Mill Creek losing over 75% of water to diversions

Return ditch repair will enable water rights compliance

by Morgan Lindsay

A hike up Lundy Canyon reveals one of the Sierra's hidden gems—impressive waterfalls and massive beaver ponds lie below steep canyon walls. It is hard to believe that just below Lundy Lake Reservoir Mill Creek slows to a trickle in desperate need of water.

A fresh analysis of the past 20 years of hydrology data has confirmed the striking disparity between what Mill Creek is supposed to receive according to long-established water rights and the amount actually flowing between its banks.

The third largest creek feeding Mono Lake, Mill Creek was never diverted south to Los Angeles. Instead, for over a century water has been diverted for hydropower, irrigation, and, more recently, aquaculture in the North Mono Basin. Over time those diversions, combined with Mono Lake's decline, profoundly degraded Mill Creek's cottonwood-willow streamside forest, wet meadows, and bottomland deltaic habitats with severe consequences for the associated trout fishery, migratory and nesting birds, and other wildlife. Today, Mill Creek and its streamside lands represent the most remarkable opportunity for restoration in the Mono Basin.

How the water flows

Mill Creek begins high in Lundy Canyon where fresh Sierra snowmelt tumbles down a series of steep waterfalls each spring. Wildflowers abound with the arrival of warm summer sun and thick stands of quaking aspens provide welcome shade to hikers and songbirds alike. This life-giving water collects in Lundy Lake Reservoir, a natural lake enlarged by a dam. The majority of the water then leaves the reservoir through a penstock to the Lundy hydroelectric plant where it produces renewable energy.

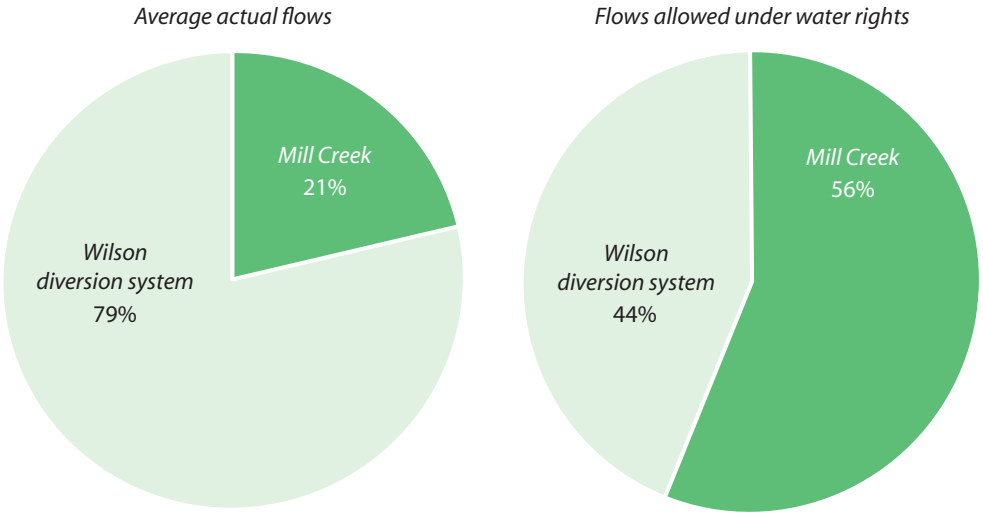
After generating electricity, only a limited amount of water should be diverted north to satisfy water rights holders' needs while the remainder is supposed to return south to Mill Creek. Unfortunately, the return ditch, originally constructed in 1911 to transport water back to Mill Creek, has degraded substantially over the past century and has not carried any water since 2005. Even when in use the return ditch had an insufficient capacity, lost half the water volume to groundwater, was subject to icing problems, and was used only a few weeks out of every year. Without a feasible way to return the water diverted for hydropower generation, for decades nearly all of Mill Creek's water has by default gone into the Wilson diversion system, a collection of irrigation ditches, watercourses, and related uses developed over the last century.

