

Friday Workshop Schedule

7:30am – 8:15 Working Social Breakfast

8:15 – 8:30 Reminder! Hotel checkout!

8:30 – 9:45 Introductory Presentations

9:45 Break - Coffee and snacks

10:15 – 11:50 Breakout Groups

11:50 Adjourn

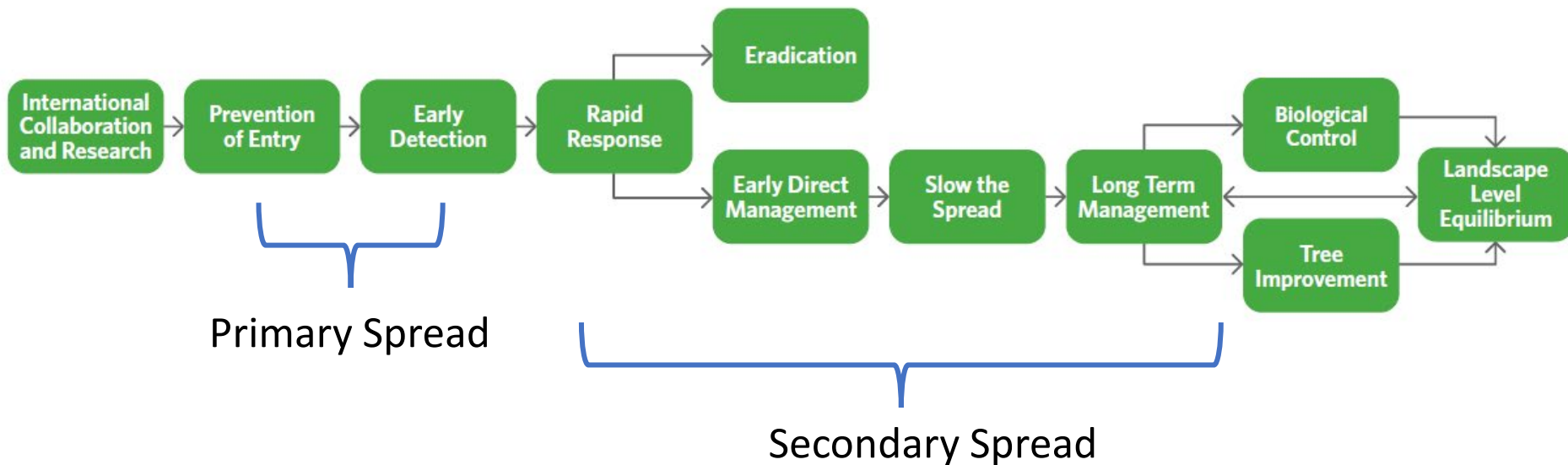
12:00 Lunch – To-go style, provided with workshop registration

*12:30 - 3:00pm Missoula walk and talk
(optional, if sufficient interest, depending on weather)*



Primary vs Secondary Spread

FIGURE 1: *Forest Pest and Pathogen Expanded Conceptual Model*



Forest pests and pathogens

This is typically defined as those **invasive species that directly affect trees**, such as wood borers, defoliating moths, and pathogens.

For the purposes of this work, please exclude from "forest pests and pathogens" those invasive species that indirectly affect tree and forest health, such as climbing ferns, annual grasses, feral hogs, or earthworms. These forest dwelling invasive types are not the focus of this survey.

OK but deer? Wait, but are you sure on hogs? What about seed predators like mice or rats?

Secondary Spread Pathways

1. Nursery facilities, sales, distribution, and consumers
2. Containers, pallets, and commercial vehicles
3. Railways and Highways
4. Firewood, campgrounds, recreationists
5. Household moving
6. Green waste disposal
7. Biology of pest and host (e.g. flight, wind, soil, mutualisms, root grafts, etc)
8. Weather event direct and indirect movement (e.g. hurricane force winds, storm damage cleanup, flooding,)
9. Forest product harvest, storage, and movement
10. Forest management (e.g. thinning, harvest, prescribed fire, etc)
11. Online sales (e.g. live plants, handicraft, foraged art and goods)
12. Informal plant and wood trade networks (e.g. iris societies, woodworking enthusiasts)

Secondary Spread Pathways (5 + 10 min)

Please review the preliminary list (below) of forest pest and pathogen Secondary Spread pathways. The numbers are meant for ease of reference and do not indicate any relative importance.

