



MEMORANDUM

To: Natalie Noyes,
David J. Powers and Associates

From: Justin Semion
Stewart DesMeules

Date: January 9, 2020

Subject: Review Dr. Alice Rich Memorandum, "Review of City of Napa Revised IS/MND for Napa Creek Apartments Project"

At the request of David J. Powers and Associates, WRA reviewed Dr. Alice Rich's memorandum entitled "Review of City of Napa's Revised IS/MND for Napa Creek Apartments Project", dated June 18, 2013. Dr. Rich's memorandum raises various issues related to the analysis of potential impacts to fish in Salvador Creek discussed in the 2012 IS/MND. WRA's review focuses on the five major issues raised in Dr. Rich's memorandum (items #4-8) in the context of the 2019 EIR/EA prepared for the Valle Verde and Heritage House Continuum of Housing Project (Project) (SCH#2018082019).

Item #4: "There is Ample Evidence That Protected Salmonids Inhabit Salvador Creek"

Dr. Rich identifies chum salmon (*Oncorhynchus keta*) as a CDFW Species of Special Concern. Chum salmon is not currently listed as a Species of Special Concern by CDFW. All fish Species of Special Concern are listed online, here: <https://www.wildlife.ca.gov/Conservation/SSC/Fishes>. The species on this list are updated from time to time by CDFW. Given that chum salmon is not currently listed as a Species of Special Concern or otherwise protected, it does not require analysis under CEQA or NEPA.¹ Regardless, any measures implemented by the Project to protect protected salmonids would also serve to protect chum salmon.

WRA does not dispute that there is evidence that protected salmonids (Central California Coast Steelhead [*Oncorhynchus mykiss*, Federal Threatened] and Chinook salmon [*Oncorhynchus tshawytscha*, Species of Special Concern]) inhabit Salvador Creek. However, WRA does take issue with certain conclusions made by Dr. Rich in Item #4 of her memorandum, as follows.

Dr. Rich states that Koehler and Edwards (2009) incorrectly characterized the conditions in Salvador Creek, stating: "I have determined that sampling only 10% of the habitat results in an incorrect characterization of the creek or river in question." WRA takes issue with the conclusion

¹ Appendix G of the CEQA Guidelines requires analysis of potential adverse effects to special-status species: "Would the project: (a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service." Chum salmon is not protected by any of the laws or regulations stated on page 70 of the City of Napa's Valle Verde & Heritage House Draft EIR/EA (2019).

that sampling 10% of the creek is inadequate. According to the California Salmonid Stream Habitat Restoration Manual (California Department of Fish and Game 1998), the Department of Fish and Game analyzed over 200 stream habitat inventory data sets. After analyzing these datasets, they determined that a similar stream descriptive detail could be accomplished by sampling 10% of a stream as opposed to 100%. Even if a 10% sample leads to an inaccurate characterization of the creek, Dr. Rich implies that more sampling would show that the creek has a higher suitability for salmonids than concluded by Koehler and Edwards (2009); however, the opposite could also be true.

Dr. Rich states that there is salmonid rearing habitat within the portion of Salvador Creek flowing adjacent to the Project site. While WRA does not dispute that salmonids could utilize this portion of the creek adjacent to the proposed development for rearing, it is notable that spawning habitat within this area is limited. Koehler and Edwards (2009) performed streamflow observations at a number of stations within Salvador Creek. One of these stations was at Big Ranch Road, approximately 0.2 miles downstream of the Study Area. At these locations, streamflow was assessed using the following five categories; Level 3 (briskly flowing), Level 2 (moderately flowing), Level 1 (slowly flowing), Level 0 (stagnant flow with isolated pools present), and Level - 1 (dry). Streamflow measurements taken at this site between July and February during the study period showed an average flow level of 1.7, indicating that rearing is possible in the area. Koehler and Edwards (2009) also surveyed the same site for gravel permeability. They found gravel permeability of <35%, which has a predicted egg-to-emergence survival estimate of between 19% and 35%, a survival estimate that is relatively low when compared to the rest of the surveyed creeks. Therefore, the quality of spawning habitat within the Study Area is low, and while there may be rearing habitat present within the Study Area, the overall amount of rearing habitat within Salvador creek is low. Any work within Salvador Creek will be conducted following minimization measures described in the Project's CEQA document and any future agency permit requirements. Following the completion of the Project and removal of the existing bridge structure², there will be an increase in available spawning and rearing habitat.

