Crucial Habitat Assessment Tool (CHAT) and Wildlife Data

Presenters:

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(Learn more about Eco-Logical at the FHWA website)

U.S. Department of Transportation
Federal Highway Administration

Steps to Ensure Optimal Webinar Connection

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Eco-Logical On Call Technical Assistance Tool

Request Technical Assistance

Photo courtesy of CH2M HILL

The Eco-Logical [On-Call Technical Assistance Tool](#) is available for agencies to

- Request responsive, individualized guidance on Implementing Eco-Logical

- Submit ideas for webinars or other Eco-Logical Activities

Colorado DOT Case Study

FHWA has developed a Case Study on how Colorado DOT implemented Steps 7-9 of the nine-step Integrated Eco-Logical Framework:

- https://www.environment.fhwa.dot.gov/ecological/Implem entingEcoLogicalApproach/Case_Study_CDOT.asp

Development of Sustainable Strategies Supporting Transportation Planning and Conservation Priorities Across the West

A project of the
Western Governors' Association

with support from the
Federal Highway Administration

Participants

Report prepared by:

Western Governors' Association

Center For Large Landscape Conservation

Western Transportation Institute – Montana State University

For the:

Federal Highway Administration

Project field trip – wildlife overpass, Flathead Reservation, US 93, MT

With Contributions from 16 State Transportation and Wildlife Agencies:

Alaska , Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, Oklahoma, Oregon, South Dakota, Utah, Washington and Wyoming

And the

Western Association of Fish and Wildlife Agencies

Purpose

➢ Identify ways digital wildlife data support transportation

➢ Identify strategies that build a collaborative approach

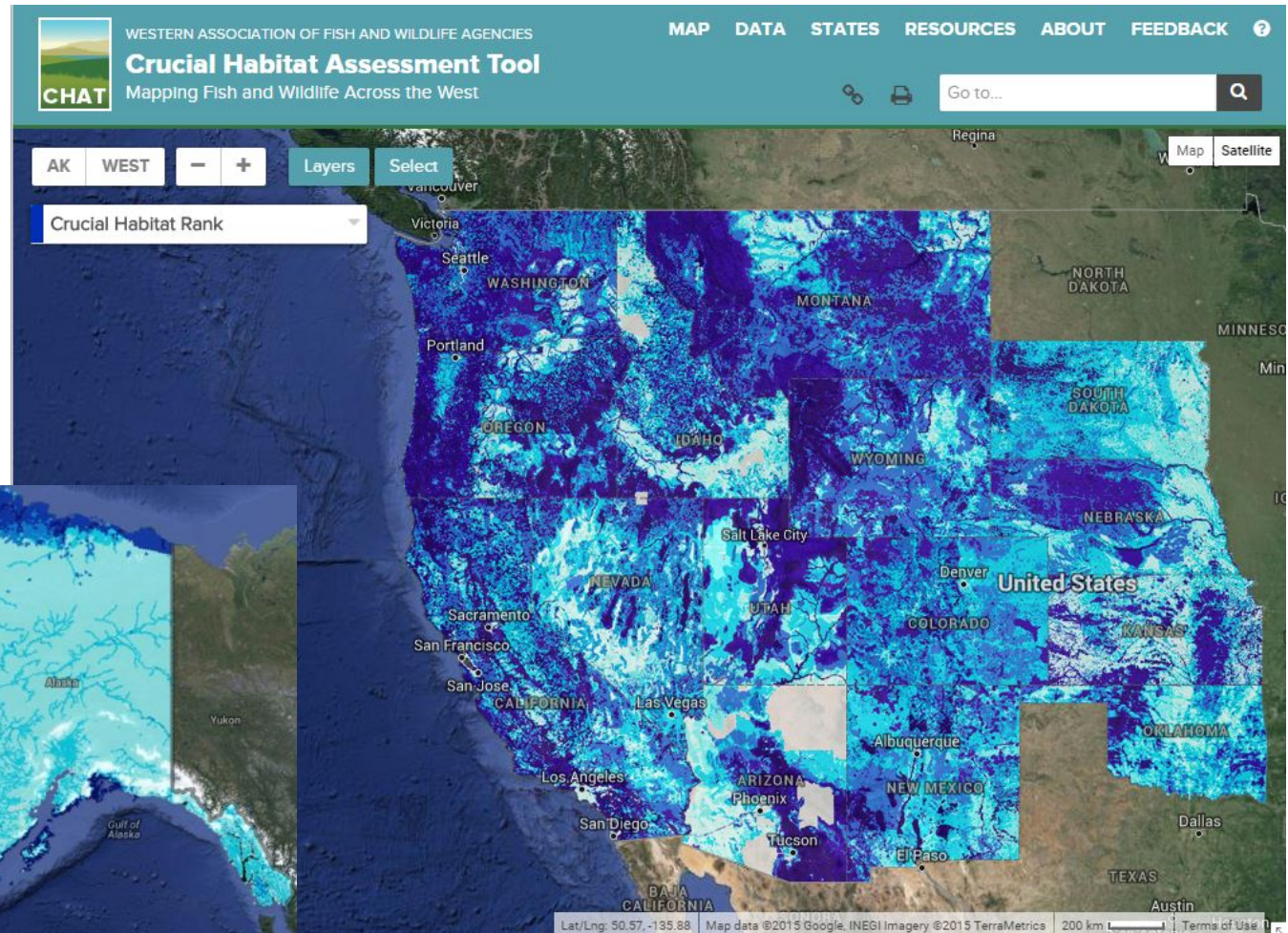➢ Enable more efficient, economic and sustainable transportation outcomes

US Hwy 6, Colorado. Photo: Roger Surdahl

Crucial Habitat Assessment Tool

Online at wafwachat.org

Crucial
Habitat
Assessment
Tool

Policy Directive

"The Governors encourage widespread use of CHATs by industry, the public, and state and federal agencies. Planners at all levels in the public and private sectors can use state CHATs as a 'first look' to help identify where states' wildlife assets are located."

