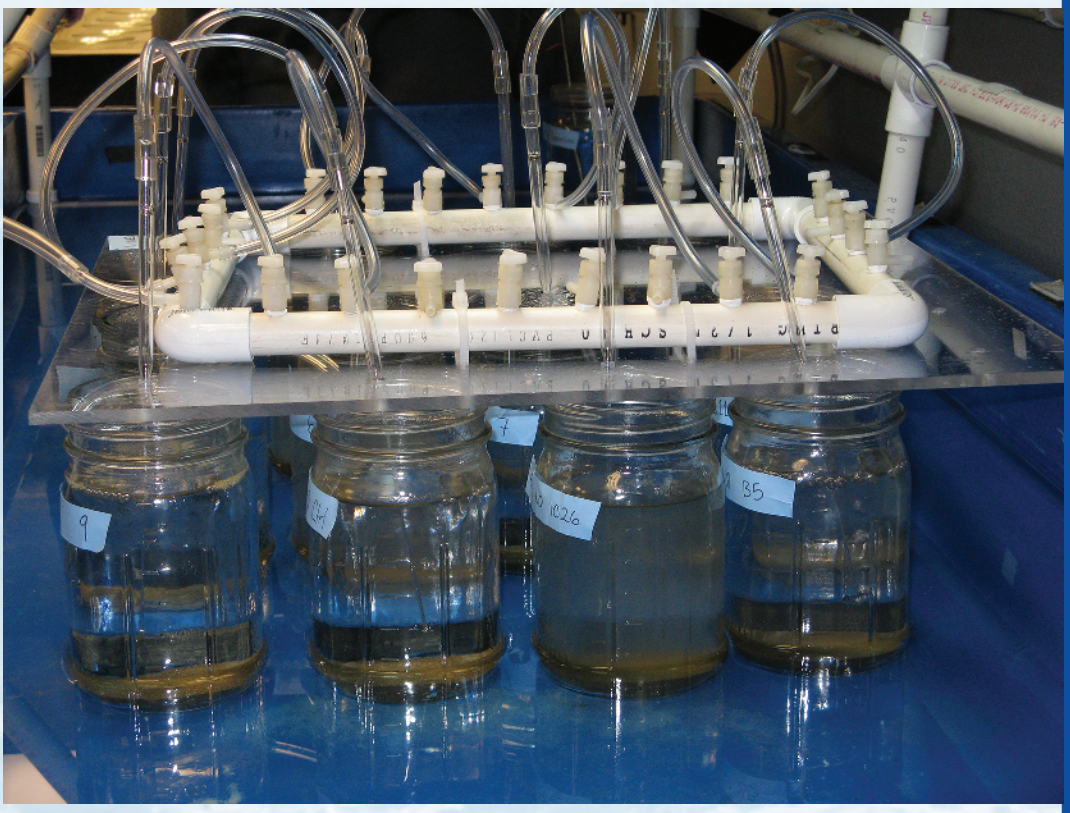
Progress Assessment and Final Recommendations by the Expert Review Panel for the State of California's Environmental Laboratory Accreditation Program

Year Two Final Report



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Southern California Coastal Water Research Project

SCCWRP Technical Report 977

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FOREWORD

This report was produced under California State Water Resources Control Board contract to the Southern California Coastal Water Research Project Authority (Agreement Number 15-037-400) under the direction of Dr. Stephen Weisberg. The views and perspectives expressed in this report by the members of the Expert Review Panel are their own, and do not necessarily reflect the views of their employer or any other entity with which they are affiliated.

ACKNOWLEDGEMENTS

The Expert Review Panel wishes to thank Christine Sotelo, Program Chief for the California Environmental Laboratory Accreditation Program, in addition to the management and staff involved in the review panel process, for their openness and willingness to provide unfettered access to, and unfiltered information about, the program and its staff. The authors also wish to thank the members of the Environmental Laboratory Technical Advisory Committee (ELTAC) and the Stakeholder Advisory Committee (SAC), especially Chair Dr. Andy Eaton, for advice, counsel and support, and the speakers who offered invaluable perspectives and information essential to the Panel's deliberations. Finally, the authors wish to thank Dr. Stephen Weisberg and Scott Martindale of the Southern California Coastal Water Research Project Authority for their guidance and support.

EXECUTIVE SUMMARY

An Expert Review Panel (the Panel) was convened in 2015 to conduct an external examination of the State of California's Environmental Laboratory Accreditation Program (ELAP). During its initial review, which was presented to the California State Water Resources Control Board (State Water Board) in November 2015, the Panel identified a number of fundamental weaknesses that hindered the program's ability to achieve its mission of ensuring the State has high-quality data for use in environmental decision-making. The Panel made a series of recommendations to help ELAP reestablish itself as a respected accreditation program. Over the course of a year, the Panel followed ELAP's progress during quarterly public webinars, then reconvened in January 2017 to conduct a second year review of the program to assess whether the program had successfully implemented those recommendations and improved as a result.

During the follow-up review, the Panel found that ELAP made significant progress in implementing the majority of the Panel's recommendations. The Panel believes ELAP is regaining credibility with clients and the laboratory community; is working toward an accreditation process with State and stakeholders support; and has created proficiency testing and enforcement units to help ensure the competency of laboratories producing environmental data. With the extensive programmatic improvements ELAP implemented in the last year, the Panel has confidence ELAP's leadership understands its organizational charge and is well-positioned to accomplish the final Panel recommendations outlined in this report.

While the Panel applauds ELAP's progress during the past year, the program is still not meeting its programmatic goals. Specifically, the Panel notes that ELAP still lacks adequate staff to properly perform onsite assessments of applicant laboratories, which has resulted in a significant programmatic backlog, and an accreditation standard has not been adopted, which hinders the investments the State Water Board has made for staff training. The Panel has identified supplementary recommendations that should help resolve the remaining programmatic shortcomings:

- **Adopt an accreditation standard:** In its initial review, the Panel urged ELAP to immediately adopt an accreditation standard. The process took considerable time, but the Panel congratulates ELAP for working well with its stakeholder communities to vet options and reach a decision to adopt The NELAC Institute (TNI) 2016 Standard with 58 modifications proposed by the stakeholder community. The Panel recommends ELAP now move quickly to adopt that standard and develop an implementation process that facilitates laboratory participation. The Panel also recommends ELAP adopt the 58 modifications as implementation guidance rather than as modifications to the underlying standard. Adopting a modified standard would isolate California from invaluable training resources available from the national program.

- **Expand resources:** During its initial review, the Panel found that ELAP was not able to carry out its mission because the program lacked the proper tools, as well as the broad expertise needed among its assessor staff, to conduct all required laboratory assessments.

The Panel recommended that ELAP consider using third-party, private-sector assessors to help clear a programmatic backlog. Instead, ELAP pursued expansion and reorganization of in-house capabilities and resources, and has yet to attract or fully retain the in-house staffing it needs. The Panel strongly urges ELAP to immediately begin accepting third-party assessments. The Panel also recommends that ELAP acquire software tools and external training resources to help meet workload demands and to ensure consistency when processing laboratory accreditation applications.