Dr. Rich states that Chinook salmon spawning was documented in Salvador Creek in 2007, and concentrated in upper reach 2 (as defined by Koehler and Edwards 2009) and reach 3 near Vintage High School. A watershed map with habitat survey reaches is included as Figure 3.8.1 in the Koehler and Edwards report (2009) and attached here for reference. Reach 2 is bounded to the north by Garfield Lane and to the south by Big Ranch Road. While it is correct that Koehler and Edwards (2009) documented spawning, Chinook salmon spawning was documented to be concentrated within upper reach 2 of Salvador Creek, and the proposed development is adjacent to the lower portion of Reach 2, approximately 900 feet upstream from Big Ranch Road. Please see Pages 174 and 178-179 of the Final EIR for additional information that responds to the impact of the Project on Chinook salmon in Salvador Creek.

Item #5. "The IS/MND Did Not Address Cumulative Impacts on Salmonids"

Dr. Rich states that the 2012 IS/MND did not address cumulative impacts on salmonids. She concludes, "the project would also likely cause potentially significant "cumulative" impacts when viewed together with other past, current, [o]r reasonably foreseeable projects. Such impacts include potential harm to salmonids and their habitat from debris falling into the pool during bridge demolition, increase human intrusion in the creek by the project's many new residents, and further

² The existing bridge is not a part of the Project Area. Removal of the bridge is being required by the City as a condition of approval. The Napa County Flood Control and Water Conservation District would complete the bridge removal under its Stream Maintenance Program.

erosion of the creek's western bank below the existing fence." The impacts Dr. Rich identifies are either a direct result of the proposed Project (e.g. debris falling during bridge demolition work and increased human intrusion) or an existing baseline condition that will not be made worse by the proposed Project (e.g. on-going erosion of the creek's western bank and access to the creek by area residents). Dr. Rich does not identify any other projects (past, current, or future) that would require consideration of cumulative impacts under CEQA or NEPA.

The direct Project impacts Dr. Rich identifies are discussed in the 2019 EIR/EA and would be mitigated to a less than significant level by implementation of the Project's mitigation measures. Potential impacts associated with debris from bridge demolition would be mitigated to less than significant through implementation of Mitigation Measure BIO-1.3. The creek will be fenced off from access; minimizing any adverse impacts from potential human intrusion as shown in DEIR Figure 2.7-1 (see Item #8 for additional discussion). Any on-going erosion of the creek's western bank is a baseline condition, which if not made worse by the Project, does not require analysis under CEQA or NEPA (see Item #7 for additional discussion of the existing erosion).

The 2019 EIR/EA addresses cumulative impacts as defined by CEQA guidelines pursuant to sections 15130 and 15065(a) (3). A cumulative project list is presented in Table 3.0-1 of the DEIR/EA and cumulative impacts to biological resources are discussed in Section 3.4.2.3 of the DEIR/EA.

Item #6. "Bridge Demolition Would Negatively Impact Salmonids"

Bridge removal has potential to significantly impact protected salmonids during construction activities. However, through implementation of mitigation measure BIO-1.3 and compliance with any future agency permit authorizations, any potential impacts to protected salmonids will be reduced to a less than significant level.

The DEIR evaluated an alternative that would remove the existing bridge. Removal of the bridge would improve habitat for protected salmonids over existing conditions by restoring Salvador Creek to a more natural condition and increasing the area of available salmonid habitat. Removal of the existing bridge would involve in-water work within established work windows to protect salmonids (between June 1 and October 31).

Dr. Rich states "Demolition of the bridge could directly impact special-status species, or cause 'take' of stray salmon or steelhead from rubble, machinery, or other materials forcibly entering the water." The Project includes measures that will prevent any construction related material from entering the creek during work, including the implementation of a debris containment device should the existing bridge be removed. The Project will also comply with any future permit requirements that may be required for work in the creek channel, including obtaining coverage for potential take of salmonids via consultation with the National Marine Fisheries Service (NMFS).

While removal of the bridge could potentially impact juvenile salmonids if they were present within the area during work, measures to be implemented by the Project as well as compliance with future agency permit requirements, would reduce potential impacts to steelhead and Chinook salmon to a less-than-significant level. Bridge removal may require Clean Water Action Section 404 authorization, under which the U.S. Army Corps of Engineers (Corps) may initiate Endangered Species Act Section 7 consultation with NMFS. It is anticipated that bridge removal would be completed by the Napa County Flood Control and Water Conservation District under its Stream Maintenance Program, which operates under a set of regulatory permits including Corps

and NMFS authorizations. Avoidance and minimization measures included in these permits would be implemented during bridge removal.

