

Kirtland's Warbler Conservation Team
Spring Meeting
April 6, 2021
10am-3:30pm (ET) via Zoom



MEETING MINUTES

Welcome, Introductions and Meeting Overview (Shawn Graff and Dave Ewert)

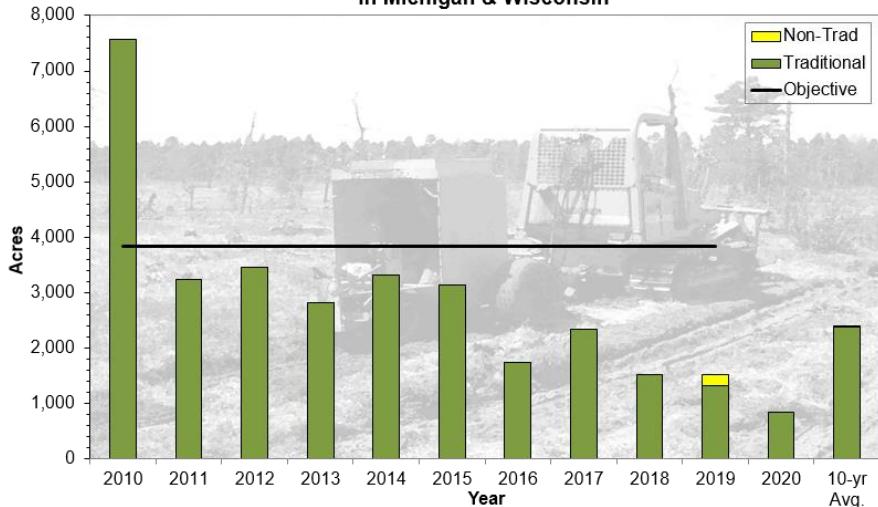
Recording minutes: 11:15-16:01

Post-Delisting Monitoring Plan (PDMP) (Chris Mensing) (50 minutes)

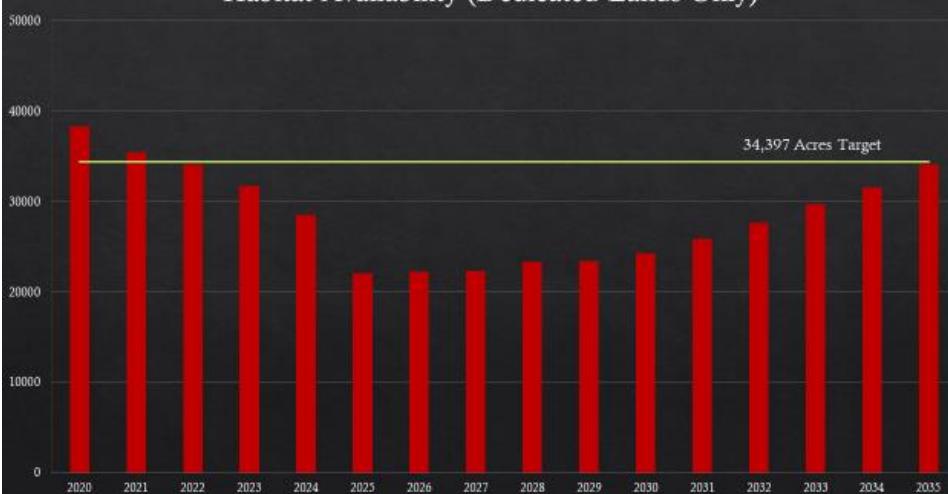
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- A PDMP is required when delisting a species from the Endangered Species Act
- Refers to activities undertaken to verify that a species delisted remains secure from the risk of extinction
- Requires a final report summarizing monitoring results and a final conclusion
- During any stage of the PDM period, USFWS may initiate procedures to re-list if data indicate the species or its habitat is experiencing a significant decline
- KW PDMP developed with the MDNR and USFS
- Four Focus Areas:
 - Breeding population
 - Brown-headed cowbird management
 - Breeding habitat availability
 - Information on specie's full life cycle
- Developed using Conservation Plan, the Agency Commitment MOU, Cowbird MOA, and metrics currently presented at Conservation Team meetings
- Extends to 2031
- New acreage targets:
 - 1,560 – MDNR
 - 1,211 – Huron-Manistee NF (down from 1,600)
 - 670 – Hiawatha NF
 - On average, 34,397 acres available at any time
- Duration of use – 10 years
- Density (average acres/pair)
 - 22 – MDNR
 - 16.8 – Huron-Manistee NF
 - 100 – Hiawatha NF

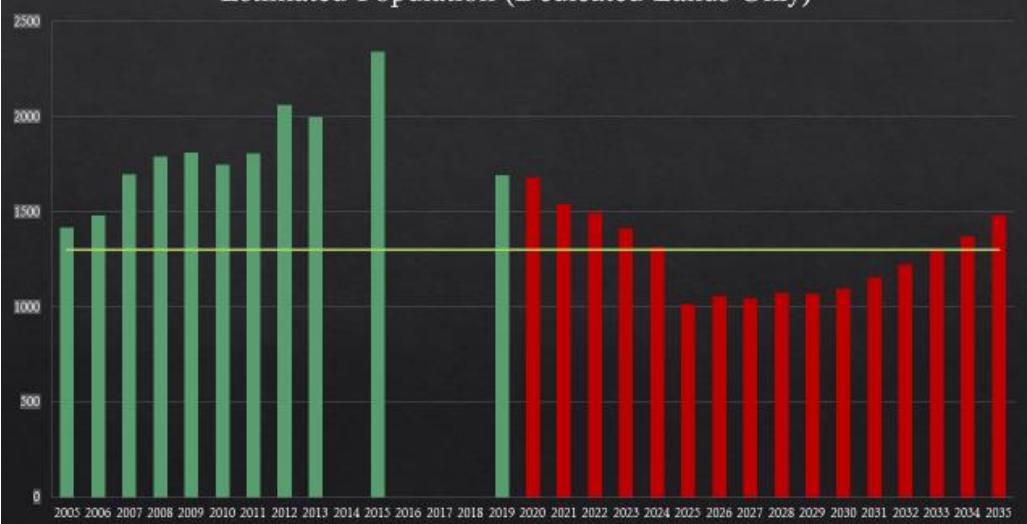
Kirtland's Warbler Breeding Habitat Established in Michigan & Wisconsin



