April 4th, 2010

Ms. Victoria Whitney
Chief, Division of Water Rights
State Water Resources Control Board
P.O. Box 100
1001 I Street
Sacramento, CA 95812-0100

RE: Mono Basin Draft Synthesis Report

Ms. Whitney:

California Trout is pleased to be submitting comments on the draft document prepared and submitted by the State appointed Stream Scientists entitled *Mono Basin Stream Restoration and Monitoring Program: Synthesis of Instream Flow Recommendations to the State Water Resources Control Board and the Los Angeles Department of Water & Power.*

Per the State Water Resources Control Board's Decision 1631 and the subsequent 98-05 Order, the State appointed Stream Scientists were tasked with evaluating and making recommendations for revised baseflows and Stream Restoration Flows relevant to Rush and Lee Vining Creeks, tributaries to Mono Lake. The respective flow recommendations are targeted towards ensuring the goal of "functional and self-sustaining stream system with healthy riparian ecosystem components" and "trout in good condition" for Rush and Lee Vining Creeks. California Trout appreciates the work of the Stream Scientist and believes as a result of the last 12 years of research and monitoring, Rush Creek and Lee Vining Creeks are on positive trend towards achieving the above stated goals.

California Trout offers the following comments relevant to the draft Synthesis Report which are divided into three categories: (1) general comments, (2) specific comments pertaining to specific issues/elements of the Synthesis Report and (3) process oriented issues. It is noted that many of CalTrout's initial comments and issues pertaining to the draft Synthesis Report have been addressed within comments submitted by others such as the Mono Lake Committee and the Los Angeles Department of Water and Power. CalTrout is not submitting comments that were previously addressed in prior submissions. CalTrout does intend to carefully review *all* of

the Stream Scientists' responses to comments, regardless of their origin. CalTrout looks forward furthering restoration of the Mono Basin.

On behalf of California Trout, I look forward to future dialogues with all relevant parties interested in the restoration of Rush and Lee Vining Creeks as well as Walker and Parker Creeks and Mono Lake itself.

Sincerely,

Mark Drew, PhD
Eastern Sierra Program Manager
California Trout

CC: Mr. Steve Herrera, SWRCB
Mr. Greg Brown, SWRCB
Dr. Bill Trush, McBain and Trush
Mr. Ross Taylor, Taylor and Associates
Ms. Lisa Cutting, Mono Lake Committee
Mr. Steve Parmenter, CA Dept. of Fish and Game
Mr. Bruk Moges, LADWP

I. General

(1). General approach and use of information gathered to date:
California Trout (CalTrout) believes the Stream Scientists have developed a comprehensive report based on information and data gathered during the course of the last 12 years. CalTrout by and large also supports the methodological approaches that have been used thus far by the Stream Scientists and acknowledge their work to date. CalTrout supports, at this time, the flow recommendations set forth in the draft Synthesis Report. However, CalTrout is not certain there is a complete set of data and understanding of the stream systems necessary to fulfill D1631 and associated Orders, particularly for Rush Creek that may be necessary for final baseflow and Stream Ecosystem Flows (SEFs). More specifically, CalTrout questions the understanding of existing (and potentially future) food web-fishery-energy use relationships in Rush and to a lesser degree Lee Vining Creeks.

CalTrout fully supports the approach of designing flow regimes to restore geomorphic processes and riparian habitat and believe it is the best way to maintain a healthy ecosystem and provide good trout habitat. In this case, however, it appears that providing flows suitable for trout, especially large trout, came somewhat secondary to providing flows for restoring the channel's morphological attributes. *Fundamentally, CalTrout wonders if the Stream Scientists believe the restoration practices and associated flow recommendations will lead to a robust fisheries in Rush and Lee Vining Creeks*. Moreover, CalTrout would like to know if modifications to the flow regime(s), or other passive measures could be used to enhance habitat for trout without compromising the overall goal of ecosystem restoration. In particular, CalTrout is interested to hear from the Stream Scientists how bioenergetics and the population's age and size structure may affect the number of large trout in the population. More specifically, do the Stream Scientists believe that better understanding the bioenergetics, particularly associated with the Rush Creek fishery, would serve as valuable and value added information relevant to both baseflow and Stream Ecosystem Flow (SEFs) recommendations specific to the betterment of trout?

