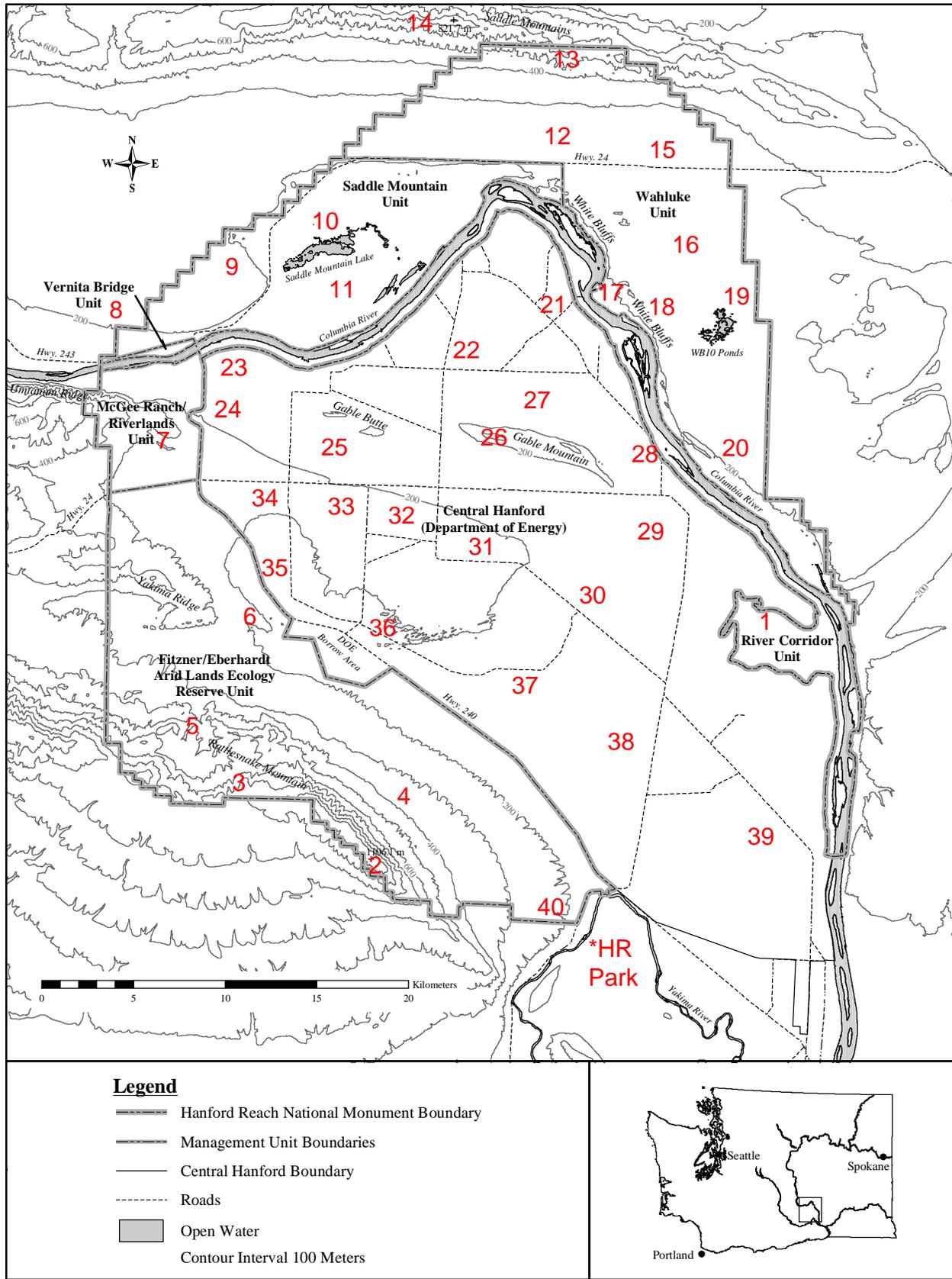


Fig. 1.1. The Hanford Site, including Central Hanford and the Hanford Reach National Monument.