-WGA Policy Resolution,
**State Wildlife Science, Data and Analysis**

Governor John Hickenlooper (CO), WGA Chairman, introduces the Western Governors' CHAT to the public at WGA's 2013 Winter Meeting. Hickenlooper is joined by (L-R) Gov. Brian Sandoval (NV), Gov. Gary R. Herbert (UT), Gov. Steve Bullock (MT), Secretary of the Interior Sally Jewell, and Gov. C.L. "Butch" Otter (ID).

Key Points

- **Collaborative:** A cross-boundary tool, guided by the work of the Western Governors' Wildlife Council representing 16 states.

- **Useful:** Pre-planning tool for energy, transportation, and land use planning.

- **Non-Regulatory:** The WG CHAT simply gives a 30,000-foot "first look" at wildlife habitat.

State Data Funneled into CHAT
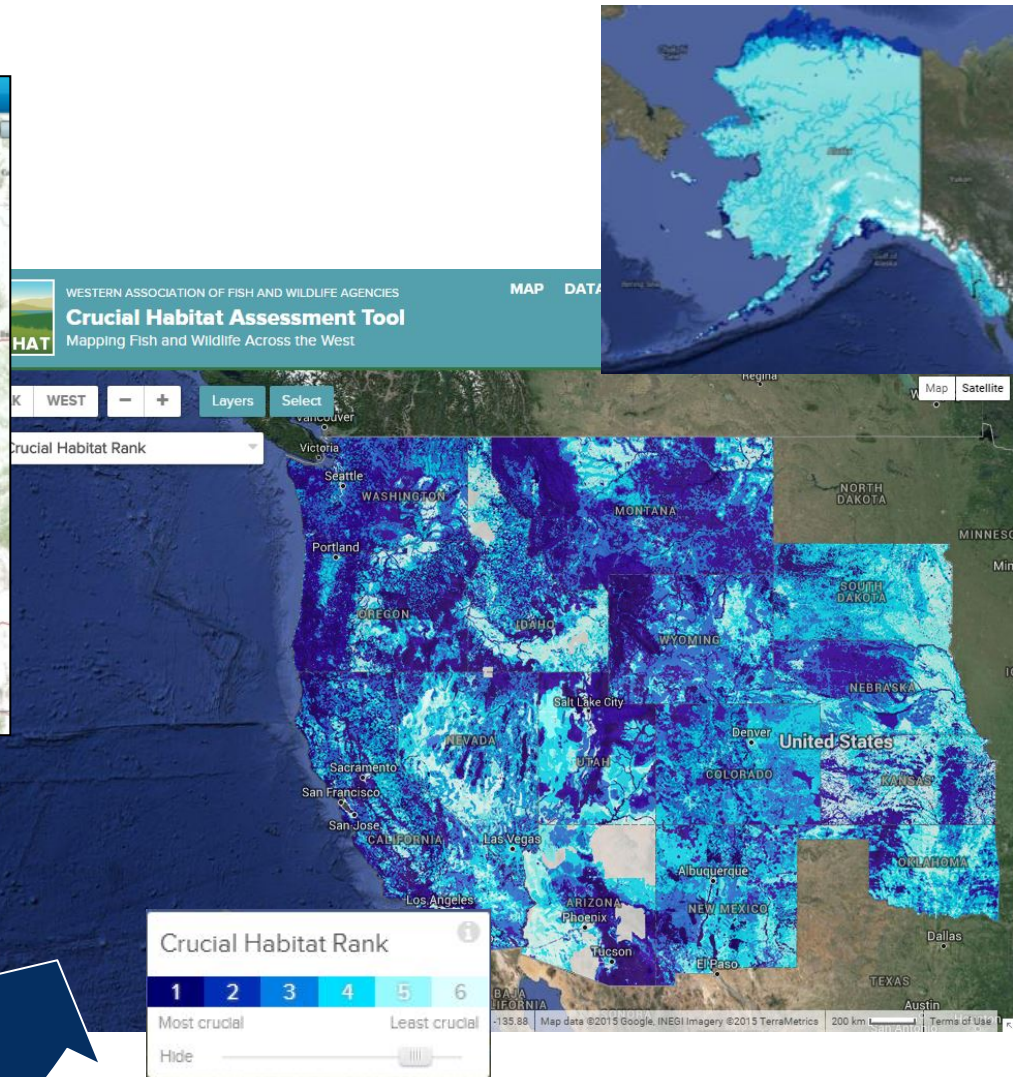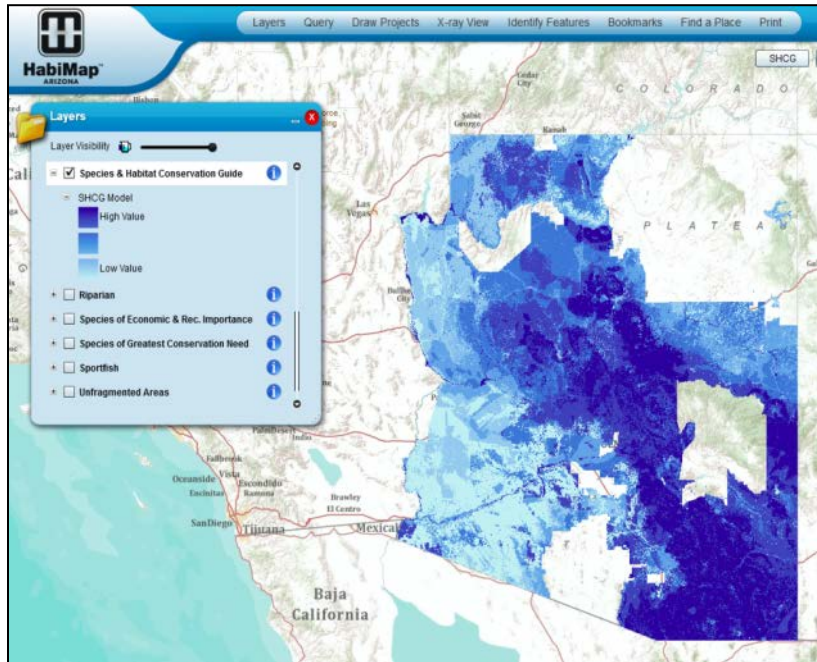
NOTE: HabiMap ™ Arizona and the Western Governors' CHAT do not show tribal lands in Arizona.