In a related manner, CalTrout is not convinced that there are no ecological values to providing high winter flows in Lee Vining Creek and that reducing them will benefit trout. Although mortality of adult trout is occurring in the winter, displacement by high flows may not be the dominant reason. For example, if adult brown trout are in poor condition in the fall, it is possible that the energetic stress of spawning may result in mortality after spawning or in the subsequent months of winter?

(2) Adaptive management:
CalTrout firmly believes the continued and conscious effort to employ an adaptive management approach is paramount to the successful restoration of the Mono Basin. For one, the flow recommendations within the draft Synthesis Report are *recommendations* and have not been tried and tested. The proposed one-year variance by the LADWP will provide an opportunity to examine (over the course of a relatively short period of time) the effects of the Stream

Scientists' recommendations. Based on the outcome of the variance, modifications to the flow recommendations may, or may not, need to be made. Additionally, the Stream Scientists are to implement a two-year primary productivity study that should provide information supporting, or otherwise, their recommended flows. Additional monitoring will also be required to determine the potential effects of lower winter baseflows with respect to potential icing events that could have detrimental impacts on both Rush and Lee Vining fisheries. Continued monitoring having to do with ongoing conditions is proposed. The aforementioned monitoring needs are in addition to other recommended monitoring protocols that may influence future revisions to flow recommendations. Lastly, the efficacy and ability to reliably provide SEF recommendations will need to be tested with results possibly requiring changes to infrastructure and water operations for the Los Angeles Department of Water and Power (LADWP). In the longer term, the potential impacts of climate change may require a revisiting of flow recommendations. For these reasons and others, it is critical that functional adaptive management be pursued. Within the Stream Scientists' recommendation for further adaptive management, CalTrout requests that a more in-depth recommendation be provided addressing under what conditions and in what manner adaptive management should be pursued along with recommended principles that guide the adaptive management process itself. CalTrout acknowledges this request may also be within the purview of the SWRCB but does not believe it is so exclusively.

(3) Termination Criteria:

The draft report states (p. 127): "The adaptive management process begun in Orders 98-05 and 98-07 should continue, but without the termination criteria." This recommendation is beyond the scope of the tasks assigned to the Stream Scientists and inconsistent with the settled law of the case. CalTrout respectfully suggest that the final report omit this recommendation.

Order WR 98-07 (pp. 3-4) adopted the termination criteria "for use in determining when stream monitoring may be terminated." These are stated in Ordering ¶ 1.b(5)(a). That order retained different criteria, as stated in Ordering ¶ 1.b(4), to terminate the restoration program as a whole.

Order WR 98-07 recounted the history and purpose of the termination criteria. All parties, including LADWP, agreed to the criteria to describe "specified pre-1941 conditions for Rush and Lee Vining Creek..." See p. 3. Although Order WR 98-05 had stated concerns about the time required to achieve them, Order WR 98-07 found that "it is reasonable to expect" that LADWP will continue the monitoring program for a "long period of time." And the parties other than LADWP agreed to dismiss the Board as a party in the Mono Lake Cases, and to dismiss our pending petitions for reconsideration of Order WR 98-05. "Under the existing circumstances, the SWRCB finds that it is in the public interest to avoid further disputes or prolonged proceedings regarding the stream restoration requirements of Order WR 98-05." See p. 3.

Ordering ¶ 1.b(5)(f) requires the monitoring program to evaluate "progress towards achievement of each of these criteria." It directs: "where an existing condition precludes the

restoration of a pre-project condition, a corresponding criterion which is functionally equivalent will be established." Ordering ¶ 1.b(5)(g) provides that the monitoring team, "from time to time, may reevaluate and if appropriate, recommend changes in the quantified forms of these criteria, on the basis of improved understanding of how to evaluate progress in restoring these streams."