Pollinator Study Survey Areas – General Site Descriptions

1. Sand Dunes
 - a. Dune are near river, but have a unique habitat and ecology all of their own.
2. Top of ALE
 - a. Highest elevation point in region, and has unique habitat at the very top but nearby habitat is a mix of the standard sagebrush dominated native habitat or is recovering from a recent to fairly recent series of wildfires.
3. Backside of ALE Peak Near Bobcat Canyon
 - a. Slighter lower elevation than peak, more gentle slope, habitat is mainly more sagebrush habitat or recovering from fire habitat – similar to what is found at the bottom of ALE and several other survey sites.
4. Bottom of ALE, somewhere in the middle of the 1200 foot road
 - a. Habitat used to be sagebrush dominated, but is now in various stages of recovery after a series of wildfires; USFWS has attempted to replant most of the lower regions of ALE with native grasses, primarily via aerial methods.
5. Snively Springs
 - a. A natural spring, one of the largest in the area; habitat near the springs is tree dominated habitat with several different species.
6. Greasewood Dominated Area Just Before Powerhouse and Springs
 - a. Native habitat still, not been too impacted by fires but is heavily dominated by greasewood.
7. Top of McGee
 - a. Roughly the fourth highest point in area, top hasn't been impacted by fires but bottom has. Top is mostly undisturbed native, sagebrush dominated, habitat.
8. Top of Saddle At AAA Site
 - a. Tree area surrounded by native sagebrush habitat mixed with open grasslands on one side, and recovering burned area on the other. Burned area is well advanced in understory recovery and is mainly native grasses and forbs, but overstory is patchy at best. Also is a fairly high elevation point, about equal with the top of Gable Mountain and the Whaluke Overlook.
9. Bottom Saddle Near AAA Site
 - a. Similar to top AAA site for habitat, but elevation is on par with most of the rest of the site.
10. Saddle Mountain Ponds North Side
 - a. Undisturbed sagebrush habitat around the side of the ponds, and near the ponds, area is dominated by trees and other plants more common to water areas in the region.

11. Saddle Mountain Ponds South Side
 - a. Recovering from burn, mostly large fields of cheatgrass with mature sagebrush, but sage was planted years ago so while large, it grows in straight lines and clumps as planted. Also near the river, and there are lots of trees and water plants near the ponds themselves.
12. Whaluke Viewpoint Road, bottom AAA Site
 - a. Ring of locust trees and some open grasslands, but mostly sagebrush dominated.
13. Whaluke Viewpoint – View Area
 - a. No trees, but otherwise vegetation is identical to that found at the bottom of the viewpoint road. This is also roughly the third highest elevation point in the area.
14. Wahatus
 - a. Second highest elevation point, habitat and basalt similar to top of ALE.
15. MM 62 AAA Site
 - a. Similar to AAA site at base of Whaluke Road, but has a large group of Black Locust trees, and two long lines of large Russian Olive trees; nearby habitat is sagebrush with patches of open grass more towards the east.
16. Four Corners – Homestead
 - a. Burned a few years ago, some trees due to homestead and agricultural water nearby, mostly grass with some native forbs recovery, was dominated by mock orange, bitterbrush, and some greasewood prior to the fire. USFWS has done some aerial grass seeding.
17. White Bluffs Boat Launch
 - a. Near both agricultural waterway and Columbia River, tree dominated near water, more sagebrush away from water.
18. Whaluke Overlook
 - a. Dominated by purple sage, moderate sage cover, and native grasses with lots of open areas. Moderate elevation, more similar to the top of Saddle Mountain and top of Gable Mountain.
19. WB10 Ponds
 - a. Ponds surrounded by trees, mainly Russian Olives (where as the River and Saddle Mountain Ponds have Russian Olives, but they aren't the most dominant species) plus mostly mature and old growth sagebrush surrounding the ponds and trees.
20. South End Whaluke – Near Fish Hatchery
 - a. Next to River, Orchard trees, River trees and water related species more, not a lot of sagebrush and understory is quite different from most of the other sites.
21. 100F Boat Launch
 - a. Next to River, across from White Bluffs Boat Launch, but more trees, some different species of trees, and understory species differ some as well.