Item #7. “Erosion and Lack of Setback Along the Existing Fence Could Negatively Affect the Salmonids in Salvador Creek

Dr. Rich identifies an existing erosion issue along the western creek bank. She states, “[t]he bank along and just below the existing fence and paved parking areas is eroding. It is my opinion that such erosion presents significant risks of sedimentation into the creek, which is deemed “pollution” by law, and is known to harm salmonid species”. The erosional issue that Dr. Rich identifies is an existing condition that will not be made worse by the proposed Project. Under CEQA and NEPA, only potential impacts resulting from the proposed project must be evaluated. The EIR identified moderate to severe streambank erosion impacting a 120-foot reach of Salvador Creek. To address this issue, the Project is proposing to construct a stitch pier retaining structure parallel to (but outside of) the creek channel. In addition, the Project applicant has entered into an agreement with the Napa County Flood Control and Water Conservation District to fund restoration of approximately 200 feet of Salvador Creek located at 3700-3720 Valle Verde Drive (Agreement No. 200091B). As this restoration work is directed at addressing an existing condition, and would be undertaken to protect the property irrespective of whether the Project is implemented, this restoration work is not considered part of the project description being evaluated under CEQA/NEPA. The Napa County Flood Control and Water Conservation District would undertake the restoration work under its Stream Maintenance Program (refer to the District’s website for additional information: <https://www.countyofnapa.org/1074/Flood-Water-Resources>).

Dr. Rich goes on to state: “due to lack of any setback in this area, the noted ongoing erosion, and lack of sufficient armoring throughout this area of the creek bank, at some point during project occupation/operation the bank will likely require armoring.” She concludes that such repair work would also result in negative impacts on salmonids and require regulatory authorization from Corps, leading to an Endangered Species Act Section 7 Consultation with NMFS. Any future repairs would be part of a separate and future project designed to address erosion, and therefore do not require analysis under the proposed Project’s EIR/EA. Any potential adverse impacts to protected salmonids from a future repair project would be addressed as part of a separate environmental review and approval process. No evidence exists or has been put forth that the Project will increase the potential for stream bank erosion. Stream erosion can be caused by numerous factors, natural and human-induced, and often arises from events in locations far upstream from the area of erosion. The fact that this erosion exists under existing conditions is not evidence that the Project will adversely affect the bank erosion in the future.

Item #8. “Increased Human Activity from the Project’s New Residents Will Cause Potentially Significant Impacts”

Dr. Rich states that the new residents, and resulting increase in human activity within the area would “likely cause potentially significant negative impacts to the salmonids within Salvador Creek and their habitat.” Dr. Rich states that these negative impacts would be caused by “...habitat damage, erosion, littering, pollution, and possibly occasional, accidental harm to individual salmonids.” Although the Project will bring new residents to the property, the creek will be restricted from access. The Project will repair and extend an existing, 6-foot high tubular wrought iron fence, making the creek inaccessible. Currently, fencing at the Project site is in general disrepair, and does not extend along the entire length of the creek. Upon Project completion, fencing will be replaced and extended along the entire length of the creek. The height of the fence

is generally considered high enough to deter climbing. Figure 2.7-1 of the Draft EIR/EA identifies the existing wood fence to be replaced. Additionally, new trash enclosures will be installed as part of the Project. Therefore, the Project will restrict creek access, thereby minimizing any chance that increased human activity would adversely impact salmonids in the creek. This is an improvement compared to existing conditions, where evidence in the Administrative Record and from other project comment letters indicate ongoing and relatively consistent unrestricted human access to the creek.

References:

California Department of Fish and Game. 1998. California Salmonid Stream Habitat Restoration Manual. Prepared by Flosi, G., Downie, S., Hopelain J., Bird, M., Coey, R., and Collins, B. February 1998.

Koehler, J, and C. Edwards. 2009. Southern Napa River Watershed Restoration Plan. Napa County RCD. Available at: http://naparcd.org/wpcontent/uploads/2014/10/SouthernNapaRiverWatershedPlan_Final_Report_2009_low_res.pdf

City of Napa. 2019. Draft Environmental Impact Report / Environmental Assessment: Valle Verde and Heritage House Continuum of Housing Project (SCH #2018082019). Prepared by the City of Napa in consultation with David J. Powers & Associates, Inc. July 2019.

City of Napa. 2019. Final Environmental Impact Report: Valley Verde and Heritage House Continuum of Housing Project (SCH #2018082019). Prepared by the City of Napa in consultation with David J. Powers & Associates, Inc. November 2019.

