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America's First River:

Bill Moyers On The Hudson

Part 2: "The Fight to Save the River"

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TEASE

CHRIS LETTS: There are people who still believe that if you fall into the Hudson River, you're limbs are going to start detaching themselves from your body and you—you're going to develop scrofula and—and you are surely a goner. And that may actually have been true, 25, 30 years ago.

PETE SEEGER: I've had people say to me sort of, "Oh, what are you trying to do? There's nothing that can be done for the Hudson." And my answer is if there's hope for the human race there's hope for the Hudson.

JOHN CRONIN: Citizens don't just have a right to a nice environment around them. They have a right to fight for it, they have a right to litigate for it, they have a right to roll up their sleeves and go into court with even the flimsiest of laws and expect victory because you're fighting for the right and you're fighting for the river.

AARON MAIR: In the case of my parents, the minute that they became cognizant of PCB contamination in the fish and the no eat order, it was like a death of a family member.

JACK WELCH: Jack Welch wants the Hudson cleaner. Very much so wants the Hudson cleaner. I know how to clean it

BILL MOYERS: But if you put it to a vote, Jack

JACK WELCH: I'd lose!

ROBERT BOYLE: The only thing it takes to change the world is a small group of dedicated people. Indeed is the only thing that ever has

CHIP REYNOLDS: Rachael Marie to the Half Moon.

BOB HENRY: Rachael Marie back to the Half Moon.

CHIP REYNOLDS: Bobby you can come in and lay along the side on our port side if that works for you

BOB HENRY: All right, roger that.

BILL MOYERS: I never imagined it that small and that narrow. I can't believe weeks on that crossing the Atlantic in uncharted waters.

BILL MOYERS: 400 years back in the history, right?

CHIP REYNOLDS: Yeah, that's right.

BILL MOYERS: Chip Reynolds, I presume.

CHIP REYNOLDS: Welcome aboard.

BILL MOYERS: Bill Moyers

CHIP REYNOLDS: Glad to have you here.

BILL MOYERS: Thank you. I'm glad to be here.

CHIP REYNOLDS: I'm pleased to meet you.

BILL MOYERS: This is your crew, I see.

CHIP REYNOLDS: This is it. We have middle school students from the Philip Livingston Magnet Academy, Rensselaer Middle School and the Bethlehem Central Middle School. They'll be sailing with us as we go up the river, and we will be anchoring each day, on the day that Hudson did, as near as possible, to where Hudson did.

BILL MOYERS: The *Half Moon* is a modernized replica of the ship Henry Hudson captained in the fall of 1609, when he became the first European to sail up the river that would later bear his name.

CHIP REYNOLDS: Now do we remember how many miles are in a degree? We were talkin' about it yesterday.

BILL MOYERS: Each September, a crew under Captain Chip Reynolds sets about to learn the skills of 17th century sailors—as they begin their *own* discovery of the Hudson River.

CHIP REYNOLDS: All ready on the capstan?

STUDENTS: Ready!

CHIP REYNOLDS: All right. That's what we want to hear. Okay. Easy up on the capstan. That's perfect right there. Now you realize of course that in the 17th century, many of the sailors would be about your age.

BILL MOYERS: Hudson came upon these waters in search of the illusive Northwest Passage, a shortcut route to the Orient, which if it existed would transform world trade and travel.

BILL MOYERS: There was no Northwest passage. But what Hudson found was stunning all the same—if almost impossible to imagine today.

CHIP REYNOLDS: If we think back to Henry Hudson and his Dutch crew coming into New York harbor, they're coming from an area that has been virtually clear-cut. The forest resources are gone, the fields have been heavily cultivated, they've just gone through the plague. They come into this New World and see the vast extent of the forest resources, the animal life that was here. It must have seemed like a Garden of Eden to them.

BILL MOYERS: Paradise found.

BILL MOYERS: An account of Hudson's journey survives—written by crew member Robert Juet.

ACTOR READS WORDS OF ROBERT JUET: We sent out our boat to sound, and found that it was a very good harbour—then, went on land with our net to fish, and caught ten great mullets, of a foot and a half long apiece, and a ray as great as four men could haul into the ship.

BILL MOYERS: The *Half Moon* sailed north past the island we know as Manhattan—past imposing Palisades and glorious mountains—all the way to present-day Albany, 150 miles from the river's mouth.

BILL MOYERS: Almost all of what Hudson himself recorded about the trip is lost to history, but it is known that he wrote: “The land is the finest for cultivation that I ever in my life set foot on. And it abounds in trees of every description...”

BILL MOYERS: It was only a matter of time before accounts like these helped set in motion waves of European emigration that would transform Hudson's newfound Eden into a mighty highway of commerce and industry.

BILL MOYERS: Of course progress brought pollution to paradise, and almost overwhelmed it. But the river never lost its capacity to produce its rich bounty...or inspire wonder in the people who live along its banks.

ROBERT BOYLE: You will find a variety of fishes here in the Hudson that will be both Northern forms and Southern forms, freshwater and salt water, which almost mirrors the kind of population if you were to do a census sample of the ethnic backgrounds of the people in Times Square.

I once collected a mangrove snapper in the Hudson River. It's a tropical fish; its native

range is between the Florida Keys and Bahia, Brazil. It's a river really full of surprises.

BILL MOYERS: Robert Boyle is a world-class angler, and a founding member of the Hudson River Fisherman's Association, one of America's first modern environmental organizations. He is also a reporter, who wrote groundbreaking articles about pollution for *Sports Illustrated* in the 1960s and '70s.

BILL MOYERS: 30 years ago, you wrote to those who know it, the Hudson River is the most beautiful, messed-up, productive, ignored and surprising piece of water on the face of the earth. Why did you say that?

ROBERT BOYLE: Because I've looked at a lot of bodies of water and that is it. Because what you would think would be dead would still be alive, and you would find amazing, amazing things in it.

BILL MOYERS: Boyle's 1969 book, the Hudson River, A Natural and Unnatural History, remains a notable account of the river's biology, geology and history.

ROBERT BOYLE: It's the birthplace, if you will, of American literature with Poe, with Cooper, with Washington Irving. It's the birthplace of American painting with Thomas Cole, and Kensett and Durand. This river has brought so much artistic expression to the forefront in this country that it's, it's just incredible. It's also of great biological significance, in that it is the only estuary, and I choose my words very carefully, it's the only estuary on the East Coast, on the Atlantic Coast of the United States that still retains all of its original fish species.

BILL MOYERS: What's the importance of an estuary? What is it, in the first place?

ROBERT BOYLE: An estuary is a tidal — it's where fresh water from the land meet salt water from the sea and they are both governed by the tide. The water doesn't flow one way downstream, it flows both ways. In fact the Indian name for this, which is something on the order of Muhheakunnuk -uck-uck means "the river that flows both ways." Estuaries are among the most productive ecosystems in the world for one very simple reason: the river gets its energy from the marsh plants, from the underwater vegetation, from the sun, and from the leaf fall in autumn but instead of being flushed out to sea, the salt water coming in and the tide's coming in and the fresh water washing it in, it's basically held in place,

BILL MOYERS: The Hudson estuary is created by fresh water flowing south from the Adirondacks colliding daily with the salt water tide flowing upriver from the Atlantic Ocean. Also feeding its flow are countless tributaries entering the river from a territory over of over 14,000 square miles from five different states. Indian Brook meets the Hudson at an Audubon wildlife sanctuary called Constitution Marsh, just below Robert Boyle's home.

ROBERT BOYLE: When I was a boy, and would go away to summer camp, I was always collecting in streams and turning over rocks. You know people say, "So and so, he looks as though he crawled out from underneath a rock." Some of the most beautiful things in the world live underneath rocks.

ERIC LIND: This is what we call a horsehair worm. It hardly even looks like an animal. But if you watch him for a minute you'll see he's moving around. We don't see them that frequently down here, but every once in a while we'll see one. They come up in our nets.

ROBERT BOYLE: Which end is which, Eric?

ROBERT BOYLE: There's this marvelous diversity of life that's compressed in this little tidal

stretch of where the brook empties into the Hudson. This is part of the Hudson. This is sea level right here. You have some organisms—as I say, *chacun son gout*—that only eat the feces of the animals that have eaten the leaves. And actually, it's very rich stuff because that's coated with bacteria. You hold that up, you can see the holes in it. See, there's the skeleton. This is a leaf that's been eaten. See the holes in it?

BILL MOYERS: What's washed out of this stream is not lost when it gets out into the Hudson system because the tides keep it in place. If this stream flowed into a river that was a classic river and only went one way, followed gravity and went downstream, it wouldn't be as rich. It's the supermarket that never closes, and it's free for the taking for the animals that are there.