Support from the State Water Board is critical for ELAP to continue its journey to fully achieve its legislative mandates and regain credibility State- and nation-wide. The State Water Board should continue to provide resources and hold ELAP accountable by requiring the program to establish additional reporting metrics, by bringing in an independent consultant to perform a gap analysis, and by creating another expert panel to keep ELAP on track to meet its present and future demands.

CHAPTER 1: INTRODUCTION

1.1 Background

Effective stewardship of the environment and protection of public health require data to inform managers about effectiveness of regulatory actions. Such data may include the concentration of chemical contaminants in drinking water, identification of harmful bacteria at beaches, or toxicity of sediments. The field and laboratory methods employed to obtain these measurements are often complex, and the procedures and analytical instrumentation evolve as technology improves. Through the use of accreditation to oversee laboratories that provide these analytical services, the State is able to ensure that laboratories are competent to generate data of known quality, that data obtained from different laboratories are comparable, and that laboratories are performing to a common recognized standard of performance.

In January 1988, the California Environmental Laboratory Improvement Act (Assembly Bill 3729, Chapter 894, Statutes of 1988) established the State's Environmental Laboratory Accreditation Program (ELAP) to provide evaluation and accreditation of environmental testing laboratories. ELAP ensures that laboratories performing analytical tests used for regulatory oversight of the State's drinking water, wastewater, shellfish, food, and hazardous waste programs meet State requirements. All environmental testing laboratories are required to receive accreditation prior to providing analytical data used for State regulatory purposes.

ELAP was one of the eleven original state accreditation programs to become a recognized accreditation body by the National Environmental Laboratory Accreditation Program (NELAP), which was formed in 1999. The goal of NELAP is to foster cooperation among accreditation activities of different states and other governmental agencies, and to unify state and federal agency standards. Each state-level accreditation body agreed to implement standards written by the National Environmental Laboratory Accreditation Conference (NELAC), and accept the accreditation of laboratories accredited by other NELAP accreditation bodies. In 2006, The NELAC Institute (TNI) was established for the long-term management of NELAP and development of standards.

ELAP offered a dual accreditation program until ELAP withdrew from TNI NELAP in 2014 following the identification of programmatic deficiencies during a TNI programmatic evaluation. The evaluation affirmed the concerns expressed by California laboratories regarding ELAP's effectiveness as an accreditation body. Shortly after ELAP's withdrawal from TNI, ELAP transitioned from the California Department of Public Health to the California State Water Resources Control Board (herein referred to as the State Water Board). With new ELAP management in place under the State Water Board's Division of Drinking Water, ELAP asked for an external, independent programmatic review to help the program frame its future directions. This review was intended to cover internal management procedures, staffing, finances, the laboratory assessment process, and communication strategies, with an overarching goal of improving ELAP's effectiveness.

1.2 Expert Review Panel

In 2014, ELAP's newly installed management team asked for an external, independent programmatic review to improve ELAP's effectiveness. The State Water Board turned to the Southern California Coastal Water Research Project Authority (SCCWRP) to establish an Expert Review Panel (the Panel) to develop recommendations for improving ELAP.

An 11-member Stakeholder Advisory Committee (SAC) was formed to vet the nomination and selection process for Panel members. SAC members (listed in Appendix D), which primarily consisted of former Environmental Laboratory Technical Advisory Committee (ELTAC) members, represented municipal and private environmental laboratories operating in California, as well as State agency users of data from ELAP-accredited laboratories. Candidates for the Panel were nominated based on nationally recognized expertise and a requirement they not be part of an organization regulated by or having official interactions with ELAP. To ensure the Panel was well-rounded, candidates were grouped according to their categories of expertise, such as laboratory operation, operation of accreditation bodies, and on-site assessment. The SAC then ranked the nominated panelists within each category and was given the opportunity to eliminate any of the candidates from consideration. This vetting process ensured the Panel members were both highly qualified and free from bias regarding the issues on which they would deliberate.

The five-member Panel, established in early 2015, consisted of:

- Dr. Jordan Adelson, U.S. Navy
- Stephen Arms, State of Florida (now retired)
- Mitzi Miller, Dade Moeller & Associates (resigned from Panel)
- Lara Phelps (Panel Chair), U.S. Environmental Protection Agency
- David Speis, Eurofins QC, Inc. (now retired)

Following a decision by her company to pursue work with ELAP, Mitzi Miller resigned from the Panel in January 2017. Brief biographies of the Panel members are provided in Appendix C.

The Panel's initial report, "Findings and Recommendations by the Expert Review Panel for the State of California's Environmental Laboratory Accreditation Program: Year One Final Report," was released in October 2015. After monitoring the progress of ELAP through public quarterly webinars, the Panel reconvened for a face-to-face public meeting in January/February 2017. The meeting agenda (provided in Appendix E) was developed by SCCWRP, with assistance on topic development and identification of speakers from the SAC and the ELTAC, to provide the Panel with a comprehensive range of information and perspectives. Members of the Panel, participants, and public were given time to ask questions of the speakers. The meeting agenda, background materials provided to the Panel, presentation slides, and written public comments are posted to a public website (http://www.sccwrp.org/ELAP).

1.3 The Panel Charge

Panel charge questions were developed by ELAP with the assistance of the SAC. The Panel has addressed these seven questions throughout the document, and Appendix A provides direct answers to these charge questions.

1. Has California ELAP been responsive to the recommendations provided by the Panel in their initial review?
    a. Did ELAP provide appropriate rationale for any deviations from the Panel suggestions?
2. Has the program become more effective as a result of those changes?
3. Do you have any modifications to the advice you provided in October 2015 as a result of lessons learned by the program in the last year?
4. What are the biggest challenges remaining for the program?
5. Is the timeline outlined by ELAP for meeting these remaining challenges appropriate?
6. The Panel recommendations from the first review focused on activities needed to address to meet minimum program acceptability. What new activities does the Panel suggest the program engage in next to take it beyond minimum acceptability?
7. This is the last meeting of the Review Panel. What metrics should the program use in the future to self-assess how well it is progressing toward its goal of becoming one of the best laboratory accreditation programs in the nation?

1.4 The Report

This report provides the Panel's assessment of the program's progress and its final recommendations based on the original evaluation, recommendations, and implementation timetable provided in the Panel's year one report. This is the second of the two reports that the Panel has produced.

CHAPTER 2: ASSESSMENT

The Panel completed a one-year follow-up review of ELAP during a three-day public meeting in January/February 2017. The Panel concluded that ELAP has made significant progress in implementing the majority of the Panel's recommendation. Specifically, the Panel found that ELAP is regaining credibility with clients and the laboratory community; working toward an accreditation process the State and stakeholders support; working to ensure environmental and public health data used are of known, consistent, and documented quality; and working toward long-term sustainability.