Attachment:

- Figure 3.8.1 excerpted from Koehler and Edwards (2009)

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MEMORANDUM

Date: June 18, 2013
To: William McGuire, Chairman, NCPSC
From: Alice A. Rich, Ph.D.
Re: Review of City of Napa's Revised IS/MND for Napa Creek Apartments Project

I. AUTHOR'S QUALIFICATIONS

My name is Dr. Alice A. Rich. I manage A. A. Rich and Associates, a fisheries and ecological consulting firm in the San Francisco Bay area, which I founded 30 years ago. I have attached a copy of my résumé and relevant professional experience and qualifications. I have had over 30 years of technical and project management experience in a wide range of fisheries-related projects. My professional experience encompasses work as a fisheries consultant, fisheries biologist, fish physiologist, analytical chemist, and university lecturer. I have worked on projects involving federal, state, and local agencies, private companies, law firms, and environmental non-profit organizations throughout the western states, Maine, British Columbia, and the Bahamas. I have designed hundreds of projects involving federal- and state-listed and candidate fish species, particularly salmonids (salmon and steelhead), including pollution and water temperature, instream flows, mining (gravel, gold, and phosphate), environmental disasters (human-induced and natural), dams and diversions, hydroelectric power, dredging and pile driving, timber harvest, urban development, and impacts of other land use activities on sensitive fish species. I have designed and supervised hundreds of fish impact studies and analyses, including threatened and endangered species surveys and analyses, limiting factor analysis, water quality and water temperature monitoring and impact analyses, fish physiology studies, fish risk assessments, instream flow analyses, fish habitat and populations surveys and analyses, fish mitigation and rehabilitation, ESA Section 7 Consultations with federal agencies, fishery resources technical reports for EIR's, EIS's, and other environmental documents, fish collection, salvage, and relocation, fish age determination, and macro-invertebrate sampling and analyses. In addition, my Ph.D. and M.S. degrees focused on salmonid stress physiology and I have been called upon as an expert witness on the stressful impacts of pollution, water temperature, altered instream flows, dams and diversions and hydroelectric power, migration barriers, timber harvest, catch-and-release fishing, transportation and handling on fishes, and other factors that are detrimental to federal- and state-listed fish species.

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II. BRIEF BACKGROUND OF PROPOSED PROJECT

On May 15, 2012, the Napa City Council (Council) approved and adopted a Mitigated Negative Declaration (MND) for the proposed Napa Creekside Apartments. The MND was challenged by the Neighborhood Coalition to Protect Salvador Creek (NCPSC) and its founding member, plaintiff/petitioner William McGuire. On April 11, 2013, the Napa County Superior Court's (Court) Peremptory Writ of Mandate set aside the Council's approval of the project, based on an inadequate analysis of the Project's potential biological impacts on Salvador Creek. The Court found a deficiency in the Initial Study/Mitigated Negative Declaration (IS/MND) for the project and ordered the preparation of a revised California Environmental Policy Act (CEQA) document that addressed the MND's inadequacies "regarding the presence of and potential Project impacts on, threatened, endangered, or protected fish species or their habitat in or adjacent to Salvador Creek adjacent to the Project." To address the Court's decision on the project, the revised IS/MND (2013) now includes a Biological Resources Report (LSA, 2013).

I was retained by NCPSC to respond to the contents of the revised IS/MND, with regard to potential impacts on fishery resources, specifically on salmonids (salmon and steelhead), in Salvador Creek.

To assist in the preparation of my review of the revised IS/MND, I visited the proposed project site and reviewed numerous documents, including the following:

- Revised IS/MND (2013);
- Biological Resources Report (LSA, 2013);
- Napa Planning Commission Staff Report re Napa Creekside Apartments (June 6, 2013);
- Southern Napa River Watershed Restoration Plan (Koehler and Edwards, 2009);
- Leidy et al., 2005a,b;
- Moyle, 2002;
- USACE, 2001-2006;
- Petitioners' Opening Brief (, December 18, 2012); and,
- Petition for Writ of Mandate (June 14, 2012).

III. SUMMARY OF MY CONCLUSIONS

Under **Section IV. Biological Resources** of the "Environmental Checklist" in the revised IS/MND, the following have to be addressed, with regard to whether or not the proposed project would:

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"a. Have a substantial adverse effect either directly or through habitat modifications on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the California Department of Fish Game (CDFG) [now called California Department of Fish and Wildlife, or CDFW] or U.S. Fish and Wildlife Service (USFWS)."

"b. Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS."

