

Wind Energy Training: The Tiered Approach

May 22, 2013

2:00 pm ET





Welcome to the 'nctc:live' room.



NCTC on LiveStream

Live broadcasts from around the National Conservation Training Center



LIVE 1 VIEWER

HIGH CHAT

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B **I** **U** **LOGIN**

Latest Videos



Charles M Russell
NWR



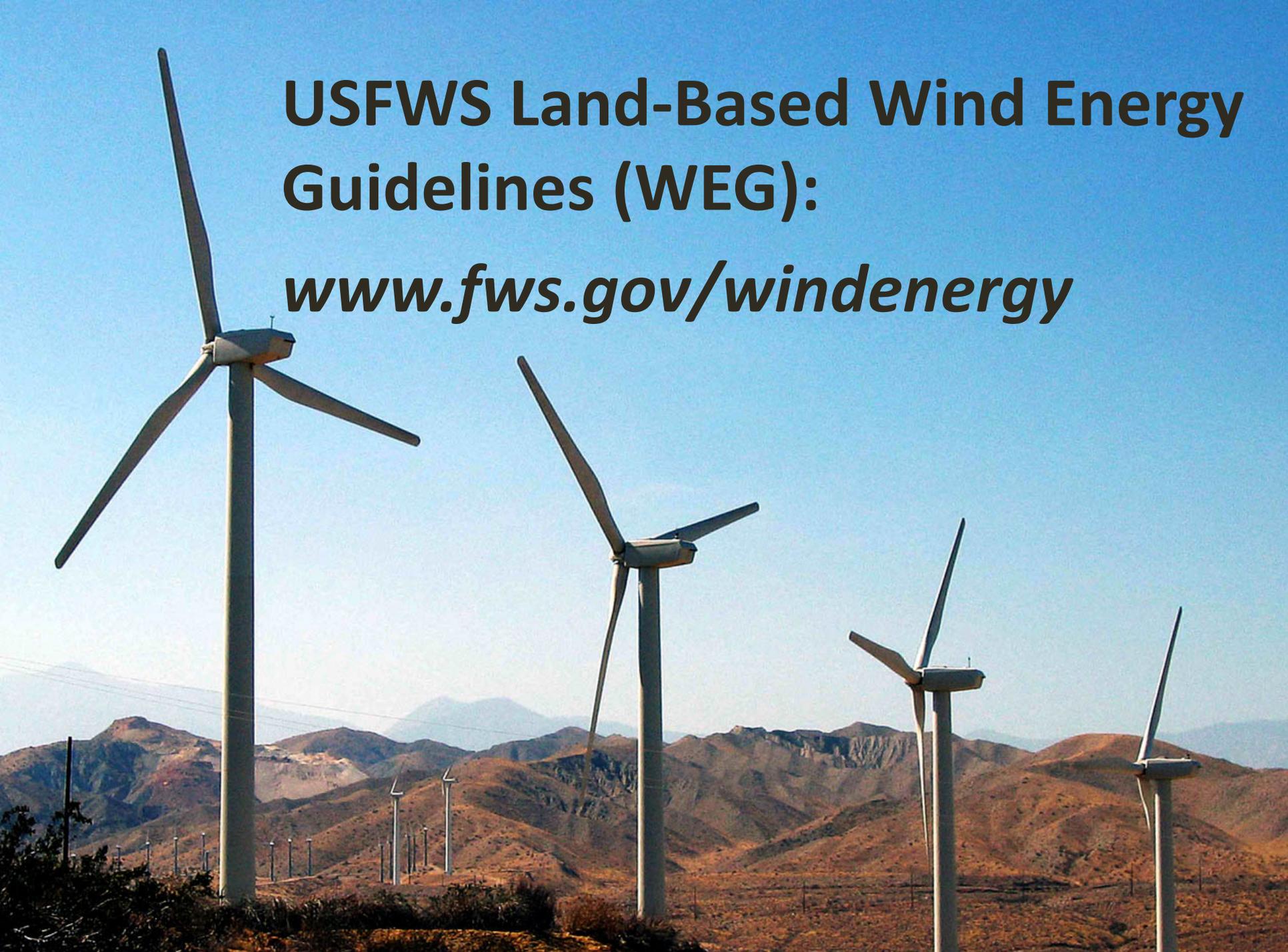
Alaska Recreation and
Subsistence B-Roll



USFWS at Work B-Roll

Type your questions or comments in the chat box below – then click “say”

If video is buffering, click the icon above and change from “high” to “low”



USFWS Land-Based Wind Energy Guidelines (WEG):

www.fws.gov/windenergy

Tiered Approach

- Iterative decision-making process for:
 - collecting information in increasing detail;
 - quantifying possible risks to species of concern and their habitats; and,
 - evaluating those risks to make siting, construction and operation decisions.