The draft Synthesis Report evaluated (pp. 121-122) progress in woody riparian vegetation relative to the termination criteria stated in Ordering ¶ 1.b(5)(a)(1) of Order WR 98-07. The Report stated (p. 120) that the acreage "will not likely reach the pre-diversion acreages at least in the foreseeable future." If so, under the provisions of Order WR 98-07, your final report should recommend continued use of that criterion if you believe it is still possible to achieve it, a change to that criterion if appropriate based on improved understanding, or a functional equivalent if you conclude that existing conditions will preclude achievement of the existing criterion. The final Synthesis Report should address progress towards achievement of the totality of this criterion. The criterion addresses not only acreage of riparian vegetation, but also whether the vegetation is of "sufficient diameter, height, and location to provide woody debris in streams..." See Ordering ¶ 1.b(5)(a)(1).

The draft Synthesis Report does not appear to describe progress across the past 10+ years for most of the termination criteria stated in Ordering ¶ 1.b(5)(a) – specifically, channel length, gradient, sinuosity, confinement or thalweg; or size and structure of fish population. Prior reports of the monitoring program have addressed progress towards these other criteria. *See, e.g.*, "Pool and Habitat Studies on Rush and Lee Vining Creeks" (July 2009), "Effects of Flow, Reservoir Storage, and Water Temperatures on Trout in Lower Rush and Lee Vining Creeks" (May 2009). CalTrout suggest that the final report should summarize the analysis from prior reports; should show progress as measured against each criterion; and should recommend continued use of each such criterion, a change if appropriate based on monitoring results and improved understanding, or a functional equivalent if you conclude that achievement of that existing criterion is not possible, all as required by Ordering ¶ 1.b(5)(f)-(g).

The draft report restates (p. 116) Mr. Hunter's view that "no data were available that provided a scientifically quantitative picture of trout populations that these streams supported on a self-sustaining basis prior to 1941." We emphatically disagree. In any event, Mr. Hunter's view amounts to an untimely disagreement with Ordering ¶ 1.b(5)(a)(7) and (b), incorporating R-DWP-68B, which includes a quantitative description of those fish populations. The Stream Scientists are not tasked to reopen the record, which is what it is. As provided in Ordering ¶ 1.b(5)(f)-(g), the final report should recommend continued use of that criterion if you conclude it may be achieved in time, a change as appropriate based on your evaluation of post-1998 monitoring results and improved understanding, or a functional equivalent if you conclude that the existing criterion may not be achieved in time.

Finally, the draft Report describes possible changes to various monitoring protocols stated in the Blue and White Books (p. 8). For example, it describes (p. 116) metrics of trout biomass,

density, condition factor, relative stock density. Order 98-07 permits the Stream Scientists to apply and revise the metrics and other technical protocols which comprise the monitoring program. We underscore that such metrics are complimentary to the termination criteria – indeed, provide the details of the monitoring program by which you evaluate progress towards achievement of the termination criteria. We respectfully request that the final report show any specific changes you may recommend to the metrics and other technical protocols in the Blue and White Books.

(4) Coordination with Southern California Edison (SEC):

CalTrout supports the emphasis on better Grant Lake Reservoir management and the concept of close coordination with SCE as a focal strategy to ensure reliable SEF recommendations. In doing so, CalTrout also recognizes the inherent challenges that exist with respect to such coordination. Close coordination with SCE is one option to deliver SEFs, although CalTrout does not necessarily believe that it is the only option. CalTrout would appreciate having other possible options presented in the final Synthesis Report with justification provided for why SEC coordination is considered optimal.

(5) Hybrid diversion rate and bypass flow strategy:

California Trout supports the "hybrid" approach of integrating bypass and diversion strategies into the flow recommendations. This approach seems to meet multiple objectives having to do with reducing winter baseflows in Lee Vining Creek and addressing the need for improved management of Grant Lake Reservoir. However, such a strategy will require more frequent transfers and of more water from one basin to another. Are there other considerations beyond those described in the draft Synthesis Report that should be given to the potential biological downfalls of such diversions? For example, are threats associated with the potential for introduced invasive species of concern to the Stream Scientists and if so, are there recommendations to minimize such threats that should be included in the Synthesis Report?