"d. Interfere substantially with the movement of any native or migratory fish, or wildlife species, or with established native resident, or migratory wildlife corridors, or impede the use of native wildlife nursery sites."

The IS/MND concluded that the proposed project would result in "Less Than Significant Impacts" for all of the above. However, I disagree. It is my professional opinion, based on the available scientific information, and over 30 years of experience working on salmonid issues, that the proposed project could potentially have negative impacts on both salmonids and their habitat in Salvador Creek. In the following pages I summarize the support and basis for my conclusions that:

- (1) There is ample evidence that protected salmonids inhabit Salvador Creek in the proposed project area, and particularly most of the year in the pool under the to-be-demolished bridge;
- (2) The IS/MND did not address the cumulative impacts on salmonids;
- (3) Demolition of the bridge could negatively impact salmonids in Salvador Creek;
- (4) Due to the ongoing erosion along the site's western bank and lack of setback for the existing fence, re-occupation of the senior building could negatively impact salmonids; and,
- (5) Increased human activity in and near Salvador Creek from the project's new residence would cause potentially significant impacts from the interference, intrusions, habitat damage, and pollution.

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SALVADOR CREEK**

The fact that there have not been many quantitative studies on salmon/steelhead presence in Salvador Creek does not mean that the creek does not support salmonids. It just means that few biologists have studied Salvador Creek. However, as noted below, there is little question of such species' presence in the subject portion of Salvador Creek flowing through the project site.

The IS/MND (page 7, first paragraph) states that "Koehler and Edwards (2009) noted that during their 2007 survey of the Salvador Creek drainage very little suitable spawning or rearing habitat for salmon and steelhead was present in the drainage. Salvador Creek is channelized upstream from Vintage High School and confined in an artificial trapezoidal channel from there to Highway 29 where it splits into two ditches running along Solano Avenue."

Koehler and Edwards (2009) sampled only about 10% of the habitat units within the creek. They used one of the habitat methodologies described in the California Salmonid Habitat Restoration Manual (Flossi and Reynolds, 1994) and decided to sample only 10% of the total habitat in the creek. Based on the results of my own research for over 30 years conducting habitat surveys in over 100 watersheds throughout California, I have determined that sampling only 10% of the habitat results in an incorrect characterization of the creek or river in question. In all of the creeks where I have conducted habitat typing, 100% of the habitat was surveyed/sampled. Thus, to state that Salvador Creek has "...very little suitable spawning or rearing habitat" may not be an appropriate characterization for specific areas of Salvador Creek and is certainly not an accurate characterization of the pool area at the proposed project site, directly under the bridge near its northeast corner.

Despite that some reaches of Salvador Creek are not ideal, steelhead, Chinook salmon, and chum salmon have all been sighted and/or collected in the Napa River Watershed, including Salvador Creek. Thus, the proposed project could result in negative impacts on the salmonids in Salvador Creek.

During my site visit, I examined the pool under the bridge and there is salmonid rearing habitat in this area of Salvador Creek, as well as along the rest of the proposed project area.

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Central California Coast Steelhead (*Oncorhynchus mykiss*)

The Central California Coast (CCC) Steelhead was listed as Threatened on August 18, 1997 (62 FR 43937) and reaffirmed January 5, 2006 (71 FR 834). In addition, the Final Ruling for Designating Critical Habitat for the CCC steelhead was listed on September 2, 2005 in the Federal Register (70 FR 52488-52627).

There have been a number of surveys that resulted in either collection or observation of the CCC steelhead in Salvador Creek. In March 1977, CDFW surveyed about one mile of Salvador Creek, from Vintage High School (upstream of the project site) to the confluence with the Napa River, including the project site (Baracco, 1977 as listed in Leidy et al., 2005). The surveyors observed six adult steelhead between Big Ranch Road (about 1,000 feet downstream from the project site) and the Napa River. In addition, juvenile steelhead have been captured in the Napa River during the U.S. Army Corps of Engineers' Napa River Annual Fisheries Monitoring Program; juvenile steelhead have been sampled throughout the Napa River Watershed (USACE, 2001-2006). In addition, as part of their public testimony during the 2012 Planning Commission and Council hearings, several speakers (including member of the NCPSC and Councilmember Krider) stated that salmon, steelhead, and trout inhabited Salvador Creek in the proposed project area (Transcripts of Planning Commission hearing in April 2012, and Council hearing in May 2012, cited in Petitioners' Opening Brief, December 18, 2012). Thus, the proposed project could have negative impacts on the CCC Steelhead.