Habitat Availability (Dedicated Lands Only)



Estimated Population (Dedicated Lands Only)



SUBCOMMITTEE REPORTS

Human Dimension and Capacity Building Subcommittee Presentation: "Engaging Proactively and Effectively with Private Landowners" (Presenter: Kayla Knoll; Facilitators: Emily Pomeranz, Katie O'Brien) (60 minutes)

Recording minutes: 1:07:00-2:11:40

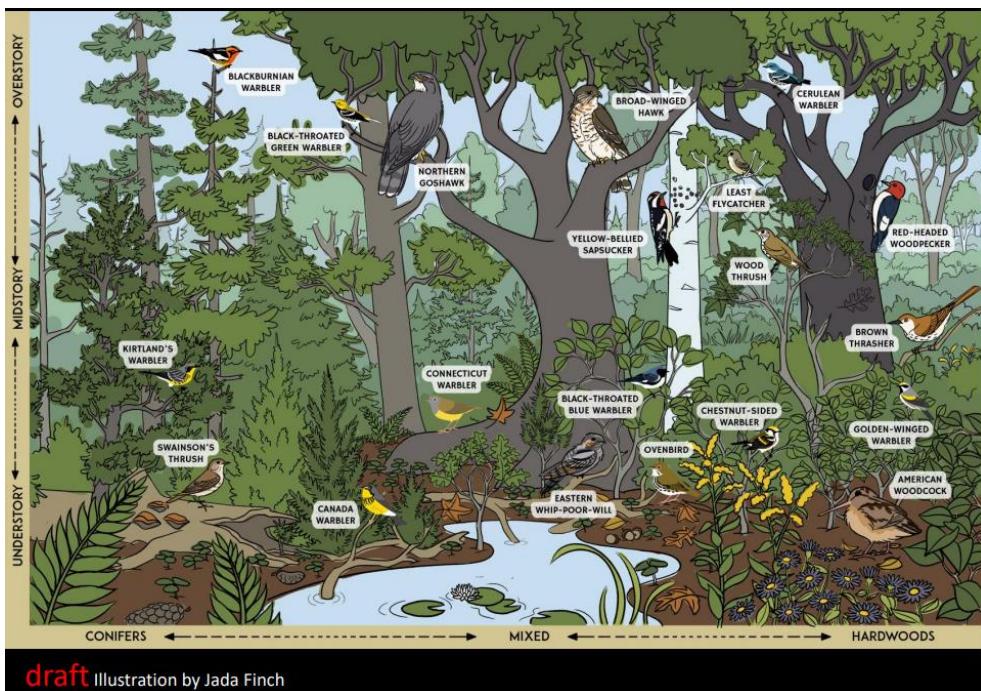
- Two main goals of Kayla's Discussion were to Introduce Forestry for Michigan Birds and Introduce RCPP (round 2)

Forestry for MI Birds:

- Forestry for MI Birds (formed in 2018) is a program to help MI landowners, foresters, and other natural resource professionals manage forests in ways that benefit birds and other wildlife
 - "Use birds to tell the story of sustainable forest management"
- They put together a stakeholder workshop to discuss and discover what other groups have done. They found several other successful programs from states that they wanted to use to develop a MI-based model as a toolkit.
 - <https://maineaudubon.org/projects/forestry-for-maine-birds/>
 - <https://vt.audubon.org/conservation/foresters-birds>
- In 2020, they were awarded a three-year grant from the US Forest Service & started working on their strategy:



They put together their list of 20 priority species and have a [draft](#) of a "Where in the Woods" diagram:



draft Illustration by Jada Finch

- They then defined their target audience as: Private non-industrial forest owners, Private industrial forest owners, land conservancies, tribal agencies, foresters, loggers, and land managers
- Their main goal in targeting them is to stop declines of birds in need, and help their audience be aware and take action to result in better homes for birds.
 - They will do this by raising public awareness about importance of bird and climate-smart forestry and provide resources. They will also provide foresters and other land managers the tools to integrate important bird habitat in their forest mgmt. planning.
- They are developing two different books (one for landowners; one for land managers) and the estimated publication date is January 2022.

RCPP (USDA-NRCS Regional Conservation Partnership Program):

- From 2014-2021, RCPP Round 1 accomplished >6,000ac of GWWA habitat using BMPs on private land
 - It's working: GWWA density doubled at treatment sites; breeding birds detected on 90% of sites w/in 3 yrs.
 - 700 site visits; helped 500 landowners apply for cost-share
- RCPP Round 2 (2021-2025) – now with Kirtland's Warblers
 - 6, 670 additional acres of ESH using GWWA + KW BMPs
 - RCPP investments of \$5 million matched by \$7.6 million in partner contributions over 5 years

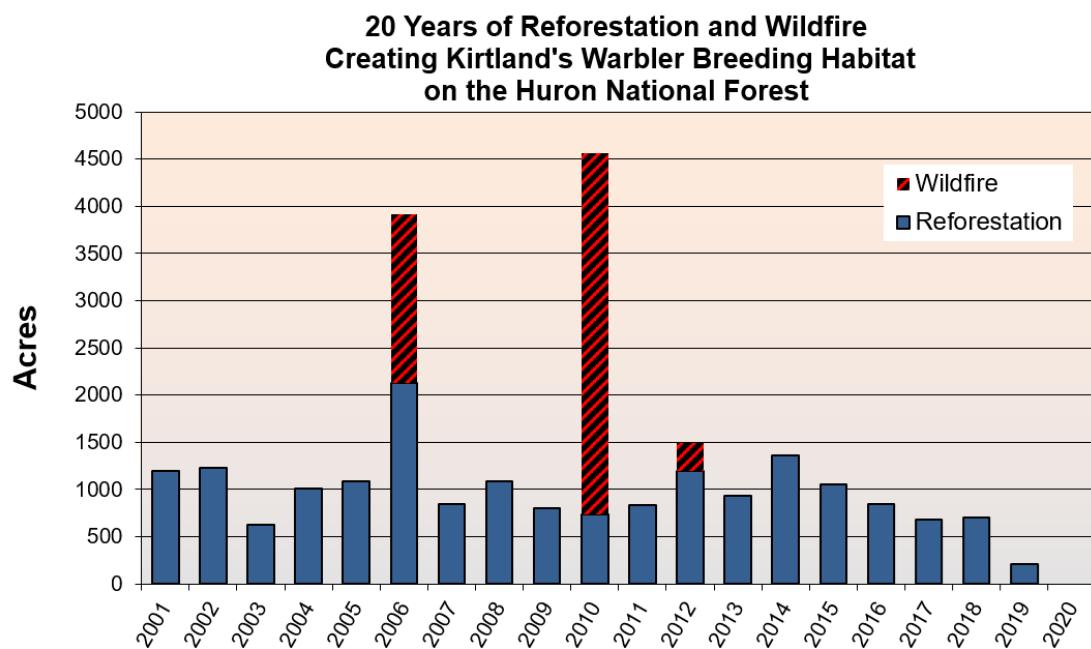
MDNR On-going KW Habitat Management Activities

