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Habitat Program Exploration

Rights-of-Way as Habitat Working Group

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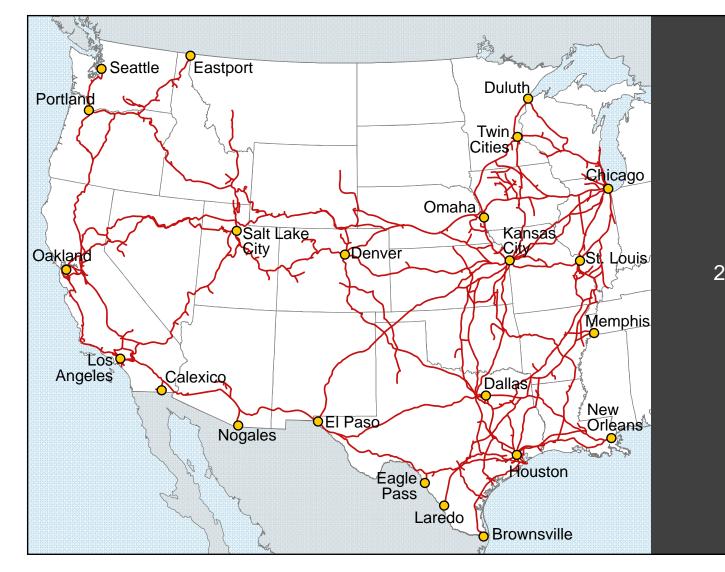
Union Pacific & Pollinators

Rights of Way as Habitat Working Group Wildlife Habitat Council 8 locations in various stages Exploring local relationships



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Building America for more than 150 Years



Fast Facts

2015 Revenue: **\$21.8 B** Route Miles: **32,100 in 23 States**

Employees: 43,000

Annual Payroll: \$4.6 B

Customers: 10,000

Locomotives: 8,500

Sizing Up the Pollinator Potential

- A no-brainer...
 - Concept fits company's fabric
 - 1 million acres
 - "Ribbons" of land in the right locations
 - Generally native soils
- ...except
 - Public safety calls for less vegetation, not more
 - Employee safety calls for thoughtful plan
 - Restricting access fosters safe corridors
 - Objective to minimize maintenance
 - \$



When you're part of the American landscape, you protect it.

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Initial Objectives

- Learn through projects & others' expertise
 - Start small, build from there
 - Wildlife Habitat Council
 - Rights-of-Way as Habitat Working Group
- Contribute to improving the environment in the pollinator space
- Foster value to / with / for communities where we operate





Start Small, Build from There

- Pilot locations with few upfront limitations
 - Non-operating properties
 - Site Remediation sites
 - Projects already requiring planting
- Find what works (and what doesn't)
 - Multiple geographies
 - Multiple seeding and maintenance approaches
 - Tap into expertise to test "lighter touch" applications
- Use lessons to define next steps
 - Quality before / over quantity
 - What's a "win"?