Chinook Salmon (*Oncorhynchus tshawytscha*)¹

Chinook salmon are not known historically to have inhabited the Napa River Watershed. The timing of observations of Chinook salmon suggests that the fish are part of the Central Valley Fall-run Evolutionarily Significant Unit (ESU), but whether or not any other ESU's occur is

¹ Chinook Salmon: The Napa River is not included in the NMFS ESU maps for ESU-listed Chinook salmon in California (NMFS, 2005). Chinook salmon ESU's in the region include Sacramento River Winter-run, California coast, and Central Valley Spring, Fall and Late-Fall runs. Further investigation, such as conducting spawning surveys on the Napa River and genetic testing of juvenile fish collected in the Napa River would determine whether or not the juvenile Chinook salmon captured in the Napa River originated from any of these ESU's.

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unknown. The Central Valley fall-run Chinook salmon ESU is considered a State Species of Special Concern.

Both adult and juvenile Chinook salmon have been observed in Salvador Creek. During the stream surveys from August 30-31, 2007, juvenile (60-80 mm) were observed just upstream of Big Ranch Road (Koehler and Edwards, 2009). August is during the low-flow season when construction would likely occur at the proposed project site. Prior to the 2007 observation, it was unknown whether or not Chinook salmon successfully spawned in Salvador Creek. Adult Chinook salmon have been documented spawning in Salvador Creek in 2007 and in a number of years prior to that. Spawning was concentrated in upper reach 2 (within the proposed project area) and reach 3 near Vintage High School (Koehler and Edwards, 2009). Such activities are also corroborated by various Napa Valley Register articles, e.g., including those published in 2002 and 2004. Thus, the proposed project could negatively impact juvenile Chinook salmon.

Chum Salmon (*Oncorhynchus keta*)

The chum salmon is designated by the CDFW as a California Species of Special Concern. Although the Napa River Watershed did not historically support chum salmon, recently small numbers have been recorded in the Napa River (USACE, 2005). It has been suggested that the salmon are using the Napa River for spawning. Although, it is not known whether or not they inhabit Salvador Creek, it is possible that they could. The statement in the IS/MND that "... Chum salmon generally have low ability to scale falls and other obstacles (e.g., weirs) that other salmonids can navigate (Moyle, 2002), so would not be expected to occur in the creek above the weir just downstream of the project area", is not based on any evidence. The description of chum salmon in Moyle (2002), that the IS/MND based their statement on, was not based on any information in California, but rather from information from Alaska and British Columbia. Furthermore, Koehler and Edwards (2009) stated that, "No fish migration barriers were identified in Salvador Creek." Thus, the weir in Salvador Creek (near the bridge at the proposed project site) would not be an impediment to adult chum salmon. In 2005, 31 juvenile chum salmon were captured in the Napa River and marsh area at the mouth of the River. (U.S. Army Corps of Engineers, 2006). Thus, there is no evidence that chum salmon could not inhabit Salvador Creek. And, the proposed project could have negative impacts on juvenile chum salmon.

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V. THE IS/MND DID NOT ADDRESS CUMULATIVE IMPACTS ON SALMONIDS

The IS/MND did not address the issue of cumulative impacts on salmonids or any other species, for that matter. Federal and State environmental regulations require consideration of cumulative impacts to provide decision makers with an understanding of the relationship between short-term uses and long-term productivity of the environment. One example of the federal regulatory definition of cumulative effect is:

The impact on the environment which results from incremental impact of the action when added to the other past, present, and reasonably foreseeable future actions" (40 CFR 1508.7)

CEQA appears to similarly define and require analysis of cumulative impacts, as follows:

A lead agency must find that a project may have a significant effect on the environment and therefore require an EIR if the project's potential environmental impacts, although individually limited, are cumulatively considerable. "Cumulatively considerable" means the project's incremental effects are significant when viewed in connection with the effect of past projects, other current projects, and probable future projects. (Pub. Res. Code section 21083(b)(2); Guidelines, sections 15064(h)(1), 15065(a)(3).)

The revised IS (p 20) recites the above CEQA definition. But, the text on page 21 concludes that there will be no cumulative impacts, without any analysis or mention of other past, current, or foreseeable future projects. Thus, the revised IS/MND does not actually undertake any assessment or analysis of cumulative impacts— as to salmonids, their habitat, or anything else.