Someone once said of a river, you're never looking at the same river flowing past, it's always changing. And that could be said in spades about the Hudson.

ACTOR READS WORDS OF ROBERT JUET: Fair weather; the wind at the north-west. We weighed and went down the river seven or eight leagues; and at half ebb we came on ground on a bank of ooze in the middle of the river, and sat there till the flood; then we went on land and gathered good store of chestnuts

JOHN CRONIN: Muhheakunnuk—the river that flows both ways. That's what it does and most people don't understand it still. Not only does it flow both ways, sometimes it flows two ways at once, because it changes closer to shore than it does out in the middle. So, sometimes—people mention this to me—they'll be on the commuter train, coming into New York, and they'll be stopped, and they'll look out on the river and they'll see ice near the shore going north and ice out in the middle going south, and they call me, because they think something's wrong with the river.

BILL MOYERS: John Cronin has spent much of his adult life on the Hudson. For over 16 years, he was known as the Hudson Riverkeeper, a position created by Robert Boyle and the Fisherman's Association to be the eyes and ears of people working to help safeguard the river's health.

JOHN CRONIN: Esso Palm Beach Esso Palm Beach, this is the Riverkeeper, over. All this sea water you're pumping, are you replacing that with fresh water from the river? Over. Oh man, this is clearly a violation of the Clean Water Act. It should be a felony violation.

BILL MOYERS: Cronin and his partner, attorney Robert F. Kennedy, Jr., gained a national reputation for searching out Hudson River pollution and bringing the polluters to justice. Logging thousands of miles on the Hudson gave Cronin an intimate understanding of the river's ways.

JOHN CRONIN: The mouth of the Hudson is almost always salty and of course the bottom of the river is below sea level. And the bottom of the river is below sea level for 154 miles. The Atlantic Ocean rolls into the Hudson. This is the Atlantic Ocean rolling into the Hudson—we can see it right here. Ocean and fresh water meet in a tidal ecosystem. And then ocean species can come up the Hudson River and spawn. For example, in from the ocean, American Shad swim up the Hudson River. They head for the fresh water reaches, where they spawn, and then the adults turn around and head back to the ocean. But those eggs, which slowly develop into larva, are sloshing back and forth in this fresh water. And by the time they reach a part of the Hudson that is just salty enough, they're the right size to endure the salty water. The time for their development includes that time of sloshing back and forth. It's a—it's a—it's a piece of ecological choreography unlike

anything that you could imagine. And then if you add to that, that those American Shad that are going up the east coast are each breaking off and going up their rivers of origin to spawn, as part of a thousands-of- miles-trip of following their ideal water temperature off the Atlantic coast. You can see that in any location on this coast, you could potentially do something that would damage the whole coast.

BILL MOYERS: Everything is connected.

JOHN CRONIN: Everything is connected. Everything is connected.

BOB GABRIELSON JR.: This is a roe shad. You can see by the thickness, the redness toward the back. It's a beautiful fish. This came right out of the ocean. This fish is caught for its meat. Also for its roe. it's a delicacy. A lot of it is shipped around the world. A lot of it is sold in New York City restaurants.

BILL MOYERS: For Bob Gabrielson, Jr., a second generation Hudson fisherman, spring is the most hectic time of the year. In April, the shad begin swimming furiously upstream to their fresh-water spawning grounds. They're gone before Memorial day.

BOB GABRIELSON JR.: You work a lot of hours, you working one, two, three o'clock in the morning. Nasty weather, rain, but you got to go. You just can't say well, I'll get them tomorrow. It doesn't work that way. Sometimes we find other things in the net besides fish. We've found bodies. A couple of them. That end up in our nets, you know, jumpers on the bridge. We just tie them up, bring them along side, bring them in and then we call the cops. You know. There's nothing really anybody can do for them. You know. So it's not really a rush-rush thing. You know, it's probably a little sad, but that's life. You can't do anything for them anyway, you know. Gotta go on. Keep fishing.

BOB GABRIELSON JR.: Catfish to white bird. Catfish to White Bird.

BOB GABRIELSON SR: Any fish, any Bass?

BOB GABRIELSON JR: There's quite a few Bass and there's a lot of Shad.

BOB GABRIELSON SR: Thank god for that

BOB GABRIELSON SR: How close you are to finishing?

BOB GABRIELSON JR: Uh, I got two more nets, Dad. I gotta go.

BOB GABRIELSON SR: Ten-Four

BOB GABRIELSON JR: I say to my father, you know, I don't want to put any more nets up. "Well, put a couple more out!" You know. And last night we were only going to put about 500, 600 feet, but we went a little bit more. And in a way I'm glad I did.

BOB GABRIELSON SR.: I taught him everything I know, so now he's smarter than me.

BOB GABRIELSON SR.: Anybody get seasick today?

BILL MOYERS: Gabrielson's father, Bob Senior, has been fishing the Hudson for over 50 years. These days he spends more time on the dock than in the boat, but he's picked more than his share of shad nets.

BOB GABRIELSON SR.: You guys didn't see labor today. This is nothing. When you're catching shad it's like going home to mother. I've trucked 14,000 pounds off of here in a day. I used to have them pulling off this dock with tractor-trailers, heading to Washington, Philadelphia and Baltimore.

BILL MOYERS: The Hudson River fisherman has been a local icon for as long as anyone can remember. Though striped bass was their main money fish, the men who worked these waters were always known as *shad* fishermen. It seemed they were defined in the public's mind and their own by the beauty and bounty of their annual spring catch.

BILL MOYERS: Gabrielson Sr. began fishing here as a boy in the 1940s.

BOB GABRIELSON SR.: It was all full of fisherman in them days. My god—I guess in this town alone there was 14 fishing camps. Even the judge was a haul-seiner down on the Tappan Zee bridge. They'd bring the seine net out. And then we'd all get on the lines, and start—you know. And I used to get yelled at. "Don't hang on to it. You're supposed to pull it!" Right? But they used to give us a dollar a day and a fish. When I brought that home to my mother she thought God had showed up, you know?

I'm a fisherman, I like to be on the water. There's no other place to go. You know, I was born in that hospital. I've got my plot up there. And I spend my life down here. It's my world. It's my river.

JOHN CRONIN: When I was a kid the river was a real source of magic. Whether I was down on the waterfront with my mother. Or up here with my dad, which where he used to love to take us. We'd see things on the river that we could only see else—like in books and pictures and so on. So we'd see a tugboat go by and it would be like it came out of a Golden Book: Like, you know, "The Little Tug That Could", or one of those great stories. And we'd say, "There really are tug boats, these aren't just book characters." And it was the kind of thing that brought the river alive. You know the river was the place that had life, that made things come true, that made things, that made things real for us.

My dad brought us up here to show me what he grew up with. It was part of the continuity. He used to come here. And we'd stand here and we'd look out here, and we were fascinated with the idea that you could see another state, because that's New Jersey over across the river there. So we'd stand here and we'd say wow that's New Jersey, like it was one of the big wonders of the world, you could actually see—stand back and see another state.

But he'd also point out all the places that were important to him like right down here is where he and my mother used to go rowing when they were dating, and over here is where Monsignor Brown took them out and taught them how to swim, which meant tying a rope around my father's waist and tossing him in the river from a boat and screaming, "Swim!" And so at that young age the river meant something very very personal. It was part of the family.

And then one day the Yonkers Sewage Treatment Plant was built and it took over the beach where we used to go wading and it kind of changed the waterfront and you got this sense of oh yeah, sewage, pollution, the beach isn't there anymore. My immediate thought was what happened to my family's river? What happened to the Hudson River that my father inherited from his father and was supposed to be passed onto me?

ACTOR READS WORDS OF ROBERT JUET: The wind at southeast, a stiff gale between the mountains. We rode still the afternoon. The people of the country came aboard us and brought some small skins with them, which we bought for knives and trifles. This is a very pleasant place to build a town on.

BILL MOYERS: As cities and towns grew up along the Hudson, more and more people came to use the river as a highway and a source of food—but also as a sewer and a garbage dump. Soon factories were built along the shores. The reasons were simple: flowing water provided power, transportation, and an easy way to dispose of waste. By the mid-20th century, plants here produced everything from paper to electrical

capacitors to Chevrolets. Their byproduct—oil, heavy metals and a variety of other toxins—went directly into the Hudson.

LESLIE ERSKINE: In the '60s I went water skiing in this river and if your ski went down too far, it came up with slug, it was disgusting.

JOHN WEBER: I remember years ago, when I swam in Havlan's Cove. They used to shut the river down because we'd break out in little red spots.

ROBERT BOYLE: Before the birth control pill came in, the river was loaded with condoms. They were known as Brooklyn Trout.