Mill missing most of its water

Over the last 20 years Mill Creek has received less than half of the water it should lawfully receive according to the water rights adjudicated in 1914.

As shown in the pie charts below, on average, less than one quarter of the total Mill Creek flow above Lundy Lake Reservoir has remained in the stream. The rest, 79%, is diverted into the Wilson system.

In contrast, under a generous charting of the water rights for the same time period, diversion to the Wilson system should have been 44%, meaning Mill Creek should have received 56% of the flow, more than double the 21% that actually flowed downstream.



The average flows to Mill Creek and the Wilson diversion system over the past 20 years stand in sharp excess of what is allowed under the established water rights.

In recent years the disparity between water allocated to Mill Creek and water delivered to Mill Creek has become even more extreme. For example in 2008, a moderately dry year, 89% of Mill Creek's flow was diverted from Lundy Reservoir and delivered to the Wilson diversion system, leaving only 11% in Mill Creek—just a fraction of the 56% that should have been in Mill Creek if water rights were followed.

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Sharing the vision and legacy of Andrea Mead Lawrence

by Geoffrey McQuilkin

The Mono Lake Committee is excited to announce a special new program designed to share the legacy and vision of environmental hero and Olympic double gold medalist Andrea Mead Lawrence.

Andrea, a key Mono Lake supporter throughout the battle to save Mono Lake, passed away in 2009 (read more about Andrea in the Summer 2009 *Newsletter* and at *monolake.org*). Her non-profit organization, the Andrea Lawrence Institute for Mountains and Rivers (ALIMAR), then faced the difficult task of charting a path forward.

PHOTO COURTESY OF QUENTIN LAWRENCE

Andrea Mead Lawrence, 1932–2009.

Lead by Andrea's daughter Quentin, ALIMAR approached the Mono Lake Committee to discuss how a joint effort might ensure that Andrea's inspirational environmental achievements and vision continue to be shared among those who knew her and those who will become the environmental leaders of tomorrow.

ALIMAR, an all-volunteer non-profit, and the Committee found much common ground and then crafted a practical and efficient plan to transfer the ALIMAR program to the Committee.

The Mono Lake Committee's newly created Andrea Lawrence Fund will promote and celebrate passionate engagement in community and the land with an emphasis on facilitating collaboration and inspiring youth to become environmental leaders. The Fund was kicked off by the transfer of all assets from ALIMAR, which has now dissolved as an organization. Special gifts in Andrea's honor are welcomed and will be dedicated to the purposes of the Fund.

All ALIMAR supporters will become Mono Lake Committee members, and the Committee will begin hosting ALIMAR's annual dinner and award event—now called the Andrea Lawrence Award Dinner—at Mammoth Mountain (check the Mono Lake Website for details).

The Committee and ALIMAR's now-retired Board of Directors—including Quentin Lawrence, Rusty Gregory, Rick Kattelmann, Lynn Haber, and Geoff McQuilkin—will make sure that Andrea's story continues to inspire us all to achieve great things.

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Fixing excessive diversions

The solution to this dramatic, damaging problem is simple: update and repair the return ditch. The win-win results will be unimpaired hydropower generation, delivery of water rights to the Wilson diversion system and, critically, the return of Mill Creek's missing water. In October 2010, Southern California Edison, the Lundy Hydroelectric Project operator, filed an application with the Federal Energy Regulatory Commission to construct a return conveyance system as prescribed by the 2005 Settlement Agreement. The improved pipeline will follow the path of the old return ditch and efficiently return the water Mill Creek is entitled to after it generates electricity at the hydropower plant.

The return conveyance system will also benefit the Black Point marsh, a valuable spring-fed wetland, by reducing the damaging deposition of thick debris caused by excess water in the Wilson system (see Spring 2010 *Newsletter*). And finally, this straightforward infrastructure improvement will at last allow the water allocation between Mill and Wilson to conform to the decreed water rights. ❖

Morgan Lindsay is a Committee Project Specialist. Her favorite task this winter was skiing out to observe and record Mono Lake's exact height above sea level. At press time, 6382.07 feet and rising!