Based on my experience, site visit, and review of relevant information, there is substantial evidence that the project may cause potentially significant "direct" impacts. Similarly, the project would also likely cause potentially significant "cumulative" impacts when viewed together with other past, current, and reasonably foreseeable projects. Such impacts include potential harm to salmonids and their habitat from debris falling into the pool during bridge demolition, increase human intrusion in the creek by the project's many new residents, and further erosion of the creek's western bank below the existing fence.

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VI. BRIDGE DEMOLITION WOULD NEGATIVELY IMPACT SALMONIDS

The IS/MND (page 8) states that, *"Demolition of the bridge could directly impact special-status species, or cause 'take' of stray salmon or steelhead from rubble, machinery, or other materials forcibly entering the water. This would constitute a significant impact should any protected fish be harmed during demolition."* As to such acknowledged significant impacts, the IS/MND (p. 8) claims that, *"Bridge deconstruction shall be conducted during the low flow season (May 1-October 1) to comply with state regulations and minimize the potential for occurrence of special-status fish species. These seasonal restrictions will make the occurrence of protected adult fish species highly unlikely in the bridge area during deconstruction, because there would not be enough flow for them to swim over the weir and access the bridge site."*

The above conclusions are not supported or contradicted by reliable substantial evidence. For example, the conclusion that no harm could result if bridge demolition is limited to the low-flow season fails to address that even during the low-flow season, salmonids have been sighted in Salvador Creek in the project area (Koehler and Edwards, 2009; Baracco, 1977). Furthermore, while it may be true that adult salmonids would probably not be present, as summer is not the time of year when spawning migration and spawning occurs for any of the three salmonid species discussed previously, there would likely be juvenile salmonids in the pool at the base of the bridge (see Section V., above). While LSA acknowledges the potential presence of both adult and juvenile salmonids, their above discussion and conclusions, regarding impacts only mentions adults, and inexplicably ignores such acknowledged juveniles.

The removal of the bridge abutments and/or piers as noted in the IS/MND would have a negative impact on the salmonids. Water would be present in Salvador Creek, and this demolition work within the creek would be deemed by NMFS as resulting in "incidental take" under the federal ESA. NMFS would be involved via ESA Section 7 Consultation with the U.S. Army Corps of Engineers, and write a Biological Opinion (BO) for the project, estimating the number of salmonids that would die, and stating such as an "incidental take". Thus, the removal of the abutments and piers would result in a negative impact (mortality) on juvenile salmonids in Salvador Creek in the proposed project area.

The IS/MND (p. 8) also states that, *"Discharges of materials during construction into Salvador Creek could also constitute significant impacts by having a substantial adverse effect on special-status species, a substantial adverse effect on riparian habitat, and a substantial adverse effect"*

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on federally protected waters." As to this acknowledged significant impact, the IS/MND claims that, "Compliance with existing federal and state regulations by implementation of the following measures would reduce these potential impacts to less than significant levels." "Debris containment methods shall be utilized during removal of the old bridge to prevent construction material or debris from entering the water or riparian habitat."

NMFS and CDFW would not allow removal of the bridge without collecting and relocating the fish and diverting the water, so that the construction crew could work in a relatively dry creek area.

Finally, as proposed mitigation, the IS/MND involves periodic monitoring of bridge demolition activities by a qualified biologist. However, such monitoring only involves three visits of undisclosed duration — i.e., before, during, and after the demolition, which is also of undisclosed duration. Such a measure would not protect the salmonids in the creek or their habitat. I and my colleagues have worked on dozens of projects that required the presence of biological monitors. It has been my experience that both NMFS and CDFW usually require full-time biological monitors on-site during construction/demolition activities. As a fisheries biologist from CDFW told me last week, "The more time a monitor is there the better." It has also been my experience from monitoring dozens of projects for over ten years that when my biological monitors do not show up at a site, but "check-in" to see if things are proceeding according to plan, the construction companies become really lax and are not careful to protect the creek at all. Thus, having a biological monitor show up only once in the middle of construction, even if it were for the entire day, will fail to see or prevent past and future violations, thereby resulting in negative impacts on salmonids.

Additionally, the one visit by the monitor during demolition seems to involve devising recommendations to correct deficiencies in the debris contamination plan. Contrary to the above-noted assurances, this strongly suggests that some deficiencies or failures are expected or likely to happen — which as noted would result in debris entering and contaminating the creek, potentially harming or killing salmonids and damaging the habitat in the large pool immediately below. Furthermore, nowhere does the mitigation require actually following or implementing any of the biological monitor's corrective recommendations. Thus, the premise that no meaningful debris will fall into or enter the large pool below the bridge is not supported by my personal experience, logic, or other relevant evidence.