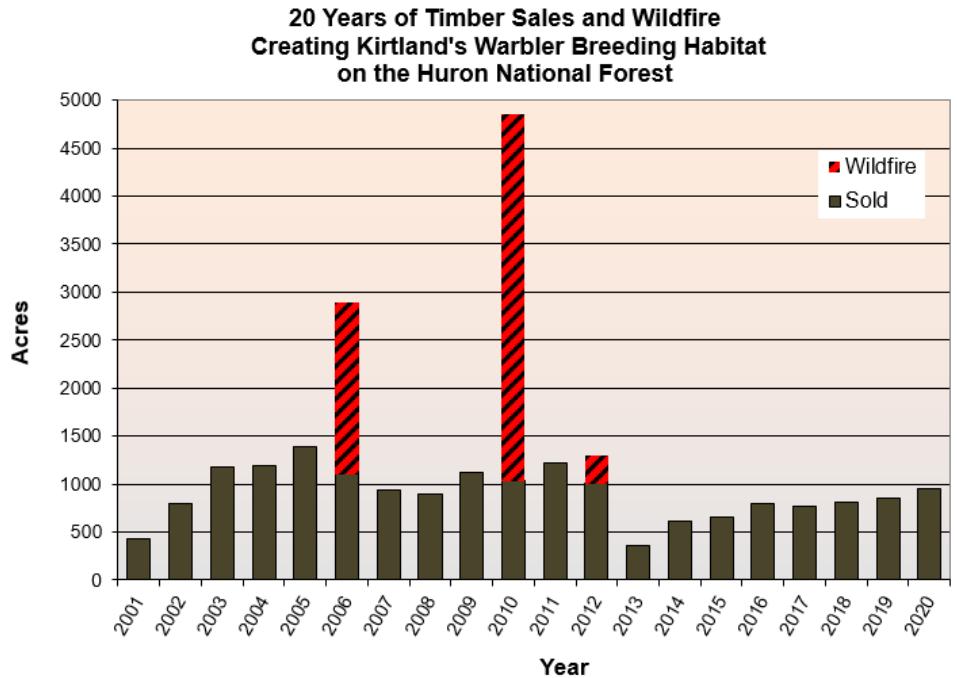
KWMU	Timber Sale	County/FMU	Acres	Status	Proposed Planting Date	Comments
Lovells	Lovells KW Sale	Crawford/Grayling	548	Trenched	2021	Density Project - 900 TPA
Pere Cheney	4 Mile KW Block		330	Trenched	2021	Density Project - 1200 TPA
Ogemaw/St. Helen	Beaver Trail KW		587	Trenched	2020, 21, 23	Density Project (Control) - 1452 TPA. 154 ac in '20, 303 in '21, and 124 in '23.
Fletcher	Fletcher KW Block	Kalkaska/Traverse City	799	On-going Scarification 20-21		Natural Regen with fill-in plant contingency after year 3.
Ogemaw/St. Helen	School Rd KW	Ogemaw/Roscommon	634	Sale Closed. Trenching planned in '21.	2022	Density Project (Control) - 1452 TPA
Ogemaw/St. Helen	School Rd KW	Ogemaw/Roscommon	190	Scarification 2021		Natural Regen with fill-in plant contingency after year 3.
Manistee River	Sop Sops KW	Kalkaska/Traverse City	400	Sale Closed. Trenching planned in '21.	2022-23	Density Project - 1200 TPA
Monument	Monument 46	Oscoda/Grayling	460	Recently closed. Trenching planned in '21.	2023	Will be trenched in 2021
Down River	McMasters Pine	Crawford/Grayling	650	Open Sale	2023	Density Project - 900 TPA
Damon	Damon 96	Ogemaw/Roscommon	588	Open Sale	2023	Density Project - 1200 TPA
Pere Cheney	Pere Cheney 75	Crawford/Grayling	700	Open Sale	2023	
Leota	Leota 121	Clare/Gladwin	640	Open Sale	2023 or 24	
Clear Lake	Clear Lake 9	Montmorency/Atlanta	238	Open Sale	2023 or 24	
			6764			

- 2. Improve jack pine marketability to mitigate program costs and increase habitat biodiversity.
 - Systematically evaluate and test outcomes on silvicultural variables on the 25% of lands not managed using “traditional” techniques. (Rotation Length; Incorporation of Stable Value Species; Natural Regen; Tree Spacing)
 - Several recent MDNR sales which included harvest specifications to promote natural regen have been closed with scarification on-going or planned.
 - Several MDNR red pine inter-planted/adjacently planted will be evaluated for occupancy.
 - Identify, maintain and restore rare natural features and communities within the Kirtland’s Warbler Management Areas.
 - Evaluate wildfire areas
 - Increase Structural Diversity
 - Promote Natural Features inventories
 - MDNR - Complete a comprehensive assessment of essential habitat
 - USFWS – Promote retention of ecological characteristics
 - USFWS – Utilize prescribed fire where and when possible