BOB GABRIELSON SR.: I can remember when they had the sewage plants, and they used to pump out. And us kids used to swim in the river. And you'd see little brown things floating by. We called it the Hudson River Crawl. You had to push them out of the way.

BILL MOYERS: Fisherman—like Bob Gabrielson, Sr.—had the closest view of the pollution. Upriver from his fishing grounds were several huge factories, including the General Motors plant at Tarrytown.

BOB GABRIELSON SR.: The Chevrolet Plant—they used to paint their cars. We'd be out there pulling our nets in and all of a sudden here comes the river blue. Here comes the river red. Here comes the river black. That is what actually got flavored in some of the fish.... So all of a sudden we had a reputation of our fish tasting like kerosene.

BILL MOYERS: In 1964, Robert Boyle reported in *Sports Illustrated* that there was a 10-mile stretch of river near Albany where you couldn't find a single fish—in their place were sludge worms, leeches and rat-tail maggots.

And the West Side of Manhattan alone, Boyle wrote, poured 175 million gallons of raw sewage into the river every day.

BILL MOYERS: It seems almost impossible in the 21st Century to imagine people standing still while all this pollution was going on back 30, 40, 50 years ago. What were the attitudes behind dumping raw sewage and garbage and all those contaminants in this river?

ROBERT BOYLE: It was considered by some people to be progress. It was accepted. There was one U.S. Senator who said that God made rivers to carry away man's waste. I remember talking to a member of one geographical society, a scholarly group, and they put out a map of the East Coast of the United States and the Hudson River was black and I called them up—it was the American Geographical Society, then located in New York—and I said, why do you have this black mark going down the Hudson? He said, well, that's a river for industrial use. I said, by whose call? And they said, well, you know, that's just the way it works. And I said, not the way I feel about it. Not the way a lot of other people feel about it.

JOHN CRONIN: This is the old Anaconda site, Anaconda Wire & Cable. And when we investigated this site, when I was the Hudson Riverkeeper, this building was packed from floor to rafters, the entire length of this building, with construction and demolition debris.

Tires and paint cans and asbestos. It was a miracle that they actually were able to pack every square inch of the building, but they did.

It was so full of garbage that every window had a blue tarp on it, and you can see the remains of those blue tarps. And those blue tarps were holding back garbage. So, every window was bulging and if you remember when you were a kid and you used to see cartoons of buildings, where—like filling with water or something and the—and the building would actually start to bulge out, that's what this building looked like. The whole

building was bulging with garbage, at every window. It's very hard to imagine what it once was.

BILL MOYERS: The Anaconda factory at Hastings, New York, was once the proud centerpiece of the community. Generations of workers here manufactured millions of miles of copper wire and cable. During the Second World War, Anaconda produced one third of all the cable used by the U.S. Navy.

One of the many local boys who returned from the war to find work at Anaconda was Fred Danback.

FRED DANBACK: When I was a boy, I spent all my spare time on this river. I spent a lot of time playing along the river, making sailboats, sailing them out and wrote poems about everything I had done. And I spent a lot of time with the Shad fishermen, who I came to know very well.

BILL MOYERS: By the 1960s, telephone and electrical wire demand was booming and so was Anaconda's Hastings plant, turning out over 4,000 different products. But there was another side to the prosperity.

FRED DANBACK: I was working at Anaconda and at the time that we were having all the trouble with the shad fishermen losing their catches. What had happened with the shad fishermen, they start losing their business because there was oil in the water that would cause the fish to be contaminated with it and the Fulton market refused to take their weekly catch. And this was their livelihood, you know, they depended on it. And one of the things that really steamed me up was the fact that other businesses were polluting a river and hurting a second business, the shad fishermen. I didn't think they had the right to do that. It used to really infuriate me. I became obsessed with fighting pollution. I figured well, this is what I'm going to do. I'm going to take them all on, you know, and I did.

BILL MOYERS: From the beginning Anaconda's manufacturing process spewed waste and toxins directly into the river. What Fred Danback did was take notice.

FRED DANBACK: I seen all kinds of oil and sulfuric acid, copper filings; my gosh, they were coming out of that company like it was going out of style. I've seen lubro oil and I've seen #2 oil. All over Anaconda, off the dock, you could see this stuff coming out. It was terrible. It was really bad. And when I complained about it, they told me oh, it wasn't a big amount. So, we come down here, got a boat, brought up a seine, put it up against their pipes and you wouldn't believe how much copper dust we got in about half a minute. We got loads of it. This was entering the river on a daily basis, you know.

JOHN CRONIN: This was a time when environmental issues were not heroic issues. If you were anti-pollution, you were anti-American and you were anti-industry, you were anti-progress, you were just you know, you were a deviant.

FRED DANBACK: They told me at one point, they says, look Fred, you're being paid to produce here, not to worry about pollution. I said well, that's simple to solve. Knock off the pollution and I'll work here. It's very easy to do here, you know?

JOHN CRONIN: So Fred's punishment for badgering company officials and the Coast Guard to come up and investigate the company for the pollution events he documented was that they gave him every crummy job in the company, one of which was pushing a broom. But what Fred did is he pushed the broom everywhere he could and he went to every building. He followed every trench that had liquid going out of it. I think he even found

excuses to go outside and sweep the dirt so he could see where things were going. And Fred made maps and took notes of everything.

FRED DANBACK: Meantime, I was told by one of the employees in Anaconda that there was a group up in Ossining that were fighting to clean up the river and I should get in touch with them, and probably join them. So, I did. That's when I joined the Hudson River Fishermen's Association.

BILL MOYERS: Tell me about the Hudson River Fishermen's Association. I mean, it played a big role in cleaning up the river.

ROBERT BOYLE: Yes it did. We started in 1966, and there were two laws on the books that had never been enforced, the New York Harbor Act of 1888 and the Federal Refuse Act of 1898. Basically what the Federal Refuse Act said is that no one should put anything into the navigable waters of the United States except that flowing from city sewers in a liquid state.

JOHN CRONIN: It was an old navigation law, it wasn't a pollution law. It was passed during the McKinley Administration and he was no environmentalist. It was a navigation law because the harbors in the United States were a mess. There were dead horses and carts and tar and paint, and it was interfering with ships and navigation. They said all right, you can't dump anything in the rivers and harbors without the permission of the Federal Government.

FRED DANBACK: And the law was ironclad. You—there was no loop holes in it whatsoever. It was a very powerful law. But unfortunately, from the time it was federalized, scheming politicians looked the other way. They didn't want to know it was there.

BILL MOYERS: You found these two laws in the books, what did you do?

ROBERT BOYLE: Set out to have them enforced.

BILL MOYERS: With prodding from the Fisherman's Association, the U.S. Attorney's Office prosecuted Anaconda, armed only with 19th century laws and Fred Danback's evidence.

FRED DANBACK: Took them to court for discharging copper filings, sulfuric acid, lubro oil and #2 heating oil.

JOHN CRONIN: And when it came time to prosecute the company in Federal Court, the US Attorney used Fred's maps and Fred's notes to document where everything, where everything was.

FRED DANBACK: They put up a team of lawyers in the court, trying to fight me. But every way they turned, I'd beat them down because I was foolproof. They couldn't—they had no case to defend themselves with.

JOHN CRONIN: The company was fined \$200,000 under the Refuse Act of 1899, You know, even today for a polluter to be fined \$200,000 is a big event. Back in the early 1970s, it was a huge event. It was like a thunderclap.

There are a lot of really unsung heroes on the Hudson River, people who put their safety on the line, their salaries and their jobs on the line, on occasion, and one of those people was Fred Danback. He was a hero. He was a hero.

FRED DANBACK: I love that river. It's a beautiful river. Look at it. It's your river, its my river, it belongs to everybody. Whose got a right to mess it up? That's the way I feel about it. I still do, to this day.

PETE SEEGER SINGS: Sailing down my dirty stream/Still I love it and I'll keep the dream/
That someday, though maybe not this year/My Hudson River will once again run clear.

JOHN CRONIN: Even though I was imprinted with the Hudson River at a young age I ended up having a different relationship with the river than my family did. I became part of the first generation that in fact ended up being distanced from the river, and then didn't rediscover it until my 20s through Pete Seeger actually down at the city of Beacon waterfront. I saw the Clearwater come in full of pumpkins and the old magic came back. Oh that's right I recognize this smell. I recognize that water, I recognize that river, we're supposed to be near it, not away from it. And it really changed my life.

PETE SEEGER SINGS: Out in the ocean they say the water's clear/But I live right at Beacon here.

BILL MOYERS: Each autumn, in waterfront towns like Beacon, New York, the sloop Clearwater arrives for a riverside festival.