While the Panel commends ELAP on these accomplishments made over the past year and is encouraged to see that ELAP has been working tirelessly on the arduous task of rebuilding, there is still a great deal of work ahead for ELAP to achieve its objective to ensure laboratories are competent to generate data of known, consistent, and documented quality for use by the State of California in its environmental and public health decision-making. This section is broken down into four main categories to capture the Panel's evaluation of ELAP's progress in the areas of concern raised in this report.

2.1 Infrastructure

During its year one assessment, the Panel concluded that ELAP management inherited a program with fundamental deficiencies. Notably, ELAP did not have a process in place for verifying whether laboratory assessments or proficiency testing (PT) evaluations were being performed to a recognized standard, had historically shown indifference to known operational problems, and had a reputation for being unresponsive to client complaints and the stakeholder community at large. Over the past year, with the adoption of a management system, establishment of three key structural units, and vastly improved communication efforts, ELAP is on the right path to overcome many of the shortcomings that existed in the work environment. ELAP has developed a framework for success, yet more remains to be done.

2.1.1 Management System

By choosing to adopt *General Requirements for Accreditation Bodies Accrediting Environmental Laboratories* (EL-V2-2009 published by The NELAC Institute [TNI]), ELAP made a giant leap towards establishing a structured environment under which management and staff can operate effectively. Extensive effort has gone into the development of a Quality Assurance Manual (QAM) that maps out ELAP's operational policies and procedures. Moreover, it is clear that the necessary internal structural and cultural adjustments have been made to begin implementing the processes described in these documents. However, more time and additional team efforts will be required to evolve the system to maturity. To ensure growth under this new system, it will be critical to hold everyone involved in implementation accountable, to evaluate progress critically and equitably, and to take corrective and preventive actions as needed.

2.1.2 Organizational Structure

As a result of acquiring personnel with the skillsets needed to begin addressing client concerns and to conceive and write the QAM, management has made organizational decisions for staff

assignments and performance expectations. Three functional units have been established that give emphasis and a sense of mission to the related areas of responsibility.

2.1.2.1 Program Development, Research, and Enforcement Unit

ELAP has led a concerted outreach plan that includes establishing a State Agency Partners Committee to facilitate cooperation with the State agencies that use the environmental data generated by the laboratories accredited by ELAP. These clients have recognized that ELAP is a valuable resource capable of supporting their respective missions. The importance of these renewed relationships to ELAP's long-term success cannot be overemphasized. Restoring confidence has resulted in clients coming to ELAP to address concerns about laboratory issues that have potentially compromised the quality of data being presented to them. This is evidenced by ELAP having received more than 30 referrals since rebuilding efforts were initiated.

ELAP has established an enforcement unit, led by an energetic and capable manager, to meet these expressed client needs and expectations. In its first year, this unit has conducted more than 25 investigations that resulted in 18 enforcement actions. It also has been leading the internal rebuilding of the program, and will be responsible for writing the new rule draft. Although these activities are commendable and necessary to engender confidence in ELAP's ability to carry out its obligation to set and enforce the regulations imposed upon laboratories, it has resulted in an unintended consequence. Because this was not a previous activity performed by ELAP and was not a task that was planned, ELAP staff had to be assigned to this unit, leaving even fewer qualified individuals available to perform onsite assessments. The Panel appreciates the reliance of stakeholders on ELAP to meet their needs, but is concerned with the added responsibility – in the absence of any new resources – to meet the demands of the evaluation and accreditation of laboratories. If the creation of this unit ultimately results in a continued inability by ELAP to evaluate the competency of all laboratories that perform the methods and produce the data the clients need, the newly gained confidence will no doubt begin to erode.

2.1.2.2 Proficiency Testing (PT) Unit

ELAP has not recently used the PTs received in the primary evaluation of in-state laboratories or reciprocal recognition of out-of-state laboratories during the accreditation process. With the establishment of a PT unit overseen by a talented manager to provide guidance and set expectations for staff within the unit, a positive step has been taken to meet this requirement in the accreditation process. More must be done, however, to effectively use PT data and make efficient use of staff time.

Currently, the PT unit evaluates the PT results it receives for laboratories manually using PDF files. (Note: It appears ELAP accepts PT reports directly from laboratories as well as from the approved PT providers. All nationally recognized programs receive results directly from the PT provider. This is a potential vulnerability that could call into question the validity of some PT results, and leads to inefficient use of ELAP staff's time.) Manual entry is a labor-intensive and time-consuming task with a significant potential for error. A sizeable backlog persists that is growing every day. The lack of automation also renders it nearly impossible to track whether

laboratories are participating at the mandated frequency. Although there are now written procedures available to staff, these procedures are general and do not provide clear guidance on the rules to be applied to determine compliance. Frequently, staff must contact laboratories to provide or receive clarifications. This is due, at least in part, to ambiguities in the requirements and the resulting misunderstandings among laboratories as to their obligations regarding PTs.

Even though ELAP now has a group of staff dedicated to PT review, as well as a manager for this group who shows a strong commitment to success, and performance measures to hold staff accountable, the program continues to face a nearly insurmountable task. Indeed, ELAP has recognized its former neglect of PT review and has taken steps to rectify the situation, but the lack of automation and a large backlog combine to make significant progress by the PT unit challenging.

2.1.2.3 Onsite Assessment Unit

Onsite assessment is the core activity of any laboratory accreditation program. It constitutes the "eyes and ears" of ELAP by allowing first-hand observation of a laboratory's capabilities. It is also the most outwardly visible activity and the one most open to criticism. As previously identified, ELAP has lacked adequate staff with the requisite expertise to properly and timely perform onsite assessments of accredited and applicant laboratories. While ELAP appears to be moving in the right direction, it is not meeting its obligations in this area.

The Panel hopes that the onsite assessment unit created during ELAP's restructuring process will serve to advance the effectiveness of this crucial accreditation activity. This unit now has seasoned leadership and staff, seemingly with strong technical and educational backgrounds. ELAP lists eight assessors in its workforce. However, many of the assessors listed are being used in other areas of the program, leaving only four positions to conduct assessments, with one of these currently vacant. Because of this, there is a large backlog of laboratories that are awaiting onsite assessments (see Table 1). Under current conditions, the prospects for eliminating the backlog are dim. ELAP has, out of necessity, turned its focus only to drinking water testing laboratories, which means it is largely neglecting laboratories accredited in wastewater and other matrices.

Table 1. Laboratory Assessment Backlog (data provided: January 31, 2017)

Drinking Water Laboratories	Non-Drinking Water Laboratories
313 are current	147 are current
41 are not current:	144 are not current:
9 are over 5 years	21 are over 5 years
14 are over 4 years	35 are over 4 years
18 are over 3 years	88 are over 3 years

During the assessments that are taking place, there also appears to be a heavy reliance on checklists, inadequate reviews of the laboratory's accredited Fields of Testing (FOTs) (including the inflexibility to address new FOTs requested by the laboratory), and cursory PT reviews. This reflects ongoing training and experience challenges that result in misunderstandings of technical requirements, assessment procedures, and PT requirements, respectively.