What is Crucial Habitat?

State Data Inputs

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- State Fish Distribution
- SOC Observations
- SOC Habitat Models
- WGA Large Intact Blocks
- WGA Corridors Layer
- WGA ESoC
- Big Game Habitat Models
- Regional Habitat Models
- National Fish Habitat
- Wetland Rest. database
- Connectivity
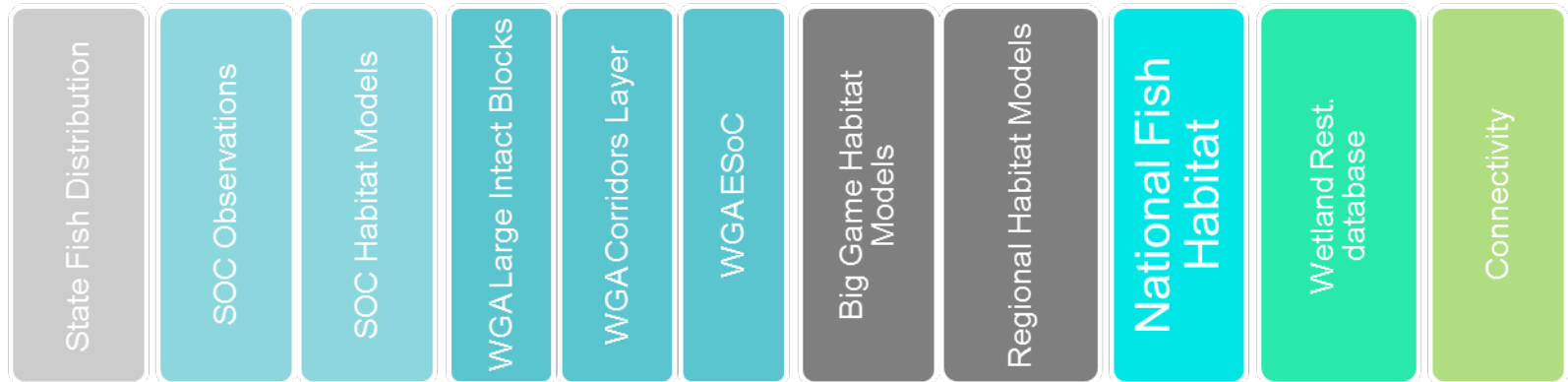
Combine into map layers using common framework

↓

- Aquatic Species of Concern
- Terrestrial Species of Concern
- Native and Unfragmented Habitat
- Species of Economic and Recreational Importance
- Freshwater Integrity
- Wetlands
- Connectivity

Aggregated Crucial Habitat Layer

↓

Crucial Habitat

Long Term Hosting

WESTERN GOVERNORS'
Crucial Habitat Assessment Tool
Mapping Fish and Wildlife Across the West

WESTERN ASSOCIATION OF FISH AND WILDLIFE AGENCIES
Crucial Habitat Assessment Tool
Mapping Fish and Wildlife Across the West

WAFWA Chat Coordinator: Holly Michael (holly.michael@wafwa.org)

Identifying Strategies

Four Major Components:

➢ Determine the use of CHATs via a <u>Questionnaire</u>

➢ Identify <u>Best Management Practices</u> and include case studies

➢ Explore nexus with FHWA's <u>Eco-Logical</u> framework

➢ Identify <u>Opportunities</u> to use digital wildlife data in transportation

Questionnaire – who completed

TARGETS

Part 1: Leadership: department heads, decision makers

Part 2: Practitioners: biologists, environmental specialists, planners, engineers

RESPONSES

- All 16 state DOTs responded in both parts

- Part 1: 26 responses from states, FHWA and 5 federal land management agencies - USFWS, NPS, USFS,BIA, BLM

- Part 2: 28 responses from states, FHWA, USFWS, USFS, NPS, BIA, and tribal agencies

Questionnaire Results (Part 1)