More than just a boat, Clearwater is an activist organization devoted to the river's welfare. It's original mastermind was legendary folk singer Pete Seeger.

PETE SEEGER SINGS: That someday, though maybe not this year/My Hudson River and my country will run clear.

PETE SEEGER: I really learned about the river and the riverbanks when the Clearwater project came along. A friend of mine says oh, you know, they used to have sailboats on the river with a boom 70 feet long. I said don't give me that, there never was a sailboat that big. He said no, I got a book that tells about it. He loans me a tattered copy of a book written in 1907, by two middle-aged men. One lived right here in Beacon, the other was an ex-captain of one of these commercial boats carrying bricks to New York, and now he was out of a job. And they said these were the most beautiful boats we ever knew and they will never be seen again.

BILL MOYERS: The proud, single-masted sloops had once been the lifeline of the Hudson, transporting travelers and cargo, connecting people to the water.

In 1966, Pete Seeger figured that if he could bring back a sloop, it *might* bring back the river. With contributions from up and down the Hudson, the Clearwater Foundation was born. In a shipyard in Bristol Maine, Seeger's vision began to take shape.

PETE SEEGER IN STOCK FOOTAGE: I've had people say to me sort of, "Oh, what are you trying to do? That—nothing that can be done for the Hudson." And my answer is if there's hope for the human race there's hope for the Hudson. Maybe we're wrong on both counts. But let's give her a try. You wait till the sloop's been in the river a few years. We'll have a hundred thousand people come down to the waterfront. They're going to see shows and sail on the boat and they'll have a wonderful time, then they'll look around and say "Gee this place is a mess, we ought to fix it up."

CROWD RECITES: I christen thee Clearwater. May God bless her and all the men who sail on her!

PETE SEEGER: Three years later, this big sailboat was launched. I remember having the sinking feeling we've bitten off more than we can chew. Two thousand people came to see the Clearwater launched.

BILL MOYERS: And so began the journey of the Clearwater, sailing around the Hudson, on a mission to draw people back to the water. Pete Seeger and the crew began holding festivals and singalongs to celebrate the river and its heritage, performing songs like Old Father Hudson, Up and Down the River, and Sailing Up My Dirty Stream. After more than three decades, the sloop built on the far-fetched notion of cleaning up the

river has become an institution on the Hudson.

JOHN CRONIN: Pete Seeger is the master of simple cunning. The brilliant and cunning idea he had about the Hudson was that the Hudson will be saved by people, but only if people have a chance to enjoy the Hudson. This was something that nobody was thinking of or doing. But Pete said, no if we do this, if we do this we're going to save the river if people will use the river. He was the one person who believed it, and the one person who said it. And there is an army of people out there who feel they have a personal stake in this river because they saw it, they smelled it, they tasted it, they touched it, because of Pete, because of Clearwater.

ACTOR READS WORDS OF ROBERT JUET: In the morning, being very fair weather, we sailed up the river twelve leagues, and had five fathoms and five fathoms and a quarter less. The river is a mile broad. The land grew very high and mountainous.

CHIP REYNOLDS: Look at the bird and then put the binoculars up. You see it's coming down?

JOHN CRONIN: This is the southern gate to the Hudson Highlands, which is to say it's the southern gate to one of the most mysterious, historical, and legend-filled parts of the river.

BILL MOYERS: The Hudson Highlands are an ancient stretch of hills and mountains, where the river twists and turns. The enchanting scenery has captivated generations of travelers and settlers, sailors and artists.

BILL MOYERS: Washington Irving set many of his tales in the Highlands, and legend has it that Captain Kidd's treasure is buried here. The natural beauty of the highlands inspired the landscape painters of the Hudson River School, and the highlands were a crucial defensive bulwark against the British during the War of Independence.

JOHN CRONIN: Holding these Highlands was important and vital for George Washington's strategy for winning the revolution. And holding the Highlands was a central strategy to the Hudson River conservation movement as well. So, it bookends the history of the Hudson River, in many ways.

BILL MOYERS: Here in these highlands, in 1963, one of the first great battles of the modern environmental movement began over a thirteen-hundred-foot high rock called Storm King Mountain.

ROBERT BOYLE: That rock, Storm King Mountain is one billion two hundred million years old. It's the eroded root of a great mountain chain. The Federal Power Commission had licensed a plant proposed by the Consolidated Edison Company to suck water from the Hudson River a mile up through Storm King Mountain, through tunnels. And then when Con Ed wanted power to meet demand, they pulled the plug on the bathtub they'd set up in the mountains and the water would rush down hill and turn turbines to generate electricity.

BILL MOYERS: The initial plan called for carving out a huge chunk of Storm King mountain to create a facility that could suck up to six billion gallons of Hudson River water in a single day.

FRANNIE REESE: As far as Con-Ed was concerned, God made Storm King for them and it was a perfect site for pump storage, and it never occurred I guess to them that anybody would think it was a perfect sight to enjoy and to leave to the future to enjoy. That kind of

autocratic approach, and also that everything was made for man to do what he pleased with—and I mean man generically—just didn't go down.

BILL MOYERS: From the time she was a little girl Frannie Reese had been raised to care for nature. She and her family would often camp deep in the wilderness, where she learned the lessons that would serve her for a lifetime.

FRANNIE REESE: We always had to leave everything when we camped just as near as possible as if we had never been there. So I think that was just part of my life, and the way we were supposed to behave. It was just the way you weren't supposed to bubble in your milk. I mean, it was the same sort of attitude.

BILL MOYERS: As a young mother, Reese spent her summers in the Hudson Valley, never dreaming she would one day help lead the fight to preserve it. Then in 1964, she attended a hearing on Con Edison's plans, and—on the spot—resolved to challenge them. She joined a group of concerned citizens calling themselves the Scenic Hudson Preservation Conference. That's not what their opponents called them.

FRANNIE REESE: We were called all kinds of things. There was a whole list of them. I wish I had them but they were quite colorful: old ladies in tennis shoes looking at birds or whatever they called us.

BILL MOYERS: Con Ed's lobbyists also characterized them as "militant adversaries of progress." And the Federal Power Commission appeared to agree. When Reese and Scenic Hudson wanted to go before the FPC to oppose the Plant, they were told the matter was none of their business.

So they took a then-*revolutionary* step: they sued in Federal Court for the right to challenge the license on the grounds the plant would ruin a national historic and scenic treasure. Incredibly, the court granted them that right.

JOHN CRONIN: This was something very unique in the mid-1960's. Nobody ever heard of it before—that citizens don't just have a right to a nice environment around them. They have a right to fight for it, they have a right to litigate for it, they have a right to take on big odds to demand attention, to demand redress, to roll up their sleeves and go into court and expect victory because you're fighting for the right and you're fighting for the river. It was a great victory—but it was only the beginning. The plant's opponents had to prove that more than just a view was at stake. So Robert Boyle and the Fisherman's Association challenged the plant on the grounds it would kill too many fish, especially the Hudson's most popular food fish—the striped bass.

ROBERT BOYLE: This would be just a giant predator on the river system.

There would be a devastated fishery, a decimated, destroyed fishery.

JOHN CRONIN: The fish studies that were done by Con Ed treated the Hudson as a river—it is called the Hudson River—which is that it ran in one direction. But it is tidal. That means the river flows south for six hours, north for six hours, south for six hours, north for six hours and the way the river works is if I drop a stick in the water at any point in the Hudson, lower Hudson, it will go back and forth, past that point, seven times before it no longer goes back and forth past that point, because of the tidal action that moves it in and out. So, in fact, the fish that would drift by—or the eggs and larva that would drift by the Storm King plant, wouldn't have one opportunity to get sucked into the plant, they'd have seven opportunities. So, everything they did was off by a factor of seven.

BILL MOYERS: Slowly, the public was learning what it meant for a river to flow two

ways—and how human behavior could destroy nature’s fragile balance.

Con Edison finally conceded. 17 years after the fight had begun the company signed an historic agreement. The plant would not be built.

FRANNIE REESE: I think that’s what Con-Ed didn’t count on—that groups such as ours would not give up.

BILL MOYERS: If the power company had won the battle of Storm King Mountain 20 years ago, what would we be looking out on now?

ROBERT BOYLE: You’d be looking at a river that had been gutted, that was, sort of a squalid monument to stupidity and greed.

JOHN CRONIN: Up until then you had to prove you were losing money or some sort of personal belongings and then what happened in the Storm King case was the court said, well, you have a right to protect the beauty around you, you have a right to protect the fish, you have a right to speak up for a mountain. This was extraordinary. Now it doesn’t sound extraordinary now, cause it happens all the time. Hence the conclusion that in many ways this was the birthplace of the modern environmental movement because what we do every day in the environmental movement started right here at Storm King mountain.