(6) Potential value in restoring Vestal Springs:

Recently, there have been discussions amongst the Stream Scientists and relevant parties pertaining to the value of trying to restore Vestal Springs. Based on such discussions, the initial analysis conducted to evaluate the potential value of restoring Vestal Springs were primarily, if not exclusively, centered on the spring's potential to benefit Rush Creek temperatures. However, values outside of potential temperature benefits have been noted. For example for the Rush Creek fishery itself, restoration of the Vestal Springs may contribute to young-of-the-year habitat and direct and indirect food sources. More broadly, restoring the Vestal Springs has the potential to simply build on the effort to continually restore natural ecosystem processes and contribute to the enhancement of riparian vegetation adjacent to the main-stem of Rush Creek. CalTrout requests that the Stream Scientists include in the final Synthesis Report a discussion that addresses the potential values and what would be involved with restoring the Vestal Springs along with the perceived tradeoffs of pursuing such restoration.

(7) Use of averages vs. other metrics:

The use of averages as a metric for analysis has the potential to be misleading as well as masking extreme event considerations be they positive or negative in impact. For example, using daily averages may not fully account for peak flow events that may in turn trigger a desired ecological process whereas taking into consideration instantaneous extreme flows may. The use of averages can be particularly misleading when very few data points are available such as having only two years worth of a particular year-type data in which conclusions are made. Where possible, CalTrout recommends, especially with limited data sets available, other metrics such as instantaneous flows, minimum and maximum flows as well as the potential use of median values be considered and discussed within the final Synthesis Report.

(8) Use of specific dates for recommendations:

The Stream Scientist proscribes flow recommendations associated with very specific dates. For example, the Stream Scientists recommend that during wet-years from May 14th to June 11th (Spring Bench period) 80 cfs are provided down Rush Creek. Given weather and future climate variability, might there be value in considering a more dynamic trigger for the various flow recommendations? It seems there could be value in having some level of flexibility based on annual conditions to implement the recommended flows i.e., if weather conditions (range) were such for a given number of days, flow recommendations would be implemented. Doing so may be challenging from an annual water operations perspective. However, are there appropriate and more flexible means that could be established to trigger particular flow recommendations and if so, what are they?

II. Specific comments pertaining to specific issues/elements of the Synthesis Report

(1) Bottom of P. 7/top of P. 8: In the 98-05-Dr. Dr. Platts testified that there may be a difference regarding the level of flows needed to help restore a degraded stream system and the flows needed to maintain the habitat once the stream system has been reestablished. Dr. Trush acknowledges in 98-05 that there is a distinction between maintenance and restoration flows. As stated in the draft Synthesis Report, Stream Ecosystem Flows (SEFs) are a term used for revised SRF flows. On Page 8 of the draft Synthesis Report in the context of the goal of the stream monitoring program, it is stated that "recommended changes to the magnitude, timing, duration, and frequency of specific hydrograph components to better achieve ecosystem recovery goals…was an important objective.". For clarification, are the SEFs provided in the draft Synthesis Report considered restoration flows and/or maintenance flows? If solely oriented towards restoration flows, what about the value and need to establish "maintenance" flows as well?

(2) P. 13. Data from nearby Buckeye Creek were scaled to Rush Creek watershed area to evaluate unimpaired hydrograph components. Presumably Buckeye Creek is a comparable drainage. However beyond Buckeye's noted close proximity to Rush Creek, there is little information provided within the Synthesis Report regarding comparability of these two drainages. It would be useful to have additional information supporting the comparability of these two areas within the final Synthesis Report.

(3) P. 31: Bottom paragraph, column 1 states that Rush Creek below the Narrows is either incapable of supporting large brown trout or this portion of Rush Creek is capable of supporting large brown trout but contemporary flow regimes do not provide conditions compatible for fast enough growth and better winter survival for resident trout to attain large size. CalTrout would appreciate having the justification for such statements included in the final Synthesis Report assuming there is more to it than the hypotheses surrounding limiting winter holding habitat and temperature constraints.

(4) P. 40, Table 2-6: CalTrout is not clear on the derivation of the incremental diversion rates included in Table 2-6. There does not appear to be a linear relationship between flows and diversion rates or a defined relationship between stream flow and diversion rates. It would be helpful to have such an explanation in the final Synthesis Report.