Use of regional and state CHATs – Leadership response summary
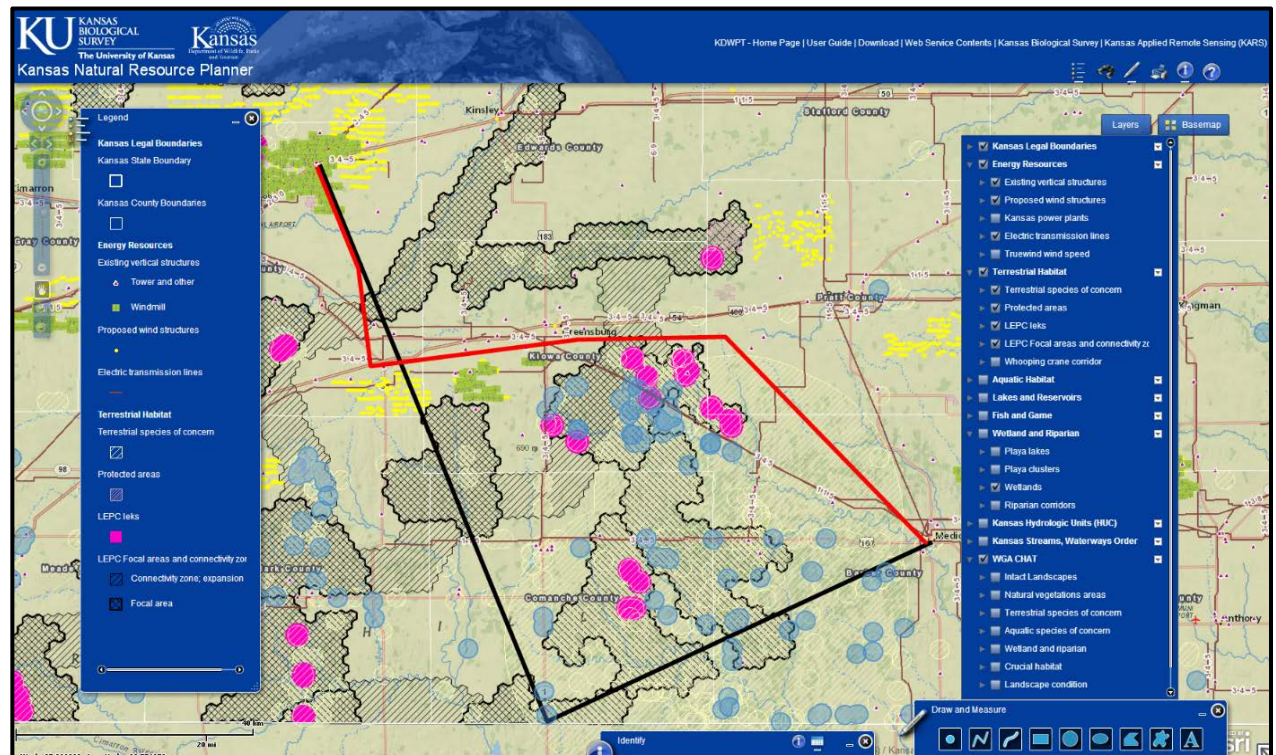
➢ Many transportation offices unaware of, and unfamiliar with, CHATs

➢ State CHATs tend to be used more, ranked more highly than the regional CHAT

➢ Many potential uses and users of CHAT information were identified

Uses:

- Planning
- Scoping
- Environmental studies
- Site assessment

Users:

- Environmental specialists
- Biologists
- Planners

Kansas state CHAT

Questionnaire Results (Part 2)

Use of regional and state CHATs –
Biologists, planners, engineers, etc. response summary

➢ States consider wildlife-vehicle collisions and game species more important than habitat quality and connectivity; feds responded conversely

➢ Majority of federal respondents were not familiar with CHATs

➢ 50%+ do not use regional CHAT – doesn't meet their specific needs

➢ Ways to increase attention to wildlife: increase funding, early integration in planning
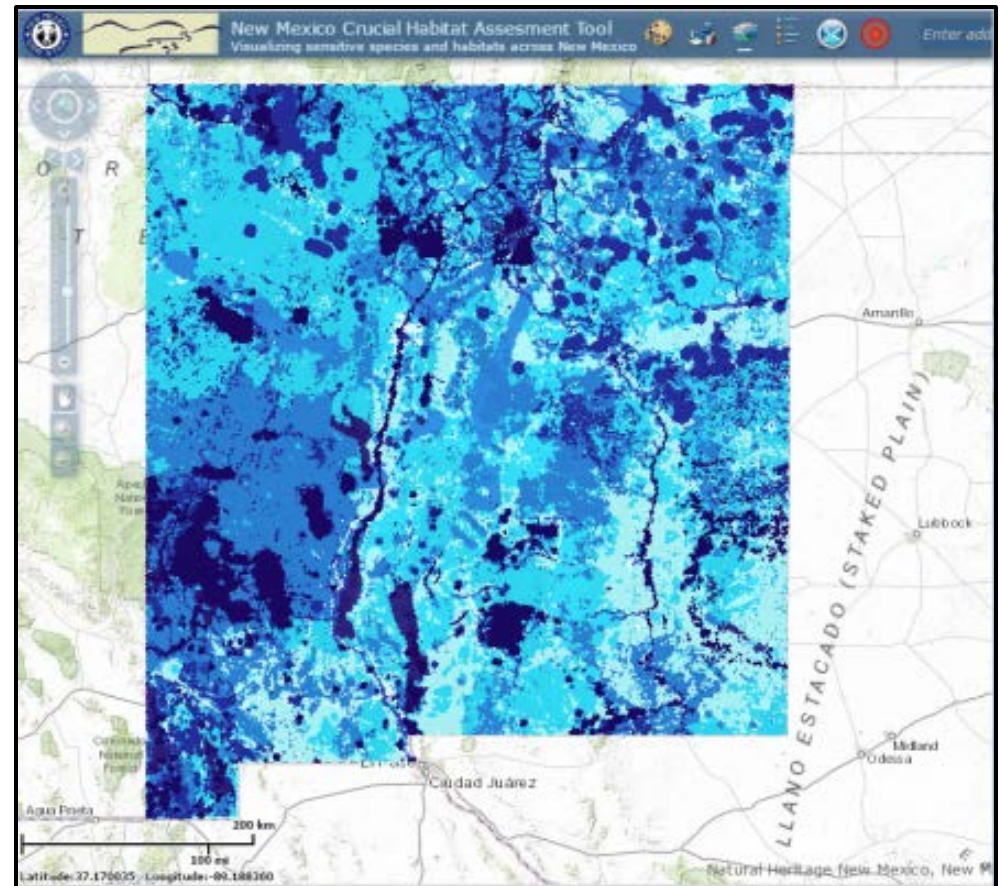
New Mexico state CHAT