BILL MOYERS: How did you come to love the river so?

ROBERT BOYLE: When I was a young boy I lived on the West Side, in New York City, Riverside Drive. And the river was always you know, sort of a fact of life. And then my parents were warring with one another. And I got shipped off to school at the age of six. And I was sent right down, right down here south of West Point. And I used to, I would stare at the river. I have a couple of friends, whose names they really wouldn’t want used, who—I didn’t find this out later until we got involved in fights for the river—they were sent to orphans homes, I wasn’t an orphan, I was in a proper school, but they were sent to orphans homes and they used to stare at the river all the time. And I thought to myself, what would Con Ed know that these 6-year-old kids staring at a river would come back to fight them.

BILL MOYERS: The work of activists like Robert Boyle and Frannie Reese, Fred Danback and Pete Seeger, inspired thousands of other citizens to take part in cleaning up the Hudson...and to press for legislation, like the federal Clean Water Act. The river that was once left for dead began creeping back to life. Even the commercial fishermen were on the rebound.

JOHN CRONIN: Right around the mid-70s, a lot of fisherman started investing heavily in equipment to start building up a real full-time family business all over again. All the fisherman were finally looking at the day when the Fulton Fish market was willing to start bragging that fish came from the Hudson River.

BILL MOYERS: It looked like the river was going to come all the way back. But Robert Boyle, reporting for *Sports Illustrated*, was on the verge of an ominous discovery.

ROBERT BOYLE: In 1972, after DDT was found in Cohoes Salmon and Chinook Salmon in Lake Michigan, a friend of mine, who was a biologist with the Fish & Wildlife Service said, gee we really ought to look at coastal fish to see if they contain contaminants. And we had fish shipped from the Atlantic Gulf and Pacific Coast, and I personally went down and collected striped bass here in the river. And I told Francis Coon, who was the chief chemist at the testing place, besides DDT and BHC, and diodrine and endrine look

for something called polychlorinated biphenyls, and he said no one's ever done that to fish before in this hemisphere. I said, well, do it and describe the protocols in case there are any questions. And the Hudson River striped bass were loaded with PCBs.

BILL MOYERS: PCBs—polychlorinated biphenyls—an industrial chemical, had been found to cause cancer in animals, and were suspected of doing the same in people.

PCBs were found in almost all species of Hudson river fish, including the commercial fishermen's most lucrative catch: the striped bass. New York State warned people about the danger.

JOHN CRONIN: I remember the day the story ran in the *New York Times* that told the world that the Hudson River is contaminated with PCBs and probably most fish.

BOB GABRIELSON SR.: Until the PCBs issue came out in the paper I'd pull my boats in here and I'd have people—two lines—standing in line. People waiting to get the fish off my boat. They put that in the paper. And I'm telling you in—I'd say inside of a week I had one customer—he was an old Russian. He couldn't read or write. And that's the only guy ever showed up after that. They destroyed us.

BILL MOYERS: Seven months after the warning, the state barred commercial fishing in the Hudson for most species of fish.

JOHN CRONIN: I watched grown, raw-boned men cry, who couldn't be scared off the river in the worst kind of weather. I've seen them cry over what happened, knowing that their children were not going to grow up in the business, the culture, the tradition that they grew up in and their fathers and their grandfathers.

BILL MOYERS: To this day, striped bass caught in the Hudson are considered contaminated with PCBs. They're illegal to sell commercially. The shad are considered safer—thanks to their eating habits. They don't feed during their migration...so they avoid the PCBs that have moved up the food chain.

But the shad and the stripers run upriver together. And you can't catch shad in a gill net without also catching a lot of striped bass. The hours it takes to pick out the stripers are hours that pay a fisherman nothing.

BOB GABRIELSON SR.: You're fighting it all the time with them—all the time. You could take a thousand pounds of shad out of a net within a half an hour—it'll take you five hours sometimes to pull the bass out. And you pull the bass out but you can't sell them, you can't market them, you can't—all of this labor intense work and you're throwing them back in the darn river. And it just kills you.

BOB GABRIELSON JR.: This fish has died on me and I'm going to be throwing it back. It breaks my heart but it's the law.

BILL MOYERS: A handful of commercial fishermen—like the Gabrielsons—still try to hang on. Most just gave up.

JOHN CRONIN: They were cut off from a living and they were cut off from a way of life. They were also cut off from—for most of them, a place of esteem in their communities. When you take that away, you cut people adrift. And it's done by people far away, whom you've have never met—who are not competing with you directly in the marketplace.

BILL MOYERS: It's an old story.

JOHN CRONIN: It's an old story, but with a new, ugly twist. It wasn't an imperial government moving in whose soldiers you could see, whose accusers, whose oppressors

you could look in the eye. It wasn't a competitor who had a better way of doing business than you. And you could say, "Well, it was my time, I lost out to a worthy opponent." It was somebody far away you've never seen, competing in a field that had nothing to do with you, and drove you out of business with a chemical you never heard of. You never smelled it, never saw it coming.

ROBERT BOYLE: PCB's were first manufactured in this country in the early 1930s, first by a company called Swann and then Monsanto took over Swan and they were used for a wide variety of industrial applications. When Monsanto would manufacture PCB's they called them araclor. That was the trade name. When General Electric would get them, they would baptize them anew and call them pyronol. It was like one of these shell games you might run into on 42nd Street. So, I knew there was something called pyrenol up river because I had a list of what they were discharging. I had no idea that pyronol were really PCB's. And I had no idea where they were coming from. I thought maybe there was some nut in Jersey City who was letting the things loose.

BILL MOYERS: Turns out they were coming from two General Electric plants on the Upper Hudson. For about 30 years—up to 1977—GE discharged over a million pounds of PCBs into the river, the last few of those years under permit from New York State. Their discovery in the fish meant more than the loss of a living for the fishermen. PCBs don't break down naturally. A potentially cancer-causing chemical was now in the food chain.

BILL MOYERS: Were you aware when you started working with GE that PCBs were considered dangerous?

JACK WELCH: No I never—look you gotta understand what 1960 was like. I got a Ph.D. from the University of Illinois, one of the great schools in engineering in the country, top five in graduate schools. We didn't take an environmental engineering course. I put my arms in phenol when I was in the lab there, put my arms in benzene, came home and left my clothes outside the door cause my wife wouldn't let me bring them in cause they smelled of so many chemicals. Bill it was a different world.

BILL MOYERS: Jack Welch, who made General Electric a global giant, gave his last major interview about the Hudson before his retirement as CEO 25 years ago. The up-and-coming Welch was GE's point man on PCBs.

JACK WELCH: ABC Stock Footage We don't feel blame, acknowledgment or anything else, other than in the spirit of getting on with the job and getting out of the courts.

BILL MOYERS: The state found in 1976 that General Electric had violated New York's water quality standards. The potential liability for the company was enormous. But Welch pulled off a brilliant settlement. After paying four million dollars, GE wouldn't be responsible for removing all the PCBs, and wouldn't be liable for future damages.

JACK WELCH: I just decided, look this wasn't a case you wanted to argue, no one had the data. It was a messy case. Get it over with, get it over with.

BILL MOYERS: Thanks to Welch, GE had dodged a bullet.

But then in 1980, Congress passed the Superfund law. It required America's polluters to pay for cleaning their toxic waste sites, and made them liable for additional environmental damages.

The new federal law trumped Welch's agreement with the state. And it touched off an

epic battle that has raged over 20 years. Much of it about whether to dredge the riverbed to remove the PCBs.

For years, the U.S. Environmental Protection Agency and others have called on GE to pay for dredging the river's most contaminated spots. GE has strenuously resisted.

JACK WELCH: When I talk to my friends who say Jack why don't you just take it out, what's wrong with you Jack, just take it out, they picture us reaching down, getting a handful of rocks and taking it out. They don't understand its molecules.

Now I'm not saying I'm a genius chemical engineer, but I'm a smart enough guy to understand hydraulics and getting PCB's out of this flowing river, this isn't a stagnant river, to chase molecules in water, Bill, is just nuts.

GE has saturated the airwaves upriver with ads claiming the dredging would take decades, and do irreparable damage to the Hudson and the surrounding communities.

GE COMMERCIAL VOICE: You've just experienced 20 seconds of dredging. Imagine what 20 years will be like.

JACK WELCH: The Hudson's recovered, it's wonderful, it's beautiful, now we're going to put barges and fifteen miles of pipes, a billion gallons of water a day, 800,000 pounds of mud to get a pound of PCB, when we haven't proven PCB's—I don't want to make that argument—we haven't proven PCB's even harm anyone.

BILL MOYERS: Now Jack you don't believe that. You believe they do harm people.