2.1.3 Staff

Under ELAP Chief Christine Sotelo's leadership and contagious enthusiasm, one of the brightest areas of improvement evident at ELAP is that of the work environment. Even under adverse circumstances that include historically low, poor staff morale and rigid hiring practices, she has managed to pull together a promising team. Each employee the Panel interviewed demonstrated pride in his or her position, an eagerness to see ELAP succeed, a clear understanding of the program's mission, and a willingness to do the hard work ahead. Staff appear to be functioning as a real team with an *esprit de corps* the Panel did not observe a year ago.

2.1.4 Communication

Prior to improvements made over the past year, it was common for stakeholders to receive little or no response when they contacted ELAP to get information or ask a question. This was an area of constant frustration among the laboratory community. Now, ELAP staff are repeatedly complimented on the fact that they return phone calls and respond to emails. The professionalism with which that feedback is being given has not gone unnoticed; indeed, this simple advancement in customer service has gone a long way towards reestablishing the trust that had been lost between ELAP and the public.

ELAP also is making progress on its website, a list serve, and a newsletter. The website has evolved a great deal, and work is being done to keep the newsletter on track as a regular feature even though only two have been issued to date. The newsletter will be an excellent resource to keep stakeholders up-to-date at a regular frequency. ELAP also now communicates with accredited laboratories through ELTAC, although ELTAC has expressed concerns that the communications with laboratories needs to take place more directly. The Panel agrees that ELAP

should more directly engage with the accredited laboratories, especially on rapidly developing issues.

Finally, a staff member has been assigned to manage customer service and to facilitate communications. This shows ELAP's firm commitment to being responsive to its customers' needs. ELAP should continue its resolute efforts toward improving communications.

2.2 Standards

ELAP is bound by inadequate laboratory accreditation standards codified in California's regulations. This challenge has prevented ELAP from fully regaining control of the assessment and accreditation process, even though the adoption of a management system, organizational restructuring decisions, and development of standard operating procedures have all had a positive impact.

The Panel compliments ELAP for engaging its stakeholder community in the process to identify a standard that would meet everyone's needs. While it was prudent to do this, it has created a significant delay in moving ahead with the selection, adoption, and implementation of a more structured program. Thus, ELAP has not yet achieved one of the key recommendations in the Panel's initial report. The Panel remains hopeful and confident that the mutual understandings gained by actively involving data users and regulated laboratories in the process of identifying a standard will help the community at large move forward together in a positive way to complete the rebuilding process. The Panel still feels strongly that establishing a robust accreditation standard is a crucial element of that rebuilding process, without which the progress to date could be lost.

2.3 Stakeholders

The perception of ELAP was extremely low in the stakeholder community during the Panel's initial review of the program. ELAP lacked credibility and trust from any part of the stakeholder community. Although there is more work to be done, a long and high bridge has already been crossed in the establishment of new relationships. Seeds have been planted that need further growth.

2.3.1 Agency Partners

During the Panel's initial review, ELAP was uncertain who its clients were. Today, ELAP has a State Agency Partners committee composed of its clients that meets regularly to help guide the program towards meeting their needs. Moreover, ELAP has created a new enforcement unit to investigate concerns from clients regarding the quality of data from particular laboratories. Trust is being established as a result of ELAP's actions to investigate and mitigate these matters. Work, however, still needs to be done to meet the oversight and accreditation needs of all State programs that rely on laboratory data for their decision-making. Current ELAP staffing levels and expertise are not adequate for all sample media areas required. As stated above, the current focus is on drinking water testing laboratories, due in part to inadequate staffing levels and in part to a lack of expertise in other areas. While the public health protection aspect of providing

safe drinking water is obvious, the agency partners have expressed data needs that go beyond drinking water.

ELAP also faces numerous competing pressures. Although ELAP still has much to do just to gain a firm understanding in the basics of accreditation, clients and laboratories have already voiced needs for ELAP to expand to consider emerging contaminants and "real-world" PT samples. This should not be a concern for ELAP at this time and should only be considered once the program is well established and meeting programmatic needs.

2.3.2 Laboratories

ELTAC historically has been the primary conduit for ELAP's relationship with the laboratory community. In spite of the outward willingness of both parties, this previous relationship had grown to be dysfunctional. ELTAC's members felt that their work often went unnoticed and unused, and the laboratories they represent were frustrated by not knowing whether someone competent would assess their performance. With ELTAC dismantled and reconstituted in 2016, it has been invigorated as never before, in part due to ELAP's commitment, and therefore, ELAP's dialogue with the laboratory community has improved dramatically. With recent audits, individual laboratories now compliment ELAP staff on their communication and transparency. However, concerns still remain about assessments, consistency of responsiveness and expertise, as well as an overreliance on ELTAC for communication with the laboratory community.

ELAP management has to date not used ELTAC as the advisory arm it is intended to be, but rather is relying on ELTAC for detailed technical support – possibly a consequence of ELAP still lacking adequate technical depth. This has resulted in an over-booked ELTAC agenda and deliberations that too often focus on minutiae. There also is a perception among ELTAC members that they are being asked to do much of ELAP's work, which in the long run could jeopardize the revived relationship between ELAP and ELTAC. It must be clear to all concerned that ELTAC is an advisory body, and that ELAP is the decision-maker regarding policy. With that in mind, ELAP cannot neglect to consider the laboratory perspective in ELAP policy decisions.

2.3.3 Others

State accreditation programs across the nation, as well as members of the public and private sector, watched with concern the erosion of the California program a few years ago. ELAP management and staff have responded by acknowledging their challenges and sharing their journey to regain their national stature. Via ELAP's participation in national meetings and events, the progress is not unnoticed, and the hope of renewal remains alive and well. ELAP has a unique opportunity to present itself as an example of how to turn a deficiency into excellence. It should remain engaged in the national environmental testing community.

2.4 Resources

As discussed above, staffing has been inadequate to meet the minimum accreditation requirements and response time required by the program, and will continue to be a challenge

with the adoption and implementation of the new ELAP laboratory accreditation standard unless ELAP receives adequate resources. While staff are being more effectively utilized for their abilities and expertise, there are still unaddressed programmatic needs. Instituting additional organizational structure within ELAP, while necessary, has drawn from resources required to meet accreditation demands for the number and diversity of laboratories in California. Conversely, using staffing resources from these new work groups to alleviate assessment demands could adversely affect other internal operations.