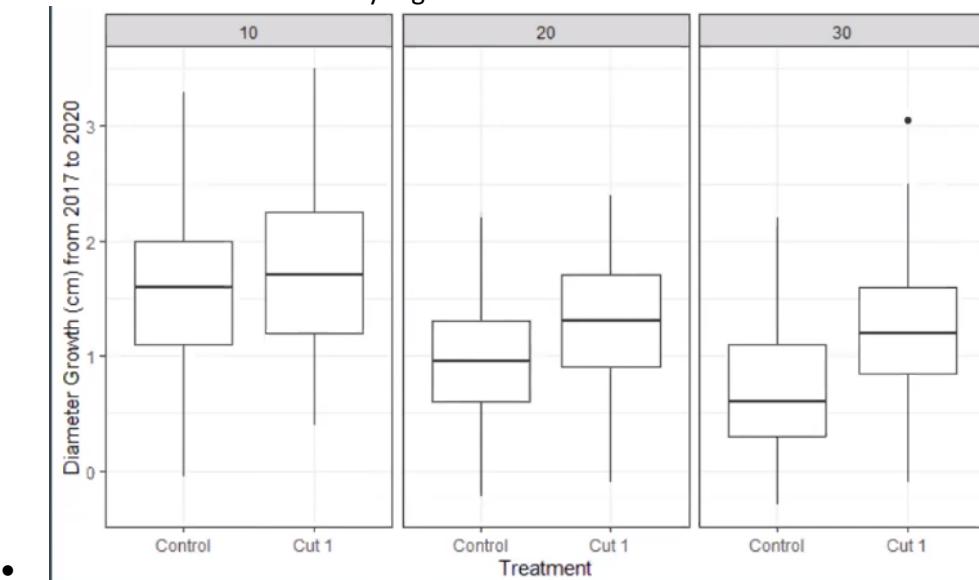
- Eric White, USFS, gave an update on the Reforestation Schedule for the Huron-Manistee National Forests:

Kirtland's Warbler Reforestation Schedule								
Huron-Manistee National Forests								
06-Apr-21								
REF YEAR	KWMA	BLOCK NAME	SITE	ACRES	M Trees	Method	NEPA DOC	NEPAYear
2021	Mack Lake	North Wagner			34.0	FILL	Mack/Mckinley KW Proj	2007
	Mack Lake	Warbler Road Rx Burn		338		BURN	Warbler Road CE	2016
	Mack Lake	Watson KW		82	89.3	TRCH	Mack/Mckinley KW Proj	2007
	Pere Cheney	Nuthatch	A		333.0	FILL	Big Chase KW & Haz Fu	2009
	Pere Cheney	Nuthatch	B	366	0.0	NRHI	Big Chase KW & Haz Fu	2009
	Pine River	SnowBird KW		280	304.9	TRCH	Snowbird KW	2011
	Pine River	Turner Deer KW	A	336	365.9	TRCH	Snowbird KW	2011
	Pine River	Turner Deer KW	B	83	0.0	NRHI	Snowbird KW	2011
	Tawas	Wawa			100.0	FILL	Jumpin Jackpine KW	2008
	Subtotal for 2021 :			1485	1227.1			
2022	Pere Cheney	Festuca		177	192.8	TRCH	Briggs and Bridge KW	2015
	Pine River	Carter KW (GNA)	A	476	428.4	TRCH	Roy Creek	2016
	Tawas	Vaughn Creek KW		411	448.7	TRCH	New Dawn KW	2011
	Subtotal for 2022 :			1064	1069.9			
2023	Big Creek	Hognose	A	407	443.2	TRCH	Briggs and Bridge KW	2015
	Mack Lake	Weeks Road KW		283	308.2	TRCH	Warbler Road CE	2016
	McKinley	Blockhouse West Rx Bu		399		BURN	Blockhouse Project	2014
	Tawas	Sunrise KW		538	585.9	TRCH	New Dawn KW	2011
	Subtotal for 2023 :			1627	1337.3			
2024	Mack Lake	Deyarmond		428	517.3	TRCH	Six Mile KW EA	2018
	McKinley	Blockhouse East Rx Bur		475		BURN	Blockhouse Project	2014
	Pine River	Roy Creek KW	A	369	401.8	TRCH	Roy Creek	2016
	Subtotal for 2024 :			1272	919.1			
2025	McKinley	Comins Creek		484	527.1	TRCH	Six Mile KW EA	2018
	McKinley	Six Mile KW (GNA)		379	412.7	TRCH	Six Mile KW EA	2018
	McKinley	Weaver KW	A	542		ROLL	Six Mile KW EA	2018
	Subtotal for 2025 :			1405	939.8			





- Megan Machusko (graduate student at MI State University working with David Rothstein) gave an update on MDNR-MSU Jack Pine Research :
 - Overall goal of the research is to improve the financial stability of KW management by identifying silvicultural approaches that will reduce management costs, increase marketability of forest products, or both.
 - Precommercial thinning (2017 plot data) showed that the greatest growth increase btw control and thinned sites was 55% in the 30-yr age class:



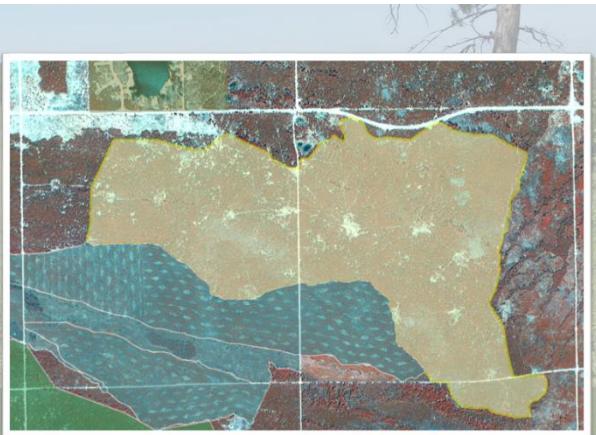
- Retrospective Density Project Data showed lower density plantations produce trees with larger diameters, heavier branches, and deeper/wider crowns. Preliminary data do not

show a relationship btw stem density and a peak KW census occupancy.

