

**SAVING THE OCEAN
RIVER OF KINGS! PART 1 TRANSCRIPT**

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TEASE

Carl Safina

On this edition of Saving the Ocean, we're bringing salmon back to a once-great salmon river in the Pacific Northwest.

Carl Safina (narration)

Hatchery fish are being replaced by magnificent wild king salmon.

Carl Safina

This is a wild fish.

Carl Safina (narration)

Logjams are making deep pools for young salmon.

Huge marshes are coming back.

And ancient spawning grounds are being restored.

So once again the Nisqually will be the River of Kings.

Carl Safina

I'm Carl Safina. Join me now for Saving the Ocean.

FUNDER CREDITS

Announcer

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INTRO

Carl Safina

Hi, I'm Carl Safina. No matter where I travel I always return here, to walk, feel the seasons change... I've been coming here since I was a kid.

Now I'm a marine biologist and I write books about the ocean -- that magic, majestic, two thirds of the planet that starts right there in the surf.

In my travels I see pollution, overfishing, coral reefs in trouble. But I also meet inspiring people, working to solve problems.

In this series, we visit people with solutions, and places getting better. So I hope you'll join me on these journeys. It's all about Saving the Ocean.

RIVER OF KINGS Part 1

Carl Safina (narration)

It's a surprisingly chilly August morning on Puget Sound in Washington State. We're on our way to the Nisqually River.

Carl Safina

So is this the mouth of the river right here?

David Troutt

Yup, and as you can imagine this is all a giant mud flat, it's very shallow so it's a bit of a challenge, eh, getting the boat, the boat through.

Carl Safina (narration)

Here's the river mouth. It's a magnificent delta, with a couple of thousand acres of mud flats and marshes.

The Nisqually delta is an oasis in heavily developed Puget Sound. And to think it was almost lost. In the 1970s the plan was to scoop it out and make a seaport. A public outcry saved it.

Here's the main channel of the Nisqually River, snaking through the delta.

Now we're following the Nisqually upstream. We're about to take a high speed trip up river, along it's entire course.

So hang on to your hats.

You'll see that the river is in great shape, unlike so many on the West Coast, with very little development along its banks. There are salmon in the Nisqually, but once there were many more – especially the large and highly-prized chinook or king salmon. This program is about making the Nisqually once again the River of Kings.

Mount Rainier. This is the Nisqually's source.

It's 14,000 feet, the highest peak in the Cascade Range.

On one side of Mount Rainier, the 500 foot-thick Nisqually glacier, which constantly feeds cold water into the river.

The Nisqually runs 80 miles from Mount Rainier to Puget Sound.

Salmon coming up river can't get past two dams half way up. We'll be going to those dams later. But below the dams, and in two key tributaries, there's a big project going on to make this a much more salmon-friendly place.

We're picking our way through the shallow Nisqually delta.

Chris Ellings

So far so good. We only, um, brushed a few logs.

Carl Safina (narration)

OK now we're in the main channel.

And I'm going fishing with guys from the Nisqually Indian Tribe.

Carl Safina

We keep our fins crossed.

It's always a waiting game in fishing, even if you have a net that goes across half the river. Fish, fish!

Craig Smith

All right, we got a fish! Two fish.

Carl Safina

Oh good it's still there. Here it is coming up, coming up I feel it.

Carl Safina (narration)

We're deliberately using a net that's not very good at catching fish.

Craig Smith

Whoa, got lose.

Carl Safina

There it went.

Craig Smith

So the whole point of these is if the mesh is small enough that it doesn't get around their head and gill them, and start making them bleed, so these fish will wrap up and they'll get caught on their maxillaries and in their pelvic fins and they'll get bound, and then you pull them up, you roll them out, let them go.

One, two, three.

Carl Safina

There we go.

Caig Smith

Ahhh, action.

Carl Safina (narration)

The Nisqually actually has a lot of chinook salmon.

Craig Smith

It's an angry fish.

Carl Safina (narration)

But almost all of them are from a hatchery. These are net experiments, to see if they can catch fish unharmed. Then they can return the few wild ones to the river, to continue up to the spawning grounds.

Craig Smith

Hatchery king.

Carl Safina

How can you tell that it's a king, or a chinook?

Craig Smith

Because it has black spots on the top and all the way along the tail.

Carl Safina

Yeah. Isn't it supposed to have a black mouth as well?