The support of the State Water Board to fund an assessor training program for ELAP staff is highly commendable. The activities outlined in this training contract should prepare current staff to properly meet expectations in their roles as assessors, and prepare them to train future staff. It should also serve to provide temporary relief to the onsite assessment workload through the assessments that will be performed under the contract. However, the contract only addresses the immediate technical training needed to give assessors the minimum skills for current FOTs for drinking water. Additional expertise would likely be needed if ELAP is to have the flexibility to address new FOTs and other programs required by agency and laboratory clients.

Over the past year, it has become apparent to the Panel that ELAP still lacks the staffing, funding, and training resources it will need to accomplish everything laid out before it. A combination of a fully trained and complete staff, investment in automation of internal processes, and the use of contractors will be necessary to put ELAP on a path to reaching its goals.

CHAPTER 3: RECOMMENDATIONS

ELAP faces a number of unresolved challenges as the staff continues rebuilding California's laboratory accreditation program, many of which are identified in Chapter 2 of this report. Nonetheless, the Panel sees solid evidence that the program is heading in the right direction. In particular, the breadth and quality of the ELAP changes implemented to date have given the Panel confidence that ELAP leadership understands its organizational charge and is well-positioned to execute the final Panel recommendations outlined in this report. Success in completing the rebuilding effort is dependent upon maintaining a focus on the primary Panel recommendations and taking prompt action to implement the supplementary recommendations that follow.

The Panel's supplementary recommendations fall into two broad categories: standard selection and resources. Specific tasks are identified that build on the progress ELAP has made to date, and that will ultimately lead to achievement of ELAP's mission objectives and fulfillment of its vision.

3.1 Standard Selection

In its initial review of ELAP, the Panel found that the laboratory accreditation standards being used by the program were insufficient, and urged the program to immediately adopt an accreditation standard.

A remarkable partnership has been established between ELAP and its stakeholders that has taken into consideration the recommendations offered by the Panel regarding adoption of a laboratory accreditation standard for the program. The process took considerable time, but the Panel congratulates ELAP for working well with its stakeholder communities to vet options and reach a decision to adopt The NELAC Institute (TNI) 2016 Standard with 58 modifications proposed by the stakeholder community.

The Panel recommends ELAP now move quickly to adopt that standard and develop an implementation process that facilitates laboratory participation. The Panel also recommends ELAP adopt the 58 modifications as implementation guidance rather than as modifications to the underlying standard. This guidance should be in a form that transcends the present ELAP management team.

A review of the proposed modifications, detailed in Appendix B, indicates that the majority do not warrant changes to the standard. Instead, they can be addressed through clarification and implementation guidance that provide examples of compliance techniques. Following this approach creates a win-win situation for ELAP and its stakeholders. From an accreditation perspective, modifying the underlying standard would isolate the State of California from other states and from the training/and implementation resources available from the national program.

Of the 58 proposed modifications, the Panel sees only two that will require modification of the TNI Standard for implementation in California: (1) The TNI Standard requires that laboratories

analyze two proficiency test (PT) samples per FOT, per year, whereas California ELAP regulations only require one PT per FOT, per year, and (2) the TNI Standard contains education and experience criteria for laboratory supervisors that differ from those for laboratory supervisors currently contained in California regulations. Although these modifications will cause some divergence from the national TNI Standard, California ELAP will not be seeking immediate NELAP recognition, allowing for a transitional period. These two issues, however, will require resolution if/when California choses to rejoin the national program.

In planning for adoption of the entire TNI Standard, ELAP should take a strong leadership role in defining the implementation path and timeline for the laboratory community. Communicating specific milestones to laboratories unfamiliar with the development and implementation of the TNI Standard will be key to a successful transition.

The TNI Standard should be implemented as quickly as is reasonable, and should feature: (1) modification of accreditation regulations and training on multiple levels to meet assessor, laboratory, and client needs, and (2) phased implementation of the standard to facilitate a smooth community integration process.

There are several implementation models ELAP can employ during the phase-in process. These include: time-based phasing, documentation processes phasing, requirements phasing, or any combination of the three. Time-based phasing provides a long lead-in time for the entire standard to be in place before statewide accreditation is required. Documentation phasing employs time-based milestones for requiring specific documentation processes to be in place, while recognizing accredited laboratories prior to the occurrence of those milestones. Requirements phasing employs a process similar to documentation phasing, but substitutes specific requirements instead of documents at fixed milestones. Using a combination of all three would enable ELAP to accredit laboratories on a faster schedule, while also providing milestones at later dates for documentation and other specific requirements to be in place.

An example of the phased approach is to institute milestones for completing the specific elements of the quality system that are defined in the standard. Development milestones can be established for completion of the quality system, quality system SOPs, and revision of analytical SOPs, which can be evaluated for compliance during on-site assessments. Once developed, milestones for executing the specifications of the SOPs can be put in place. Additional milestones can be established for initiating the documentation processes specified in the standard.

The phase-in period should be supplemented with formal external training that is integrated throughout the process to assist laboratories in developing their quality systems. Training could either be through ELAP staff or external contractors. The Panel recommends that ELTAC take the lead in establishing laboratory support groups to assist with implementation and share resources. There is a sufficient number of California NELAP-accredited laboratories that have program implementation experience that can provide user-group leadership.

3.1.1 ELAP

Selecting an established national standard offers ELAP the opportunity to become a true leader in laboratory accreditation. Participating as an accreditation body within the TNI community is a realistic goal, which becomes more attainable as key program elements are put in place and the program gains operational stability.

3.1.2 Laboratories

Laboratories that perceive the TNI Standard as potentially imposing onerous requirements will instead have the flexibility to develop a quality system within the TNI framework that complements their size and operational style. In becoming part of a large community of accredited laboratories, there will be access to user groups, training, support, and operational tools, which would not be available to these laboratories if California created a modified standard. Stakeholders will be able to participate in the standards development process and obtain formal interpretations on standard requirements, regardless of whether or not they are TNI members, benefiting the standards development process nationwide.

3.1.3 Fields of Testing

ELAP's FOT array focuses on traditional methods and parameters used for environmental measurement, but it requires modification to meet client needs. Client needs can effectively be met by using programmatic needs and regulatory requirements as the driver, rather than hard-wired links to established environmental testing methodology. Accreditation mechanics should be overhauled for greater flexibility and to enable a quicker ELAP response to specific changes or needs when requested by clients, dictated by regulatory changes, or requested by laboratories as the need arises. ELTAC has the technical expertise to provide a framework to help ELAP in this process and/or with laboratory stakeholder communities' input.

3.2 Resources

ELAP remains unable to meet many of its programmatic obligations because of several factors, including a lack of adequate resources and the reliance on inefficient manual processes for labor-intensive tasks. These shortcomings are exacerbated by the need to continue operations while the program is being overhauled, and are burdened by the addition of new program responsibilities. The Panel has identified several recommendations to provide relief for the resource shortfall. As these recommendations are implemented, ELAP's programs should be evaluated and modified as it evolves.

Additional staffing resources will be needed to assess FOTs, when they are requested by laboratories. Appropriate ELAP staff should be cross-trained to support assessments, when necessary. Since drawing from the staff of other program elements will likely affect those units, efficiencies should be put in place to optimize performance with available staff.