(5) P. 41: It is stated that diversions are not expected to detrimentally affect water temperatures in lower Lee Vining Creek. What information is there to support the premise a flow of 30 cfs in late summer months will not result in undesirable water temperatures, particularly if very warm ambient air temperatures persist?

(6) P. 62-Table 3-1: Table 3-1 is very informative in providing brief descriptions of desired ecological conditions. While the ranges provided are informative and help to provide a basis for what constitutes such desired conditions, it would be extremely helpful to have each of the respective ecological conditions more quantifiably defined. Additionally, in the process of developing flow recommendations the draft Synthesis Report identifies which of the ecological desired conditions are taken into considerations for a given year type, there is a lack of information pertaining to the relative weights provided to each of the ecological conditions. It would be useful to have more in-depth discussions in the final Synthesis Report that describe how ecological conditions were prioritized along with an analysis of the potential tradeoffs of such prioritizations.

III. Process

(1) On page 10. The Stream Scientists provide a process for completion of the Synthesis Report. The process described by the Stream Scientists has been revised and should be updated in the final Synthesis Report.

(2) As noted above and within the Adaptive Management comment, there are activities relating to the restoration of Rush Creek to be implemented during summer/fall of 2010. Moreover, additional findings from future monitoring may shed light on the need to modify the newly recommended flow regimes. CalTrout requests that to the extent possible, and within the final Synthesis Report, the Stream Scientist include a section that provides more detailed information regarding how future information will be synthesized and potentially incorporated into relevant recommendations.

Category	Page	Comment	Stream Scientists' Response
I. General		(1). General approach and use of information gathered to date: California Trout (CalTrout) believes the Stream Scientists have developed a comprehensive report based on information and data gathered during the course of the last 12 years. CalTrout by and large also supports the methodological approaches that have been used thus far by the Stream Scientists and acknowledge their work to date. CalTrout supports, at this time, the flow recommendations set forth in the draft Synthesis Report. However, CalTrout is not certain there is a complete set of data and understanding of the stream systems necessary to fulfill D1631 and associated Orders, particularly for Rush Creek that may be necessary for final baseflow and Stream Ecosystem Flows (SEFs). More specifically, CalTrout questions the understanding of existing (and potentially future) food web-fishery-energy use relationships in Rush and to a lesser degree Lee Vining Creeks. CalTrout fully supports the approach of designing flow regimes to restore geomorphic processes and riparian habitat and believe it is the best way to maintain a healthy ecosystem and provide good trout habitat. In this case, however, it appears that providing flows suitable for trout, especially large trout, came somewhat secondary to providing flows for restoring the channel's morphological attributes. Fundamentally, CalTrout wonders if the Stream Scientists believe the restoration practices and associated flow recommendations will lead to a robust fisheries in Rush and Lee Vining Creeks. Moreover, CalTrout would like to know if modifications to the flow regime(s), or other passive measures could be used to enhance habitat for trout without compromising the overall goal of ecosystem restoration. In particular, CalTrout is interested to hear from the Stream Scientists how bioenergetics and the population's age and size structure may affect the number of large trout in the population. More specifically, do the Stream Scientists believe that better	

		understanding the bioenergetics, particularly associated with the Rush Creek fishery, would serve as valuable and value added information relevant to both baseflow and Stream Ecosystem Flow (ESFs) recommendations specific to the betterment of trout? In a related manner, CalTrout is not convinced that there are no ecological values to providing high winter flows in Lee Vining Creek and that reducing them will benefit trout. Although mortality of adult trout is occurring in the winter, displacement by high flows may not be the dominant reason. For example, if adult brown trout are in poor condition in the fall, it is possible that the energetic stress of spawning may result in mortality after spawning or in the subsequent months of winter?	
I. General		<u>(2) Adaptive management:</u> CalTrout firmly believes the continued and conscious effort to employ an adaptive management approach is paramount to the successful restoration of the Mono Basin. For one, the flow recommendations within the draft Synthesis Report are *recommendations* and have not been tried and tested. The proposed one-year variance by the LADWP will provide an opportunity to examine (over the course of a relatively short period of time) the effects of the Stream Scientists' recommendations. Based on the outcome of the variance, modifications to the flow recommendations may, or may not, need to be made. Additionally, the Stream Scientists are to implement a two-year primary productivity study that should provide information supporting, or otherwise, their recommended flows. Additional monitoring will also be required to determine the potential effects of lower winter baseflows with respect to potential icing events that could have detrimental impacts on both Rush and Lee Vining fisheries. Continued monitoring having to do with ongoing conditions is proposed.	