Best Management Practices

1) Incorporate wildlife information before budgets are set

2) Set joint transportation and wildlife priorities

3) Employ a transportation-wildlife liaison

4) Expand the role of wildlife biologists

5) Use CHATs in mitigation planning

6) Invest in innovative technologies, research and monitoring

7) Increase use and understanding of CHAT websites

8) Use FHWA's *Eco-Logical* approach to improve cooperation

Credit: P. Cramer, USU, UDWR and UDOT

Best Management Practices

Case Study 1: I-80 CSMPS Wildlife Crossing Working Group

I-80 CSMPS study area. Existing and proposed wildlife crossings in Nevada and Utah represented by red deer heads. Source: Nevada Department of Transportation

Best Management Practices

Case Study 2: Rogue Valley Council of Governments
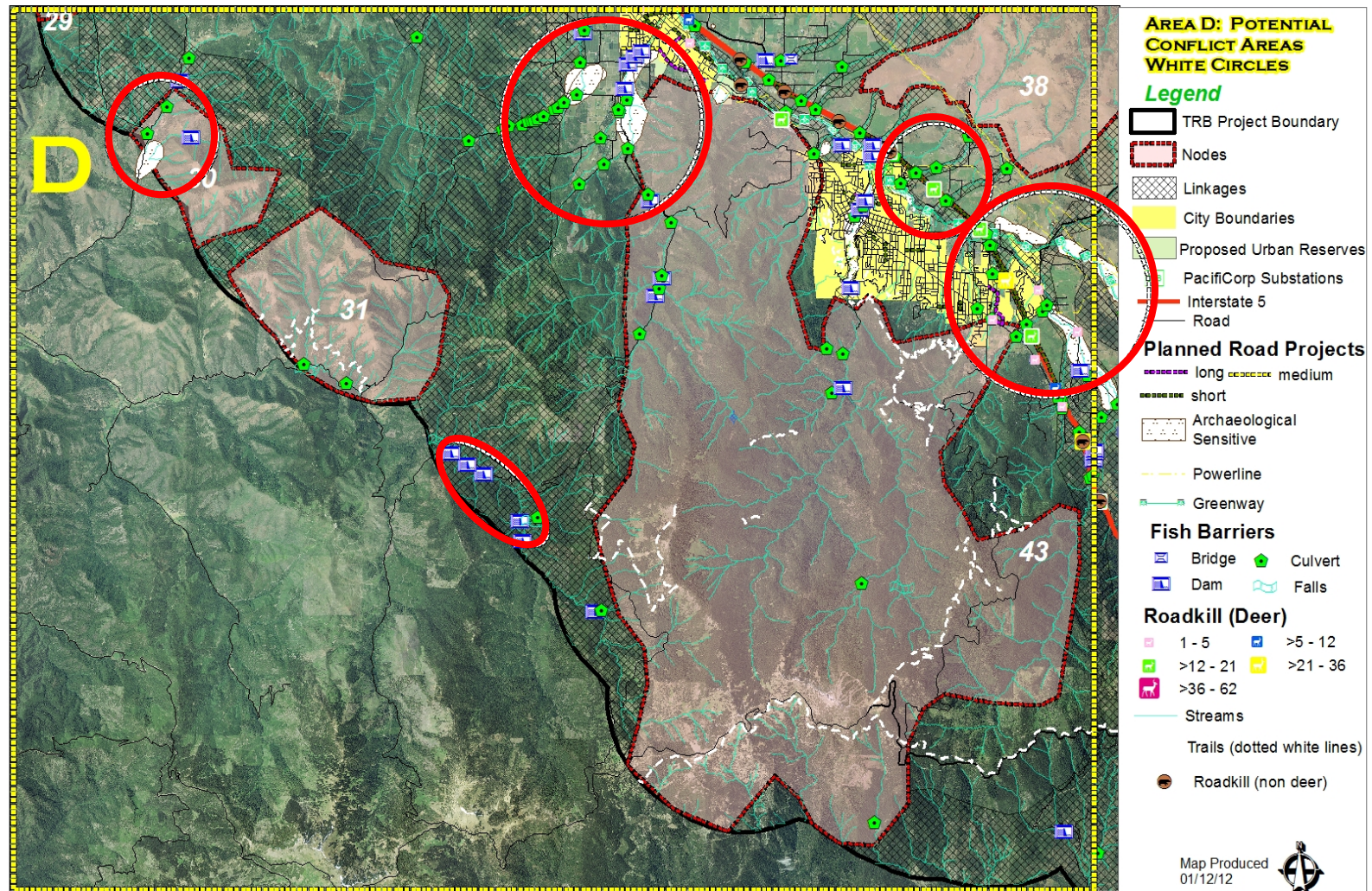
Red circles denote potential conflict areas. Source: Rouge Valley Council of Governments.

Best Management Practices

Key Next Steps

1) Update data regularly

2) Develop finer scale CHAT data

3) Improve integration of CHAT websites and other wildlife data sources

4) Expand CHAT outreach

5) Align highway safety and wildlife priority areas

US 93, Montana

SR 260, Tonto NF, Arizona

Opportunities

Matrix of Opportunities:

Completed by all 16 State DOTs

MATRIX OF OPPORTUNITIES	STATE:						
	TYPE OF DATA AVAILABLE IN STATE: Regional CHAT, State CHAT, Other Digital Wildlife Data						
	Regional		State		Other Digital Wildlife Data		
	YES or NO?		YES or NO?		YES or NO?		
TRANSPORTATION PROCESSES	Current Use: GREEN (ALWAYS) - G, YELLOW (SOMETIMES)-Y, RED (NEVER)-R						COMMENTS
	Potential Use: High - H, Medium - M, Low - L, No - N						
	Current	Potential	Current	Potential	Current	Potential	
Strategic Plans or Policies							
Long Range or System Plans							
Short Range Plans							
Programming, Funding, Internal Project Scoping (pre-STIP)							
Project Design, Environmental Review & Public Scoping (post-STIP)							
Mitigation							
Construction							
Operations							