JACK WELCH: No I don't believe that, but I'm not arguing that case. It told you I'm—

BILL MOYERS: I know you're not, but I can't, I have a hard time accepting that you don't believe by now that PCB's are harmful,

JACK WELCH: There are—

BILL MOYERS: There've been plenty of studies.

JACK WELCH: No and none of them have proven it.

DAVID CARPENTER: Every national and international body categorizes PCBs as probable human carcinogens. This is on the basis of studies in animals, including studies by—done by General Electric in animals, that prove conclusively that PCB exposure causes cancer in animals.

BILL MOYERS: David Carpenter is a professor of environmental health and toxicology at the State University of New York in Albany. His work suggests a link between PCBs and learning disabilities in children.

DAVID CARPENTER: One of the major concerns with children's exposure to PCBs is that they will suffer from a reduced intelligence. And in this regard, PCBs are very similar to lead. A child that's exposed to lead has, on average, five or six IQ points less than a child not exposed to lead. Almost identical results with PCB exposure in other studies. In some regards, I think this may be the most dangerous effect of PCBs because it appears to be an irreversible reduction in a person's ability to use their brain.

GE will argue that the PCBs are all buried in the sediments and therefore they're not available. It's certainly true that PCBs are primarily attached to soil particles that are sediments. If the water's not murky, they're settled to the bottom. But every time there are the spring floods, the sediments get stirred up and the water gets to be murky. And that's the PCBs that then get eaten by the fish, and therefore if someone goes and catches a fish from the Hudson and eats it, they're going to ingest and store in their own body the PCBs that are in the body of the fish. And a properly designed dredging and landfill will

immobilize PCBs so that they don't move any longer.

EPA VIDEO VOICE: The cleanup of contaminated sediments....

BILL MOYERS: The Environmental Protection Agency has said that dredging with mostly newer, cleaner technology will take only five years, not 20, and that while there will be short-term disruptions for people nearby, dredging is the best plan for the long-term health of the environment.

Meanwhile, one of GE's plants continues to leak PCBs into the river. The company has spent years—and millions of dollars—trying to stop the seepage. Accomplishing that, according to Welch, would allow the Hudson to heal itself.

JACK WELCH: Jack Welch wants the Hudson cleaner, very much so wants the Hudson cleaner. I know how to clean it.

BILL MOYERS: What if you're wrong and all the others are right?

JACK WELCH: No—it's not me wrong and all the others, it's—

BILL MOYERS: I mean your side wrong.

JACK WELCH: Bill, we can't be wrong because we're going to stop it from going in there.

Right now we have three ounces a day leaking from the side of the plant into the river, three ounces a day, down from five pounds seven years ago, down from hundreds of pounds fifteen years ago. We're almost there to where the source is shut off.

BILL MOYERS: And once the source is shut off the PCB's are still down there.

JACK WELCH: They're in the river, but they're not coming into the river. The river will have had its last PCB from GE, okay.

BILL MOYERS: As General Electric's CEO Jack Welch fought the government dredging plan with an army of lawyers and lobbyists, even suing to have the Superfund law struck down as unconstitutional.

PERSON IN GE COMMERCIAL: I love this river. For the past 20 years I have seen the river cleaning itself.

BILL MOYERS: And in its massive public relations campaign, the company has enlisted people living along the river to help promote its vision.

PERSON IN GE COMMERCIAL: This place is special because it's home.

PERSON IN GE COMMERCIAL: This is just a project that should not be done

PERSON IN GE COMMERCIAL: The river is coming back. It's quite remarkable.

GE COMMERCIAL VOICE: Let's think hard before we undo all the good that's been done.

BILL MOYERS: The town of Fort Edward is home to one of the GE plants. It's the center of PCB contamination in the Hudson. You'll find some people here who echo GE's commercials. Others aren't so convinced.

FRANK DYER: I remember when I grew up, the Hudson River was always the great Hudson River, but now it's known for the GE's river. All these people you see saying that the river looks beautiful on these commercials. I mean, they show the river, how beautiful it is, and the life's coming back to the river, but the facts are is that stuff's still in there—you know. It's not going to go away. It doesn't break down itself. It's still in there. Either cover it up or repair it some way, however they're going to do it—I'm not a scientist—or let the people know that it is still there and it's not going to go away.

JOHN WEBER: It was just about a week ago, I walked there, the water up to my hips, looking down and seeing my toes clearly in two and a half to three feet of water. The rocks are clean, the water's crystal clear and the river is generally cleaning itself.

DAVID CARPENTER: You can look at a river that looks beautiful, where the water is crystal clear, but it still can be very highly contaminated and in fact, in the case of the Hudson River, it is very highly contaminated. The Hudson River is a dump. It is a contaminated site that is not enclosed, from which PCBs are migrating to the air, to the water, to the sediments, and and in to people. Now, dredging is not the ultimate solution. You must find a way of destroying these things once and for all. But as an interim solution to restore the integrity of the Hudson River, it's really about the only thing that we can propose.

JACK WELCH: We've got 50,000 letters have been sent to EPA, stop this madness, we've got telegrams, we've got—all these people have done incredible things.

BILL MOYERS: In no small part because of your very effective advertising campaign.

JACK WELCH: But my ads—no one's claiming my ads aren't true. My ads are subject to any review by anybody who wants to. I haven't said a thing in those ads that I'm embarrassed about. I've looked at every one of them.

BILL MOYERS: You approved them?

JACK WELCH: Absolutely, every single one of them. All they are are the facts They're trying to tell people what the story is.

GE Commercial Voice: Does this sound like the best way to clean up a river that's cleaner than it's been in a generation?

AARON MAIR: If you repeat it often enough, it's got to be true, it's gotta be true. So let's bombard them with the old Orwellian, "The river is clean. It's cleaning itself. It is good." To suggest that you can live with evil in the silt and that to suggest that cleaning up the river is bad is no different than somebody coming in your house, taking a dump in the middle of your living room, and don't want to clean it up, saying, listen, leave that pile of manure right there, because in time nature will take care of it. In time you won't smell it anymore. I'm just saying those ads stink and the logic stinks.

AARON MAIR: How's it goin' there?

BILL MOYERS: Aaron Mair lives and works in Albany, the state capitol. He also heads an environmental group that informs people about the dangers of eating fish from the Hudson.

AARON MAIR: ...from the ocean to the nest, and put their babies in them. They live in that mud and stuff and they grow up, they have a bit of that stuff in them, cause they have to live off the little things that are there.

AARON MAIR: A couple years ago we identified and highlighted the issue that inner city populations along the Hudson are fishing and consuming the fish. So the advisory by New York State about not eating fish from water bodies in New York State was not getting to inner city populations. And we have been part of the effort to post the signs and educate the community about fishing in the Hudson.

AARON MAIR: I'm gonna make—put you down there with them ducks.

BILL MOYERS: Mair grew up along the banks of the Hudson, where he spent many weekends swimming and fishing in the river.

AARON MAIR: In my family, fishing was a necessity because with a family of nine children while there was money, there was not always enough money. Fishing was a vital part of making ends meet.

POLISH FISHERMAN: This is small. I got a big one. I can—See, I can show you.

AARON MAIR: Immigrants, new people coming to the Hudson are now living the lie that we lived. They're pulling fish from the Hudson and thinking that they're safe.

POLISH FISHERMAN: This is big one.

AARON MAIR: These people consume the fish.

POLISH FISHERMAN: I take it home. I no cook it. My wife cook it. My wife knows how to do it.

AARON MAIR: There's nothing in their language or tongue. There's no health worker coming out, or no DEC enforcement ranger out here to protect their human health from the exposure and the risk associated with eating PCB-contaminated fish.

BILL MOYERS: What they're saying leave it alone. It's a nice way of saying walk away from the Hudson.

ROBERT BOYLE: General Electric should live up to its responsibility and clean up the mess it made. Jack Welch—what a miracle he's done. What a miracle? He's done it by dumping on the backs of the public because if GE had to clean up all the contaminated sites it has across the country, it wouldn't be making the profit it's making. Vic Yanacone, who was a lawyer with the Environmental Defense Fund, he said, unlike a human being, a corporation has no soul to save nor ass to kick. You know, they're immune.

JACK WELCH: We're people. We're flesh and blood. We're not "a corporation," we're not evil. It's not good government, bad corporation, it's not fat cat CEO versus poor citizen, it's none of that stuff. What this is about is let's punish a big company, a polluter. This has become a war, a religious war about big company polluter versus good government. Who says good government?

ROBERT BOYLE: They need to get down on their knees and beg forgiveness.

BILL MOYERS: Do you see them doing that?

ROBERT BOYLE: No, but the fight's not over, the fight's not over. The fight's far from over. The fight is far from over.