1. Nursery facilities, sales, distribution, and consumers
2. Containers, pallets, and commercial vehicles
3. Railways and Highways
4. Firewood, campgrounds, recreationists
5. Household moving
6. Green waste disposal
7. Biology of pest and host (e.g. flight, wind, soil, mutualisms, root grafts, etc)
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12. Informal plant and wood trade networks (e.g. iris societies, woodworking enthusiasts)

After you have read this list:

- **What pathways are missing?**
- **What would you split up or lump?**
- **What other modifications to these categories would you make?**

Secondary Spread: Concerns (5 + 10 min)

1. Nursery facilities, sales, distribution, and consumers
2. Containers, pallets, and commercial vehicles
3. Railways and Highways
4. Firewood, campgrounds, recreationists
5. Household moving
6. Green waste disposal
7. Biology of pest and host (e.g. flight, wind, soil, mutualisms, root grafts, etc)
8. Weather event direct and indirect movement (e.g. hurricane force winds, storm damage cleanup, flooding,)
9. Forest product harvest, storage, and movement
10. Forest management (e.g. thinning, harvest, prescribed fire, etc)
11. Online sales (e.g. live plants, handicraft, foraged art and goods)
12. Informal plant and wood trade networks (e.g. iris societies, woodworking enthusiasts)

What do you think might increase risks or challenges in next 5-10 years for one, some, or all of these pathways of secondary spread?

Secondary Spread: Get better? (5 + 5 min)

1. Nursery facilities, sales, distribution, and consumers
2. Containers, pallets, and commercial vehicles
3. Railways and Highways
4. Firewood, campgrounds, recreationists
5. Household moving
6. Green waste disposal
7. Biology of pest and host (e.g. flight, wind, soil, mutualisms, root grafts, etc)
8. Weather event direct and indirect movement (e.g. hurricane force winds, storm damage cleanup, flooding,)
9. Forest product harvest, storage, and movement
10. Forest management (e.g. thinning, harvest, prescribed fire, etc)
11. Online sales (e.g. live plants, handicraft, foraged art and goods)
12. Informal plant and wood trade networks (e.g. iris societies, woodworking enthusiasts)

What do you think might mitigate, improve or lessen in next 5-10 years for one, some, or all of these pathways of secondary spread?

Report out
(10min)

Mix groups!



The new idea: Pathway Guilds (5+10 min)

Let's call this idea a "pathway guild" for now. Here is one example of what could be pathway guilds for forest pests and pathogens, with examples following each:

- Wood and phloem obligates (e.g. emerald ash borer larvae)
- Foliage and sap obligates (e.g. aphids)
- Sessile and motile contaminants (e.g. spongy moth egg or pupae, crevice sheltering adult insects like western conifer seed bug)
- Soil and litter associates (e.g. phytophthoras)
- Passive environmental dispersers (wind, water, migratory birds; e.g. hemlock wooly adelgid, chestnut blight)
- Active self dispersers (e.g. flighted spongy moth)

After you have read this list:

- **What guild groups are missing?**
- **What would you split up or lump?**
- **What other modifications to these categories would you make?**

Mission

The Continental Dialogue on Non-Native Forest Insects and Diseases cultivates and catalyzes **collaborative** action among diverse interests **to abate the threat to North American forests from non-native insects and diseases.**





Pathway Guilds Concept: Deep thoughts (10 min)

- Is there a better name? Dispersal guilds? Spread guilds?
- What can you imagine this concept might be used for? How would it advance the overarching goal of slowing secondary spread of forest pests?