Craig Smith

Yeah, it has a little bit of a black mouth. You can see it in the gums there.

Carl Safina

Yeah.

Craig Smith

Give it a grip.

Carl Safina (narration)

This chinook has returned from the ocean. It's heading not for the spawning grounds but for the hatchery up river.

If it makes it, they'll find the tag and know that fish can survive the catch-and-release process.

Carl Safina

Oh there it goes.

Carl Safina (narration)

Then in years to come they'll keep just hatchery fish, but let wild ones go to repopulate the river with wild salmon.

A hundred years ago Puget Sound was a major wild salmon highway, with five different species returning to the 14 rivers that run into the Sound.

The settlers couldn't believe the bounty. Every year thousands of tons of fish were pulled out to supply a major canning industry.

It couldn't last. Overfishing combined with dams that blocked rivers, development that polluted the water, and logging that destroyed spawning streams. The once-abundant salmon became a trickle. Some species are extinct in some rivers – especially the chinook, which is now officially endangered.

Clear Creek is a small Nisqually River tributary.

It's filled with large, beautiful chinook salmon.

So what's the problem? There seem to be plenty of fish, headed for home upstream as salmon should.

The problem is that this is home – Clear Creek hatchery, run by the Nisqually tribe. Wild chinook are extinct in the Nisqually.

About 10,000 adult chinook make it back to the hatchery from the ocean each year. But they're not wild fish – they owe their existence to people. After 6 hatchery generations here, most of them have lost the ability to spawn naturally.

Every year the hatchery raises about 4 million chinook smolts, as baby salmon are called.

They'll all be released into the river at once, and about 1% will make it back – all at once.

Crowded together as smolts and as adults, hatchery fish are vulnerable to disease or natural disaster – unlike wild fish.

Hatchery technology is impressive. These smolts are having their small back fin clipped -- by hand or in these million dollar machines – so if they return as adults we'll know if they're wild or not.

That's going to be essential in the years to come, as the campaign to get wild chinook back in the Nisqually River moves ahead.

About half way between Mount Rainier and Puget Sound is Ohop Valley. This is a place that salmon once loved.

Jeanette Dorner

So this is Ohop Creek.

Carl Safina

Yeah.

Jeanette Dorner

This is our restoration project. And this is one of the two highest priority tributaries in the Nisqually watershed that we've identified for salmon habitat restoration.

If we had been standing here two hundred years ago, this entire valley floor would have been completely covered in native vegetation, shrubs and trees, forest and wetlands, with the creek meandering back and forth in the valley plain.

Carl Safina (narration)

In the 1890s, settlers arrived. This Norwegian family's descendants told us the valley was thick with vegetation, which the pioneers started to clear.

Jeanette Dorner

They wanted to use this land for farming and it was still wet, so what they did is they built a ditch on the side of the valley and moved the creek from the valley floor down into that ditch.

Carl Safina (narration)

It took enormous labor, but eventually 5 miles of ditch were dug and the valley floor cleared.

More than 500 of acres of good farmland were created.

Today, the farms and much of the drainage ditch are still there. But there was a price.

Jeanette Dorner

What it really did was it really completely destroyed the salmon habitat.

Carl Safina (narration)

Now the restoration project is taking the Ohop back in time.

The valley floor is filled with young trees.

And the ditch is gone.

The Nisqually tribe, together with the state and federal governments, bought a 250-acre dairy farm – one of the largest in the valley. Two years ago they set about re-creating the shallow Ohop Creek on its original meandering course through the valley.

They planted 100 acres along the restored creek with native trees. And the result is spectacular.

Here's the old ditch, just as the settlers created it. And here's the restored section – about 1 mile of creek so far. The plan is to restore the whole valley – a huge increase in the river's areas that are good for spawning and for young salmon.

The new “old” creek comes complete with “old” log piles where fish can shelter, and many different pools and little rapids. It's the most convincing man-made creek I've ever seen.

Jeanette Dorner

What this does is it actually creates multiple different speeds of water in the stream because it has the meander. So in some places it's going to run faster and in some places it's going to be slower, and that's actually what you want to create for the fish so that they have a choice, and they're not stuck in one speed of water all the time.

Carl Safina

Right, right. So that they can get out of a big flow.

Jeanette Dorner

Right. It's sort of like – I try to explain to people it's sort of like being on a freeway without any rest stops. There's like a constant speed in these narrow ditches, and the fish have nowhere to get out of the way and it's really stressful for them.