		The aforementioned monitoring needs are in addition to other recommended monitoring protocols that may influence future revisions to flow recommendations. Lastly, the efficacy and ability to reliably provide SEF recommendations will need to be tested with results possibly requiring changes to infrastructure and water operations for the Los Angeles Department of Water and Power (LADWP). In the longer term, the potential impacts of climate change may require a revisiting of flow recommendations. For these reasons and others, it is critical that functional adaptive management be pursued. Within the Stream Scientists' recommendation for further adaptive management, CalTrout requests that a more in-depth recommendation be provided addressing under what conditions and in what manner adaptive management should be pursued along with recommended principles that guide the adaptive management process itself. CalTrout acknowledges this request may also be within the purview of the SWRCB but does not believe it is so exclusively.	
I. General		<u>(3) Termination Criteria:</u> The draft report states (p. 127): "The adaptive management process begun in Orders 98-05 and 98-07 should continue, but without the termination criteria." This recommendation is beyond the scope of the tasks assigned to the Stream Scientists and inconsistent with the settled law of the case. CalTrout respectfully suggest that the final report omit this recommendation. Order WR 98-07 (pp. 3-4) adopted the termination criteria "for use in determining when stream monitoring may be terminated." These are stated in Ordering ¶ 1.b(5)(a). That order retained different criteria, as stated in Ordering ¶ 1.b(4), to terminate the restoration program as a whole. Order WR 98-07 recounted the history and purpose of the	

		termination criteria. All parties, including LADWP, agreed to the criteria to describe "specified pre-1941 conditions for Rush and Lee Vining Creek..." See p. 3. Although Order WR 98-05 had stated concerns about the time required to achieve them, Order WR 98-07 found that "it is reasonable to expect" that LADWP will continue the monitoring program for a "long period of time." And the parties other than LADWP agreed to dismiss the Board as a party in the Mono Lake Cases, and to dismiss our pending petitions for reconsideration of Order WR 98-05. "Under the existing circumstances, the SWRCB finds that it is in the public interest to avoid further disputes or prolonged proceedings regarding the stream restoration requirements of Order WR 98-05." See p. 3. Ordering ¶ 1.b(5)(f) requires the monitoring program to evaluate "progress towards achievement of each of these criteria." It directs: "where an existing condition precludes the restoration of a pre-project condition, a corresponding criterion which is functionally equivalent will be established." Ordering ¶ 1.b(5)(g) provides that the monitoring team, "from time to time, may reevaluate and if appropriate, recommend changes in the quantified forms of these criteria, on the basis of improved understanding of how to evaluate progress in restoring these streams." The draft Synthesis Report evaluated (pp. 121-122) progress in woody riparian vegetation relative to the termination criteria stated in Ordering ¶ 1.b(5)(a)(1) of Order WR 98-07. The Report stated (p. 120) that the acreage "will not likely reach the pre-diversion acreages at least in the foreseeable future." If so, under the provisions of Order WR 98-07, your final report should recommend continued use of that criterion if you believe it is still possible to achieve it, a change to that criterion if appropriate based on improved understanding or a functional equivalent if	