- Phil Huber, USFS presented on the Kashian-Inspired KW Stocking Density Project:

Vaughn KW

- Mack Lake KWMA
- 579 acres
- 279 acres traditional
- 300 acres non-traditional

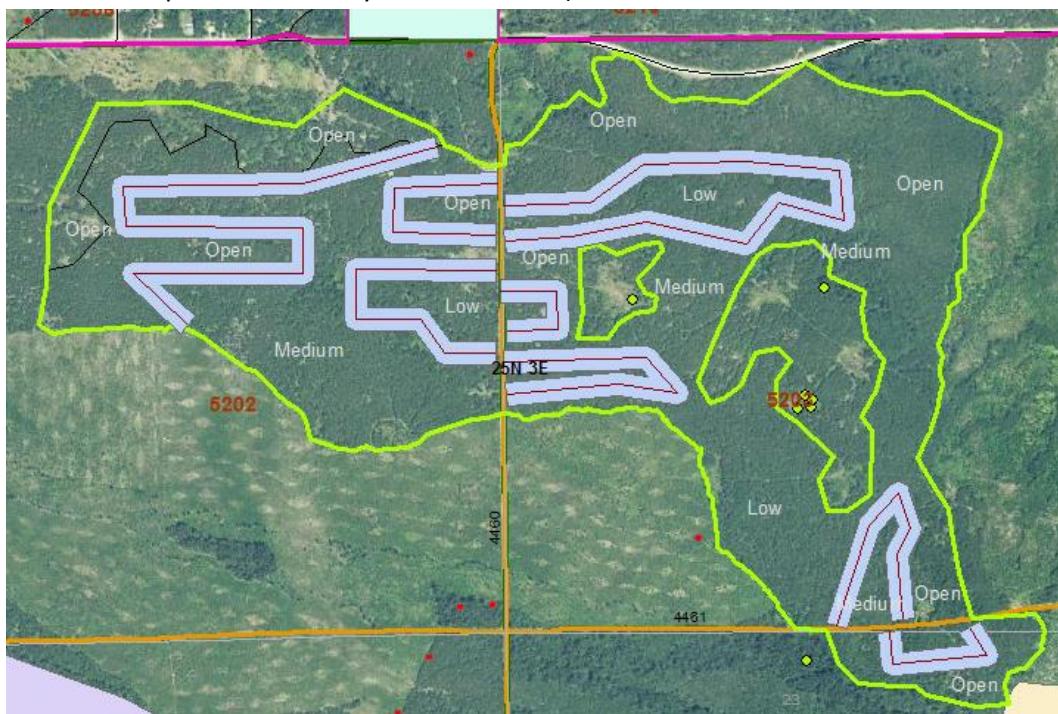


- Non-Traditional Habitat - Project Goals:
 - Reduce planting cost
 - Increase timber value for the next rotation
 - Improve wildlife habitat by increasing structural and species heterogeneity/diversity
 - Maintain 50%+ KW density (i.e., KW block would hold at least half the birds it would with traditional management)
- Reforestation Objectives:
 - 50% Open (<200 trees/acre, Kashian Class 1 + Class 2)
 - No planting
 - Wildlife benefit
 - 10% low density trees (200 - 400 trees/acre, Class 3)
 - Natural regen or jack pine planting (400 trees/acre)
 - Increase timber value
 - Wildlife benefit
 - 15% medium density trees (400-999 trees/acre, Kashian lower Class 4)
 - Natural regen or jack pine planting (800 trees/acre)
 - Increase timber value
 - 25% high density trees (> 1000 trees/acre, Kashian Class 4 + Class 5)
 - Natural regen or jack pine planting (1452 trees/acre)
 - Expect KW to use for breeding

- Tree Cost Example: (Total tree cost for non-traditional habitat would be \$56,654, which is 40% of traditional.

Non-traditional Planting Tree Cost			
Density Class	Acres	Planting Density (trees/acre)	Tree Cost (\$225/1000 trees)
25% high	146	1089	\$35774
15% medium	87	800	\$15660
10% low	58	400	\$5220
50% open	291	n/a	\$0

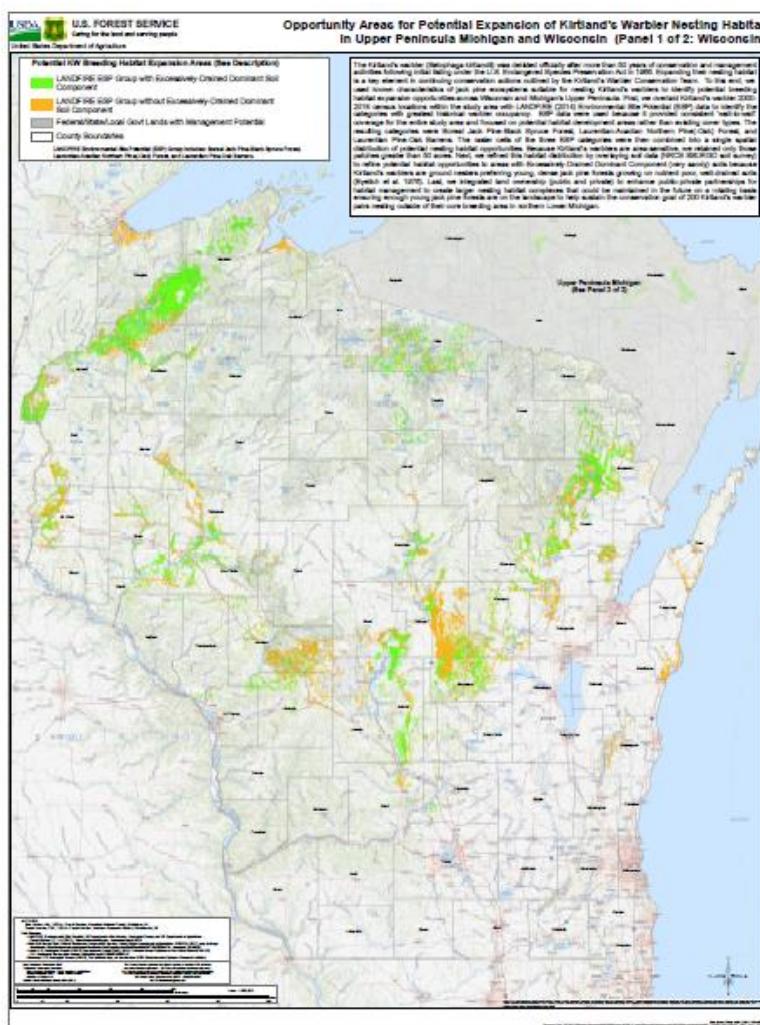
- Density plantings: (it will be sold this year, then take 2-3 years to cut, then will be planted about 2 years after that...)