3.2.1 Third-Party Assessments

During its initial review, the Panel recommended the use of third-party, private-sector assessors as an option to help clear a programmatic backlog. ELAP instead pursued expansion and reorganization of in-house capabilities and resources. Because these efforts did not result in ELAP being able to attract and retain the in-house staffing it needs, the Panel again urges ELAP to begin accepting third-party assessments.

Eliminating the accreditation backlog, especially for non-drinking water programs, is a critical component of ELAP's charge and must be maintained from an operational perspective, even as program rebuilding activities are occurring. ELAP does not currently have the breadth of expertise on its staff needed to conduct all required accreditation activities, nor to conduct accreditation for needs that go beyond the mainstream regulatory FOTs.

Non-governmental accreditation bodies and assessor bodies (i.e., third parties) have the expertise to evaluate a laboratory's quality system implementation to an ELAP-specified standard, as well as the ability to conduct technical assessments of all laboratory methodologies commonly used by environmental laboratories. This is especially relevant for laboratory programs not currently accredited by ELAP, such as ambient air and soil gas analyses for which a need exists. Utilizing third-party assessment of laboratories conducting wastewater, solid, and hazardous waste analyses, will allow ELAP to focus its resources on accreditation recognition and drinking water laboratory accreditation.

There are several models that can be employed for the engagement of third parties. These include direct engagement as contractors, and self-engagement by individual laboratories to conduct accreditation activities to a specific standard. When employed as a contractor, the third-party assessor would evaluate the laboratory's information submittal, conduct the assessment, and produce a report for ELAP, which would then render the accreditation decision. When employed as an accrediting body, the laboratory would engage the third party directly to evaluate the laboratory's information submittal, conduct the assessment, write the assessment report, and render an accreditation decision. This accreditation would be submitted by the laboratory to ELAP, which would then issue a California-specific accreditation or license to the laboratory. In either model, ELAP retains their regulatory authority for oversight, enforcement, and accreditation.

Regardless of which model is used, provisions for continued operation during the transition must be in place to ensure that accreditations can continue until third-parties are engaged and operational. The recognition system currently being used can be employed by ELAP to ensure continuity of operation until third-party resources can be secured. Essential to the use of recognition for laboratory accreditation is the development of a formal procedure. The procedure must detail who and how reciprocity will be conducted.

Not using a third party would necessitate an internalization of accreditation activities for non-drinking water programs, which would require additional staff and an accompanying fee increase

to maintain cost neutrality of the program. This could be unpopular among the laboratory stakeholders unless services to the laboratory stakeholders improved proportionally.

3.2.2 ELTAC

The Panel recommends that ELAP continue to use ELTAC as an advisory resource (e.g., review and comment on checklists, regulatory language, stakeholder challenges), and only employ ELTAC members to perform technical tasks (e.g., writing method specific checklists) that cannot be performed by ELAP in a timely manner because of resource issues. In addition to fostering a stronger symbiotic relationship with the laboratory community, this relationship would provide ELTAC and the laboratories they represent an opportunity to have a greater voice in the accreditation process and, possibly, the regulatory process as it applies to ELAP's clients.

3.2.3 Training

The absence of a sound technical training program should be addressed to ensure that methods are clearly understood by the staff conducting assessments. Outside training resources can be used to buoy internal resources.

3.2.4 Software

The majority of the processes being conducted by ELAP staff for laboratory accreditation are being performed manually. This exacerbates the shortage of staff resources and lengthens the time to complete the accreditation of any individual laboratory.

Use of software to improve the processing efficiency of information being evaluated for laboratory accreditation should be initiated as soon as possible. Automated processes will enhance management of the overall accreditation process. This includes a significant labor reduction for management of the PT program, which is a significant consumer of labor resources. Software investment will facilitate the efficient use of the currently available labor resources.

CHAPTER 4: NEXT STEPS

The top priority for ELAP, the State Water Board, and stakeholders remains getting the fundamental accreditation program established and functioning. Without an adopted standard and new resources, there will not be a future to explore. California's program must firmly reestablish itself before looking to expand beyond this critical role.

To evaluate achievement of ELAP's core foundation, and prioritize the journey beyond, the State Water Board should require ELAP to establish additional reportable metrics, to have a gap analysis performed, and to form a follow-up expert panel.

Metrics must demonstrate ELAP is meeting all programmatic requirements, which includes expectations outlined in the programmatic Standard Operating Procedures (SOPs), expectations outlined in the TNI Standards, and expectations inherent in all client requests. Making use of a formal complaint process is another important metric for evaluating improvements over time. While a reduction of complaints is desirable, ELAP should view complaints as evidence that the community is invested in ELAP and wants to make the program stronger. Metrics and program adjustments made based on complaints should be reported semi-annually to the laboratory community in the newsletter.

Once ELAP has been operational under its new quality management system for an appropriate amount of time, ELAP should hire an independent consultant to perform a gap analysis. The results would offer the State Water Board a critical evaluation of the core program's status, provide an immediate spring board for engaging another expert panel, and inform the program's readiness to establish goals beyond ELAP's base functions.

ELAP should commission a new panel of experts to conduct a follow-up review of the Panel's supplemental recommendations in approximately two years. This panel should be charged with the mission of evaluating the ELAP program from an internal and external perspective. The proposed panel's objectives would include an assessment of program development progress, recommendations for mid-course corrections, and suggestions for future improvements oriented toward the completion of ELAP's overhaul. In the interim, it is recommended that ELAP continue to brief the existing Panel on its progress through webinars every six months.

ELAP is not currently realizing all of its mission, but there is a path to getting there. The Panel believes ELAP is regaining credibility; working toward an accreditation process the State and stakeholders support; working to reliably ensure environmental and public health data used are of known, consistent, and documented quality; and working on sustainability. State support is critical for ELAP to fully achieve its mission, and the State should continue to hold the program accountable.

APPENDIX A: PANEL'S RESPONSE TO CHARGE QUESTIONS

1. **Has California ELAP been responsive to the recommendations provided by the Panel in their initial review?**

Yes. The program has been responsive and made significant improvements in many areas covered by the recommendations provided by the Panel. ELAP has worked tirelessly to begin the arduous task of rebuilding. However, there is still a great deal of work ahead for ELAP to achieve its objective to ensure laboratories are competent to generate data of known, consistent, and documented quality for use by the State of California in its environmental and public health decision-making. (Chapter 2)

   a. **Did ELAP provide appropriate rationale for any deviations from the Panel suggestions?**

The only deviations from the Panel's suggestions were related to adjustments in the timeline for completing the suggested actions. This was most evident in the effort associated with selecting the standard used for assessing laboratories. This delay was a result of ELAP engaging its stakeholder community in the process of identifying a standard that would meet everyone's needs. While it was prudent to do this, it has created a significant delay in moving ahead with the selection, adoption, and implementation of a more structured program. (Section 2.2)

2. **Has the program become more effective as a result of those changes?**

In some areas, ELAP has become more effective as a result of the changes it has made. Chapter 2 details the effectiveness of these changes and identifies where some of these changes have yet to be fully implemented, limiting the improvements to the program.