		you conclude that existing conditions will preclude achievement of the existing criterion. The final Synthesis Report should address progress towards achievement of the totality of this criterion. The criterion addresses not only acreage of riparian vegetation, but also whether the vegetation is of "sufficient diameter, height, and location to provide woody debris in streams..." See Ordering ¶ 1.b(5)(a)(1). The draft Synthesis Report does not appear to describe progress across the past 10+ years for most of the termination criteria stated in Ordering ¶ 1.b(5)(a) – specifically, channel length, gradient, sinuosity, confinement or thalweg; or size and structure of fish population. Prior reports of the monitoring program have addressed progress towards these other criteria. *See, e.g.*, "Pool and Habitat Studies on Rush and Lee Vining Creeks" (July 2009), "Effects of Flow, Reservoir Storage, and Water Temperatures on Trout in Lower Rush and Lee Vining Creeks" (May 2009). CalTrout suggest that the final report should summarize the analysis from prior reports; should show progress as measured against each criterion; and should recommend continued use of each such criterion, a change if appropriate based on monitoring results and improved understanding, or a functional equivalent if you conclude that achievement of that existing criterion is not possible, all as required by Ordering ¶ 1.b(5)(f)-(g). The draft report restates (p. 116) Mr. Hunter's view that "no data were available that provided a scientifically quantitative picture of trout populations that these streams supported on a self-sustaining basis prior to 1941." We emphatically disagree. In any event, Mr. Hunter's view amounts to an untimely disagreement with Ordering ¶ 1.b(5)(a)(7) and (b), incorporating R-DWP-68B, which includes a quantitative description of those fish populations. The Stream Scientists are not tasked to reopen the record, which is what it is. As provided in Ordering ¶ 1.b(5)(f)-	

		(g), the final report should recommend continued use of that criterion if you conclude it may be achieved in time, a change as appropriate based on your evaluation of post-1998 monitoring results and improved understanding, or a functional equivalent if you conclude that the existing criterion may not be achieved in time. Finally, the draft Report describes possible changes to various monitoring protocols stated in the Blue and White Books (p. 8). For example, it describes (p. 116) metrics of trout biomass, density, condition factor, relative stock density. Order 98-07 permits the Stream Scientists to apply and revise the metrics and other technical protocols which comprise the monitoring program. We underscore that such metrics are complimentary to the termination criteria – indeed, provide the details of the monitoring program by which you evaluate progress towards achievement of the termination criteria. We respectfully request that the final report show any specific changes you may recommend to the metrics and other technical protocols in the Blue and White Books.	
I. General		<u>(4) Coordination with Southern California Edison (SEC):</u> CalTrout supports the emphasis on better Grant Lake Reservoir management and the concept of close coordination with SCE as a focal strategy to ensure reliable SEF recommendations. In doing so, CalTrout also recognizes the inherent challenges that exist with respect to such coordination. Close coordination with SCE is one option to deliver SEFs, although CalTrout does not necessarily believe that it is the only option. CalTrout would appreciate having other possible options presented in the final Synthesis Report with justification provided for why SEC coordination is considered optimal.	
I. General		<u>(5) Hybrid diversion rate and bypass flow strategy:</u> California Trout supports the “hybrid” approach of integrating	

		bypass and diversion strategies into the flow recommendations. This approach seems to meet multiple objectives having to do with reducing winter baseflows in Lee Vining Creek and addressing the need for improved management of Grant Lake Reservoir. However, such a strategy will require more frequent transfers and of more water from one basin to another. Are there other considerations beyond those described in the draft Synthesis Report that should be given to the potential biological downfalls of such diversions? For example, are threats associated with the potential for introduced invasive species of concern to the Stream Scientists and if so, are there recommendations to minimize such threats that should be included in the Synthesis Report?	
I. General		<u>(6) Potential value in restoring Vestal Springs:</u> Recently, there have been discussions amongst the Stream Scientists and relevant parties pertaining to the value of trying to restore Vestal Springs. Based on such discussions, the initial analysis conducted to evaluate the potential value of restoring Vestal Springs were primarily, if not exclusively, centered on the spring's potential to benefit Rush Creek temperatures. However, values outside of potential temperature benefits have been noted. For example for the Rush Creek fishery itself, restoration of the Vestal Springs may contribute to young-of-the-year habitat and direct and indirect food sources. More broadly, restoring the Vestal Springs has the potential to simply build on the effort to continually restore natural ecosystem processes and contribute to the enhancement of riparian vegetation adjacent to the main-stem of Rush Creek. CalTrout requests that the Stream Scientists include in the final Synthesis Report a discussion that addresses the potential values and what would be involved with restoring the Vestal Springs along with the perceived tradeoffs of pursuing such restoration.	
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I. General		<u>(8) Use of specific dates for recommendations:</u> The Stream Scientist proscribes flow recommendations associated with very specific dates. For example, the Stream Scientists recommend that during wet-years from May 14th to June 11th (Spring Bench period) 80 cfs are provided down Rush Creek. Given weather and future climate variability, might there be value in considering a more dynamic trigger for the various flow recommendations? It seems there could be value in having some level of flexibility based on annual conditions to implement the recommended flows i.e., if weather conditions (range) were such for a given number of days, flow recommendations would be implemented. Doing so may be challenging from an annual water operations perspective. However, are there appropriate and more flexible means that could be established to trigger particular flow recommendations and if so, what are they?	
II. Issue Specific	P. 7-8	(1) In the 98-05-Dr. Dr. Platts testified that there may be a difference regarding the level of flows needed to help restore a degraded stream system and the flows needed to maintain the habitat once the stream system has been reestablished. Dr. Trush acknowledges in 98-05 that there is	

