Fisheries Stream Scientist's Response to Mono Lake Committee's (MLC) Comments to Reports Submitted to the Water Board

The Stream Scientists submitted four reports to the Water Board on August 3, 2009. These reports were:

1. Rush and Lee Vining Creeks - Instream Flow Study.

2. Radio Telemetry-Movement Study of Brown Trout in Rush Creek

3. Pool and Habitat Studies on Rush and Lee Vining Creeks

4. The Effects of Flow, Reservoir Storage and Water Temperatures on Trout in lower Rush and Lee Vining Creeks.

We appreciate the effort that the MLC put into commenting on the reports. The MLC submitted comments on October 5, 2009. These comments were signed by Lisa Cutting. Because the MLC made comments primarily to specific sections of the IFS report, we will respond point-by-point to their comments. Prior to responding, we are pleased that the MLC understood that the purpose of the IFS report was to identify flow needs, and that flow recommendations would be made later within the Synthesis Report.

<u>Stream Scientists' Response to MLC comment Regarding original CDFG Flow Recommendations</u>

We reviewed and evaluated the flow recommendations for Rush and Lee Vining creeks made by CDFG and others (CDFG 1991; 1993). These recommendations were made using the best information that was available at the time; however, we contended these studies and resulting flow recommendations needed to be updated (Taylor et al. 2009; p. 6) because: "(1) in the 22 years since the initial instream flow studies channel morphology has changed, and therefore the relationship between baseflow and fish habitat has changed, (2) we now have a greater understanding of the trout populations and flow conditions that may be limiting recruitment of older age-classes and diminishing survival at key life stages, and (3) necessary assumptions made in past evaluations may not apply today as a result of knowledge gained through recent extensive monitoring." We also contend these early studies were based on several assumptions that have proven unsupportable that we will present more fully in the Synthesis Report and in our response to the CDFG comments. We will also describe the short comings of the Smith and Aceituno (1987) habitat suitability criteria report.

<u>Stream Scientists' Response to MLC comment regarding process to re-evaluate flow recommendations</u>

There will be a section in the Synthesis Report that will identify parameters (or metrics) to trigger a re-evaluation of the flow recommendations made by the Stream Scientists. We anticipate this will be some combination of documented changes in pool habitat frequencies and quality (primarily depth and surface area) and channel morphology changes documented by plan-form and cross-sectional data collected by geomorphologists.

Stream Scientists' Response to MLC comment regarding status of SNTEMP model

This report has been completed, including the third-party review, and should have been distributed to the stakeholders by late October. We apologize for the late release of this report, but there were issues with incomplete data sets and getting the third-party review completed. We feel the extra time taken to complete the SNTEMP model strengthened its utility as a tool in evaluating summer flow recommendations in Rush Creek.

Stream Scientists' Response to MLC comment regarding factors influencing large trout numbers

We reached this conclusion by studying Rush and Lee Vining creeks annually for 12 years, reading the past testimony regarding the pre-1941 fishery, and reviewing the peer-reviewed literature on all aspects of brown trout biology and population dynamics.

Habitat surveys, particularly of pool habitats, have shown the Rush Creek channel below the Narrows trending towards a more desirable condition, with vast improvements since the early 1990's (Knudson et al. 2009). These surveys also suggested that water velocities near the stream bottom within large portions of many pools are excessive under current flow recommendations to those preferred by both juvenile and adult brown trout. The Movement Study confirms the findings of many previous studies (cited in Taylor et al. 2009) that brown trout of several age classes preferred holding habitats in low-velocity areas near the channel bottom in direct association with cover (Taylor et al. 2009).

Nearly 10 years of water temperature data have been analyzed and compared to findings from both the literature and empirical measurements of brown trout growth. These analyses indicated that thermal conditions within Rush Creek likely limit growth of brown trout, especially during conditions of high water temperatures. We also have some limited summer water temperature data collected in 2009 by Mark Drew from above Grant Lake Reservoir that suggest Rush Creek may be thermally impaired by upstream water management activities before reaching DWP's facilities The SNTEMP model supports the conclusions of Cullen and Railsback (1993) that one of the best means to provide suitable summer water temperature in lower Rush Creek is to manage Grant Lake Reservoir at higher storage levels.