The Tiered Approach

PRE-CONSTRUCTION

- Tier 1 – Preliminary Site Evaluation
- Tier 2 – Site Characterization
- Tier 3 – Field Studies on Wildlife/Habitat;

Predicting Project Impacts

POST-CONSTRUCTION

- Tier 4 – Post-construction Studies to Estimate Impacts
- Tier 5 – Other Post-construction Studies

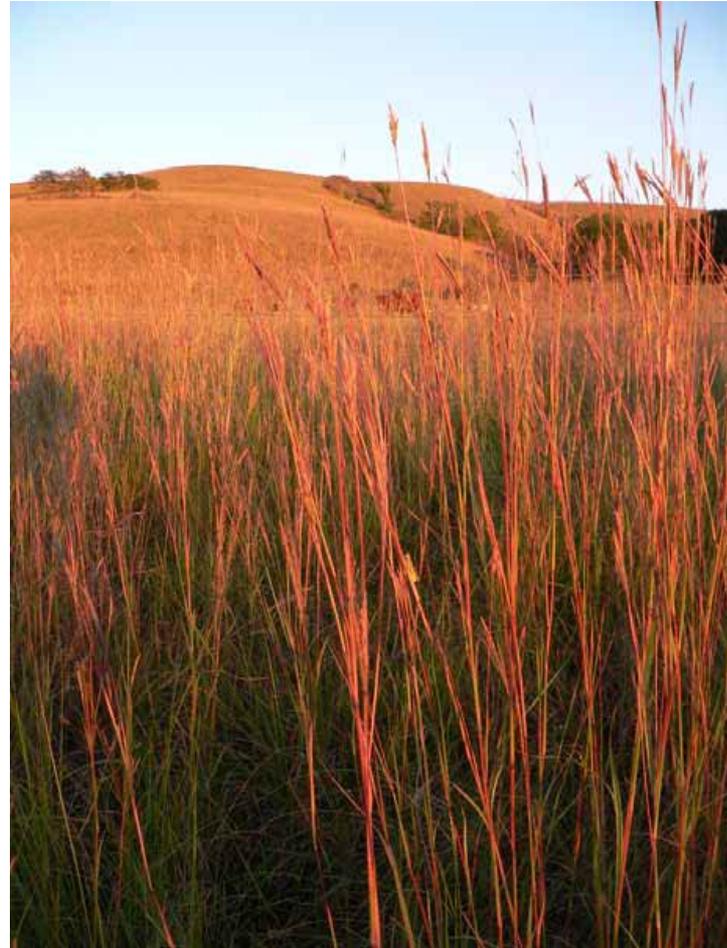
Tier 1: Preliminary Site Evaluation

- Landscape-scale screening of possible sites
- WEG pages 12-13



Tier 2: Site Characterization

- Broad characterization of one or more potential sites
- WEG pages 14-18



Wind and Wildlife Landscape Assessment Tool



Table of Contents

- ▶ Amphibians
- ▶ Bats
- ▶ Birds
- ▶ Fish
- ▶ Invertebrates
- ▶ Mammals
- ▶ Plants
- ▶ Reptiles
- ▶ Migration Count Data
- ▶ Wind Power
- ▶ Disturbance
- ▶ Land Ownership
- ▶ Audubon Important Bird Areas



Examples of Tier 1 & 2 Tools

- Federal
 - Information, Planning, and Conservation System (FWS)
 - BISON (USGS)
- State
 - Crucial Habitat Assessment Tools
 - Natural Heritage Databases
- NGO
 - AWWI/TNC Landscape Assessment Tool

Tier 3: Field studies...

- ...to document site wildlife and habitat and predict project impacts
- Quantitative & scientifically rigorous studies to assess potential risk
- WEG pages 19-33



Tier 3 Considerations

- Level of uncertainty
- Species of concern
- Duration



Examples of Tier 3 Tools

- USFWS Federally-listed species survey methodologies
- USFWS Eagle Conservation Plan Guidance
- National Wind Coordinating Collaborative
 - Comprehensive Guide to Studying Wind Energy/Wildlife Interactions