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In sum, the IS/MND has not addressed the above issues – i.e., that bridge removal would likely have negative impacts on the salmonids and their habitat in Salvador Creek.

VII. EROSION AND LACK OF SETBACK ALONG THE EXISTING FENCE COULD NEGATIVELY AFFECT THE SALMONIDS IN SALVADOR CREEK

According to the IS/MND, the project involves constructing a new fence along the northern portion of the project site, on the parcels where the to-be-demolished house is located. Because it is required to comply with riparian setbacks, the new fence would be located some distance to the west of, and away from, the creek's western bank.

As part of my inspection of the entire site and some of its surroundings, I observed the southern portions of the project site where the existing multi-unit senior building is located, as well as the associated paved parking areas (between the east side of the building and the creek's western bank), and the existing fence along this portion of the site's eastern side, i.e., at the top of Salvador Creek's west bank. As noted in the IS/MND, along the eastern edge of the southern portions of the site, there is no setback between the existing fence and the creek bank/riparian corridor. For this reason, the IS/MND characterizes the existing fence and some of the other senior building's site improvements (such as the paved parking areas east of the existing building, etc.) as "non-conforming". Despite the lack of setback, and the above-noted requirement to construct the new fence in compliance with setbacks, during the project's re-occupation of the existing building, the existing fence is proposed to remain where it is, roughly parallel to, and only one or two feet from, the creek's top of bank.

The bank along and just below the existing fence and paved parking areas is eroding. It is my opinion that such erosion presents significant risks of sedimentation into the creek, which is deemed "pollution" by law, and is known to harm salmonid species.

Also, due to the lack of any setback in this area, the noted ongoing erosion, and lack of sufficient armoring throughout this area of the creek bank, at some point during project occupation/operation the bank will likely require armoring.

The above problems and associated potentially significant impacts were also noted in an e-mail to the City, dated May 7, 2013, by Ms. Suzanne Gilmore of CDFW, as part of CDFW's comments on the revised IS and proposed MND. In response to CDFW's comments, LSA prepared a memorandum dated May 23, 2013, claiming that, "The Salvador Creek channel on the west side immediately adjacent to the project area site is already armored with large

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boulders and concrete." This simply is not an accurate description of the eroding bank, as it has little support.

The LSA response further states that, *"The long term stability of the channel will be assured by the Napa County Flood Control and Water Conservation District's Stream Maintenance Program which includes this reach of Salvador Creek and is approved under CDFW Stream Alteration Agreement 1600-2011-0349-R3."* While that may be true, it does not address the fact that since the bank is below the Ordinary High Water Mark (OHWM), its repair would most likely involve the U.S. Army Corps of Engineers, leading to an ESA Section 7 Consultation with NMFS. Work within the channel at the base of the bank would require fish collection and relocation, and NMFS would write a BO that would include "incidental take". Thus, in addition to the ongoing potentially significant impacts on salmonid habitat from bank erosion and sedimentation prior to any bank repair, the repair itself would also result in negative impacts on salmonids. None of this appears to be addressed in the documents that I have reviewed.

VIII. INCREASED HUMAN ACTIVITY FROM THE PROJECT'S NEW RESIDENTS WILL CAUSE POTENTIALLY SIGNIFICANT IMPACTS

Similar to many streams, some portions of Salvador Creek contain better salmonid habitat than others; the pool under the bridge at the northeast corner of the site appears particularly valuable. It is also attractive to nearby residents, not only aesthetically, but also as a place for potentially damaging recreational activities; mostly by the area's younger residents. Based on the current, existing negative effects of human intrusions at Salvador Creek within and near the project site—which I personally observed during my site visit, and reviewed in the relevant project-related documents and public testimony—it is my opinion that introducing the project's many additional residents at this site on top of Salvador Creek's western banks would result in significantly more human intrusions (than now) in and about the creek's banks and channel. The increased intrusions would most likely cause potentially significant negative impacts to the salmonids within Salvador Creek and their habitat (e.g., in the form of habitat damage, erosion, littering, pollution, and possibly occasional, accidental harm to individual salmonids). The notion that the level of "baseline" human intrusions would remain static or somehow decrease upon project occupancy is simply contradicted by all seemingly relevant evidence, including the project

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applicant's lack of success in preventing such intrusions by residents of their adjacent apartment complex, my own observations and experience, and human nature. Thus, the proposed low fencing most probably would not keep people away from the creek. Nor would the project's new residents or management be able to adequately "police" or otherwise prevent increased intrusions.

IX. LITERATURE CITED

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