As to pre-1941 conditions that may have supported an allegedly "big" trout population, we speculate that the following factors may have been influential:

1. Vestal Springs were augmented (and possibly supported) by irrigation return flow from the extensive amounts of Rush Creek water diverted onto the Cain Ranch. We would not recommend "restoring" this practice since the historic Cain Ranch diversions basically de-watered Rush Creek downstream of Grant Lake Reservoir. We are also concerned about experimenting with re-watering distributaries in an attempt to recharge spring flow in Rush Creek downstream of the Narrows; especially if this requires manipulating the current Parker or Walker channels. Between 2003 and 2008, Walker

Creek had the highest biomass (kg/ha) of brown trout in five out of six years, including estimates greater than 300 kg/ha in four of those years (Hunter et al. 2009). Within our sample section, the single-thread, highly sinuous channel contains ample foraging and holding habitats in numerous pools with low focal-point velocities and extensive undercut banks.

2. Higher nutrient levels in Rush Creek below the Narrows resulting from animal waste products deposited by the thousands of sheep grazing the Cain Ranch and entire Bottomlands area. This constant input of nutrients, particularly nitrogen, probably fueled a higher level of primary productivity than is currently occurring in Rush Creek. We would not recommend "restoring" this practice since the impacts caused to riparian vegetation and stream-bank stability would negate any "gains" in primary productivity; in fact, it could lead to excessive growth rates of filamentous algae on the stream bottom, which could cause wide fluctuations in diel dissolved oxygen concentrations.

3. The historical interviews suggest that the series of ponds created by Walt Dombromski for duck hunting were also utilized by large trout. These ponds were created off-channel and were tiered in such a way that water flowed down through the series of ponds and then returned to Rush Creek. Dick Dahlgren has proposed creating a similar series of ponds adjacent to Rush Creek to "restore" the fishery. However, since the collaborators in the Mono Basin Restoration program have agreed to focus on the recovery of the entire stream/riparian ecosystem, primarily by restoring natural processes, we do not support this type of unnatural physical manipulation of the channel or diversion of stream flow into ponds.

4. The historical record also suggests that Lahontan cutthroat, the first trout species introduced to the Mono Basin, constituted the initial sport fishery, which appeared to have thrived. The egg-taking stations on upper Rush Creek and Fern Creek were operated to produce fertilized "black-spotted" trout eggs for export to other watersheds because of the high numbers of fish present throughout Rush Creek system. When brown trout introductions started in 1919, along with plants of both rainbow and brook trout, it appears that the Lahontan cutthroat fishery withered and disappeared. The historical record then indicates that during the decade prior to 1941, regular and increasing levels of stocking of catchable trout were required to maintain the quality of the fishery due to heavy fishing pressure and generous daily creel limits.

Finally, it has always been the position of the Fisheries Stream Scientists (past and present) and his associates that there was never any quantifiable data presented at past Water Board hearings to support the claim that large (>14") brown trout were "common" in lower Rush Creek. This position is supported by language directly out of Decision-1631 and the Mono Basin EIR:

"Published and unpublished scientific information is scarce, and definitive information is unavailable to quantitatively describe historic pre-diversion fish habitats or populations."

Stream Scientists' Response to MLC comment regarding overhead cover and ability to project future amounts based on further recovery of the riparian vegetation

We agree that as the riparian vegetation continues to recover there will be more and better trout habitat both in the form of more extensive undercut banks and accumulations of woody debris as mature trees are recruited into the stream channel. While we cannot accurately predict, with any degree of precision, when riparian areas will be dominated by mature stands of trees, we believe it is safe to say that recruitment of mature trees to the stream channel will take decades.

Stream Scientists' Response to MLC comment regarding prey items of brown trout – size/age of piscivorous behavior and relative contributions of terrestrial insects

We have not collected any stomach samples from brown trout in Rush or Lee Vining creeks, thus any statements about dietary composition are speculative at best. Depending on the literature cited, brown trout start to consume more fish when they reach either 130-160 mm (Mittelbach and Persson 1998; Museth et al. 2003) or 170-200 mm (Jansson et al. 1999). On the Logan River in northern Utah the stomach contents of 35 brown trout (121 to 389 mm in length) were examined, and fish prey were found in 15% of the stomach samples (in only five of 35 brown trout) and comprised, by weight, 9% of the contents (McHugh et al. 2006). All of the consumed fish were mottled sculpin; no evidence of cannibalism was evident in this study (McHugh et al. 2006).