Coming Up: Panel Discussion



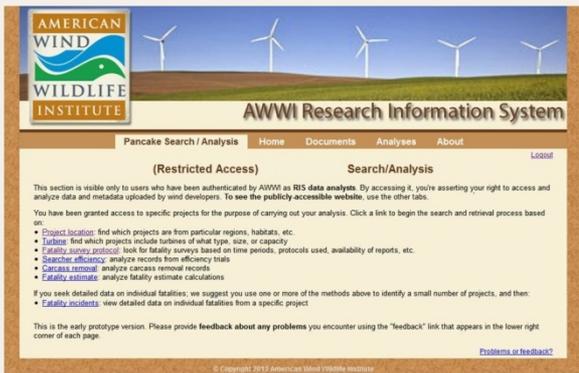
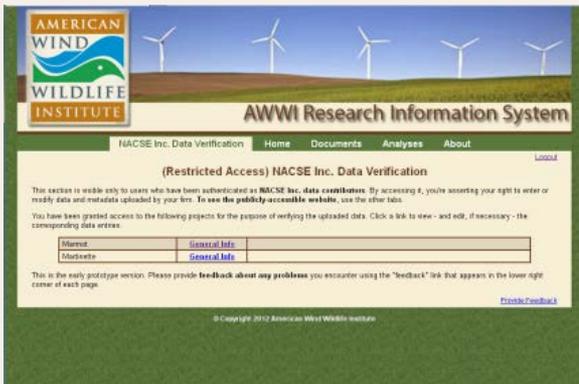
Tier 4: Post-construction studies to estimate impacts



- Fatality studies
- Assessing direct & indirect impacts of habitat loss, degradation, fragmentation
- WEG pages 34 - 42

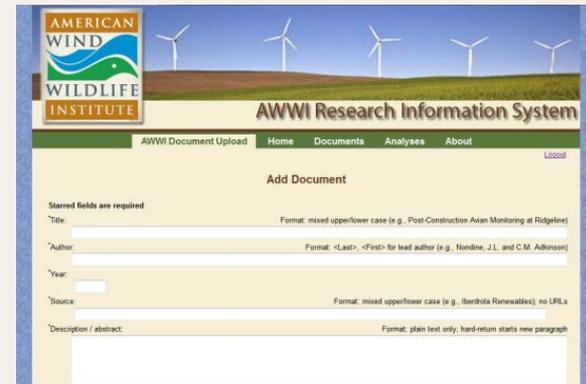
Research Information System (RIS) Prototype Portals

Company Portals
(for data validation)

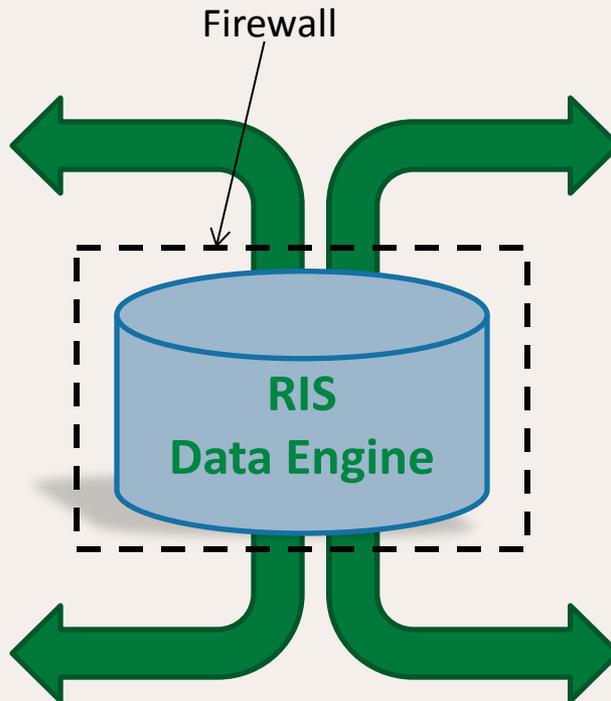


Analyst Portal
(data query & retrieval)

AWWI Portal
(literature curation)



Public-Access Portal
(literature query & retrieval)



Tier 5: Other post-construction studies & research

- Analyze factors associated with impacts in those cases where Tier 4 analyses indicate they are potentially significant
- Identify why mitigation measures were not adequate
- Assess demographic effects on local populations of species of concern
- WEG pages 43 - 48

References

Tool	Web Address
Land-based Wind Energy Guidelines	www.fws.gov/windenergy
Information, Planning, and Conservation System	http://ecos.fws.gov/ipac
BISON	http://bison.usgs.ornl.gov
Crucial Habitat Assessment Tools	http://www.westgov.org/initiatives/wildlife/380-chat
Landscape Assessment Tool	http://wind.tnc.org/awwi/#
Comprehensive Guide to Studying Wind Energy/Wildlife Interactions	www.fws.gov/windenergy