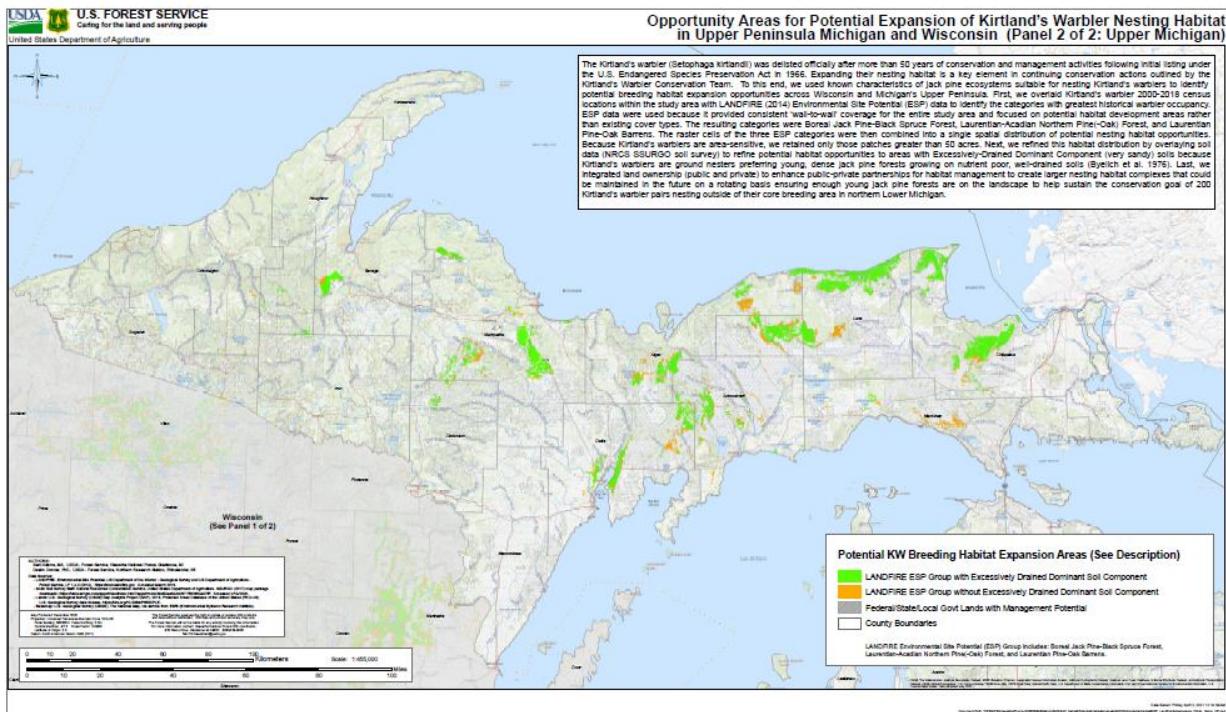


- 3. Evaluate and implement management goals outside of the core breeding range.
 - Assess the status and distribution of potential habitat management opportunities to determine if changes are needed to areas currently managed for the Kirtland's Warbler, considering current concentration of breeding pairs and climate change.
 - Evaluate 100 pair goal -- **New goal of 200 pairs.**
 - Determine the number of habitat acres need to sustain the population goal
 - Development of spatial model to identify areas in UP MI, WI, and MN which have the potential to be managed for Kirtland's Warbler breeding habitat using LandFire.
 - Development of spatial suitability model for ON.
 - ID and develop partnerships
 - Develop Best Management Practices for habitat management outside of core.

- Davin Lopez, WI DNR, gave a presentation on “Mapping Beyond the Core Breeding Area in Michigan”
 - Goal is to map areas in the U.P., WI, Ontario, and MN that has current or future potential as KIWA breeding habitat
 - Ultimately the working group decided that they want at least 200 pairs outside of Michigan’s Lower Peninsula (up from previous goal of 100)
 - Steering Committee approved new goal in 2019
 - Leaders and managers need tools on a large scale to identify areas to explore further for KIWA habitat management
 - USFS (Sam Adams and Deahn Donner Wright) took the lead in developing a mapping tool
 - For the background/development of maps: GIS/Landfire map development
 - 50 Acre minimum contiguous areas
 - Focuses on soil types and not current land cover
 - Will need ground truthing on a case-by-case basis

Opportunity Areas for Potential Expansion of KW Nesting Habitat:





- Ongoing and Next Steps:
 - Based on ~area per breeding pair in each region (U.P., WI, Ontario, MN?), how much habitat is needed to support a minimum of 200 pairs at any one time?
 - What are the threats (insect/disease) specific to each area that may affect KW capacity?
 - What is the cost of Jack Pine management in each area given threats?
 - Who are additional partners we can engage to reach minimum 200 pair goal and consider biodiversity on the landscape?
 - How do we monitor and establish adaptive resource management feedback loop?
 - How can you utilize these maps?
 - Does the Expanding the Breeding Range Working Group have the capacity and expertise to take on all of the above?
- 4. Evaluate the scope and needs of the cowbird control program.
 - Determine the appropriate level of cowbird control needed to maintain the Kirtland's Warbler's population above recovery objectives taking into account declining cowbird populations and changes in funding.
 - Evaluate KW response to reduced cowbird trapping
 - Determine correlation between cowbird presence and rates of parasitism
 - ID and establish trigger points
 - Continue WI work
 - Coordinate transfer of responsibility from USFWS to MDNR
- 5. Develop and keep current a list of breeding range research needs and implement a feedback loop to integrate research results into habitat management practices.
 - Develop and maintain research needs list

- ID conservation planning and research needs list to communicate with KWCT for prioritization and distribution
- Communicate updated needs every 2 yrs
- Maintain and keep current a lit database. Ensure current research results are monitored and evaluated for integration into breeding range management techniques
- Agencies will integrate new science
- USFWS – Develop research demo sites