The consumption of terrestrial insects by trout in Rush and Lee Vining creeks is probably most prevalent during the summer and fall when terrestrial insects are more abundant. Along Rush and Lee Vining creeks, grasshoppers appear to be quite abundant. We are not sure how the MLC is coming to the conclusion that terrestrial insects are lacking (compared to what or when?), and we are not sure that pre-1941 conditions would have produced more terrestrial insects compared to the current condition of the riparian vegetation. Some photos taken in the decade prior to 1941 reveal a fairly denuded riparian zone along lower Rush Creek that probably resulted from livestock (sheep) grazing.

Stream Scientists' Response to MLC comment regarding their concern about summer mapping to inform winter flow recommendations

We suggest that water depths and velocities measured during the summer should be similar to those experienced during the winter, as long as ephemeral ice conditions do not change the channel morphology too much. It is extremely difficult to accurately predict winter instream habitat conditions due to the ephemeral nature of winter ice conditions. We recognized this possibility and are currently implementing a winter monitoring program with the assistance of LADWP's Bishop Office's biological staff. Lower winter baseflows will be monitored during at least the next two winter seasons to ensure that these flows are delivering the forecasted benefits and are not problematic. On Lee Vining Creek, we are especially aware that icing may be a valid concern; however the range of flows that provided relatively high amounts of holding habitat as quantified during the IFS are much closer to the estimated unimpaired flows than the currently prescribed flows. Also, the winter icing study conducted by CDFG in 1989-1991 indicated that more anchor ice formed on higher flows during 1990-1991 (30 to 45 cfs) than at lower flows in 1989-1990 (13-20 cfs)(CDFG 1993).

We have concerns with how CDFG utilized the habitat suitability preferences derived by Smith and Aceituno (1987) during the initial instream flow studies. Smith and Aceituno (1987) readily admitted that all of their brown trout observations were made during the daytime and also during the spring, summer, and fall. They cautioned against using these data for making either night time or winter flow recommendations; yet CDFG used these data for all seasons. We are also concerned that Smith and Aceituno (1987) made very few direct observations of brown trout utilizing habitat deeper than 2 ft, probably because few pools were present with depths greater than 2 ft. Finally, we are concerned that the original CDFG instream flow studies utilized the SCE-altered hydrographs as the unimpaired flows for both Rush and Lee Vining creeks, thus their studies generated artificially high winter base flow recommendations.

Furthermore, unlike most other Instream Flow Studies, our winter flow recommendations are based on data generated from relocations of our radio-tagged brown trout during winter (December-March). We used site-specific winter habitat measurements, taken at each relocation site, to develop our winter holding habitat criteria for brown trout on Rush Creek. We did not need to extrapolate non-winter observations to winter conditions, like most other IFS recommendations, including CDFG's studies on Rush and Lee Vining creeks (CDFG 1991; 1993).

<u>Stream Scientists' Response to MLC comment regarding the probable inability of rainbow trout to sustain themselves in Lee Vining Creek without regular stocking by CDFG</u>

We wonder what information the MLC is using to support their contention that rainbow trout were historically the dominant trout species in Lee Vining Creek. While the Lee Vining Creek channel is steeper and the water is cooler than in Rush Creek, this fact doesn't automatically mean it's a better rainbow trout stream when rainbow trout are in direct competition with brown trout. We have cited Kondolf et al. (1991) in several annual reports, a paper in which the authors documented spawning gravel distribution and bed mobility in seven high-gradient stream reaches in the eastern Sierras over two seasons, 1986 (a wet year) and 1987 (a dry year). During the wet year, all tracer rocks placed in spawning gravel pockets were swept away, and substantial scour, fill, and channel changes were noted throughout their study streams during the May and June snowmelt period. The authors theorized that the periodic mobility of gravels they documented might explain why brown trout are more abundant than rainbow trout in many eastern Sierra streams where high flows occur primarily in May and June due to snowmelt. Brown trout are fall spawners, and their fry emerge before these high snowmelt flows; whereas, rainbow trout are spring spawners whose eggs (or alevin) are in the gravel, and thus, more vulnerable to scour during snowmelt flows. Interestingly, these authors noted that most of their study streams looked more like typical rainbow trout streams, yet brown trout were much more successful in these systems (Kondolf et al. 1991).

Apparently, CDFG also felt that brown trout were the focal trout species in Lee Vining Creek since the title of the original instream flow study was *Instream Flow Requirements for Brown Trout in Lee Vining Creek, Mono County, California* (CDFG 1993). Page 3 of the CDFG report describes the pre-diversion fishery as primarily a brown trout fishery, as follows:

"During the period immediately prior to LADWP diversion activities, Lee Vining Creek was mostly a brown trout fishery with some rainbow trout and an occasional brook trout in the catch (Vestal 1989)."