BILL MOYERS: After Welch stepped down as CEO, General Electric was finally ordered by the EPA to dredge the river.

ROGER PANETTA: In Robert Juet's journal of the record of the voyage up the river, he says this smell is really so fresh and wonderful and rich and lush. And then, a few paragraphs later, he says this place is ripe for development. Right from the first European encounter, there is this duality in which it's a wonderful work of nature, but it's also a kind of untouched resource that can be fully developed.

BILL MOYERS: Hudson Valley historian Roger Panetta.

ROGER PANETTA: Because so many of the struggles of the last 20 years have been essentially with the quality of water or over Storm King we have set up a kind of good guy/bad guy view of the history here. And I think it's more complex than that. This was an industrial river, it was a commercial river, and too much of the image that we want to hearken back to is really a fixed image that we've picked out of some moment in history—that the good river is the bucolic Hudson River painters' river. And I think that's unhistorical. What the history of the Hudson is about is change. What we're looking at is change

BILL MOYERS: Do you like to come to a place like this?

ROGER PANETTA: Yes. I find it recalls the history, brings it back to life. I to look at it before it's completely covered. Because it reminds me if I look at a building like this that there's a whole other history we tend to neglect.

BILL MOYERS: What was this?

ROGER PANETTA: This was the New York Central Yonkers Power Substation. It was built between 1896 and about 1906. And it housed the turbines which generated power for this whole section of the New York Central Railroad

BILL MOYERS: Well, this looks as if it were just left to die.

ROGER PANETTA: Yes. And when I look at this scene, it reminds me of one of the last in the series of paintings by Thomas Cole in the *Course of Empire*. In the last one, there's a single classical column in which a vine is beginning to grow back over what is essentially the ruins of the great city. And I look at this, and this tells me that we're really at a junction, a transition, between the old industrial Hudson and a different kind of Hudson. The question is: What are we going to do with this site and many other sites like that along the Hudson? And those are issues which all of these river communities are dealing with. And given the endurance of this first decision...this is a hundred-year decision we're looking at, one can ---

BILL MOYERS: You mean a hundred years ago they put this here and it's lasted for a hundred years?

ROGER PANETTA: That's right. As the industrial waterfront south and north of us, also dating to the 1880's and the 1890's. And in my mind, is the notion that the decisions being made now may also endure for a hundred years and they ought to be made with care. There's pressure on this waterfront property now for development for improving the real estate base and the tax revenues of these communities. The question is: What's going to happen here in the future? What new future are we going to see?

PETE SEEGER: All I know is that—face up to the contradiction of the situation, starting to clean up the river started off the real estate boom.

JOHN CRONIN: This is actually the price of success. As recently as 10 or 15 years ago this was undesirable real estate.

BILL MOYERS: So, do you see those condos as a symbol of the revival of the river?

JOHN CRONIN: It's a symbol of two things. I mean, it's a symbol of the revival of the river, but it's also a symbol of people cashing in on the river. Real estate developers have the control of this whole waterfront.

BILL MOYERS: What's the impact on the environment of development?

JOHN CRONIN: One is the obvious impact of building instead of land. It's all run off, it's all sewerage producing, it's all petrochemicals from parking lots and it's all headed here, the most inviolable environmental law is—you know, is the law of gravity. Nobody's going to repeal it. Everything heads down to sea level, so that's where this all heads.

ROBERT BOYLE: The danger we see in the Hudson is everybody wants to embrace it. The thing we're going to suffer is death by a thousand cuts. The sprawl that's come in the Hudson Valley is just appalling. I mean just one parking lot after another. You have a summer's day, two weeks with no rain, 1500 cars out on one lot, 3,000 cars on this lot, or whatever all at the galleria, and suddenly you get a downpour. The rain comes down and what washes off the parking lots and the streets is not water but a very complex chemical solution that goes into streams and goes into the Hudson River, and that is not controlled at all.

BILL MOYERS: Our impact on the Hudson Valley has been relentless. Once upon a time Manhattan Island was forest and farmland, as were the Bronx and the surrounding

suburbs.

Now, as development pushes north, the landscape upriver is changing, too.

NORMAN GREIG: My father bought the original 108 acres. It was all the flat ground down below. He always wanted to own this hill. And in 1967, he bought this hill. We have a beautiful view of the Catskill Mountains and everyone who comes here says gee, wouldn't this be a great place for a house, but it's also a great place for an orchard.

BILL MOYERS: Norman Greig works a family farm in Dutchess County, about two hours north of New York City, just a few miles from the Hudson.

Greig grew up on this land, back when farming defined the county.

NORM GREIG: I farm 550 acres. We grow fruits and vegetables, asparagus, strawberries, peas, blueberries, blackberries, fall raspberries, apples and pumpkins. I have 67 non-farm neighbors. I have no farm neighbors. When my father started farming in '42, there were 50 dairies in the Town of Red Hook. There were only two when I sold out and the—then the last one, the fellow died at the age of 80—last February, so now there are no dairies in Red Hook.

BILL MOYERS: But this land's been selling off, hasn't it—I mean, all around you.

NORM GREIG: Red Hook has a hundred new lots a year in a community of 9,000 people.

BILL MOYERS: Growing houses on this land would pay Greig a lot more than growing apples.

Real estate values keep rising, while foreign competition undercuts what he can charge for his produce.

NORM GREIG: From a business standpoint, I should move my fruit business to Chile. I should move there tomorrow. I was going to go down there last year to figure out how I could do some sort of wholesale function out of Chile to supply my market here, because I can't afford to grow it here. But I'm faced always with—I have this 550 acres that's my family farm.

BILL MOYERS: You'd do very well if you sold your land.

NORM GREIG: Yes, but I have to keep the land to keep my job. I think about other occupations but—you know, this is what I've studied and I've been doing for 25 years, it's—I guess everyone else has had to re-invent themselves, and so—you know, maybe it's my turn.

BILL MOYERS: To survive, Greig has turned his farm into something of a theme park with hay rides, music, food and games.

His father's once-placid farm is now home to 100,000 visitors a year.

VITO SINGS SONG: Been dreaming about eating all evening/I'm so hungry I could eat a cow/I don't smell no pancakes/I don't smell no grits/I don't hear no corn flakes Wheaties Cheerios or Trix/So where's my breakfast/What am I supposed to wait all day/Pretty soon it's gonna be lunch time/Once this morning's gone away. All right Jeff, take it away! Yeehaw!

BILL MOYERS: The variety of what you do is amazing. I mean we see you raising corn, pumpkins. We've seen you treating people to rides. You run a store right here on your property. You sell bakery goods, apples. But everything that you do doesn't guarantee that this farm's going to be here 10, 15 20 years from now.

NORM GREIG: Everyone comes to share this bounty in the fall season and to see the foliage and—hear the corn and pick a pumpkin. We sell dollar pumpkins to the school children—you know, a dollar doesn't produce—doesn't—you know, you can't buy a

soda for a dollar in the store. It doesn't get you much. We're in a financial crisis and we've been in it and it—and it continues to get worse all the time.

BILL MOYERS: That is an old story, isn't it, Norm. I mean, farmland that was once prosperous is now more valuable for other purposes than farming?

NORM GREIG: Right. The greatest pressure is on the land, for the open space. Red Hook has a very good school district—people say, couldn't I just buy one lot from you? And I say well, if I sell just one lot, then I can't farm it any more and the farm gets smaller and smaller. And that same thing happened this year. The school was doing construction and so the—the Red Hook Soccer Club didn't have a place to play and they said couldn't we buy a field from you and I said, no, I don't want to sell the field because then the farm won't be here anymore. Because it—that's how it happens—you know, just one piece at a time. So, I finally rented them one field. 12 acres, until they found a place. So, there's 500 families playing soccer on one field on the corner of the farm now. But, you know, in this suburban area, it looks very natural there. It's almost more natural than the corn. And maybe they're right. I mean, maybe this is a better use of land and open space than the cornfield. I mean it serves more people.

BILL MOYERS: But, when does the moment come you say, "I've got a little gold mine here, I'm selling it and I'm going to move, retire, or maybe go to Chile and farm."

NORM GREIG: No, no, but farming is a congenital defect, I'm convinced. You are the steward of that land and you want to care for it, it's your garden,

BILL MOYERS: Is it fair to say that what's happening is, that old word, sprawl?

NORM GREIG: Sure, it's the US model. The US model is to spread the people evenly over the space, and everyone wants to be lord of their own manor. So, it means that not only do you drive farther to your work, but then you come home and you drive your mower over more and more territory to keep it open.

BILL MOYERS: We have a real conflict in this country. We want open space and we want K-Mart. We want a clean environment and we want a neverending energy supply. We all are complicit.