Opportunities

Results:

Regional CHAT

Greatest potential use:

➢ Pre- and post-STIP planning activities

Least potential use:

➢ Construction or operations

TRANSPORTATION PROCESSES	Regional CHAT															
	Current Use															
	AK	AZ	CA¹	CO	ID	KS	MT	NE	NV	NM	OK	OR	SD	UT	WA	WY
Strategic Plans or Policies	N	N	N	N	N	N	N/A	N	N	N	N	N	N	A	N	
Long Range or System Plans	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N
Short Range Plans	N	N	N	S	N	N	S	N	N	N	N	N	N	A	N	N
Programming, Funding, Internal Project Scoping (pre-STIP)	N	N	N	S	N	N	N	N	N	N	S	N	N	A	N	N
Project Design, Environmental Review & Public Scoping (post-STIP)	N	N	N	S	N	N	S	N	N	N	A	N	N	S	N	N
Mitigation	N	N	N	S	N	N	N	N	N	N	A	N	N	S	N	N
Construction	N	N	N	N	N	N	N	N	N	N	A	N	N	S	N	N
Operations	N	N	N	N	N	N	N	N	N	N	N	N	N	S	N	N
	Potential Use															
Strategic Plans or Policies	No	H	No	M	No	L	M	L	M	No	No	No*	L	H	L	
Long Range or System Plans	No	H	M	M	No	M	No	L	M	No	L	No*	L	H	No	M*
Short Range Plans	No	M	L	H	No	M	L-M	No	M	No	L	No*	L	H	No	M*
Programming, Funding, Internal Project Scoping (pre-STIP)	No	M	M	H	No	M	No	No	M	No	M	M*	L	H	No	M*
Project Design, Environmental Review & Public Scoping (post-STIP)	No	M	L	H	No	L	L	No	L	M	H	No*	M	H	No	No*
Mitigation	No	M	L	H	No	L	L	No	L	M	H	No*	M	H	No	M*
Construction	No	No	L	L	No	L	No	No	No	M	M	No*	L	M	No	No*
Operations	No	No	L	L	No	L	No	No	L	No	M	No*	L	M	No	No*

¹California indicated low to moderate use potential only for projects that cross state boundaries. If a project is completely intrastate, CA would use ACE (state CHAT).

Current Use
N	Never
S	Sometimes
A	Always
N/A	Not applicable
	No response provided

Potential Use
No	No
L	Low
L-M	Low-Medium
M	Medium
H	High
	No response provided

N	=	No*
S	=	M*
A	=	H*

*For Potential Use, some states responded with colors from Current Use instead of the L/M/H/No categories. The above is our interpretation of their responses.

Opportunities

Results:

State CHATs

Greatest potential use:

➤ Pre- and post-STIP activities

➤ Mitigation planning

TRANSPORTATION PROCESSES	State CHAT																
	Current Use																
	AK	AZ	CA	CO[2]	ID[1]	KS	MT	NE[1]	NV	NM	OK[1]	OR	SD[1]	UT[2]	WA	WY
Strategic Plans or Policies	N	S	N	S	N	N	N/A	N	N	N	N	N	N	A	N	
Long Range or System Plans	N	S	N	N	N	N	N	N	N	N	N	N	N	A	N	S
Short Range Plans	N	S	N	S	N	N	S	N	N	N	N	N	N	A	N	S
Programming, Funding, Internal Project Scoping (pre-STIP)	N	S	N	A	N	S	S	N	N	N	N	N	N	A	N	S
Project Design, Environmental Review & Public Scoping (post-STIP)	N	S	N	A	N	A	S	N	N	N	N	N	N	S	N	A
Mitigation	N	S	N	S	N	S	N	N	N	N	N	N	N	S	N	S
Construction	N	N	N	N	N	S	N	N	N	N	N	N	N	S	N	S
Operations	N	N	N	S	N	S	N	N	N	N	N	N	N	S	N	S
	Potential Use																
Strategic Plans or Policies	No	H	No	H	H	L	M	L	M	M*	No	M*	L	H	L	
Long Range or System Plans	No	H	H	M	H	M	L	L	M	M*	L	M*	L	H	No	M*
Short Range Plans	H	M	L	H	H	M	L-M	L	M	M*	L	M*	L	H	No	M*
Programming, Funding, Internal Project Scoping (pre-STIP)	Unk	H	M	H	H	H	L	L	M	M*	M	M*	L	H	No	M*
Project Design, Environmental Review & Public Scoping (post-STIP)	L	H	L	H	H	H	L-M	L	L	M*	H	M*	M	H	No	H*
Mitigation	L	H	L	H	H	H	L-M	No	L	M*	M	M*	M	H	No	M*
Construction	No	No	L	M	L	H	No	No	No	M*	H	No*	L	M	No	M*
Operations	Unk	No	L	M	L	H	No	No	L	M*	M	M*	L	H	No	M*

[1]State does not have a public web portal for state CHAT information.

[2]State does not have a public web portal for stat CHAT information; DOT may access state CHAT information via other means.

Current Use

N	Never
S	Sometimes
A	Always
N/A	Not applicable
	No response provided

Potential Use

No	No
L	Low
L-M	Low-Medium
M	Medium
H	High
Unk	Unknown
	No response provided

N	=	No*
S	=	M*
A	=	H*

*For Potential Use, some states responded with colors from Current Use instead of the L/M/H/No categories. The above is our interpretation of their responses.