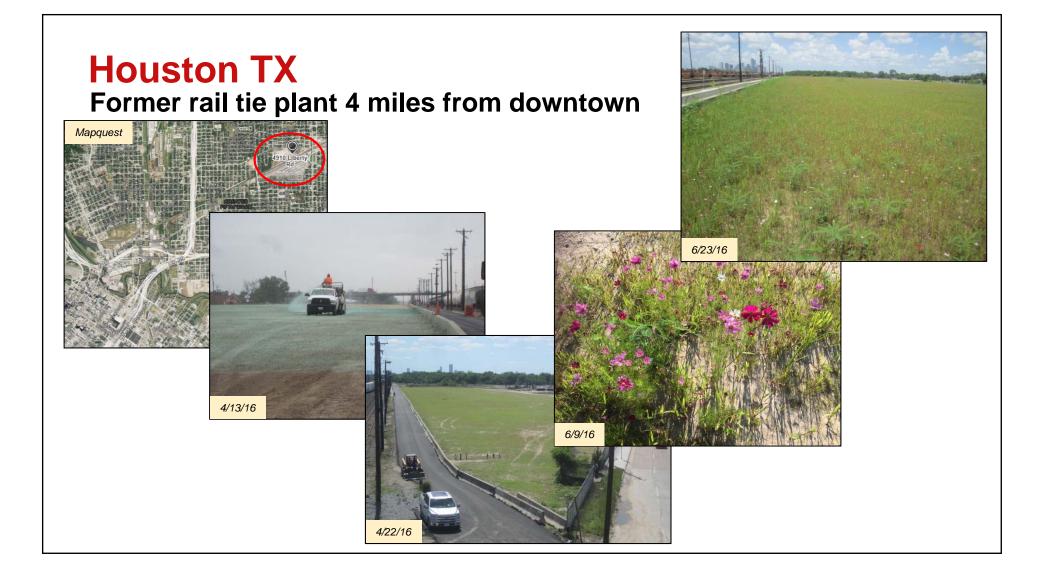


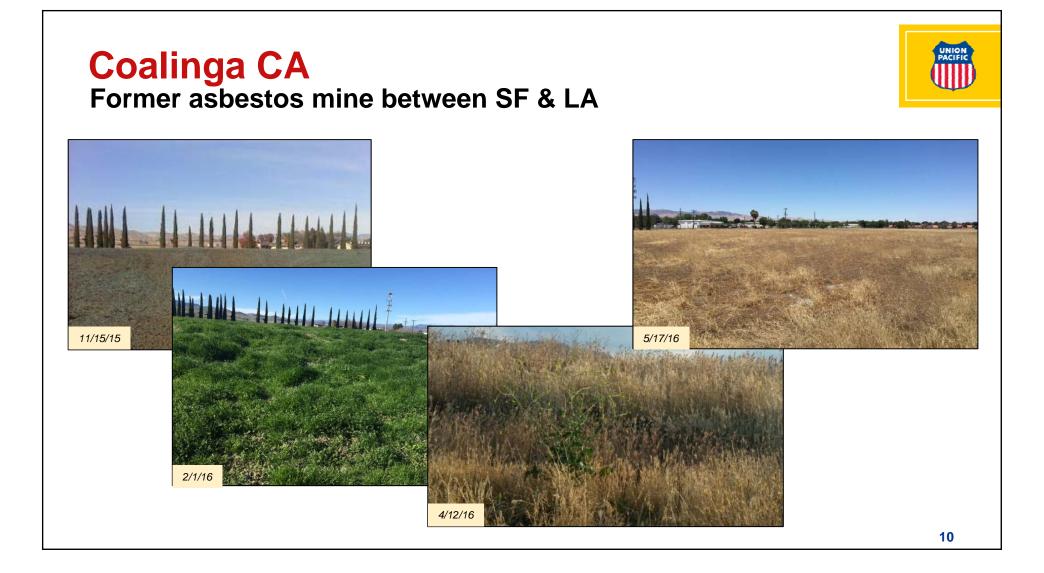


Initial Tests



City	St	Project Size	Project Objective	Seed Types Used	When Planted	Initial Result
Roseville	CA	3 acres	Test multiple maintenance approaches		Nov 2015	Poor
Salinas	CA	2 acres	Native vegetation restoration; WHC partnership	Habitat Seed Mix & CA Native Wildflower Mix	Nov 2015	Good
Coalinga	CA	2 acres	Native vegetation restoration; WHC partnership	Habitat Seed Mix & CA Native Wildflower Mix	Nov 2015	Good
Bakersfield	СА	1 acre	Native vegetation restoration; WHC partnership	Habitat Seed Mix & CA Native Wildflower Mix	Nov 2015	Poor
Auburn	NE	0.75 acres + 0.65 acres	Complete wye with butterfly plantings	Native milkweed	Fall 2016	TBD
Houston	ΤХ	~5 acres	Wildflowers used to offset mowing	Wildflower mix	Apr 2016	Excellent
Houston	тх	~5 acres	Wildflowers proposed to be planted to offset mowing requirements	Wildflower mix	Pending	TBD
Laramie	WY	TBD	Two pollinator habitats	Native wildflower mix and Ascelpias incarnate to attract Monarch butterflies	May 2016	TBD





Roseville CA Railyard near Sacramento







Wildlife Habitat Council

- Project and site-specific consulting
- Basic Seeding Guidelines
 - General Considerations
 - Seed Mix Selection
 - Implementation, Monitoring and Maintenance
- **Regional Seeding Specifications**
 - Region Definition
 - Understanding decision making process
 - Specifications by region







Next Steps

Finish Regional Seeding Specifications

Capture results from tests

Provide direction for upcoming tests

Build from there



THANK YOU Bob Toy - bmtoy@up.com