Carl Safina (narration)

Another thing salmon need is cool water, and in summer that means shade.

So they've planted willows and cottonwoods along the banks.

Carl Safina

How long is it going to take before there are trees big enough to cast shade on this stream? Got to be decades.

Jeanette Dorner

Yeah, yeah, it's going to be a few years. But you know, the cottonwoods, you can see them sticking up already?

Carl Safina

Yeah.

Jeanette Dorner

Those are probably two year olds. Um and these –

Carl Safina

Oh, they grow pretty fast.

Jeanette Dorner

These cottonwoods grow pretty fast and those in the distance there, that's a cottonwood there.

Carl Safina

Yeah.

Jeanette Dorner

And that's probably a forty, fifty-year-old tree.

Carl Safina

So you guys are really thinking ahead here.

Jeanette Dorner

With plant restoration, you have to be thinking long term. You have to be thinking generations. You know, they say when is the best time to plant a tree? It's like right now, because, you know, it's going to take so long.

Carl Safina (narration)

Ohop Creek's restoration will take years, but it'll be worth it. Not only will it increase spawning grounds, it will also revive the river's second spawning tributary. And diversity is always good as insurance against future catastrophe.

On many rivers, dams have been bad news for fish like salmon, that need to move up and down stream. But on the Nisqually, salmon never could get past this massive rock ridge where the dams are. So there were no upstream spawning grounds to block.

And I was about to discover another lucky break for salmon here.

Carl Safina

I know that in a lot of places, dams and fish don't go together. And, um, salmon particularly, they can't get past many dams, it's been a big fight over dams. What's the relationship here with dams and salmon?

Debbie Young

If this dam were to be operated just for power, we'd release a big pulse of water in the morning, when we all turn on the lights. Then we'd drop it off and we'd release another big pulse in the evening when we all come home and turn on the power. But we don't want to operate the river that way and it wouldn't be good for fish. So what we do is, the project actually meters out the water. We're supplementing the water for fish.

Carl Safina

Oh, oh, so this isn't just about electric right now. It's about electricity, really and it's also about fish.

Carl Safina (narration)

Now I'm not completely naïve about this. The power company is not doing this just because they love fish.

To get their license renewed, they had to make up for years of holding back water by releasing more than they'd like. And they pay for the Clear Creek hatchery as well.

Debbie Young

What you're looking at here is the Nisqually River.

Carl Safina

Yeah.

Debbie Young

This is nine hundred and sixty cubic feet per second that's come through the generators and it's being released back to the river.

Carl Safina

So is the evening out good for salmon?

Debbie Young

Well, during spawning season, there's less chance of stranding when the flow is steady. If it were to fluctuate a lot there would be a chance to strand eggs where fish spawn in the margins of the river.

Carl Safina

Uh huh, so in other words, the water level would drop and maybe expose some nests...

Debbie Young

Right.

Carl Safina

And dry them out?

Debbie Young

Could be dried out.

Carl Safina

This is maybe the first salmon friendly dam I've ever heard of on a salmon river.

Debbie Young

We're actually certified as a low-impact hydropower facility.

Carl Safina (narration)

On the Nisqually – unlike other salmon rivers – there's no fight about dam removal to restore salmon.

We're heading back to the delta to meet the man who's thought – and dreamed – more about restoring the Nisqually than anyone.

This is Billy Frank, a leader of the Nisqually Indian tribe.

The Nisqually were catching fish in the river long before settlers came out west.

There were five salmon species coming up river, in seven different runs, spread throughout the year.

The Nisqually and 19 other tribes here were salmon people, and Billy Frank never lost sight of that.

Carl Safina

In this boat behind me is Billy Frank. In the 1960s, when people were trying to keep the Indians out of the river where they had always fished, he insisted on fishing here, insisted on his rights, got arrested dozens of

times, and it's really because of his force of personality and his perseverance that he's still fishing, all these guys are still fishing, the river still has fish and the river is being restored for the wild fish.

Carl Safina (narration)

Right now this is the only run that's like the old days: chinook returning to the hatchery. But it sure is fun.

Fisher 1

I's just jokin'.

Fisher 2

Oh, oh he got him whew!

Carl Safina (narration)

One thing that hasn't changed is the seals that like to grab a free meal out of the net.