		a distinction between maintenance and restoration flows. As stated in the draft Synthesis Report, Stream Ecosystem Flows (SEFs) are a term used for revised SRF flows. On Page 8 of the draft Synthesis Report in the context of the goal of the stream monitoring program, it is stated that "recommended changes to the magnitude, timing, duration, and frequency of specific hydrograph components to better achieve ecosystem recovery goals…was an important objective.". For clarification, are the SEFs provided in the draft Synthesis Report considered restoration flows and/or maintenance flows? If solely oriented towards restoration flows, what about the value and need to establish "maintenance" flows as well?	
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II. Issue Specific	P. 31	(3) Bottom paragraph, column 1 states that Rush Creek below the Narrows is either incapable of supporting large brown trout or this portion of Rush Creek is capable of supporting large brown trout but contemporary flow regimes do not provide conditions compatible for fast enough growth and better winter survival for resident trout to attain large size. CalTrout would appreciate having the	

		justification for such statements included in the final Synthesis Report assuming there is more to it than the hypotheses surrounding limiting winter holding habitat and temperature constraints.	
II. Issue Specific	P. 31	(4) (Follow-up to above comment-top paragraph, 2nd column) Stream Scientists state that brown trout biomasses estimated during the past 12 years represent a population near carrying capacity for the flow regime and physical habitat now present in lower Rush Creek. What is the basis for making such a conclusion? Please expand on this theory. Isn't carrying capacity linked to food web potentials? If so, are there data to support such a statement?	
II. Issue Specific	P. 40	(5) CalTrout is not clear on the derivation of the incremental diversion rates included in Table 2-6. There does not appear to be a linear relationship between flows and diversion rates or a defined relationship between stream flow and diversion rates. It would be helpful to have such an explanation in the final Synthesis Report.	
II. Issue Specific	P. 41	(6) It is stated that diversions are not expected to detrimentally affect water temperatures in lower Lee Vining Creek. What information is there to support the premise a flow of 30 cfs in late summer months will not result in undesirable water temperatures, particularly if very warm ambient air temperatures persist?	
II. Issue Specific	P. 62	(7) Table 3-1 is very informative in providing brief descriptions of desired ecological conditions. While the ranges provided are informative and help to provide a basis for what constitutes such desired conditions, it would be extremely helpful to have each of the respective ecological	

		conditions more quantifiably defined. Additionally, in the process of developing flow recommendations the draft Synthesis Report identifies which of the ecological desired conditions are taken into considerations for a given year type, there is a lack of information pertaining to the relative weights provided to each of the ecological conditions. It would be useful to have more in-depth discussions in the final Synthesis Report that describe how ecological conditions were prioritized along with an analysis of the potential tradeoffs of such prioritizations.	
III. Process	P. 10	(1) The Stream Scientists provide a process for completion of the Synthesis Report. The process described by the Stream Scientists has been revised and should be updated in the final Synthesis Report	
III. Process		(2) As noted above and within the Adaptive Management comment, there are activities relating to the restoration of Rush Creek to be implemented during summer/fall of 2010. Moreover, additional findings from future monitoring may shed light on the need to modify the newly recommended flow regimes. CalTrout requests that to the extent possible, and within the final Synthesis Report, the Stream Scientist include a section that provides more detailed information regarding how future information will be synthesized and potentially incorporated into relevant recommendations.	