Regardless of the Stream Scientists' opinion about rainbow trout sustainability in Lee Vining Creek, we believe that the habitat criteria utilized during the Lee Vining IFS study will benefit rainbow trout, especially the velocity criteria of 1.5 ft/sec utilized in determining pocket pool polygon areas.

<u>Stream Scientists' Response to MLC comment regarding statement about "difficulty wading is not an example of habitat quality"</u>

While we agree that we made no attempt to quantify velocities in Lee Vining Creek at flows higher than 54 cfs, we used our experience during sampling of Lee Vining Creek over a very wide range of flows to select test flows up to 54 cfs. We feel confident that water velocities will be too fast to allow for good holding habitat for brown trout over most of the three-dimensional areas when velocities are too high to allow for safe wading. We also acknowledge that at flows >54 cfs, other velocity refugia likely become available in side channels or other parts of the floodplain, but we feel that these ephemeral habitats are not as important for adult trout holding habitat as are the main channel pools and runs that we identified during our pool/habitat survey on Lee Vining Creek.

<u>Stream Scientists' Response to MLC comment regarding synoptic flow measurements in Lee Vining Creek</u>

During the Lee Vining Creek test flow releases, the following discharge measurements were collected.

Date	Lee Vining at Intake (cfs) (data provided by DWP)	Lee Vining Mainstem at XS 3+73 (cfs)	Bottom of A-4 Channel (cfs)	Total Measured Discharge (cfs)
4-30-2009	13	11.9	0	11.9
5-1-2009	20	24.5	.3	24.8
5-2-2009	28	23.8	1.2	25.0
5-4-2009	37	29.3	2.4	31.7
5-5-2009	54	46.3	4.6	50.9

All field measurements with exception of those collected on 5-5-09 were all rated as "fair" to "poor", which, according to USGS standards allow at least 5-8% measurement error. These measurements also enabled an estimate of the proportion of total released flow in only one of the habitat mapping reaches, the upper mainstem. We were uncertain what proportion of flow losses were attributable to loss to undetected or unmeasured side channel flow, loss to groundwater, and/or resulted from measurement error. The flow "gain" recorded on 5-1-09 most likely resulted from measurement error from the poor available sampling locations along the upper mainstem. We agree these difficulties could be overcome, that there is likely some flow loss to groundwater along the Lee Vining Creek corridor, and that the flow loss could fluctuate seasonally. However, the added information would likely not modify flow recommendations for summer or winter baseflows. In contrast, flow losses in Rush Creek possibly will influence final flow recommendations. We assume less flow losses occurs in Lee Vining than in Rush, because Rush Creek, excluding Reach 1 and the MGORD, is 42,500 ft long, almost twice as long as Lee Vining Creek from the Intake to Mono Lake (24,044 ft). The upper Lee Vining habitat mapping reach is 14,000 ft downstream of the Lee Vining Intake, which is comparable to Upper Rush Creek just below Hwy 395 in terms of distance from the upstream DWP gaging site.

<u>Stream Scientists' Response to MLC comment regarding the metric "percent of maximum habitat" because we may have missed the flow that produced the highest amount of habitat</u>

Interpolation based on a series of fixed test flows is a common methodology for predicting the likelihood of the maximum habitat provided by different flows. In fact, all instream flow methodologies (including IFIM) rely on this type of interpolation. The only assumption for correctly applying interpolation to field data is that it is only appropriate for the range of flows tested. We feel confident that we tested an adequate range of flows in both Rush and Lee Vining creeks in regards to developing flow recommendations to improve brown trout holding and foraging habitats. Yes, it is possible that the actual flow that produced the highest amount of habitat may have been a non-test flow. In our opinion if this was true, this non-test flow is most likely within the range of test flows, probably within a few cfs of one of the actual test flows. However, we seriously doubt that the actual maximum amount of brown trout foraging or holding habitat is present at any flow lower or higher than our range of test flows in either Rush or Lee Vining creeks.

<u>Stream Scientists' Response to MLC comment regarding the verification that the Parker and Walker accretions during the Rush Creek IFS were a constant 4.9 cfs for the 10-day duration of the habitat mapping</u>

The use of the phrase "assumed to be stable" was a poor choice on our part. Dave Martin assured us that the DWP-installed weirs on lower Parker and Walker measured a combined 4.9 cfs for the 10-day duration of the IFS. During the IFS study, the flows above 4.9 cfs were diverted into the Lee Vining conduit from both Parker and Walker creeks.