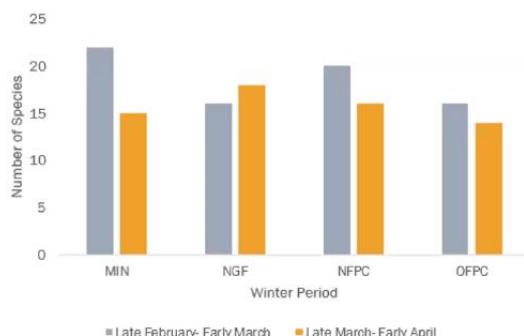
Nonbreeding Range Subcommittee Discussion (Dave Ewert, Bradley Watson, Scott Johnson) (45 minutes)

Recording minutes: 4:27:04-4:54:44

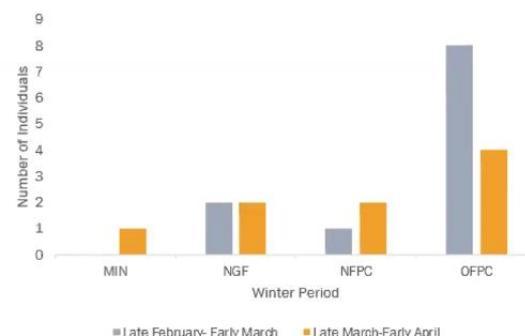
- KW Non-Breeding Conservation Plan is completed and the updated version will be available on <http://www.kwconservation.org/>
- Non-Breeding Work Plan has been updated and updates are always in progress about every six months
- Dave Ewert thanked Bahamas National Trust and the USFS International Program for building capacity for long term work and research/efforts
- He also thanked Mike Akresh of Antioch University, who has had long associations with Gerace Research Centre (University of Bahamas)
- Bradley Watson and Scott Johnson of Bahamas National Trust gave a presentation on KW Monitoring on Eleuthera Goat Pastures:
 - Goats are KW habitat creators (a mix of native and imported goat stocks). They are grazed rotationally on farms and Scott and Bradley desire to work with farmers to see both success on goat farms and success creating KW habitat).
 - Study sites: goat farms and surrounding points. They did point counts and vegetation sampling to gather data.

Preliminary Results

NUMBER OF BIRD SPECIES SEEN DURING COUNTS



NUMBER OF KIWA SEEN DURING COUNTS



- Part of the work they were doing in Eleuthera was collecting fruits so that they could start nurseries. Goal is to determine how they can propagate fruit plants

both in the field and in nurseries. Their focus is on sage, as they have had more luck with it versus other species.

- Scott and Bradley shared multiple fantastic videos and photos from their trip – watch the recording to see for yourself!

Monitoring Updates and 2021 Census (Katie O'Brien, Bill Rapai, Nathan Cooper) (30 minutes)

Recording minutes: 4:55:27-5:40:27

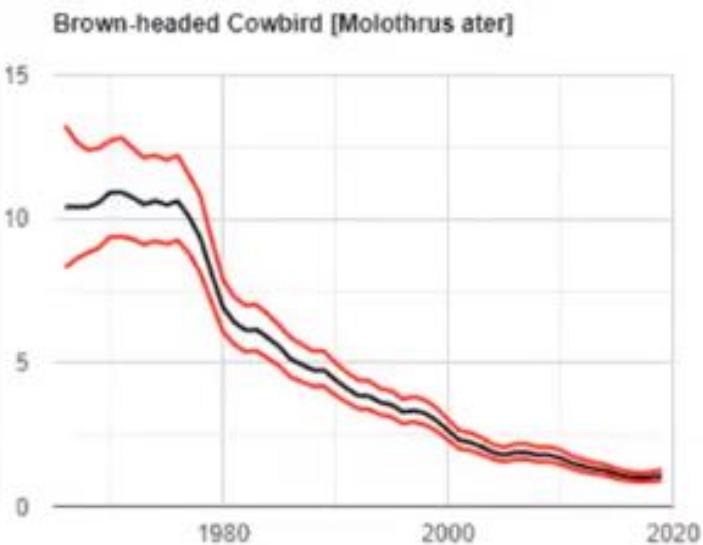
- Katie O'Brien, USFWS, gave an update on the KW Monitoring Ad Hoc Group:
 - Ad Hoc group established in May 2021 to prep for the 2021 Census

TASK	Nov '20	Dec '20	Jan '21	Feb '21	Mar '21
Investigate online training platforms					
Send potential volunteer contacts (except for Huron-Manistee list) to Bill Rapai					
Survey maps for MI DNR Lands completed					
Develop online training program					
Send contact letter, protocol, & JHA to prospective volunteers (email and postage)					
Develop field training materials					
Agency request internal help and firm up paid staff commitments					

TASK	Apr '21	May '21	Jun '21
Firm up volunteer commitments (review & notify all applicants)			
Develop field schedules for paid staff and assign locations			
Determine which locations require volunteer surveyors			
Determine need for USFWS staff to come help with KW census			
Develop field schedules for volunteers/additional USFWS, assign locations, and pair unexperienced surveyors with experienced surveyors			
Census field training			
Conduct KW Census			
Return field data sheets to census coordinators			

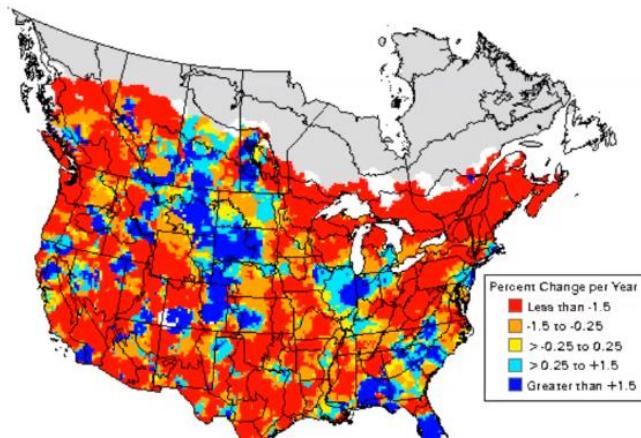
TASK	Jul '21	Aug '21	Sep '21	Later '21
Census coordinators process data sheets, summarize, and send results to Chris Mensing				
Present census results at Fall KWCT Meeting				
KW Alliance prepare (coordinate with Agencies) and distribute Census press release				
Publish census results (Passenger Pigeon (WSO Journal) or Agency Tech Report)				