ROBERT BOYLE: You mean we have met the enemy and he is us?

BILL MOYERS: Contradictory desires are common along the river that flows both ways.

The same region that rejected the Storm King power plant is nonetheless home to eight others. Consumer demand, and deregulation of the industry have resulted in plans that could create a dozen more.

Other industries too are pressing to settle on the riverbanks but there's an opposing current. Preservation groups are working to maintain farms and open space. River towns are reclaiming old industrial waterfronts for parks and recreation.

And where the Hudson meets the Atlantic, near where the World Trade towers once stood, there's a rebirth in the making.

At the tip of Manhattan lies The Battery, home, in the 17th Century, to a Dutch fort.

Later to a garrison that kept the British at bay in the war of 1812.

A concert hall where Jenny Lind first sang in America - and the docks where millions of immigrants set foot before there was an Ellis Island.

Now a newly refurbished Battery Park will serve as one end of a greenway that will stretch a hundred and fifty miles up river along the same route Henry Hudson sailed in 1609.

History flows here like the river itself in the endless search for balance and harmony between people and the environment.

BILL MOYERS: Peter Nye is a wildlife biologist, the head of New York State's endangered species unit.

PETER NYE: We began looking at bald eagles in New York in 1975. At that time we had one breeding pair, two adult eagles in the entire state. By 1850, I would say the decline had begun with massive logging of the waterways and the Adirondacks and things like that. We lost a lot of habitat. Many eagles were shot and then, of course DDT, which everybody knows about. DDT was like the straw that broke the camel's back. We had very, very few breeding pairs left and suddenly they weren't able to raise their own young, so the population began to crash.

PETER NYE: Hey boys and girls. What's happenin'? You're still here, huh?

PETER NYE: They can't fly. They're about seven weeks old. They could probably glide a little bit if they do happen to come out of the nest, but they're four weeks away from flying. They could drop like a stone and hurt themselves. The key is to try and be very careful and cautious.

PETER NYE: It's time to give blood for Uncle Sam.

BILL MOYERS: Back in 1976 Nye started bringing adult bald eagles to New York from Alaska to see if they could survive in the recovering ecosystem.

PETER NYE: Okay one comin'.

BILL MOYERS: It took 20 years before a pair on the Hudson successfully hatched an eaglet. Today, there are six breeding pair along the river.

PETER NYE: He's the one in the middle, Craig! Number 80!

CRAIG THOMPSON: This is basically a falconer's hood. They're very light-sensitive. When it's dark, they calm down, amazingly so. They'll still fight, because they'll feel you working around them, but it's nothing like if they can see you and get at you. The adults will, if you give them a chance, they'll do some damage. Both been scratched, bitten, footed. Eventually it happens if – if you handle them enough.

BILL MOYERS: These baby eagles are being reared on a diet that includes fish and eels from the Hudson. Anything the fish and eels have consumed will show up in the birds.

CRAIG THOMPSON: We're looking for contaminants in these birds, things such as PCB's, heavy metal, I believe organochlorides is one, just a whole variety of things that have—have been dumped in the—or put through the Hudson River at one point or another in the past 50 years or so.

PETER NYE: Hey 79 what's happenin'?

PETER NYE: The resurgence of the eagles in New York is a great thing, of course in and of itself, but it is also a great opportunity for us to use this species as an indicator to the health of the entire system. As the eagles go, their production and the contaminants that might be in them are a great indicator to us of what's happening in the overall environment in the aquatic system of the Hudson River and in the Hudson Valley, so it's kind of a good thing that they're here.

PETER NYE: Last one!

CRAIG THOMPSON: OK, Buddy.

CRAIG THOMPSON: They're very amazing birds. From a biological standpoint, as the top of the food chain, they're one of the types of animals which will get removed from the

system first. Things like contaminants, as they build their way up through the system, it's eagles that end up with the lethal dose of it.

BILL MOYERS: Along with trace amounts of DDT, mercury, lead and other chemicals in the birds' blood, the biologists have found elevated levels of PCBs.

PETER NYE: Easy, got it.

BILL MOYERS: They're watching closely to determine what effect these chemicals will have on the eagles.

PETER NYE: Bald eagles are a very sensitive creature. And they will let us know when too much has been too much and things are not proper for them to keep breeding, and they'll begin failing at some of these sites.

PETER NYE: You guys have a great life!

PETER NYE: We know what the keys are to survival of bald eagles: It's suitable habitat, it's undisturbed habitat; it's a good, clean food supply, mostly in the form of fish. We can make sure we have those types of ecosystems, we'll continue to have bald eagles around. But it's incumbent on us to identify those areas and make sure they're protected in the future. Not every last inch or every last perch tree for bald eagles, but enough so that we're sure that the numbers that they need to maintain viability down the road are secure. The big issue is what's going to be the status of the habitat that eagles are using today in 20, or 30, or 40 years. Is the amount of habitat that is supporting the numbers that we see today that we're happy about, going to be available and suitable for them in the year 2020, 2030, 2040. Will that still be here?

ACTOR READS WORDS OF ROBERT JUET: The morning was misty until the sun arose. Then it cleared. So we weighed with the wind at the south, and ran up into the river 20 leagues. We had very good depth, at six, seven, nine, 12 and 13 fathoms, and great store of salmon in the river.

CHIP REYNOLDS: Haul those flags! Haul Smartly, Adrian! All the way to the top. Haul!

MINSOO LEE: When I first boarded this ship, I was just like, Oh, well we're just going to cruise on the Hudson River, the Hudson River's ok. Now that I look at the river, like, the way the suns glistens on the surface of the water, it's different. The Hudson River isn't like, you know, super clean or anything like that, but, you know, it's alright. But you know, we should keep it like, clean, because if we don't, then you know, fish will die and wildlife won't come around. And that was my project, like, observing wildlife. So, if we pollute the river then I can't see any wildlife and that would be a shame.

MATTHEW GOLDSTEIN: We saw a bald eagle, we've see egrets. There's stuff around here, and we've caught jelly fish, crabs. We've got a fish in the fish tank. It's definitely a very good river. I sailed on it.

STUDENTS SING: John Kanaka-naka too-rye-ay/Too-rye-ay ho too-rye-ay/John Kanaka-naka too-rye-ay/Haul oh haul oh haul away/ JohnKanaka-naka too-rye-ay/Haul away the livelong day/ John Kanaka-naka too-rye-ay/Too-rye-ay ho too-rye-ay/John Kanaka-naka too-rye-ay

BILL MOYERS: The River that flows both ways.

The Hudson in the 21st Century remains perhaps, in Robert Boyle's phrase, America's most beautiful, messed-up and surprising piece of water.

PCBs remain in the sediment...with other poisonous remnants of the river's industrial legacy. And despite strict laws, raw sewage and toxic waste still find their way into the

water.

And yet, the Hudson is thriving—cleaner than it's been in decades.

BOB GABRIELSON JR.: Every year it gets better.

JOHN CRONIN: Really?

BOB GABRIELSON JR.: Every year it gets better.

BILL MOYERS: You still find magic and mystery in this river?

ROBERT BOYLE: Oh yes. I do in all rivers, I do in all rivers, but this river most of all, because of everything that's occurred here and what this river's done for this country and what people have done for the river.

JOHN CRONIN: If you look through the trees over here. See the grey house right above the big Christmas tree? That's where I used to live when I first moved to Garrison. And I used to come down here...

JOHN CRONIN: When I first started on the river, my hope—my belief was that in my lifetime, I would see a restored river. What I've come to realize is that our vision for the river now has got to be our vision for our kids. My vision is for the next generation and hopefully a generation whose children will see a restored river. Where any kid could come down to the river and catch a fish, knowing they could put it on the family table. That would be the Hudson that I would wish for my children and grandchildren.

BILL MOYERS: The paradise that Henry Hudson encountered in 1609 is gone forever. But the river that bears his name is being discovered all over again.

STUDENT ON HALF MOON READS FROM JET'S JOURNAL: ...in the middle of the river, for we could not find but two fathoms and a half and three fathoms for the space of a league. Then we came to three fathoms and four fathoms.

BILL MOYERS: The question for the future is what will we do with it this time?

PETE SEEGER: I don't have any voice left, you know, (SINGING) Sailing up my dirty stream, Still I love it and I'll keep the dream that some day, though maybe not this year, my Hudson River will once again run clear. She starts high in the mountains of the north, crystal clear and icy trickles forth with just a few floating wrappers of chewing gum dropped by some hikers to warn of things to come. Halfway between the mountains and the sea, tacking to and fro this thought returns to me. Sailing up my dirty stream, still I love it and I'll keep the dream that some day, though maybe not this year, my Hudson River will once again run clear.