<u>Stream Scientists' Response to MLC comment regarding the Fisheries Stream Scientist's decision to not use the habitat polygons mapped at 45 cfs</u>

We totally agree that the 45 cfs test flow was an important flow to map because of how common a baseflow it has been over the past 18 years. However, we still feel that habitat mapped at 45 cfs should not be used for making flow recommendations. Besides the reasons stated in the IFS report as to why we dropped the habitat polygon data measured at 45 cfs, there was another reason to discard these data that we failed to mention in the IFS report. During the second day of mapping at the 45 cfs test flow, the DWP hydrographers in Bishop prematurely ramped-up the flows on us at mid-day and during the afternoon of August 13^{th} we were mapping habitat on a rising flow (refer to Table 5 on page 31 of the IFS report). To address the MLC's concerns we have presented Table 6 from the IFS with the 45 cfs test flow added to show the amounts of habitat we mapped within the five reaches of Rush Creek (Table 1). We have presented this table **only** for your information. We still firmly believe that the measurements taken at 45 cfs are not based on accurate, reproducible measurements for the reasons stated above and in the IFS report, and therefore should **not** be used as a basis for any IFS recommendation in regards to brown trout holding or foraging habitat.

Table 1 (modified Table 6 - IFS report). Total surface areas of winter holding and foraging habitats mapped at five reaches during **five** test flows on Rush Creek during August 2008.

REACH NAME AND LENGTH	MGORD Measured Releases*	M&T Measured Flows	Holding Habitat Area (ft^2)	Percent of Maximum Area	Foraging Habitat Area (ft^2)	Percent of Maximum Area
Upper Rush – 2,122 ft	17.0	17.9	294.7	88.1	1726.2	100
	33.0	33.5	334.5	100	1337.8	77.5
	52.8	43.3	190.5	57.0	684.4	39.7
	60.8	64.0	205.7	61.5	731.6	42.4
	89.6	94.1	251.6	75.2	798.3	46.2
Old Lower Mainstem – 1,344 ft	21.9	3.0	761.4	64.5	3771.5	94.2
	37.9	6.1	1037.8	88.2	4002.9	100.0
	47.3	8.6	1018.2	86.5	3605.7	90.1
	65.7	12.1	1171.2	99.5	3282.2	82.0
	94.5	19.2	1177.2	100	3136.6	78.4
10-Channel 1,328 ft	21.9	12.3	1702.6	96.6	4585.4	100
	37.9	22.6	1763.4	100	3555.0	77.5
	52.8	32.2	1640.7	93.0	2985.5	65.1
	65.7	48.1	1525.3	86.5	2595.0	56.6
	94.5	62.0	1333.8	75.6	2471.0	53.9
Bottom-lands 1,432 ft	21.9	14.1	1346.8	94.3	4076.6	100
	37.9	28.8	1191.7	83.5	2940.2	72.1
	47.3	45.7	1427.6	100.0	3215.0	78.9
	65.7	57.6	1060.8	74.3	2527.0	62.0
	94.5	77.3	705.9	49.5	1905.2	46.7
County Road – 776 ft	21.9	14.1	1321.5	100	3887.1	100
	37.9	28.8	1168.3	88.4	2971.7	76.5
	47.3	45.7	696.2	52.7	2094.7	53.9
	65.7	57.6	891.7	67.5	2683.9	69.0
	94.5	77.3	680.9	51.5	2531.7	65.1

*For the 4 mapping reaches downstream of the Narrows, this value includes the 4.9 cfs accretion from P+W creeks.

Stream Scientists’ Response to MLC comment regarding amounts of adult winter holding habitat within the 10-Channel given the dropped data from the 45 cfs test flow

We are quite confident; please refer to the modified Table 6 from the IFS report. As you can see in the table, the amount of habitat mapped within the 10-Channel during the 45 cfs test flow fits nicely into the pattern of declining area of holding habitat versus increased discharge over the three highest test flows.