22. North of Route 1
 - a. Burned area, mostly cheatgrass and noxious weeds, no recovery efforts have been made.
23. Bruggerman's Warehouse
 - a. Near River and while there are trees next to the river, near the warehouse its mostly fields of cheatgrass due to a fire years ago; no recovery efforts have been made in this area.
24. Road from Route 6 to HWY 240
 - a. Elevation is higher than Bruggerman's, but lower than Central Plateau; sagebrush dominated habitat.
25. Route 11A – Gable Butte
 - a. Sagebrush dominated with mid-range elevation.
26. Top Gable Mountain
 - a. Roughly equal in elevation to the Whaluke Overlook and top of Saddle Mountain; sagebrush dominated with some open patches.
27. North Side of Gable Mountain
 - a. Dense sagebrush dominated habitat, roughly mid-range in elevation.
28. Route 2N – Old Hanford Townsite
 - a. Not far from River, area is mostly open grassland with scattered sagebrush and trees near the River.
29. Route 2S
 - a. Used to be all sagebrush, burned ~2 years ago, recovery efforts have been made to replant with native grasses and shrubs using a cultipacker.
30. Route 4 – Midway point
 - a. North-east side of road mostly sagebrush mixed with some open grass areas. South-west side is more grass areas, less sagebrush and sage is smaller in size.
31. 200 East Area – North-West of C Farm
 - a. Sagebrush dominated, but next to highly active operational zones. On the Plateau, so higher elevation.
32. Route 3 – Midway on North Side
 - a. Sagebrush dominated, next to low activity operational zones but not far from heavily used road. On the Plateau, so higher elevation.
33. 200 West Area – T Plant
 - a. Sagebrush dominated, next to low activity operational zones, not far from medium level of activity construction and moderately used road. On the Plateau, so higher elevation.
34. Route 11A and Route 6 Intersection Near 200 West Area Fenceline
 - a. Sagebrush to the north side of the intersection, one tree, and mostly grassland to the south due to fires (2000 and 2008). Area was actively replanted with native grass and shrubs using a cultipacker. On the Plateau, so higher elevation.

35. Army Loop Road – Halfway down Western Half
 - a. Near Tree area (old AAA site), been replanted but due to soil type (more clay), different plants are coming in that elsewhere in the area. Moderate elevation.
 36. Army Loop Road – Just Past Rattlesnake Barricade near AAA Site
 - a. Old AAA site with trees, mostly sagebrush nearby. Did not burn in the fires. Moderate elevation.
 37. Army Loop Road – Southern Loop Near Rare Plant Areas and Landfill
 - a. Sagebrush scattered near landfill on north side of the road, south side is an old burn area with scattered shrub recovery that is mostly native grasses and forbs. A lot of the more unique and rare plant communities exist along this stretch. Moderate elevation
 38. Route 10 – LIGO
 - a. Varying size patches of sage and a lot of grass. Multiple fires over the last 30 years, mainly natural revegetation; heavily dominated by cheatgrass in the understory.
 39. Route 4S – 618-10
 - a. Burned within the last year, natural recovery only, mostly bare ground and cheatgrass. Prior to the recent fire, hadn't burned since the early 1980s and was a moderately successful natural re-growth area.
 40. Entrance to ALE
 - a. Slightly higher elevation than Plateau, not too far from Yakima River, scattered sage and grass areas.
- *Horn Rapids Park – True Park next to the River with the standard green grass and trees.