Seals especially like salmon caviar.

Fisher 1

Go up to a fish and bite it right there and just suck the eggs out, they like to leave the rest.

Fisher 2

Oh, there he goes, another one!

Carl Safina (narration)

Then we got a welcome surprise.

Carl Safina

This is a wild fish because it's still got this fin. It's great to see that there are some wild fish here because the whole point of the restoration is really to get the wild fish back in the river, and spawning throughout the river, make the whole river produce salmon.

Carl Safina (narration)

As we said wild chinook were extinct here. But some hatchery fish have strayed, and are becoming wild again.

Carl Safina

Over the years, how has the fishing been going up and down? I mean, is it the same as it always was? Were there a lot more or less –

Billy Frank

If we never had the hatchery, we wouldn't have any fish. The hatchery feeds us, Indians. Our culture is based on this salmon. And our – it feeds us.

Carl Safina

Wow, look at all these fish. That...

Billy Frank

Boy this, this is...

Carl Safina

That's very impressive.

Billy Frank

This is a great run for Nisqually here.

Carl Safina (narration)

Only since the 1970s has the tribe been allowed to take a good catch like this out of the river – even of hatchery fish.

Before that the State of Washington had been severely restricting the Indian catch all around Puget Sound.

Then Billy Frank and his friends decided they wanted their rights.

Billy Frank

We had Marlon Brando, and everybody coming down here and going to jail and Dick Gregory and, you know, everybody went to jail with us. We marched with Martin Luther King.

Carl Safina

You did?

Billy Frank

Oh yeah, we went to Washington with all, you know, we did everything. We took over the Bureau of Indian Affairs' building back there. We were fighting for our treaty rights but it was always coming back to our river and fighting for our salmon.

Carl Safina (narration)

There were many demonstrations, and some ugly scenes. In this 1967 confrontation, for example, the tribes set their nets in Olympia, the State capitol. There are no salmon here, but the State was trying to restrict fishing to the small tribal reservations, whereas the tribes claimed they could fish anywhere.

The women continued the fight while the men were in jail. Here Billy Frank's sister and his wife have set their nets in the Nisqually River outside the reservation.

Civil rights, native rights and treaty fishing rights became one and the same campaign.

Demonstration crowd

[Singing]

Carl Safina (narration)

Things came to a head in September, 1968. The tribes made a united stand on the Puyallup River in Tacoma.

With both sides spoiling for a fight, things deteriorated. The State brought in riot police. There was tear gas, many arrests. But miraculously no serious casualties.

Ten days later the US government filed suit against the State of Washington on behalf of the tribes, and four years after that Judge Boldt issued his now famous decision upholding the 19th century treaties that had originally spelled out native fishing rights.

Billy Frank

The judge gave us fifty percent of the salmon, to the Indian, fifty percent of salmon to the non-Indian, and what I'm saying is, fifty percent of nothing is nothing.

Carl Safina (narration)

That's what's driven Billy Frank ever since – after all 50% of a restored river could really be something.

The tribe is not wealthy, but with a small casino they can contribute about a million dollars a year to Nisqually River restoration – a significant part of the restoration budget.

This is one of the key parts of the restoration. These 750 acres of brown mud in the Nisqually delta are becoming salt marsh.

But two years ago they were a farm, created a hundred years ago by building a system of huge earth dykes to seal the area off from Puget Sound. Once it's drained and the salt washes out, salt marsh makes good farmland.

Then along came the river restoration project.

Seven miles of dykes were removed. Like Ohop Creek it's been a major construction job to reconnect almost the whole Nisqually delta to the waters of Puget Sound.

The land is all part of the Nisqually National Wildlife Refuge, which has potentially doubled its salt marsh. Estuaries and marsh are vital places for young salmon, so the Refuge has become one of the most important components of salmon restoration in the entire river.

In our next episode, we conclude the story of the Nisqually restoration project.

We'll see how the restored delta is springing back to life, and creating new places for young salmon.

We'll follow young Nisqually salmon out into Puget Sound, and we'll see how young fish are liking specially created deep and quiet pools in a Nisqually tributary, that's right next to a town.

We'll see how that town is changing the way it treats its salmon river, and we'll be on the Nisqually's best spawning grounds to look for rare wild king salmon.

I'm Carl Safina. Please join me next time on Saving the Ocean for the conclusion of River of Kings.

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