Results:

Other data sources

Greatest potential use:

➢ Post-STIP activities

➢ Mitigation planning

TRANSPORTATION PROCESSES	AK	AZ	CA	CO	ID	KS	MT	NE	NV	NM	OK	OR	SD	UT	WA	WY
Other Digital Wildlife Data — Current Use																
Strategic Plans or Policies	N	A	N	S	N	N	N/A	A	S	A	N	N	S	A	A	
Long Range or System Plans	N	A	S	S	N	N	N	A	S	A	N	N	S	A	A	N
Short Range Plans	S	A	N	S	N	N	A	A	S	A	N	N	S	A	A	N
Programming, Funding, Internal Project Scoping (pre-STIP)	Unk	A	A	S	S	S	S	A	S	A	S	S	S	A	A	N
Project Design, Environmental Review & Public Scoping (post-STIP)	A	A	A	A	S	A	A	A	A	A	A	S	A	A	S	S
Mitigation	A	A	S	S	S	A	S	A	A	A	S	A	A	S	A	S
Construction	S	A	N	N	N	S	N	A	N	A	S	N	S	S	A	S
Operations	Unk	A	N	S	N	S	A	A	S	A	N	A	S	S	A	S
Other Digital Wildlife Data — Potential Use																
Strategic Plans or Policies	No	H	No	H	H	L	M	H	H		No	No*	M	H	H	
Long Range or System Plans	No	H	M	M	H	M	M	H	M		No	M*	M	H	H	No*
Short Range Plans	H	H	M	H	H	M	H	H	M		No	M*	M	H	H	No*
Programming, Funding, Internal Project Scoping (pre-STIP)	Unk	H	H	H	H	H	L-M	H	H			M	H*	M	H	H	No*
Project Design, Environmental Review & Public Scoping (post-STIP)	H	H	H	H	H	H	H	H	H			H	H*	H	M	H	M*
Mitigation	H	H	M	H	H	H	H	M	H			M	H*	H	M	H	M*
Construction	L	H	No	M	L	H	No	H	No			M	No*	M	M	H	M*
Operations	Unk	H	L	M	L	H	H	H	L			L	H*	M	M	H	M*

Current Use
- N — Never
- S — Sometimes
- A — Always
- N/A — Not applicable
- Unk — Unknown
- (blank) — No response provided

Potential Use
- No — No
- L — Low
- L-M — Low-Medium
- M — Medium
- H — High
- Unk — Unknown
- (blank) — No response provided

*for Potential Use, some states responded with colors from Current Use instead of the L/M/H/No categories. Below is our interpretation of their responses.

- N = No*
- S = M*
- A = H*

Opportunities

Future Needs Identified:

- ➢ Overcome institutional/cultural barriers within DOTs

- ➢ Increase state DOT ownership of wildlife values

- ➢ Increase communication/alignment between wildlife and transportation agencies

- ➢ DOTs and DOWs should set joint priorities

- ➢ Find better ways to fund wildlife mitigation

Eco-Logical

4 Potential opportunities to use CHATs within the Eco-Logical framework:

Step 1   Build and strengthen collaborative partnerships

Step 2   Characterize resource status and integrate natural environment plans

Step 3   Create a Regional Ecosystem Framework (REF) (overlay of geospatially-mapped transportation plans with conservation priorities, land use, and other data)

Step 4   Assess effects on conservation objectives

Step 5   Establish and prioritize actions

Step 6   Develop a crediting system

Step 7   Develop programmatic consultation, a biological opinion or a permit

Step 8   Implement agreements, adaptive management and delivery projects

Step 9   Update the REF and plan

An Ecosystem Approach to Developing Infrastructure Projects
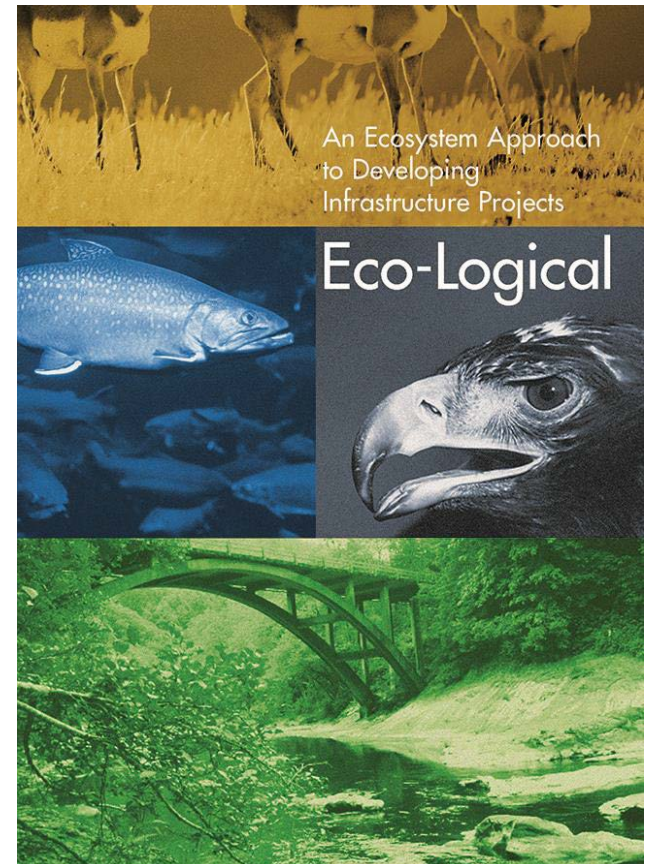
Eco-Logical

Eco-Logical

Top Opportunities to Strengthen CHAT ←→ Eco-Logical Nexus:

- ➤ Case Studies

- ➤ Webinars

- ➤ Peer learning exchanges

- ➤ Conferences and meetings

- ➤ Annual reports and other

  documentation
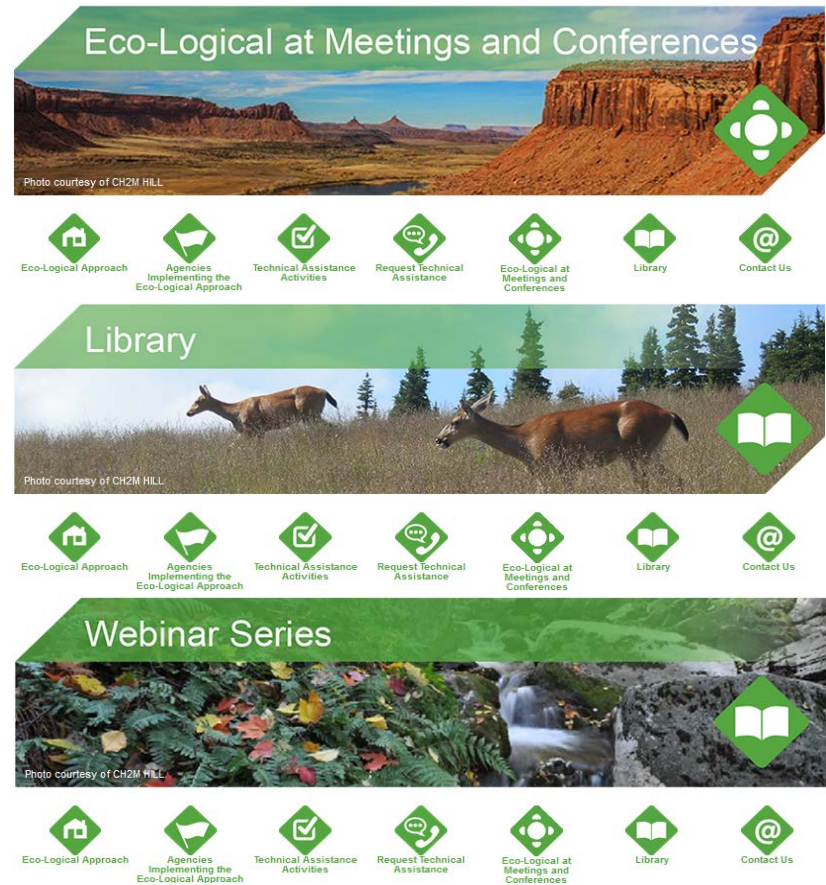
Project Summary

Future Steps:

➢ Increase CHAT outreach

➢ Explore CHAT data refinements

➢ Expand use of CHATs

➢ Assess if CHATs need modification

➢ Investigate DOT responses
  to opportunities matrix

➢ Strengthen the CHAT⟷ Eco-Logical nexus

➢ Overcome DOT cultural barriers to consider wildlife

➢ Increase funding for CHATs and wildlife mitigation

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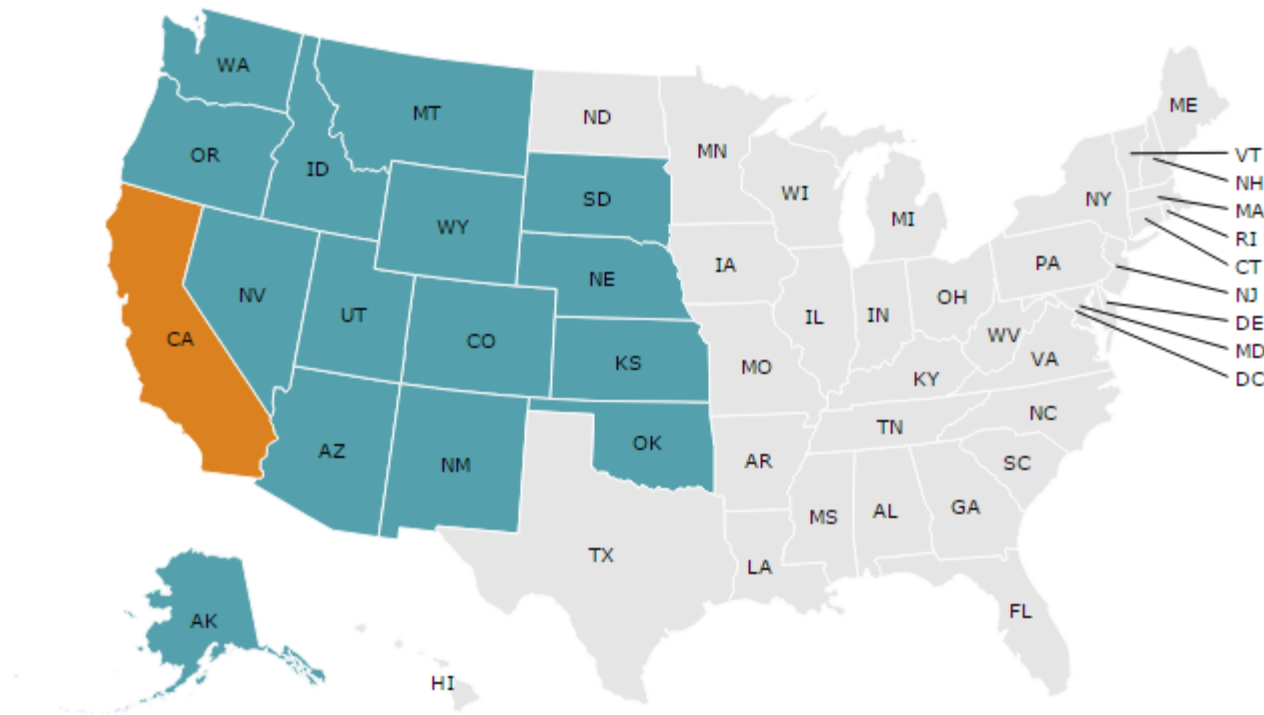
Acknowledgements

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