Stream Scientists’ Response to MLC comment regarding winter holding habitat and flows on Lee Vining Creek

We anticipate that fall-winter baseflow recommendations on Lee Vining Creek will be in the 16 to 22 cfs range, based on water-year type, with higher baseflows recommended in wetter year types. These flows were selected based on the IFS results which determined higher amounts of holding habitat at lower flows. We also anticipate recommending a bypass flow during six months of the year (October – March) in which the bypass would be set at the recommended baseflow amount. We considered the implications of setting a bypass flow and losing natural variations within the unimpaired hydrograph that would still be exhibited if a diversion rate was used. When we examined Lee Vining Creek hydrographs it was not possible to consistently discern natural variations from the “noise” of Southern Cal Edison’s (SCE) operations in which the hydrograph fluctuates up-and-down throughout the winter low-flow period. We also examined unimpaired hydrographs for Buckeye Creek to see if this creek exhibited similar flow fluctuations as Lee Vining Creek’s hydrograph. During most winters, the Buckeye Creek did display a few minor fluctuations in discharge, but not to the degree that Lee Vining Creek’s SCE-altered hydrograph does. Other than the January 1997 flood, there were no rain-on-snow events within the past 18-years large enough (>250 cfs) to provide geomorphic benefits that were not met by the annual snowmelt flood, and thus there was no justification for preserving natural winter peak flow variations that outweighed the benefits of constant flows for maintaining trout winter holding habitat.

The effect of turning 20 cfs into a “maximum” winter baseflow would move Lee Vining Creek’s hydrographs towards those resembling the natural unimpaired hydrographs based on water-year types. Within the Synthesis Report we are still evaluating the geomorphic merits of passing rain-on-snow events versus potential impacts these flows would probably have on survival of incubating brown trout eggs. We are leaning towards passing these rare events down the channel because the frequency of channel-forming discharges in Lee Vining Creek is already impaired by SCE’s upstream operations. We are also considering ramps out of winter baseflows in all year types, not just dry years.

Stream Scientists’ Response to MLC comment regarding deep pools versus run habitats in Lee Vining Creek and too much emphasis put on pool habitat

Winter holding habitat as defined by our depth/velocity/cover criteria was found not only in pools, but in runs and glides too. The historical record indicated that “deep” run habitat was a common feature in Lee Vining Creek downstream of Highway 395. When conducting a habitat typing survey, the differences between a deep run and a trench or mid-channel pool may be so subtle that particular units would probably be classified differently by independent field crews. During the Lee Vining Creek IFS we mapped polygons in pools, runs and glides; acknowledging that some of the units could easily be considered pools or deep runs. The important fact is that all types of “flat water” habitat were rare on Lee Vining Creek; be it pools, runs or glides, so we considered all of these habitat types during our evaluations.

As far as examining other factors that may contribute to the size and health of the fishery; our annual sampling has shown that growth rates and condition factors of Lee Vining Creek’s trout are consistently above average. Our sampling also indicates that in Lee Vining Creek recruitment of age-0 brown and rainbow trout is highly variable and in some years is probably limiting. For the Synthesis Report we have estimated peak emergence timing of brown trout in Rush and Lee Vining creeks based on daily water temperature data for several presumed dates of peak spawning.

Preliminary results indicate that incubation takes longer on Lee Vining Creek and peak emergence timing often occurs during elevated snowmelt-driven flows. In earlier annual reports we have cited several papers which concluded that recruitment of age-0 brown trout was correlated to stream discharge (Cattaneo et al. 2002; Gonzalez et al. 2002). Another factor that may limit recruitment in some years may be extended periods of cold water temperatures. We are currently examining the Lee Vining Creek winter water temperature data and comparing the daily average water temperatures during the two coldest months of the year (for the years we have data) to results from a recent study that suggest extended periods of water temperatures near freezing may affect hatching success (Wood and Budy 2009).

<u>Stream Scientists’ Response to MLC comment that the Stream Scientists “ignored” the reach of Lee Vining Creek from the DWP diversion down to Highway 395</u>

The definition of the transitive verb “ignore” is to disregard deliberately; pay no attention to; refuse to consider. We contend that this was a poor word choice for the MLC to use in this situation. When developing the Lee Vining Creek IFS plan we did consider the entire length of the creek from the DWP diversion down to Mono Lake. We described our rationale for selecting the Lee Vining Creek mapping reaches on pages 23-24 of the IFS report. Finally, the winter monitoring protocol for 2009-2010 in Lee Vining Creek includes a reach between the DWP diversion and the USFS compound and a reach within the gorge upstream of Highway 395.

In regards to the MLC’s comment about the pools and runs within the mapped reach of Lee Vining Creek, we would not expect these to be “representative” of the pools in the unmapped reach between the DWP diversion and Highway 395 based primarily on differences in channel slope, confinement, and dominant substrate sizes. Again, we examined all of these reaches and made our reach selections as described on pages 23-24 of the IFS report.

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