**Inclusion of disabled wildlife viewers: A literature review**

**Webinar transcript**

Thanks for joining our webinar here. This is a webinar supported by a Multi-State grant from U.S. Fish and Wildlife Service, Wildlife and Sport Fish Restoration and in collaboration with the Association of Fish and Wildlife Agencies. I'm Ashley Dayer from Virginia Tech. You can go forward to slide Freya. So I quickly wanted to introduce our speakers here today. So as I said I'm Ashley Dayer. I'm an Associate Professor at Virginia Tech and the PI on this project focused on inclusion and diversity specifically related to disabled wildlife viewers. Also joining me and presenting today will be Freya McGregor who works as a Research Associate in our lab and she is a trained occupational therapist. And then PhD student Emily Sinkular. So we'll all be co-presenting today. You will hear from each of them as they present. We are based in Blacksburg Virginia is where Emily and I are. And Freya's in Alabama. Feel free to introduce yourselves as well in the chat. Tell us where you're joining us from and the organizations that you're representing too. All right. Move forward. Okay. So our focus is on wildlife viewing and disability. So we want to start with a little bit of background about how we got engaged in this project. We have been working with the Wildlife Viewing and Nature Tourism Working Group of AFA for several years now. And in line with the US Fish and Wildlife Service’s National Survey of Hunting Fishing and Wildlife Related Recreation our focus on wildlife viewing includes closely observing, feeding, and photographing wildlife, visiting parks or natural areas to observe, feed, or photograph wildlife, and maintaining plantings or natural areas for the benefit of wildlife. So when we talk about wildlife viewers we're talking about that full range. Next, so we conducted a survey several years ago now. our final report from that was published in 2022. And we looked at wildlife viewers across the U.S. Again in collaboration with the Wildlife Viewing and Nature Tourism Working Group and we found that there was a whole array of participation in line with those activities that I mentioned. I wanted to share with you just a few highlights of those results. So we see feeding wild birds is the key way that wildlife viewers reported involvement in wildlife viewing. As well as visiting parks and natural areas to view wildlife. And then photographing. And then you can see that our percentages start to drop off to 40% of people saying they closely observe wildlife, or take trips and outings specifically to view wildlife. 30% of people saying they feed other wildlife, which I understand many agencies are not in support of. But we were using that more inclusive definition that came from the National Survey. And then maintaining plantings for the benefit of wildlife was the least prominent behavior. Next in terms of what types of wildlife people view wild birds and land mammals were most common. If you are interested in viewing our full report, which Emily can put a a link to in our chat, you can see all of the other types of wildlife that are of interest to people to view as well. Next, I also wanted to point out that there's a lot of overlap between hunting and angling and wildlife viewing. This is often not considered. We think about how there's different constituents for state fish and wildlife agencies or federal agencies and that there's viewers or there's hunters and anglers. But we actually saw that about a third of our sample were people who fish as well as view wildlife. Only 3% were people who hunt and view wildlife. Of course that's because we just have a small percentage of hunters across the U.S. And then 14% of people fish, hunt, and view wildlife. And about half of the sample were people who only view wildlife. So keep that in mind as we talk about wildlife viewers today - that we're talking about some people who just view wildlife, some people who fish, hunt, and view wildlife, and a good chunk of people who fish and view wildlife. Next, so in our survey we had one question in there that related to disability. And we looked at people's experience with accessibility challenges that we defined as ‘challenges that people face in line with neurodiversity, or mental health challenges, or mobility challenges.’ Or, you know the whole array of descriptions that would relate to disability without using the actual word disability. And we found that 40% of people were saying ‘yeah that describes me’ or ‘that leads to some challenges to wildlife viewing for me.’ And that's led us, in conjunction with the Wildlife Viewing and Nature Tourism Working Group, to say we really need to look into this more - if we're being inclusive of all of the types of wildlife viewers and supporting state fish and wildlife agencies in serving wildlife viewers. Next, another reason that the state fish and wildlife agencies were interested in partnering with us on this is that they are subject to complying with the Americans with Disability Act. As well as federal agencies and NGOs and local governments and businesses. That it must be ensured that people with disabilities have equal opportunities to participate in the programs that they offer. So, our state agency partners who we've worked with on these projects said we'd like to know how to do a better job of that, and maybe even go beyond what's required of the ADA to truly be inclusive of disabled wildlife

viewers. So we've put together a literature review. Freya and Emily have been super busy in the last quarter of of this year really combing what they could find in the literature. As you'll hear today, there wasn't a lot specific to wildlife viewing so they've extended beyond wildlife viewing specifically but then they've also made sure they've been totally comprehensive of wildlife viewing. This literature review is nearly completed. You will be seeing it from us within the next week or so. But here today you're going to hear the highlights of it and we hope that it's going to pique your interest to read even more. We hope that this will be a really accessible resource for you regardless of where you work or your intersection with wildlife viewing. And, I'm sure you're going to learn a lot today from Emily and Freya as they cover the highlights. So today we've organized our webinar into three main sections. Covering a bit of background about disability and inclusion, then talking specifically about the literature related to wildlife viewing and disability, and then finally best practices for including disabled wildlife viewers. And I should say that this literature review is the first step in a project we're doing this whole year where we will also be producing additional webinars and doing focus groups with disabled wildlife viewers. So you can stay tuned for even more insights, but this is what is already out there. All right, take it

away. Hi everyone my name's Freya McGregor my pronouns as she/her. Thank you Ashley for that introduction. It's exciting to have so many people here today to learn more about increasing inclusion for disabled wildlife viewers. So we thought we'd just give a little bit of an overview about what disability is and what inclusion is before we dive in

further. So a disability according to the Americans with Disabilities Act is a physical or mental impairment that substantially limits one or more major life activities. And those activities are mobility, so someone's ability to walk. Cognition, thinking, learning, hearing, vision. The ability to live alone and or the ability to perform self-care activities, like bathing or dressing. So, someone might have a disability because one of these major life activities has impacted or multiple of these major life activities is impacted. And in the U.S., 1 in 4 Americans has a disability. That's a lot of folks. There's 80 people currently so in this in this Zoom room so 20 of us are likely have a disability of some kind. This is a conversation that we need to consider. It's not an “Us” and “Them” conversation. This is a conversation about all of us and disability is the only minority population that you can join at any time. So it's really important that we do this work to include disabled wildlife viewers because at some point it might be us, or a person that we love, if it's not already us or a person that we love who we want to go out and view wildlife. With -in addition to that this statistic on the right 1 in 50 Americans has a diagnosed mental health condition. And I added this because these folks may not be included in that 1 in 4 number with a disability. So mental health conditions: schizophrenia, generalized anxiety disorder, PTSD. There's a whole lot that could impact someone's ability to engage in wildlife, doing programs, or access wildlife viewing locations, too. So, again this is just a conversation about all of us. And whether you have formally fit into that category of having a disability, or whether you have a diagnosed mental health condition, you might experience disability in a temporary way after an operation, or maybe there's some side effects from some medication that you're on for something else. So again this is just a conversation about all of us. So the Americans with Disabilities Act is a federal right. A federal law that was signed in 1990 to prevent discrimination based on disability. Local and state governments are obliged to comply with this federal law. And businesses and nonprofits that provide public-facing services are also obliged to comply with the ADA. In 2010 the ADA standards for accessible design were published. They're available online. You can get them. They cover things like how wide again accessible parking space must be, or where grab bars need to be placed in an accessible stall in a bathroom. They cover buildings, recreation facilities, a whole lot of stuff that is public-facing. But, they don't cover hiking trails. And this is something that I see a lot where a nature preserve might describe a trail as ‘ADA accessible.’ Well, that's not actually possible because it that's not grammatically correct. ‘ADA accessible’ doesn't make sense. You would say that it's ‘ADA Compliant’. It complies with those ADA standards for accessible design. But the ADA standards for accessible design actually doesn't cover hiking trails. So your trail can't be ADA Compliant. Your bathrooms might be. Your visitor center might be. But hiking trails can't be. So just off the bat we've got to make sure that we're using the right terminology. And also that we're not supplement, swapping out the word ‘disability’ for ‘ADA.’ They're different things. They're related, but maybe you mean that your hiking trail is ‘wheel-chair friendly.’ Or maybe you mean that your program is being designed to be inclusive of folks with multiple disabilities. But be specific in the terminology used. That's a really helpful way of increasing inclusion. Speaking of inclusion, that inclusion is an active and ongoing effort to intentionally, not by mistake but intentionally, welcome and incorporate people of diverse backgrounds and life experiences into whatever it is that you're doing. A program, the facilities that you provided, or location and this is different than the ADA. Because the ADA is a law and inclusion is in the social and cultural environments of places and activities that we engage in. So it's how we interact with each other that's where inclusion comes from. So an entity, a wildlife refuge or a nature center, might comply with the Americans with Disabilities Act, but that doesn't inherently mean that someone with a disability will feel included there. Because the inclusion comes from the interactions we have with people. So the staff and volunteers, and the other wildlife viewers at that location is what helps someone feel included. Or,

not. Hi everyone. Thank you for joining us today. My name is Emily and my pronouns are she/her. I'm going to talk a little bit more about people with disabilities participating in outdoor recreation. The literature was kind of limited on disability and wildlife viewing. But, one of the key themes that we've seen throughout outdoor recreation is having a disability does not mean that someone doesn't want to recreate. People with disabilities participate in hiking, biking, kayaking, programs and wildlife viewing. Specifically on public land a recreation survey found that about 1 in 5 families who visited public lands had at least one member of their family who had a disability. So again we're seeing people with disabilities are recreating on our public lands and connecting to wildlife. And the literature also shows us that people with and without disabilities are similarly like to view wildlife. So a similar portion of people with disabilities and people without disabilities both identify as wildlife viewers and like to connect with wildlife that

way. Now I'm going to focus a little bit more on wildlife viewing and disability. First, wildlife viewing or spending time in nature and having these multi-sensory experiences with the sights, and the sounds, and the smells, can lead people to feel more connected to wildlife and nature. In turn, this connection can sometimes lead to wildlife viewers benefiting conservation through a variety of conservation behaviors. There's a lot more in the literature but I just wanted to highlight some of these behaviors Include collecting data on wildlife or habitat, known as community or citizen science. As well as donating money to support conservation or to support state fish and wildlife agencies conservation, which we looked at a little closely in a previous

study. In addition to benefiting the environment, wildlife viewers can also benefit from spending time in nature and participating in wildlife viewing. There's lots of benefits that people with disabilities can experience from spending time in nature. And some of these can include reduced symptoms of depression and anxiety. Social connection, this is a really important theme that we've seen and we'll share throughout this presentation. The opportunity for people with disabilities to connect with the community and the people around them while they are participating in wildlife viewing or outdoor recreation. We've also seen that time in nature can increase problem solving skills for people and kids with disabilities. We see this a lot in some outdoor adventure or environmental education programs as well, these benefits really come through. And finally another benefit is just this mental reprieve and calm. One of the studies that we looked at focused on birders who were blind or low vision and the birders talked about the sense of community and calmness that they had from listening to the bird sounds and connecting to the birds in that way.

So, lots of great things can happen when we engage with wildlife. But, there's lots of barriers that many people with disabilities experience. We broke these into four different categories of barriers. So, personal barriers are not necessarily within someone's control but they're related to an individual so that's why they're grouped into this category. Lots of disabled wildlife viewers said that they had a lack of time, which may be related to the fact that lots of folks with disabilities, their self-care routine in the morning can take a lot of time. Or, they might rely on someone else's help. So that takes time. Maybe they're engaged in more medical appointments in any given week or month so they don't have as much time maybe as non-disabled folks. Lack of money, lack of equipment, and not knowing where they can go to enjoy wildlife viewing in a way that's accessible to

them. Interpersonal barriers are about how people interact with each other. So that social and cultural environment that we were talking about a bit earlier. So, some wildlife viewers with a disability said that if they didn't have someone they could go with, maybe a birding buddy or or a friend who could drive if. if they can't drive that - we had folks say that they had a lack of people supporting them to go. So maybe this is someone at home who could look after the kids so they can get out on their own. That they experienced negative attitudes of others. Perhaps these were staff or volunteers or maybe other wildlife viewers at these locations, that they were interacting with. Crowds. Now this survey was conducted during the the COVID pandemic. So crowds were a particular concern to a lot of folks who were immunocompromised. But I'm sure even now if this survey was conducted now or, or you know six years ago, crowds concern for lots of people for lots of different reasons. And safety concerns. Now that's really broad, there's lots of different safety concerns that someone might have. It might be related to the physical environment, like a hole in the board that the front wheel of their wheelchair might fall through. Or it might be broken glass on the trail that their wheelchair wheels could get a puncture from. Or it could be safety around other people, or dogs off leash. All kinds of things. Like that a lack of accessible features was a really big barrier to viewing wildlife with a disability. So before I dive into this list, just a disclaimer. The photo on the right I took at a lovely, otherwise lovely state park. This is not recommended signage. Instead of telling people who who isn't allowed on a trail or in a facility, it's much better to provide concrete detailed information about the the accessibility of that trail, or that that that building so that people can make up their own minds about whether they want to engage or not. This implies that people who are using wheelchairs are not allowed on this trail. This trail in fact was quite bumpy. There was lots of exposed roots that were quite high. It's not a wheelchair friendly trail. But saying people aren't allowed is kind of not very welcoming, so please don't use signage like that. But a lack of accessible trails. A lack of information about the accessible features of a place. Obstacles like bollards. Those are those like poles that are like maybe two or three feet high that stop cars for example driving down a trail. Boards, big boulders, you know, rocks and gates. There's lots of ways to design gates and and often there isn't a way to get around or through them if you are not non-disabled. So, gates can be an obstacle. Benches or rest areas. We need more benches. A lack of accessible bathrooms. Now, there might have been accessible bathrooms but if they are not open and unlocked or if they are an accessible portaloo way out on an island in a sea of grass that someone can't maneuver over, they're not accessible. Anyway a lack of accessible parking and a lack of accessible public transportation were all barriers to wildlife vieiwng with disability. And then there were programming barriers, too. So staff or volunteers who did not have a good understanding of disability. Maybe they didn't know the right words to use or how to modify a program to make it more inclusive for folks with disabilities. There was a lack of inclusive programming, specifically designed to include folks with disabilities. A lack of wheelchair accessible tour vehicles. This is a photo on the right I took. My parents are the people seated in the back there when they were visiting from Australia at a National Wildlife Refuge. And it's really great, except that it's not wheelchair friendly. So that makes a difference, folks. And a lack of awareness of the impacts of intersectionality. Now intersectionality. We all have multiple identities. I am an occupation therapist, I'm a researcher, I'm white, I'm female, I'm an Australian, I'm a U.S. permanent resident. We all hold multiple identities. But when people hold multiple historically marginalized identities they both have to deal with. For example, being Black and Deaf, separately they are one person. It happens at the same time. They have to deal with being Black and Deaf at the same time. So they're dealing maybe with racism and maybe with a lack of access in a really hearing dominated world. So if programming isn't aware of programming designs, and people running programs aren't thinking about intersectionality they might be creating barriers

unintentionally. So, now we want to shift away from barriers and start talking about best practices for including disabled wildlife viewers at your sites and in

programming. So we conducted a survey of wildlife viewers and one of the questions that we asked is ‘what changes could be made to improve your wildlife viewing experience?’ It's important to note that this question was originally focused on state fish and wildlife agencies. But, we suspect that these findings would apply to all agencies and wildlife viewers would be interested in this from anyone. With that said we can see that disabled wildlife viewers were really interested in receiving information. This information includes information about wildlife around them, information about where to go to view wildlife, information about how to view wildlife, as well as information about where to go wildlife viewing when and where there is no hunting. And later on we'll talk a little bit more about how to share information. Wildlife viewers with disabilities or accessibility challenges were also really interested in having more accessible features at the wildlife viewing locations. As well as some programming. Wildlife viewers were interested in more programs to improve their wildlife viewing skills and on the next slide we can see more programs that they were interested in. Some of these programs that disabled wildlife viewers expressed interest in included virtual programs. Some people with disabilities rely on public transportation or rides from a friend to get to programs. And if they don't have access to travel to your program site, it can be really important to have the option of virtual programs, so people can join from their homes. Again, we're starting to see a little bit more of that connection, the community benefit from wildlife viewing and outdoor recreation. Wildlife viewers were interested in events and festivals programs to interact with other wildlife viewers as well. We also saw that disabled wildlife viewers were interested in more training for guides or mentors to help people support wildlife viewing. As well as volunteer data collection or citizen science, as well as more staff to support wildlife

viewing. So you're totally invested in helping wildlife viewing be more accessible and inclusive for disabled wildlife viewers. That's awesome. How should you design a trail so that it really is accessible? Well there's a bunch of different guidelines and this is not research, these are these are guidelines. There's the Outdoor Developed Areas Guidelines from the United States Access Board. We've got guidelines from Parks Canada, which are older but a little broader. Really great resource because they also have lots of illustrations. Sorry to, to explain why some of these things are really important. And then Oregon Parks and Recreation have their own accessibility guidelines too for trails. So when you get the literature review, which I know you don't have yet, but in the next week or so have a look at this. Because we put up a big table that goes through key access features and that and compares these three different guidelines. Sometimes they recommend slightly different things, which shows that disability is diverse, right. And sometimes it changes. So you have a look at these when you get the lit review. But a couple of really important features of accessible trails include surfaces that are firm, stable, and slip resistant. Having a trail that is wide enough, at least 36 inches wide, that's because folks using wheelchairs and mobility scooters, folks who might have a service dog that will walk alongside them. We need the trail to be wide enough that people aren't forced off the trail that width is is 36 to 48 inches because these guidelines have different recommendations. The wider the trail,l the more likely people can pass each other without problems. There's guidance in there too about passing spaces, how big they need to be and how frequent they need to be. So, check out that literature review when we send it out. The slope, the gradient, how steep the trail is. Basically up to 5% which is pretty gentle, it is the guidance. And cross slope is the angle that you're on as you're traveling down that trail and that's really important for folks using mobility devices and folks with maybe balance issues, so that they don't fall over or tip out of their mobility device. So, cross slope is really important and it needs to be no steeper than 2% which is basically nothing. Like you you basically can't tell a 2% cross slope unless you are really tuned into it because you're using a mobility device or you have some balance issues. So, the other thing that's really important is benches. Benches, as we saw before, lack of benches can be a barrier for disabled wildlife viewers. And I think this one came out of Parks Canada, they recommended having a bench every 150 to 200 feet. So, that's a lot of benches but even just adding one more bench to a trail can make that trail a little bit more accessible for a whole bunch of folks who need to take some weight off. So at your wildlife viewing location or trail it's also important to have interpretive signs. In the literature review Freya has also made a table that summarizes these four guidelines. Ahe 2010 ADA Standards for Accessible Design, the Wayside Exhibits Guidance from the National Park Service as well as the Design Guidelines For Media Accessibility from Parks Canada as well as guidelines from the Smithsonian. So, you can check out more information in the literature review when we send it. And I'll share the highlights now. So when you're designing accessible signs it's important to use the largest font signs possible for your layout. And so everyone can see your main message, it's also important in your sign that the main point is able to be understood in about 45 seconds of reading or less. And that's not to say that you shouldn't have more material on your slides that would take longer than 45 seconds to read, but you want that main point to be right there and easy to understand for people to take away after they look at your sign. It's also important that signs have a strong contrast between the text and the background colors. On this sign here you can see the text is on this lighter blue color, the sky, and there's no text on that darker blue color from the ocean. But, it's also important to note that while black and white has the highest contrast you don't want to use a white background. As anyone who has stood in the sun on a hot day and looked at that white sign and had that glare reflected back at you, we want to try to avoid that. So the literature encourages using lighting, light colors that aren't white. It's also best practices to provide information in alternative formats. On this slide there's a little texture piece that you can see in the picture, but some signs can also include little buttons that you push and it'll read the sign back to you. I've also seen interpretive areas that have little scat molds or sculptures of the mountains so people can take away information from your sign without reading. It it's also important to just keep text justified and use plain language and sans serif font. So those are fonts without the little tails at the end. So arial which is the font we used today on these slides, that's an example of a sans serif font and it can be a little easier to

read. Now also when we communicate, with this communicate with people with disabilities we're going beyond just our interpretive signs and marketing programs. So when you're marketing programs whether it's a social media post, a flier, an email, a blog, any of these things, some important considerations to keep in mind are to use up-to-date disability related language. You want to use plain language use headings and organize your content logically so have that most important piece of information just up there first so people can understand the gist of your program without having to search through the the marketing materials. It's also encouraged to just keep it short. Avoid any complicated words, long sentences, long paragraphs and try to avoid jargon as much as possible, which I know can be a little tricky. You also, we also the guidelines also encourage people to use lists to break up your text. So, avoiding those big intimidating walls of text that you can see sometimes. And if you ever want to emphasize a point it's encouraged to avoid all caps and instead consider using bold text to highlight those key messages. And getting a little bit more specific if you're marketing a program that's going to take place on site some things - to some other things to keep in mind when marketing programs is to include people with this with disabilities in your marketing materials. And some signs you can see pictures of people with disabilities if you have their permission and consent to use the images, it's a great idea. This sign that you can see on the slide says ‘Wheelchairs and strollers welcome’. Right there, people with disabilities or people who are using a wheelchair that day they can see that they're explicitly welcome to participate. It's also encouraged to follow best practices for visual accessibility of graphics. Don't use colors that are too close and if you want to get into the nitty-gritty of website design it's encouraged to follow the Web Content Accessibility Guidelines. This is an important guideline that will enable people using screen readers or other assisted devices to access the information that you're sharing on a web

page. And finally, when you're marketing programs that are going to be held on trails it's important to include the contact information. So if people have any questions beforehand they can reach reach out. If your program is going to be held at a separate location, so maybe if you're not affiliated with the site, it's also encouraged to include the contact information for the host site, so people can call if they have questions about trail conditions or other things specific to the location. And there's a lot of information that's encouraged to include with disability marketing programs because people with disabilities have a lot of different access needs. And this information helps them understand if the program that you're marketing will be accessible to them. Some of these needs, some of this information to include includes parking and public transport availability. Like we've said, some people with disabilities rely on public transportation. So if you can note the nearest bus stop that would be a great step as well as the availability of toilets and drinking water. And it's encouraged to go into detail if it's a flush toilet, a pit toilet, or a porta potty, what the accessibility of the toilet is like. As well as just information on the trail surface, with maximum gradient so people can understand if this is a trail that they can navigate before they come to the site. It's also encouraged to report the frequency of benches and resting areas, like picnic tables. And if you don't have any benches or resting areas at your site, still include that anyway so people can know that's not available. As well as the presence of any obstacles like this bollard that you can see on the slide. And it's good to share information about any other trail users are there going to be. Horseback riders, motorized vehicles, mountain bikers. It's great to just give that information information ahead of time whether or not they'll be there so people can understand what to expect at your

program. So people are coming to your program because you've marketed it really well. That's awesome. But how do you make that program inclusive? There's lots of different ways the literature says that staff and volunteers who are involved in running the program or who otherwise are supporting the program need to be educated on disability inclusion. So this includes a whole lot of different factors, including viewing disabled people as normal people, not not treating them particularly differently than folks who don't appear to have a disability. Cultural humility, disability etiquette the updated language. These are really important for staff and volunteers to be trained and aware on and how to modify that program or activity. So for example, this is a photo that was taken at the San Diego Bird Festival a couple of months ago. That's me, walking backwards with the teal- I like teal- the teal t-shirt and the over my shoulder leading this accessible outing. One of the participants had just told me that she was Deaf and she needed me to look at her when I spoke so that she could lip read. So, I was walking backwards as I was leading out to the trail, so that as I talked to the group so that she could lip read as much as possible it. That was okay for me to do on this trail, I was familiar with this trail, it's it's basically a sidewalk. It's flat and concrete and I knew I could walk back backward safely. But the other thing that I did that I had to keep thinking about doing was when we were out there at the looking at birds, anytime I was pointing out a bird to the group I needed to take my binoculars down and turn and look straight at her when I spoke. So, that's really easy to do if you're aware of the need to do it. So, that's an example of modifying the program or activity to make it more inclusive. And then the literature also recommends that staff and volunteers involved in programming are trained a little bit in soft skills. So it might be things like patience and how best to support and and and wait for someone who for example might have a communication disability, and just takes extra time to use their communication device or to get the words out. Patience is a virtue. Patience is also really important to help people feel

included. It's important that inclusive programs are held at locations that have public transport as Emily mentioned. Many folks with disabilities rely on public transport. A lot of folks with disabilities drive too but if folks can't get there, they can't attend your program unless it's virtual. And that these places are physically accessible and we talked a little bit earlier about what kind of features make up a truly accessible wildlife viewing program. Programs that are designed to be inclusive should include multiple breaks. Perhaps, perhaps there's an area with a bunch of benches or some picnic tables and you write this in your marketing too that you're ‘going to spend 10 minutes doing some stationary birding from that spot’. Or things like that. And that stationary viewing opportunity too. So, folks who maybe have fatigue or pain maybe maybe they just need some time out from all the interaction in the group and having those breaks, and those stationary opportunities, means that they can participate. And then as discussed earlier, providing accurate information about the program and the locations accessibility is really important. So programs accessibility. This might include how many leaders are. Is there 1 leader to a group of 30? Or are there 3 leaders to a group of 30? Will the program last two hours or four hours? When's the end? Does it end at the other end of the trail or will it end at the parking lot? So including all this information. Knowledge is power, right. So, information is so valuable when marketing and and and designing programs to be inclusive. The other thing that you can do, this a little harder but really important, is co-designing programs with members of your local disability community. And when we co-design programs people have the folks that you're working with will have increased buy-in and engagement because they help create the thing that they actually want. Not the thing that you think that they want. It also helps you build relationships. And the the literature says to provide conditions so that they can grow themselves. We're going to talk a little bit more in a moment about allyship, but this is a great example of not coming with the answers, but coming with the support and asking what folks with disabilities need to to create inclusive programs for themselves, that you can support for them. So, network with local disability organizations. I promise you, there are lots in your community. There's probably a School for the Deaf, and a School for the Blind. There'll be adaptive sports organizations. There'll be independent centers, centers for Independent Living. There's a whole lot of different disability support organizations and building genuine connections with these folks and these organizations is a wonderful way to make sure that your programs are inclusive. And and and even going even further is creating a formal Advisory Board of disabled wildlife, disabled wildlife that should read ‘viewers’. So I hope that you're compensating these folks financially for their time and their expertise. Being on this Advisory Board that's important for equity, but this again helps you create programs that are really going to meet the needs of the community, with experts helping you with the marketing with with when the breaks, should be you know all the what what people actually want and what people actually need from this Advisory Board. And then allyship. I mentioned that earlier so allyship is ‘active actively and intentionally supporting uplifting and advocating for a person or a group that you don't belong to, often using your privilege to help dismantle systems of oppression and promote social change.’ So, this allyship can be practiced by individuals, it can be practiced by an or like at an organizational level. And this is really important when we're trying to push back against that really outdated and kind of condescending narrative of like the ‘poor tragic disabled people who can't do anything for themselves.’ Like, that's not true at all. And being an ally helps really reframe that too. Standing with folks, instead of talking over them or or telling them what they need. So this photo on the right I actually took it a bookshop. It's not from a wildlife viewing location. In Phoenix and it says ‘hi friends we are happy to have queer and trans people who work here. Please be mindful of using gendered language like ‘sir’, ‘man’, ‘miss’, ‘man’, or ‘bro’. If you're unsure about someone's pronouns use ‘they/them’ or ask. Thank you.’ And it's a, that's a really simple way that customers at this Bookshop can be allies to trans and nonbinary folks and and create that more inclusive space. So, I invite you to consider and maybe share in the chat are there ways that you can be an ally to folks with disabilities as an individual. What can you do that might be something as simple and straightforward as using ‘they’/ ‘them’ instead of assuming someone's gender based on their appearance. So, organizations can practice allyship to disabled wildlife viewers in a lot of different ways. And this is a big wordy slide because this stuff is really important. Because unfortunately if we don't get this right, all the rest of the stuff that we talked about might not kind of work out too well. So up-to-date language around disability is really important. We could talk about this for like 25 minutes at least. But things like ‘impaired’ and ‘handicapped’ are considered outdated and offensive by a lot of folks. So using the word ‘disability’ is not a problem. There's nothing wrong with having a disability, so there's no reason you can't use this word. There's more there but, that's the big one. Provide accessibility features proactively in advance before someone has requested it. Not reactively. Now, if someone requests something that you don't have, please provide that if you can. I don't mean that. But you know, having close caption available in your webinar which is now easier and easy because Zoom does it automatically, or having large print and Braille, and an audio option for all of your interpretive signs. Having them available already when someone walks into the visitor center it just makes folks feel so much more included and they don't have to keep advocating for their access needs, which gets really exhausting. Develop a code of conduct on expected behavior of staff, of volunteers, of other people who visit your site. There's a lot more on this in the literature review and I encourage you to check out a bit more about this code of conduct. But what's most important about this is not that you develop it, but that you uphold it. Otherwise, it's just lip service. S,o upholding it means things like responding when someone has a violation of the code of conduct, and responding in the moment if there is a microaggression. Microaggressions might be things like saying, let's see, ‘oh it's so nice to see people like you here’ to someone using a long cane because they blind or have low vision. That feels a bit gross. Like, people like you? Like of course, what people people who have sensory disabilities shouldn't be out in the world? Like that, that doesn't feel good. That's an example of a microaggression. So calling it out, saying ‘hey I don't know if you realize but that kind of sounds a bit mean and we don't talk like that around here. We just treat everyone the same.’ Another way of organizations practicing allyship is co-designing programs with the disability community. And we talked about this earlier because it helps make your programs more inclusive. So again ask how you can support the folks in the disability community, rather than assuming you know what they need. And share the community's own work, rather than rephrasing or repurposing it. That can be seen as co-opting their work, stealing their work, it doesn't feel good. It's not a good way to build connections. Amplify that the work that they're already doing it's a great act of allyship. Introduce disability organizations to your networks and resources. Maybe you get an occasional email about grants for more inclusive programs and there's this grant that you're just learning about. Like you can't do much with it, but you've built this relationship with this local adaptive sports organization. Forward that email. And say ‘hey I don't know if you're interested in this, but this looks like something that could be helpful for you. I just wanted to pass it along.’ Amazing. They might not have known that was an option for them, but now you've you've worked on your allyship, that's awesome. Another example might be if you're having a a an event with a bunch of donors and there's a local group that are - and this also goes beyond disability, too. Maybe there's a BIPOC birding group. Black Indigenous and people of color, or a disability organization who were just getting started who are volunteer lead or you know you know that they don't have a lot of financial resources. Maybe you could invite a few of their leaders to your fundraising event and introduce them to a couple of donors who you know would be really interested in the work that they're doing. That is an amazing active allyship. Connecting folks to the resources and networks that you have. A really important thing in this allyship work is learning how to apologize without being defensive. Unfortunately, no matter how hard you try, you're going to make mistakes. I've made plenty. If you don't make mistakes, it's almost like you haven't tried enough. Check out the literature review when we send it out because there's some really great guidance on how to apologize well without being defensive and thanking people for their feedback. Acknowledging your mistake, talking, reflecting, and talking about what you're going to do differently in the future. That kind of thing. Feedback is a gift and people don't have to give that to you. So that's that's really important to do. And keep learning, because allyship is not a destination. You can't check 10 boxes and like ‘Bing you're an ally! You don't have to do anything anymore.’ It's a journey. You, you've got to keep working on it and the label of Ally to is not something that you can give yourself. That's something that the community that you are trying to be an ally to gives to you. So keep learning, keep striving, there's lots to be done here but it's really really

important. So as we reached the end of this literature review project we agreed that there was a lot we still need to know in quite a few gaps in the literature. There's still no solid estimate of how many disabled wildlife viewers are there and what kind of wildlife viewing behaviors are they engaging in. There's a lot of opportunity in the future for more disability related questions and surveys. This summer we're going going to be conducting group interviews with disabled wildlife viewers to learn a little bit more about their recreation preferences, how we can facilitate more inclusive programs, and what exactly would their best practice of allyship look

like. So, as we come to the end of this presentation we wanted to encourage all of you to think of this as the start line instead of the finish line. We know that we gave a ton of information in these 30-some slides today and we don't want you to leave this webinar feeling overwhelmed. Instead, we encourage everyone to think of one small change that they could do within themselves or with their organization that could make their more work more inclusive of everybody. Even something like including a few extra sentences on your marketing material or trying to be more intentional on practicing allyship can be great steps that you can take to increase that inclusivity while we work on this together.

And we also wanted to let you know again that we will be sharing the literature review with you, everyone who registered, will receive this via email. And this is a great resource. It will just be available to download on the Virginia Tech website and so you can come back and reference this at any time and share it with as many people within your organization or network you think would be interested in our findings. And we are continuing our spring-summer webinar series. On Wednesday May 29th from noon 0 1 p.m. Eastern we will be conducting a second follow-up webinar. That will just focus on the current findings from research that we've been doing here at Virginia Tech. If you'd like to register I'm dropping the link in the chat right now. And we would love to see you then again! Just like this webinar, anyone who registers will receive a link to the recording after. So, even if you have a scheduling conflict we encourage you to register so you can access the materials from this webinar. And with that we wanted to thank you all for joining us today. We give a special thank you to our project Steering Committee and Shelly Plante for helping us with these efforts. Our emails are on the slides and I'll drop them in a chat in a moment. And we have about 10 minutes for questions and we'd love to have more of a conversation with everyone. Thank you for being here. Yes, I'll echo what Emily said. Thanks everyone for being here. Thanks to Freya and Emily for presenting our insights from the literature review. I wanted to start off by addressing a couple of questions that I see in the chat and please feel free to add others there as well. So someone asked I guess it's Karen Gaines here asked how we're going to be sharing the resulting recommendations from our work with agencies so they can implement these suggestions?’ Let me tell you a little bit about that. So, as I alluded to at the beginning of the presentation, the literature review is the first step in a year-long grant that we have. So we have this webinar today, we're going to share out the literature review, as well, to the various lists that we sent this webinar to, the webinar information to. We're having another webinar following and then we're going to be having focus groups with people with various disabilities who participate in wildlife viewing. Those will be done via Zoom and we will be compensating participants as well. So, we hope to to get broad participation across the U.S. and across a variety of experiences that people have with disabilities and and have more insights from that on how state agencies can better support people with disabilities interested in wildlife viewing and involved in wildlife viewing. As well as be better allies. So, the in the insights from that we will be sharing with our Steering Committee from this project who involves people from state fish and wildlife agencies. And then we also plan to have a co-production workshop, as we have for other parts of our projects, where we get together with folks from state fish and wildlife agencies, and probably couple partner organizations too, and think about what are the recommendations that come from these results for state fish and wildlife agencies in particular, but broadly other organizations as well. And from there we'll be producing a report. We will have another presentation on that. We have also in the past, and we again this time make sure that goes out to all the state fish and wildlife agency directors, and also a variety of different working groups within state fish and wildlife agency, we'll send it to this list too. So, if you're not from a state fish and wildlife agency and you want to make sure that it gets to your leadership you're welcome to. We always record our webinars and provide them on YouTube so they can be shared too. Freya and I, and others, are also working on another grant proposal for a follow-up year long project based upon the the work that we're doing this year. We know that, for example, this webinar each one of those slides we could have gone into multiple slides and lots of details and provided a lot more insights that can be really usable. So, we're hoping to expand out our training that will be available to agencies and and other organizations, if we can receive that funding. As well as provide more case studies of agencies and organizations that have really great programs or trails or facilities that really are inclusive and accessible. So those are things that you can look for from us. If you have other ideas on things that we can do to make our work even more applicable, please reach out to any of us. For those of you who've worked with me before or who haven't worked with me, our research lab at Virginia Tech is really driven by making sure that our research is used in the field. And so we're we're doing this so that we can make sure that we improve how wildlife viewing is approached by agencies and organizations so that it is much more inclusive. So, those are some thoughts on that. The other thing that I wanted to address and see if Emily and Freya have anything to say about is there was a question about like ‘What do we do? Our agencies are already stretched for funds. How can we allocate resources and figure out what to do with limited funds for accommodations, especially when there's so many different disabilities out there? And there might be various types of accommodations that different people need?’ So I'd start with two insights. And I'll throw it to Freya and Emily. One is you can do things that cost nothing. Like that allyship slide, for example there weren't costs associated with most of those recommendations that Freya offered. It's basically just changing the way that you do your work to make sure that you are engaging the disabilities community. So that's one thing to consider. The other thing is search out specific grant funds for disability-related projects. There's specific funders who provide those or for diversity and inclusion related funds, for example. That's a component of the multi-state grants from the state fish and wildlife agencies. So that's how we've been able to fund this work. Freya, quick thoughts on what to do with limited funds? Yeah, so things like improving the quality and depth of information you provide about your trails or your programs. That's free. It takes time. But, once you've written it up once, you probably don't have to do it again. Rinse and repeat if you're holding the same program multiple times a year or every you know May 22nd or whatever. Information is is writing that up take yeah, takes time but it's free. The other thing to think about, I totally get that this can feel really overwhelming, because we just talked about a lot of stuff but just start small as I said earlier one bench. Just adding one bench to a trail can make a difference for someone. So, sure a bench might cost $500 maybe but if you're able to get donors. Benches are a great fundraising opportunity for folks to put a little memorial plaque or something on so that might cost you nothing, except a little bit of effort getting that going. But any single thing you do to increase access, increases access. You don't have to do a massive overhaul of all of the things. Just one thing at a time. Just keep, keep going. It all, it all makes a difference. So, please don't be discouraged even though there might be a massive list of stuff that you could do. Any one thing that you do, will make a difference. Emily, what's your thought on cost effectiveness? I would just encourage sharing what you've learned with other people, especially, if you're a public facing agency. Maybe you have interp staff that weren't here today, just letting them know a quick summary of what you learned and some best practices. Just the quick little bit of information, maybe over a coffee or something, that could go a really long way for increasing that inclusivity in your workplace. Great, thanks Emily. I see someone else suggesting in the chat that an Eagle Scout project could be a great approach, I assume especially if you're thinking about something like trail changes so. So, that's a great idea to partner with other organizations that may have volunteer capacity. I'll just jump in there really quickly because I have seen some amazing Eagle Scout projects and I've seen some ones that were like so. If you're using Eagle Scouts or other volunteers, amazing, please share this lit review with them. Those guidelines about trail surfaces and how wide things need to be, because if Eagle Scouts and others aren't supervised they might just do whatever they think is good and that might not be the best practice. So, you still need to be a little bit involved in that process to make sure that what is being built is actually going to be as useful as possible to the people that you're trying to serve. Yeah, that's a great point. Volunteers always need volunteer management. I see another question here about ‘how to improve wildlife viewing when you don't have trails? Especially since some public agencies are mandated or encouraged to minimize the maintenance of trails that they have.’ So what could be things so I'll throw out one and then again throw it to Frey and Emily. I think thinking about the programming you offer or how your visitor centers are structured to support wildlife viewing in an inclusive way can be really useful, too. So, if we're not talking about trails, thinking about some of those guidance that we offered related to programming, or related to your interpretive signs, or related to your website, can also be ways to support wildlife viewing and make sure that it's inclusive. Freya. Virtual programs. Emily mentioned them earlier, can be amazing things for folks who have trouble getting to the location for various reasons. For folks who might have chronic fatigue, or chronic pain, or otherwise just getting up and out into the world might be too hard that day, even though they wanted to. Virtual programming can look like you taking out your smartphone and doing a zoom live from the prairie, or from the bird feeding area, or something like that. You might invite a community into a space and go through and share feeder cams and nest cams from around the world. There are lots of them streaming on YouTube and create an inclusive space in that Zoom room. Virtual programming can look like webinars. A lot of folks like this one, right ,familiar with that. But how can you create programs that people don't have to come to your site to engage with your site, that can be a way to create these. Yeah inclusive programs that don't involve trails. We focused on trails, because trails often create a lot of barriers and a lot of wildlife viewing places do have a lot of trails. But, for sure there are many other ways that people can engage with wildlife viewing that don't involve trails. Car birding or car wildlife viewing, using your car as a blind is a really accessible way for a lot of people to engage in wildlife viewing too. And so you might not have you know a lot of National Wildlife Refugees might have an auto route that folks drive down and and check out the the alligators or or whatever is out there. But maybe you could create a map of local back roads near where your location is, and maybe it's not a formal auto route, but maybe it happens to have some good views of different wildlife there, too. So think try and think outside the box. And there's lots of different ways that that you could create inclusive programs that don't involve trails. Emily? Since Freya covered a lot there and there's a specific question I think relates to some of your research. ‘Could you address instead any information that you have specifically about disabled wildlife viewers' interests in online related offerings from agencies?’ That was that something that came out in the survey. Yes we did see that disabled wildlife viewers were interested in virtual and online programs. I know the person who asked the question about live streaming was Meagan Thomas from the DWR. But the Virginia DWR has a program where people can kind of take control of a live stream wildlife camera for a week and direct it. And that is also a great option for people to kind of connect a little bit more with those wildlife viewing cameras. And I think that's a great segue for wrapping up. Thanks Emily, the insights that Emily started to mention here related to virtual programming and other requests for programming will be shared in our webinar on May 29th when Emily reviews the research that she's done with our existing data set and Freya also reviews work from another data set on a strength-based approach to working with disabled wildlife viewers. So we hope to have people engaged in those webinars. We thank you all for being here today and for sharing your thoughts, ideas and resources in the chat. We will be getting out a recording of this webinar so you can share it with others who might benefit from it within your agency or a partner organizations and we also look forward to having you all engaged in the other aspects of our project as we continue this year and hopefully next year too. So thank you, take care and we appreciate your interest in this topic. Thank you everyone.