- Update Census Protocol (2022)
 - Smithsonian Migratory Bird Center project to compare methodologies during the 2021 census.
 - Goal is to reduce cost while providing reliable population estimates.
- Summary of Brown Headed Cowbird Population Trend:
 - Surveys conducted in 1966-2019 (pause in 2020; will resume in 2021). 4.2% decline over time. (MI = 2.4% decline; WI 2.3%)



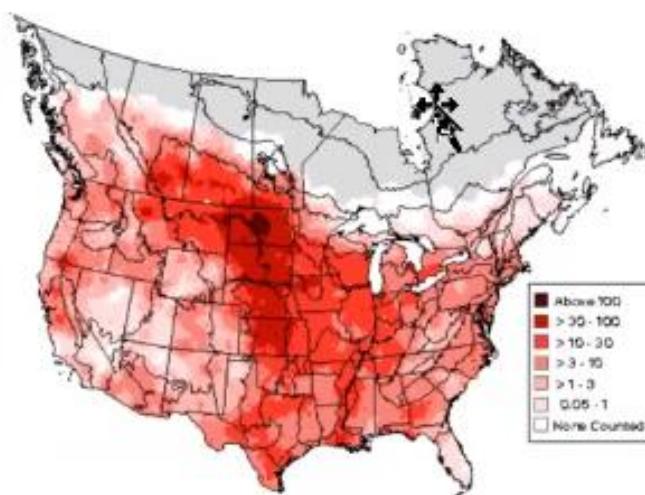
Brown-headed Cowbird *Molothrus ater*

BBS Trend Map, 1966 - 2015



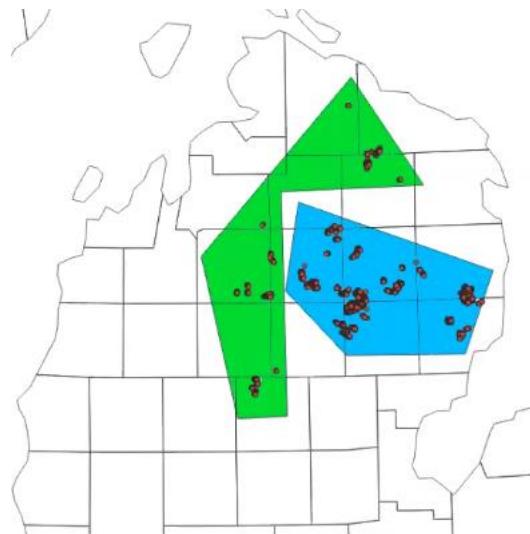
Brown-headed Cowbird *Molothrus ater*

BBS Summer Distribution Map, 2011 - 2015



- Bill Rapai, Kirtland's Warbler Alliance, presented on the online training module for volunteers to ensure that they obtain a certain level of competency. (Bill shared the website on the screen live for everyone one to see – view video for details)
 - This is a temporary website that will be live for about two months.
 - The training website will have census and survey protocols.
 - It also has KW songs (listening instructions), jack pine species identification, triangulation instructions, and even job hazards.
 - To date, 34 volunteers are signed up.
 - The website should be able to be saved and updated for the next Census.

- Nathan Cooper, Smithsonian Migratory Bird Center, presented on a 2021 Research Update
 - **BHCO update:** Reduced trapping 2015-2017 (3 of 384 nests parasitized – 0.8%))
 - Ended trapping 2018-2019 (5 of 278 nests: 1.8%)
 - Recent collaboration (Brown, Donner, Cooper) uses models to determine the max parasitism rate: Lower Peninsula can sustain a 12-13% parasitism rate and the population can be sustained. The peripheral area can sustain up to even a 40-50% parasitism rate, as long as the core area is lower:



- 2021=last full nest searching season (funded and planned)
 - 2022 and beyond=may do nest searching (lots of depending factors)
 - How to consider all of this in light of a potential smaller population size
- **KW Monitoring Updates:**
 - Point counts + full annual census + spot mappings
 - Point counts = proposed new method
 - Spot mapping = closest “true” density

- Two main questions trying to answer through this research: How do point counts and traditional census compare? / How close do either method get to “true” density as estimated to spot mapping?
- Point counts:
- Spatial Coverage: 220 locations in Lower Peninsula
- Temporal Coverage: (Five 10-day periods; May 10-June 30)
- Age class coverage:



Updates

Recording minutes: 5:40:27-5:55:08

- Kirtland's Warbler Alliance (Bill Rapai)
 - Jack Pine Planting Day is May 1, 2021 (partnering with Huron Pines)
 - Limited to 20 people due to Covid. Plans are to plant one acre.
 - KW Census Field Crew t-shirts are available – provided to volunteers; others are for sale – contact Bill for details



- KWA is sending letters and developing material for Legislators. Secretary Holland has been invited to come for a private KW tour
- Fundraising (Dave Ewert)
 - ABC Long Term Fund is approx. \$166,000 currently. Lynne Mecum is new with ABC and will be working with donors to increase the endowment for KW. Shawn Graff thanked all the partners for supporting the KW Coordinator position.
- Fall Meeting (In-Person) & De-Listing Celebration
 - Keith Kintigh stated the September meeting will be a good time to bring all the past and current partners together that would be focused on the work of partners instead of focused on a very delayed de-listing celebration.
 - Kirstie Heidenreich, KW Coordinator, will be working on planning the details of the event – contact her for questions or details. Kirstie stated the target dates are Sept. 14-15, 2021 but those dates are not yet set due to KCC facilities not available in 2021.
- Kirtland's Warbler Festival (Mike Petrucha) – June 5, 2021 via Zoom
 - Mike informed the group that 2021 will be a virtual festival. He has seven different groups and agencies presenting on what they are doing now that KW is delisted.
 - The festival will start out with a virtual tour in KW habitat
- KW Calendar Update from USFS:
 - All the calendar presentations were virtual with 14 schools from Michigan and a few in the Bahamas. They received about 350 entries and Kirstie shared on live video the top 18 entries – view if you'd like to put a smile on your face! Examples:

