Interview | Multi-Species Conservation Program Oral History
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Q: DeEtte Person (CAP interviewer)
Bob: Bob Snow, Solicitor's Office, Department of the Interior (previously with the Bureau of Reclamation

Chris: Chris Harris, Colorado River Board of California (now retired)

Justin: Justin Tait, Solicitor's Office, Department of the Interior (now retired)

Perri: Perri Benemelis, consultant (previously with the Arizona Department of Water Resources)

Seth: Seth Shanahan, Southern Nevada Water Authority

Terry: Terry Murphy, Bureau of Reclamation

Vineetha: Vineetha Kartha, Central Arizona Project

Chris:
Let me start off. I'm Chris Harris. I'm the executive director of the Colorado River Board of California. But I started in Arizona working for both the Bureau of Land Management in the very early 1980s and then went to the Arizona Department of Water Resources, hired by my good friend and colleague Tom Buschatzke, who was a water resource specialist at the time. He hired me in the adjudication section in late 1984 or 1985.

I spent a lot of time working on general stream adjudication within the Gila River Basin, mostly focused on the San Pedro River system. And in the very early 1990s, my deputy director at the department, Larry Linser, asked if I would lead the adjudications division and come over to Colorado River management and start working to help him and Tim Henley with Colorado River issues.

And I said, "oh heck, yes." It was it was a good move. I was a water resources supervisor at the time and I was ready for a change. So let me put that in the parking lot for a second.

When we're talking about the Multi-Species Conservation Program, we really should thank the great state of California for kind of being the impetus for doing something. In the early 1990s, there was a great desire on California's part to really look at some innovative new things for management of the lower Colorado River. This involved things like water banking and top water storage in Lake Mead and potentially interstate transfers of Colorado River water supplies. Some of these things came to fruition, some didn't.

But one of the first things I got involved with for the state of Arizona was working with Larry Linser and Tim Henley, and our counterparts in California and Nevada on what we called the

regional solution. And it was really a series of focused retreats between the three states and Reclamation on how we could more effectively manage Colorado River supplies from Lake Mead downstream, including our deliveries to Mexico.

And to that end, again, these things like top water banking, middle water banking and so forth came up. So, we knew that at some point in time we were going to have to develop an environmental compliance program that could address the Section 7 obligations on the part of the Bureau of Reclamation. And we didn't really know what Endangered Species Act obligations there might be for the three Lower Basin states. But we felt we probably needed to think about that.

California sponsored a tour to the Upper Basin – this has nothing to do with the MSCP -- but the right people were on that tour. They got on the bus and were drinking beer and driving around Wyoming and Colorado. And a lot of the general managers on the tour had recent experience working on developing a multiple species conservation program for both the Coachella Valley and also for what is now Diamond Valley Reservoir. Actually, I guess it's now Diane Feinstein Diamond Valley Reservoir over in the Inland Empire, where MWD stores a lot of water off their aqueduct system. And they put together these multiple species habitat conservation plans under both federal law and California's Endangered Species Act. And they said, well, maybe we can work something out where the three Lower Basin states go together with the feds and put something together.

So, they sent a small delegation over to Arizona and to Nevada and said, “Would you guys be interested in this?” And the first-blush reaction on the part of Arizona and Nevada was, “We think that's a federal thing – I don't know that we've really got a dog in this fight and everything.” And California said, “Okay, but we at least would like you to look at this stuff and think about it.”

And so, this was 1994-ish. By 1995, the regional solution process had kind of petered out. I think Arizona was getting ready to implement the Arizona Water Banking Authority. Reclamation was beginning to think about promulgation of a rule for intentionally created unused apportionment. In other words, to facilitate operation of the Arizona Water Bank. All those things kind of came together and we realized now we could actually conserve water supplies, store them, we could put it in, move it to off-stream underground storage, things like this.

And by 1995, there was a meeting of the minds between the regional leadership and Reclamation and within the three states that, okay, maybe it does make sense to pull us together as three Lower Basin states and the federal government working with the Fish and Wildlife Service and see if there is something we can do that addresses both the federal long-term ESA needs and the non-federal needs.

Q:
That's a great preamble to how we all got here. Let's do some quick introductions just so everybody knows who we’re hearing from. So, Chris just introduced himself. I'm going to go

left to right, top to bottom the way I see you. So, just a quick introduction – your name and your role with the MSCP.

Perri:
I'm Perri Benemelis and I'm currently a consultant. I'm still working on Colorado River issues, but at the time I was working as a program planner. I was with the Arizona Department of Water Resources when we were pulling together the MSCP program.

Seth:
Hello, it's Seth Shanahan. I'm the Colorado River programs manager at the Southern Nevada Water Authority. I've been a part of the MSCP program continuously for about a decade. And then just more recently, I have the privilege to serve as the Steering Committee chairperson,

Terry:
I'm the program manager for the Lower Colorado River Multi-species Conservation Program. I also work for the Bureau of Reclamation. I was hired in the engineering shop in 1991, and ever since about 1993, I've been doing MSCP and pre-MSCP implementation.

Vineetha:
Good morning, everyone. I'm Vineetha Kartha, the Colorado River Programs Manager for Central Arizona Project. I am currently working with MCSP as Seth Shanahan's Vice Chair for the MSCP Steering Committee. I have been involved with MSCP for 12 years. I was actually hired by Perri when I started at the Arizona Department of Water Resources a while ago. So, she is my mentor and I'm happy to be here with her.

Bob:
Good morning, everyone. Bob Snow, I'm a staff attorney with the Solicitor's Office at the Department of the Interior. I got initially involved with the MSCP in 1995, before it was formalized. I also worked on the litigation where the Bureau's operations were challenged. That was so integral to kind of being the catalyst for the MSCP. And then as the MSCP was actually stood up, formalized, negotiated and adopted, I was lucky enough to be Justin Tate's partner because the seamless work that we did with the Fish and Wildlife Service was the only way this could possibly work. Justin and I tag teamed on this for many years and I've stayed involved. But luckily, I've been less involved with the MSCP as time has gone on, and I think that's because of the successful implementation. It's moved from a program that had to be negotiated and structured to one that's now in its second decade of successful implementation.

Q:
Bob, would you like to tell us anything about your shirt?

Bob:
Well, yeah, I guess I'll tell this quick story since Chris has already opened up the relationship of beer to the Multi-Species Conservation Plan. Justin and I were having dinner one night after a long day in a windowless room in McCarran Airport. The really neat thing about working on the Colorado River and certainly with people like these is that traditionally you'd work all day in a windowless room trying to problem solve these issues. And then you all go out to dinner together and keep working on them. And a lot of times you solved some of the problems in the more relaxed setting.

So, Justin and I were just commiserating. We were up in Green Valley, I think it was. We were sitting outside getting a little fresh air and we said, "You know, this is such a unique collaboration. We should do something creative to give people a tangible memory of working on standing up the MSCP. Let's think about getting a logo and a shirt."

And so all the people who worked on it would get something to remember the MSCP by. Turns out, John Swett's wife was a wonderful artist. She designed the logo to show the importance of the river and the riparian habitat.

So, this is one of my most prized possessions from my federal career.

Q:
That's awesome. Thank you.

Justin:
I'm Justin Tait. Good morning. It's nice to see all of you. I'm a retired attorney in the Solicitor's Office for the Department of the Interior, and the MSCP was one of my first projects. I was an Army judge advocate for seven years and then came into the Solicitor's Office in 2001 and my boss said, "Hey, go do this, this thing. It's something about multi species and whatever, and you need to be on a plane next week and go to Las Vegas."

And so, my first project – a project that I continue to talk about when I talk about the projects I'm proud of – is one I think of as a real model. And I say that in large part because the program was never litigated in total. And it's been quite successful.

At the seven-year mark, I remember calling my biologist in Arizona, Leslie Fitzpatrick, who I am still good friends with. And I said, "Well, do you have a bottle of champagne on your desk today, Leslie?"

And she said, "No, why?"

I said, "Well, this is the Statute of Limitations Day."

It is great to see you all. And thank you for inviting me.

Q:
We've been using the acronym MSCP, but in this oral history, for those watching, we haven't yet defined what MSCP is. So, Terry/Bob, can you set the stage with what that acronym stands for – what it is and what it means.

Terry:
I could start. I'll give you a the more of the textbook definition. So, the Lower Colorado River Multi-Species Conservation Program is a long-term program that balances the interests of water users with the conservation of endangered species, allowing for continued river operations. Reclamation is the implementing agency for the program and we represent 56 federal, nonfederal and tribal partners.

Essentially what we did was simplify this complex permitting burden on all the partners and allowed for continued water delivery and generation of power. And so collectively, with all the partners implementing one conservation action as one, we were able to create habitat on a larger scale than we would have done if we had all chosen to do our own compliance separately.

And that's allowed us to build these effective habitat patches that offset any negative impacts due to river operations.

Q:
So, Chris, gave us a little bit of the color of how this all started. And Bob, too. Can you chime in with a little bit more about where the concept came from? And has anything like this been done anywhere else?

Bob:
I'll tag on to Chris' earlier remarks. Maybe just to set the stage a little bit, if you go back 30 years now into the early 1990s, the Endangered Species Act was one of the most controversial and difficult programs that the Department of Interior had to implement.

There was a tremendous amount of litigation across the West on how the ESA was being implemented. There were calls for abolishing the ESA. It was a very politically charged program to administer and a very difficult set of choices that the Department faced in implementing the ESA. The Secretary of the Interior was in a unique position because he or she oversees the Fish and Wildlife Service, which is charged with administering the ESA and promoting the conservation of species and avoiding extinction. But that person also has to oversee all of these program agencies like the Bureau of Reclamation and Bureau of Land Management that have to take action and implement programs for the federal government across the West.

So, you're in a politically charged situation with great uncertainty, calls for repealing the ESA, calls for modifying ESA. Politically at the time, Secretary Babbitt and his chief adviser/chief counselor at the time, a gentleman named Joe Sax who was just an amazing figure in environmental law, were looking for ways to show that the Endangered Species Act could work.

So, as Chris said, with the listing of certain species – fish species and bird species that there was particular concern for in the Southwest – there was a desire that this be a state-initiated program. But in the regional implementation of it, it got off to a rocky start because in 1994 the Fish and Wildlife Service signed a memorandum of agreement saying, "we're going to work together to develop a program, and just by working together that will serve as our compliance for the ESA."

Well, that posture was attacked by environmental groups. There was very active litigation taking place. And ultimately the U.S. Justice Department determined that it couldn't defend that position. That is, they needed something more robust. If we were going to claim that we had a real program and a program that the courts could rely on to protect species, it had to have substance. It had to have funding. It had to have rules and a program structure. And that's where the federal and state governments then came together.

I had been with the Department for more than 10 years in 1995 when all of this kind of blew up – and it blew up hard in the 1990s, in the fall of 1995 and spring of 1996. I had spent 10 years at USGS, the U.S. Geological Survey, working on hydrology and this was one of my first assignments when I moved over to the Solicitor's Office. So, like Justin, it was an exciting thing to get thrown into. And I happened to be there kind of from day one.

I'll never forget and won't go into the gory details, but I happened to be there when the principals from the Basin states and others flew back to meet with the Justice Department to explain how proud they were of this program that they had stood up through the MOA. And the Justice Department said, in essence, "This memo isn't worth the paper it's written on. What, are you people crazy? We're never going to defend this. If you want to get something that we can defend in court, you got a lot more hard work to do."

And I was like, wow, this is a very frank discussion. So, the combination, I would say, of the state's interest, the need to recognize the needs of the species and the pressure of litigation all came together in the 1995/96 time period. And it's absolutely astounding how much we accomplished over the first couple of years in that 1996 to 1998 time period to get everything on the right track.

So, I was very lucky to be there at the beginning. We had incredible partners on the state side. We had creative problem solvers on the Fish and Wildlife side. And that's what it took to put it together.

It's about, you know, strategic vision. Where do you want to get to? We want to get to a defensible program that the Justice Department can defend that's going to take care of the needs of the species. And the only way to get there was through collaboration, some compromise, a lot of long hours and a lot of creative partner. And that's the kind of people that are on this call.

Q:
Great. Justin, do you want to add anything to that?

Justin:
No, I think Bob gave a great summary. We're good.

Q:
So, the concept sounds relatively simple – at least to people who don't know all the intricacies of how government works and those types of things. Sounds like the implementation definitely wasn't as simple as it sounds. We've talked about some of the challenges. Before we bring the states' perspective in, is there anything else you think viewers would want to know by way of context?

Chris:
You know, let me jump in here and tag onto Bob and Justin. And you alluded to it, and you may not have known that you did, but the process to develop the MSCP was torturous at best. It took 10 years from 1995 to 2005 to the place where you could hold up a package -- and I actually went and pulled out of the files, the signed documents, and it's probably 150 pages of sets of agreements between the United States and the states and the water users, etc.

We put together a steering committee and like Terry said, it was large. And when you're doing the interstate negotiation and negotiations between the states and numerous federal agencies with 50-plus people in the room with smaller work groups working on biological aspects, other work groups working on legal aspects, it took 10 years. And that process resulted in several times we had to sit down with the feds, particularly the Fish and Wildlife Service, and sort of, if you will, review our sufficient progress. Were we making sufficient progress to achieve the ultimate goal of developing this large-scale first-of-its-kind-in-the-nation type of program?

So, I think the thing I want to pat all of my colleagues on the back for is that we had the gumption, the drive, the commitment to stay with it for 10 years to get through all those tough negotiations. I mean, finally it got down to we had to send people off with a bottle of Irish whiskey for a couple of days to figure out an element of the mitigation package.

But they got the job done and we finally got there in 2005, I think it was April something like that, right? At the Hoover Dam, we had a big signing ceremony and like some of you said, it's also one of the crown jewels in my professional career seeing this program go. Once we had the agreements agreed upon, and put in the Federal Register, and the EIS, you turn it over to Reclamation and its highly professional staff and they have not missed a trick from that point. From 2005 to 2024 going into 2025, this program is humming right along.

Perri:
I want to jump in here, Chris – I think one of the one of the challenging aspects of this program was trying to craft a compliance program that addressed the federal side of the Endangered Species Act, Section Seven and the nonfederal side of the Endangered Species Act, Section Ten, because there are different requirements under those two parts of the Endangered Species Act.

We were trying to marry those into a single program, which had a lot of complexity involved. And Chris will remember this – we had consultants that we hired to help with the analysis necessary for putting together the compliance documents. We burned through one consultant. The program was so different that they just kind of collapsed mid-process, you know.

So, then we were out looking for another consultant, raising money again to fund the steps of putting together these compliance documents and sort of starting from scratch again to move through the process to get to the documents that Chris was talking about. So, it was very challenging. And I don't believe that anyone had done it before – trying to marry these two different sides of the Endangered Species Act. So that's where a lot of the complexity originated.

Q:
I just was going to ask, because this may be a way too complicated answer than we can get to. But in in a nutshell what were the conflicts between those two – the federal side and the nonfederal side?

Justin:
I can maybe help with that – and be very succinct about it. Under Section Ten of the Endangered Species Act, nonfederal entities can engage in take-of-species as long as they have a permit. But in order to get that permit, they have to mitigate for the effects of their actions to the maximum extent practicable. That's the standard.

The federal standard is that federal agencies engaging in an act that may result in take of an endangered species shall not take an act that will either jeopardize the species or adversely modify critical habitat. Those are the simple standards. But mitigating to the maximum extent practicable, right, is not a well-defined term either in the regulations or by the courts.

And so those were the different standards that we had to deal with. And if I might just add this, one of the things that I think resulted in success for this program was even though there was a lot of, you know, we refer to them as negotiations, I like to refer to these meetings oftentimes as head butting. Right? There was a lot of head butting for many years in many windowless rooms.

I don't like McCarran Airport anymore. I don't. I'm sorry, Vegas.

There was a lot of grappling. But I think in the end, the states and our other non-federal partners, the federal agencies, there were so many resources brought into this. There was so

much money, there was so much buy-in at the end that I think it would have been it was, for lack of a better term, somewhat unassailable.

You just had so much being put into this, especially in the conservation realm, that it was going to be very, very difficult for any environmental group or industry group to come in and say, "you're not doing enough for the species or you're not doing enough for the farmers in Southern California," you know, and it took a long time to get there.

But I know with the help of the states and the other agencies that were involved, finally getting, together and saying, "look, we've got to make this big, robust and relatively speaking, unassailable." And if I were an environmental group or an industry group and I looked at the administrative records that were going to fill a panel truck, I'd probably be like," Oh, do I really want to do that?"

Bob:
Maybe I could jump on. And maybe just if anyone has the opportunity down the road to watch or read the transcript of this – just to put a couple of things in context. First off, when we talk about the MSCP, we're talking about an Endangered Species Act program. But in the real world, what is it that we were trying to cover? What is it that we were trying to address?

What we were trying to address was operations from the full pool of Hoover Dam down to the Mexican border. We were trying to address all of the water deliveries to Arizona, Nevada and California in a normal year, which amounts to seven and a half million acre feet of consumptive use.

We were also trying to make sure we were addressing the power production of the water as it's delivered, the operation of different facilities along the river and the activities along the mainstem of the corridor that the Bureau of Land Management or the Bureau of Indian Affairs might take. That's all on the federal side.

And then on the states' side, we wanted to cover all the diversions of water from the river to, for example, through the Central Arizona Project area to the Phoenix metropolitan area and Tucson to Los Angeles and the coastal plain to southern Nevada and Clark County in the Las Vegas metropolitan area. So, we were trying to integrate, in essence, the effects of all of that activity, as Justin was saying, in one comprehensive program, instead of having each entity come in on a project-by-project/action-by-action/piecemeal basis.

What was so groundbreaking was that we were integrating the nonfederal activities with the federal actions, the Section 10 of the ESA and Section seven. And then we went further philosophically. We said instead let's put on our imagination glasses. What's going to happen over the next 50 years and we're going to account to the best of our ability for all of those impacts, whether they actually happen or not.

We're not going to wait for an action by action, consultation. We're just going to mitigate them to the greatest extent practicable upfront. So, if there's a particular water activity that never

happens 10, 20 years down the road and we've mitigated for it, that's okay. We've done more for the species than the bare minimum, and we're all doing it in one coordinated program.

So, I just wanted to give that kind of stage-setting for the vast reach of over 300 river miles of and impacts along a riparian corridor affecting states, three states, multiple tribes, power generation, water use for LA, San Diego, Phenix, Tucson, Las Vegas and the communities along the river. And to get all of those folks literally in a room, we wound up occupying this decrepit old facility in in Boulder City called the – what was that? It was it was a building that was so decrepit that the Western Area Power Administration leased it to the Bureau of Reclamation for a dollar a year. And basically, after the MSCP documents that Chris held up were all finished and signed with, we'd spent so much time there that they just bulldozed the building.

Terry:
I spent a decade working in that building.

Q:
So, thank you, Bob. That's great context to kind lead into the states' perspective itself. I'm actually going to start with you, Seth, because your airport has been disparaged here, but also because you're at the top of the system there. From Nevada's perspective, what did it take to get Nevada on board and what have you seen as the benefits?

Seth:
Well, thanks. And I might not answer that specific question, but answer some other things and pull out some other threads here. Because, you know, I heard Bob say and others say how difficult it was in the beginning to get the program put together, get the people together. How groundbreaking it was to have this combined, you know, federal state program.

I just want to start by saying I'm just thankful to many of you on this call here for going through that hard work. Because I've been a part of this program really for about a decade now continuously. And I feel it's a privilege to stand on the shoulders of these giants on this call here who went through all that hard work to get us to the point of implementing this program, which has been implemented so successfully.

And that's been my experience. My history as I think about the program has been just another point of pride with my work on the Colorado River, where, you know, we have a lot of difficult issues. There's no doubt about that. But we have a program that has buy-in from all the parties that come to the table. And what is remarkable is that we do have difficult issues come up, people look to the past, look to how this program developed, how difficult it was, and I think they draw strength on that as they think about trying to accomplish the next set of goals that we have to adapt this program to the future. And I'll also just be very thankful to folks in the beginning of the program, the wisdom that they had to think about what this program could be,

envisioning that into the future, into this 50-year term, and not necessarily knowing exactly what that future looks like, of course.

But having it has had the architecture to be flexible enough to allow a lot of the creative thinking that's been going on in the basin for years now to actually occur. And so, I think from a Nevada perspective, we're very much supportive of the program, bought in and 100% biggest advocate and find so much extreme value in it.

Like I said, I have the privilege of serving as the chair of the steering committee and that's reflective of our organization's commitment to this program to ensure that it works, not only just for us, but throughout all of our partnerships. Because that's what helps us accomplish all of the water sustainability goals we have in the basin.

My background is wildlife biology and restoration, ecological restoration. And so, you know, before I joined the program in more of a planning policy role, that was my awareness of the program was just kind of tracking what was going on. It was always just such a great interaction with all of Terry's staff and others of all the work that they were doing out there and going out and surveying for wildlife and sharing best practices.

Because, you know, this program operates within a context of a variety of other programs in the basin as well. And to see this group become a source of extreme expertise has just been such a great addition that I don't think we shine enough light on. So those are just maybe a few reflections and I'm happy to defer to others to add their comments as well.

Perri:
I agree with the comments that Seth has made about the program. I think from Arizona's perspective, our real driving force was to have certainty and I say that knowing that we're in very uncertain times. We've been in this extended period of drought. We're seeing operations that we really, I don't think, contemplated at the time that we were putting the MSCP program together.

However, we've got a framework that's been working for a couple of decades now, and it's a framework that we have a lot of comfort with and that we feel we can work within to do the best management under the circumstances that we're presented with right now.

So, you know, we've had to reinitiate consultation because of the drought conditions that we're encountering right now. But we'll get through our consultation and adjust to the new kinds of circumstances that are out there and still have a program that's functioning at the end of the day. I'm confident about that.

With regard to the benefits that Arizona has gotten from this program, I think several people have spoken about the collaborative process in putting it together. I think the fact that we have so many people involved in the development – really down in the nuts and bolts of the development of the program throughout its creation – improved the robustness of the program. Not only did we have the Fish and Wildlife Service and the biologists who were working there,

but we had tribes participating. We had farmers participating, giving us more real-life information about work on the ground and how that could be impacted by the program and how it could fit within the program. We had the water operators. We had the folks that were involved with power production. Having all of those folks involved in the development of the program, I think has made it very robust.

We've got a regional program. Instead of having individual entities like CAP or Metropolitan go out and do their consultation on their actions and their compliance and mitigation – instead of having that done on a piecemeal basis – the fact that it's a regional program and we're looking at the region for the implementation of these mitigation measures has made the program just infinitely more effective, I think, than it would have been had we taken a more traditional kind of compliance approach.

So, I really would attribute the success of the program to the way it was created and o this regional structure and the participation that we've had in the program. And I think that's why it's still going strong at this point in time.

Bob:
Can I tag on to that?

Perri, you just said something that's so important about the adaptability of the program. Let me just put this in context. In 1996, when we were litigating the question of protecting flycatcher habitat along the margins of Lake Mead, this is how different it was. Our reservoirs were essentially full. We had full reservoirs. And we were worried about rising lake levels, inundating the habitat of endangered flycatchers – migratory birds.

Well, at that point in time, we were designing a program. We were hoping to have the ability to adopt a program that would last for 50 years. And ultimately, as Perri and Chris alluded to, the program was adopted in 2005. Well, by then we had lost half of the reservoir contents to the Colorado River system reservoirs. So, between when we started to design the program and the date that we adopted the program, the Colorado River reservoirs had gone from full to half full.

We'd lost half of the contents in just over five years, and no one sitting in those windowless rooms in 1997 and 1998 could have known that that was coming. We were trying to do our best projections for a 50-year period of stability to protect the species under varying conditions on the river.

But the proof of the adaptability, which Perri just mentioned, is that since the program was adopted 20 years ago, we've gone through this continuous period of drought, and yet the program has been fully functioning. We've had to make adjustments, but those adjustments were built on that adaptability. Justin was a genius at this, making sure there would be appropriate adaptive management measures built into the program documents.

And the proof is that despite being in continuous low-runoff conditions since 2001, the program is still functioning. It's been stress tested. We've had to make adjustments. We've had to make

the initiation of consultation under pressurized conditions because of changes on the river. But the structure is still functioning.

Justin:
And importantly, none of the species covered by the program have gone extinct.

I haven't checked numbers lately. Perhaps Seth could tell me more because I haven't been with the program for quite a while. But I think in some cases the species have done fairly decently.

Terry:
Oh yeah, I can handle that one. The river now supports sizable populations of Razorback Suckers in areas where they were rarely detected. You know, the riparian birds, they immediately colonize all these new stands of trees we create. We've got the largest population of Yellow Billed Cuckoos on the whole Lower Colorado River.

And it's not just the endangered species. I get a chuckle when I'm in these communities and you're sitting out having dinner or something, and people talk about all those trees. They go out and visit once in a while and enjoy nature and like to see the deer running around. So, I think they've created these kind of community hotspots, which not only benefit the species, but they also provide a place for education, research and community pride.

Q:
That's good. And that's exactly where I wanted you go – from the windowless room to the Razorback sucker! I want to come back to that. I'm guessing, Chris, you might have something from California's perspective. You want to get in there?

Chris:
No, I just want to follow the general theme here. Yesterday in my board meeting, we actually had CAL Fish and Wildlife. We've talked a lot about the Fish and Wildlife Service, but there are three state game and fish agencies that have been critical components of this process from the get-go – the Arizona Game and Fish Department, the Nevada Department of Wildlife and the California Department of Fish and Wildlife.

And California, like the federal government, has its own Endangered Species Act. In some cases, it's more onerous than the federal statute. And this program, in fact, manages several species where in the state of California you cannot take them. You cannot get an incidental take permit. So, we had to develop a work-around in the program that involved the California legislature, the Department of Fish and Wildlife and the Game and Fish Commission. And we worked with California's Colorado River water-using agencies to have a legislative fix that allowed us to implement the MSCP within the state of California.

But I want to kind of swing back to the community benefits side. If you look at the largest area of habitat restoration for this program, it's in the Palo Verde Valley and it's a spectacular place in its own right. You know, the lower Colorado is a series of shotgun barrels and then open valleys and then shotgun barrels and open valleys.

And when you're thinking about both agriculture and habitat restoration, you're looking in those valleys. So, there's an immediate competing interest between farmable acreage and Colorado River water use. And can we restore some of that native riparian habitat that used to occupy those areas? And I think Perri and Seth said it. And Bob said it with the great number of people we had involved in the program it did become, as Justin said, unassailable. And even the agricultural communities in these valleys, whether it was the Colorado River Indian Tribes in the Parker area or the Palo Verde Irrigation District, there was buy-in to implement habitat restoration and maintenance activities on lands that were formerly irrigated for crops.

And that's up and down the system from basically the Mojave Valley all the way down to the Mexican border. We have significant non-tribal and tribal involvement in habitat restoration. But the Palo Verde Valley we've had in a couple of our conservation areas that we've had elk show up. We have burgeoning deer populations, we now have mountain lions that are coming in and actually preying on the deer.

Terry:
That's been there awhile. We also have a black bear.

Chris:
Cool. So that's the beauty of this. And you know, back to sort of the modularity of the program, the adaptability. No one had seen a Mexican Garter Snake on the lower Colorado River for, I don't know, 75 or 100 years. And all of a sudden, I think it was an Arizona Game and Fish Department biologist who found some Mexican Garter Snakes. And we essentially roped in a new module of conservation activities and monitoring that would address keeping track of how this species is doing.

And apparently, I think they're finding more of them over time. But so, I'm also optimistic that this program can adapt to both that the climate change impacts that we're dealing with on the water supply and demand side of the equation, as well as ensuring that we don't lose these valuable habitats and species that occupy them over the next 50 years.

We're working on new operating guidelines for the entire Colorado River system. And with a particular emphasis on Lake Mead downstream. It's going to be vital to all of us in our three states and to our partners in Mexico. MSCP has dribbled south of the border. It's become an influence and an extension of what's being done down in Mexico. I look at it and I look across the United States and again, like Justin, I scratch my head and wonder why aren't more people kind of picking up on this approach? It's absolutely the right way to deal with these challenges rather than in a piecemeal species-by-species or activity-by-activity approach.

Bob:
I'm going to make just one observation and then I'm going to add, if you would indulge me, I'm going to start asking a question of Terry Murphy. But just to put this in context, if you go all the way back to the program's foundation that the environmental groups at the time were very concerned about losing habitat at Lake Mead.

Lake Mead had fallen in the early 1990s and then was recovering. Well, when Lake Mead fell, all of that marginal habitat grew and as the lake level declined and then we were losing that habitat as Lake Mead began to refill. Well, the trade off and this predated Justin's tenure. But it was baked into the final documents that ultimately, we worked on together with Justin. The trade-off that the Fish and Wildlife Service was having to accept – the proposal to them was, "look, we're never going to be able to protect species in a reservoir that goes up and down." That is, if your way of protecting habitat is reliant on having Lake Mead never fluctuate, that's a terrible proposition. Instead, if we can develop dependable habitat down along the riparian margins, that will be long-term habitat that should have multiple benefits because reservoirs are made to go up and down.

And if we pin our hopes for these species on locking in a certain Lake Mead reservoir elevation, we're just going to fail. We're just going to fail. So, Terry, I was going to throw it to you. Maybe you could tell, you know, just for someone who's a layperson who doesn't know the program, give them some specifics about how many acres along the river corridor have been created and how valuable that habitat is.

Terry:
Yeah, I can do that. And before I do, maybe I'll just do a little shout out to some of the giants on Reclamation who couldn't be here today, but kind of sheltered me from a lot of the background that you're talking about now, because I always have been able to focus on the implementation. And so that's Lorri Gray She was our first program manager, and John Swett and my two favorite peers were Glenn Gould and Tom Burke. So yeah, you ever get to hear this? You did well.

Bob:
Terry, could we all agree that Glenn Gould, Tom Burke and Leslie Fitzpatrick are in their own pantheon of characters?

Terry:
Yes, I agree with that. And now we have Jess Gwynne with Fish Wildlife, who's also in that same room.

So, specifically before we started implementation, Chris knows this well. We spend a lot of time looking at conservation opportunity areas. So, the question was, is there enough ground

out there to physically create all this new habitat and where would it go and who would it affect?

We literally scoured the entire corridor, the whole 276 miles from Davis Dam to Mexico, and put together this whole series of maps that says, yep, you could do something here. These are the kind of activities that would be suitable. And we've done nothing but run with that ever since day one. So, 2005, the first year of the program – next year will be our 20th anniversary.

We have a tour every five years and we will be having our 20th anniversary tour. On that tour we will see the 18 conservation areas we've already created of the 8,132 acres of the original habitat we had to create for the program. We've already created more than 7,200 acres, so that's well on our way to making it. By the time we hit 2055, we'll be closer to 10,000 acres with some of the new mitigation that's come up.

And just to give us that extra buffer, as you said, we don't do things just to the edge and say, that's good enough. Now let's stop. Let's do a little more. Let's give ourselves some insurance. So, when we look back at this in 2055, we have clearly met the goal and everybody maintains their permitting status.

Chris:
Excellent summary, Terry. Thank you.

Terry:
I'll just say one more thing. I could tell you that implementing it wasn't quite that easy, you know, and when the program started it was kind of state of the art. Chris had mentioned earlier that we took one gallon plants, dug a hole and put them in the ground. And when you're trying to create thousands of acres of habitat with thousands of trees per acre, that's not very practical.

So, within two years of the programs – actually within a year – we had gone from planting about 200 trees a day to about 50,000 trees a day and increased the survivorship of the trees we planted. And we had to do that just to give us the tools to start that implementation. And probably the biggest challenge that we never could have overcome without the help of all our partners and the steering committee was finding the land and water resources to do that.

Nobody wants to give up their favorite ground or favorite fishing hole to create some habitat for endangered species. So, without their help, this this would have been virtually impossible.

Perri:
One thing that I think that was maybe an unintended benefit of the program is that some of these habitat conservation areas have actually been an economic boom to the communities that are near to them. So, for instance, there's one in Yuma adjacent to the downtown area there, and it's actually been an economic driver for the community.

So, that's helped us to get some buy-in from folks who might have been a little bit reluctant initially, but it has been a great benefit to some of these communities as well.

Chris:
It is a great point. And all I was going to do is kind of pitch another topic. Back to Terry and to Bob. You sort of touched on it, Talk a bit about challenges related to both marsh and aquatic habitat. You know, the program bought a dredge and I think that's been a big help.

And then, Bob, I'd love for you to jump in and talk about the how we addressed water use for the MSCP through the water accounting agreement. That was a big deal for the three lower division states and the Secretary of Interior.

Terry:
Let's me set it up for you, Bob, just briefly. One of the larger components, it's not large in acreage, but the amount of dirt you have to move to create these marshes and backwaters is definitely a challenge.

When the program started, we sort of envisioned and thought about how much was this actually going to cost somewhere in the neighborhood of six feet of dirt was going to be removed to create a backwater. And that should be deep enough for these native fish to survive and go through their life cycles.

Problem is, depending on where you are downstream from a dam, there is attenuation of flow. If you're right below the dam, daily flows can vary up to five feet. But if you dig a six-foot hole and the river goes up and down five feet, half the day, you only have a foot of water in that backwater.

On average, we're cutting between 23 and 25 feet of ground -- removing 25 feet of dirt to create every acre of backwater. So, it's not only a challenge of locating a site that's suitable and fairly small amount of material to remove to excavate it. What do you do with all that dirt once you pull it out of the ground?

One of our largest jobs is the Laguna Division Conservation Area. It's around 1,300 acres. It's between Imperial and Laguna Dam. And what we did is we moved a little over 3.4 million cubic yards of dirt and you only get 30 cubic yards in a truck. So, that's a lot of truckloads. And we reshaped and contoured this whole two and a half square miles and it's 100% gravity diversion off the face of Imperial Dam and we can flood irrigate that entire site.

There aren’t any pumps. It's all automated. We just remotely open and close gates and we incorporated all that material we excavated to create the marsh in open water, and then we planted it with riparian trees. That’s the best example of how you can do a marsh, but it’s not cheap. That job alone – some are around $15 million.

Bob:
Maybe I'll pick up there. Terry. Let me pull together a couple of threads of things that folks have said on this call already. Justin pointed out how happy he was on the seventh year at the end of the six years when the program could no longer be challenged. So, on day one of year seven, there's another layer of coordination that took place between the development of the program and its successful implementation.

And I'll just make two really quick observations, and then I'm going to read two sentences. My first observation is about, you know, polarization, political polarization is not new to the United States. Obviously, anyone who's read our history and there was a big change from the Clinton administration through 2008 and the Bush administration coming in in 2001. But between those two administrations, Secretary Babbitt and Secretary Norton both understood water issues, ESA issues, the importance of collaboration.

And so, in essence, the program that the architecture was built, the blueprints were being developed during the Clinton administration under Secretary Babbitt. That carried forward seamlessly into the Bush administration, under Secretary Norton. And I remember her being asked at the time of the signing of the Record of Decision in April of 2005, when the program was officially codified with those documents that Chris was holding up, a Washington Post reporter had sort of a gotcha question, and the reporter said to Secretary Norton, I understand that these documents that you're crowing about and so proud of, that these really date back to the Babbitt administration and basically what you're doing is just a continuation of what was done before. And she leaned into the camera and she said, “you're exactly right, it is a continuation. But on our watch, we finalized and signed the documents and now the program is in effect and we couldn't be more proud of that.” And she really owned it. So that continuity was essential for our stability, and that continuity continued because when Terry's talking about digging up and installing these trees, it's like a tree nursery.

And for these seedlings and small trees, they need water. And on the Colorado River, basically all the water is spoken for. So we came up with a theory and I'm not going to do it justice, but just to kind of synthesize it in a couple of sentences, the idea is if you've got poor habitat, invasive species that is connected to the groundwater along the river and you take that habitat out and instead you plant valuable seedlings as Terry was describing, they're going to need a little bit of river water to grow until they intercept the groundwater the way that the non-native species had been intercepting.

So how do we get enough water to grow the replacement habitat until it can self-sustaining and grow to fruition? Well, we thought that basically, out of fairness, if those non-native species are taking Colorado River water through the ground and ultimately, we're going to be replacing them with more valuable for the species native vegetation why don't we just charge that a little bit of initial water that you have to irrigate to keep them healthy? Why don't we just consider that a charge to the system as a whole? And that had never been done proactively before. And it was a controversial arrangement. Let me read you what Congress said about that arrangement.

Quote: The secretary is authorized to enter into an agreement with the states providing for the use of water from the lower Colorado River for creation and maintenance in accordance with

the program documents. (That means the MSCP program documents.) And then Congress said the Secretary is authorized to manage and implement the MCP in accordance with the program documents. So that pile of documents that Chris held up not only had the endorsement of the Secretary of the Interior, the three states, all of our partners, tribes, but then Congress directed and authorized the secretary to implement t those activities.

And it was done in a noncontroversial manner. Everyone bought into it. Now we've got you know, we've got states, tribes, feds and Congress all endorsing a program. And that gave Terry and his colleagues the ability to focus on getting the job done as opposed to litigating in the courts and tying up just in valuable time. And having the Fish and Wildlife Service staff spend their time on species solutions rather than defending an administrative record.

You know, because when the federal government gets sued, everything takes second place to defending litigation. Everything on your desk becomes the second most important thing, as opposed to taking care of that litigation. So instead, Justin and his colleagues got to work on solving problems for the species rather than defending five year old documents that someone challenged.

Chris:
Well done, Bob. Thank you.

Q:
We're a little over an hour and I think that's a great way to end now. We could go on and on. Chris, why don't we have you hold up that document one more time. Do you still have it?

Chris:
I do.

DeEtte:
Everybody want to end with a thumbs up?

Chris:
Absolutely. These are all the implementing agreements from 2005. It's California's copy, a wet signature copy of all that good work that we did. And then we've had minor modifications and amendments that have come along through the course of several chairmen. Seth is now chair of the Steering Committee working with our program manager. The Water Accounting Agreement was signed by Regional Director Lorri Gray after she moved on from the program and became else's regional director.

The folks on this webinar this morning, DeEtte, they are the giants in this program. It's been a real privilege and honor for me personally to have worked with all of you. I'm getting ready to

turn a chapter in my life and retire at the end of August, and I'm delighted to do so. But Terry, I will send you my personal email. I think you have it, but I would really like an invitation to the 20th anniversary tour next year.

Terry:
Absolutely. We've enjoyed almost 20 years of implementation and look forward to another 30.

Chris:
Thanks for all the good work that all of you have done. Not only in the past, but continue to do. Really appreciate it.

Q:
And thank you all for being here today.