3. **Do you have any modifications to the advice you provided in October 2015 as a result of lessons learned by the program in the last year?**

No. The Panel feels that the advice provided in the October 2015 report are still valid and will result in the desired improvements to the program.

4. **What are the biggest challenges remaining for the program?**

ELAP faces a number of remaining challenges as it continues rebuilding California's laboratory accreditation program. Chapter 2 of this document addresses these concerns by looking at infrastructure, standards, stakeholders and resources.

5. **Is the timeline outlined by ELAP for meeting these remaining challenges appropriate?**

Yes. Key to meeting the timeline is the ability to quickly achieve consensus on issues where extended debate is delaying progress.

6. **The Panel recommendations from the first review focused on activities needed to address to meet minimum program acceptability. What new activities does the Panel suggest the program engage in next to take it beyond minimum acceptability?**

The Panel's supplementary recommendations fall into two broad categories: standard selection and resources. Specific tasks are identified that build on the progress that ELAP has made to date, and will ultimately lead to the accomplishment of ELAP's mission objectives and fulfillment of its vision to become one of the best laboratory accreditation programs in the nation. (Chapter 3)

7. **This is the last meeting of the Review Panel. What metrics should the program use in the future to self-assess how well it is progressing toward its goal of becoming one of the best laboratory accreditation programs in the nation?**

To continue to assess the progress of the program, ELAP should conduct a third-party assessment of its program once the quality management system is implemented to identify any areas that are not meeting the specifications of the quality system and the TNI Standard. ELAP should also look to establish a new review panel to assist the program in the establishment of ongoing metrics to evaluate progress (Chapter 4). One item the next review panel should explore is whether ELAP should apply for ISO 17011 accreditation (Conformity assessment – general requirements for accreditation bodies accrediting conformity assessment bodies).

APPENDIX B: PANEL COMMENTS ON THE 58 ITEMS IDENTIFIED BY STAKEHOLDERS AS NEEDING MODIFICATION OF THE TNI STANDARD

This table is a simplified copy of the one produced by ELAP to highlight the 58 items identified by stakeholders for modification to the TNI Standard. The Panel marked each item as either "implementation" or "clarification." Implementation means the item should be addressed by ELAP either (1) in a timetable or schedule provided for implementation, or (2) during rulemaking, which is highlighted by an * and discussed in section 3.1. Clarification means the item should have supplemental information provided through guidance or training, with resources available from commenters or the official TNI process for clarifications.

ITEM #	MODULE	SECTION	SUMMARY	PANEL RECOMMENDATION
A	2	4.1.5 (k)	Relevance of Activities	CLARIFICATION
B	2	5.6.4.1	Reference standards and reference materials. Delete sentence that precedes subsection (a)	CLARIFICATION
C	5	1.7.3.7 (b) (ii) (a)	Autoclaves	CLARIFICATION
D	2	4.1.7.1 (d)	QA Manager training/experience	IMPLEMENTATION
E	2	4.3	Document Control	IMPLEMENTATION
F	2	4.8	Complaints	IMPLEMENTATION
G	2	4.11	Corrective action (documentation requirements)	IMPLEMENTATION
H	2	4.12	Preventive action (documentation requirements)	IMPLEMENTATION
I	2	4.13	Control of Records (documentation requirements)	IMPLEMENTATION
J	2	4.15	Management reviews (documentation requirements)	IMPLEMENTATION
K	All	Notes	Notes provide clarification of the text. Revise - boldly state notes are not enforceable.	CLARIFICATION
L	1	4.2.4	LOQ Requirements. Remove any reference to LOQ and replace with something more specific to CA regulatory agency needs (for example DLR for DW). ELTAC will work with SAPC	CLARIFICATION
M	1	4.3.5	LOQ Requirements.	CLARIFICATION
N	1	4.3.7	LOQ Requirements.	CLARIFICATION
O	1	5.0	PT Frequency. Revise	IMPLEMENTATION*
P	1	5.2.1.1	PT Assessments. Revise - make Section 5.2.1.1 consistent with the requirement of one PT per year	IMPLEMENTATION*
Q	2	2.0	Normative References	CLARIFICATION
R	2	3.1	MDL Verification. Remove any reference to MDL as currently specified; work with SAPC to come up with solution that more adequately meets their needs	CLARIFICATION
S	2	4.1.2	Reference to "International Standard"	CLARIFICATION
T	2	4.1.6	Staff Communication. Recommend ELAP provide training/clarity on how this provision will be audited against.	CLARIFICATION

ITEM #	MODULE	SECTION	SUMMARY	PANEL RECOMMENDATION
U	2	4.1.7.1 (c)	QA Officer Impartiality. Modify to say something like: "without influence from others within or outside the lab."	CLARIFICATION
V	2	4.1.7.2 (e)	Requirements when Tech. Mgr. is absent > 15 days. Delete timeframe for notification, require an alternate when on leave; or delete and replace with current ELAP language	IMPLEMENTATION
W	2	4.2.2.3	Reference to "International Standard"	CLARIFICATION
X	2	4.2.4	Staff Communication	CLARIFICATION
Y	2	4.2.6	Reference to "International Standard"	CLARIFICATION
Z	2	4.4	Review of Requests, Tenders and Contracts	CLARIFICATION
AA	2	4.5	Subcontracting	CLARIFICATION
AB	2	4.5.1	Reference to "International Standard"	CLARIFICATION
AC	2	4.5.4	Reference to "International Standard"	CLARIFICATION
AD	2	4.11.5	Reference to "International Standard"	CLARIFICATION
AE	2	4.14.1	Reference to "International Standard"	CLARIFICATION
AF	2	4.14.5 (c)	Internal Audits. Modify - require internal audits during years ELAP is not performing assessment	CLARIFICATION
AG	2	5.2.6 (all)	Technical Manager Qualifications. Add a sentence saying if the technical manager does not meet qualifications in TNI Standard, the lab should describe how they will ensure this does not adversely affect the quality of the work.	IMPLEMENTATION*
AH	2	5.2.6.1 (f)	Technical Manager Qualifications (for labs analyzing radon in air). Remove. Not Applicable	IMPLEMENTATION*
AI	2	5.4	Use of Non-Standard Methods. Add a sentence saying that the State regulatory agency can approve methods.	CLARIFICATION
AJ	2	5.4	Requirements for calibration labs. Be careful not to delete references to calibration of equipment such as balances and pipets to traceable standards.	CLARIFICATION
AK	2	5.4.1	Use of Non-Standard Methods. Add a sentence saying that the State regulatory agency can approve methods.	CLARIFICATION
AL	2	5.4.3	Lab Developed Methods. Modify - add to regs labs shall be able to generate data that is reproducible (by inter-laboratory comparison) by other labs and process has to go to SAPC for method approval (see 1-page ELTAC recommendation)	CLARIFICATION
AM	2	5.4.4	Lab Developed Methods. Add to regulations: Comparability of non-standard methods should be demonstrated by inter-laboratory study or analysis of split samples by an independent laboratory. ELTAC propose comparability language for non-chemical methods.	CLARIFICATION
AN	2	5.4.5	Lab Developed Methods.	CLARIFICATION
AO	2	5.4.6.1	Requirements for calibration labs	CLARIFICATION
AP	2	5.5	Requirements for calibration labs	CLARIFICATION

ITEM #	MODULE	SECTION	SUMMARY	PANEL RECOMMENDATION
AQ	2	5.5.1	Reference to "International Standard"	CLARIFICATION
AR	2	5.6.2.1.1	Requirements for calibration labs	CLARIFICATION
AS	2	5.6.2.2.2	Requirements for calibration labs	CLARIFICATION
AT	2	5.8	Handling Samples. ELTAC: Remove and simplify and make more specific. SAPC: Do not delete; consider adding the DoD clarifications and additions.	CLARIFICATION
AU	2	5.9	Requirements for calibration labs	CLARIFICATION
AV	2	5.9.3	LOQ Requirements.	CLARIFICATION
AW	2	5.10	Requirements for calibration labs	CLARIFICATION
AX	2	5.10.7	Reference to "International Standard"	CLARIFICATION
AY	4	1.5.2.1	LOQ Requirements.	CLARIFICATION
AZ	4	1.5.2.1.2	MDL Verification.	CLARIFICATION
BA	4	1.5.2.2	LOQ Requirements	CLARIFICATION
BB	4	1.5.2.2.2	MDL Verification.	CLARIFICATION
BC	4	1.7.1	Calibration Requirements (for Chemistry Methods). Delete last sentence of first paragraph 1.7.1	CLARIFICATION
BD	4	1.7.1.1 (f)	Calibration Standards. Modify - only when the method does not specify then the section applies	CLARIFICATION
BE	4	1.7.1.2	MDL Verification.	CLARIFICATION
BF	4	1.7.2.4	Data Reduction. Modify - strike "such as use of linear regression"	CLARIFICATION

APPENDIX C: BIOGRAPHIES OF PANEL MEMBERS

Jordan Adelson

Dr. Jordan Adelson has a Ph.D. in environmental analytical chemistry, and currently serves as the Director of the Navy's Laboratory Quality and Accreditation Office (LQAO) and as the Chair of the DoD Environmental Data Quality Workgroup (EDQW). As Director of the LQAO, Dr. Adelson manages the accreditation programs for the Naval Shipyard Material Testing Laboratories and implements quality system requirements on all NAVSEA testing laboratories. As the Chair of the EDQW, Dr. Adelson oversees the DoD Environmental Laboratory Accreditation Program (DoD ELAP) and develops and recommends DoD policy with respect to environmental sampling and testing operations.

Stephen Arms

Stephen Arms is the former Administrator of the Florida Department of Health's Environmental Laboratory Certification Program. He was responsible for oversight of the program's quality system and day-to-day operations, and was the central point of contact for information, interpretations, and decision-making in all areas of certification for the State. He retired from state service in February 2016 but remains active in the environmental laboratory community. He now does part-time consulting and training with a small environmental quality assurance firm in Florida and also serves in leadership roles for The NELAC Institute and the Florida Society of Environmental Analysts.

Lara Phelps

Lara Phelps (Panel Chair) is the Senior Advisor for Measurement, Modeling, Monitoring, and Laboratory Science Issues with the U.S. Environmental Protection Agency (EPA) in the Office of the Science Advisor (OSA). Over her years of government service, she has gained expertise in a wide range of areas including budgeting and program planning, quality systems, laboratory accreditation, monitoring and testing issues, proficiency testing, regulatory issues, modeling, statistical design and analysis, and innovative strategies and technologies. At present, she is not only an advisor for science issues, but is serving as the Director of the Forum on Environmental Measurements, Director for the Environmental Modeling Community of Practice, Designated Federal Official for the Environmental Laboratory Advisory Board, and Quality Assurance Manager for OSA. She has received numerous honors including the Association of Public Health Laboratories 'On the Front Line' award, four bronze medals, and service recognition in support of the Nation's response to the Deepwater Horizon Oil Spill. Lara is also involved in several professional organizations.

David Speis

David Speis is the retired President of Eurofins QC, Inc. in Southampton, Pennsylvania. He has extensive senior staff and management experience in commercial environmental laboratories including technical operations, quality assurance, business development, and facility general management. Mr. Speis has served on the USEPA's Environmental Laboratory Advisory Board as a member and Past Chair. He also serves as a Board member and Treasurer of The NELAC Institute (TNI) and had also served as past chair. He is a past member of the Executive Committee of ACIL's Environmental Sciences Section. He served on the board of the International Association of Environmental Testing Laboratories (IAETL), and during this time assisted in development of the initial framework for National Environmental Laboratory Accreditation.

APPENDIX D: STAKEHOLDER ADVISORY COMMITTEE (SAC) MEMBERSHIP

The members of the Stakeholder Advisory Committee are:

- Socorro Baldonado, Metropolitan Water District
- Cindy Ziernicki, Helix Water District
- Andy Eaton (Chair), Eurofins Eaton Analytical, Inc.
- Bruce Godfrey, Curtis & Tompkins Labs
- Calvin Liu, Contra Costa Water District
- Terry Powers, South Tahoe Public Utility District
- Pamela Schemmer, Test America, Inc.
- Josie Tellers, City of Davis
- Anthony Gonzalez, Sacramento County Public Health Laboratory
- Allison Mackenzie, Babcock Laboratories
- Pete Ode, California Department of Fish and Wildlife

APPENDIX E: MEETING AGENDA

STATE OF CALIFORNIA ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM (ELAP) EXPERT REVIEW PANEL

Jan 31-Feb 2, 2017
Draft meeting agenda

To be held at:
Southern California Coastal Water Research Project
3535 Harbor Blvd. Costa Mesa, CA 92626
Meeting will be webcast via gotomeeting

***Day 1* – Tuesday, January 31 (open to public)**

8:00	Coffee & pastries	
8:30	Welcome and introductions	Steve Weisberg SCCWRP
8:40	Purpose of the review	Tam Doduc Board Member - State Water Resources Control Board
8:50	Panel charge questions	Steve Weisberg SCCWRP
9:00	Overview of actions taken by ELAP since the Panel report	Christine Sotelo SWRCB
9:45	Have these actions led to program improvements?	Christine Sotelo SWRCB
10:10	Break	
10:25	Implementation of ELAP management systems	Jacob Oaxaca SWRCB

10:50	Staff training	Katelyn McCarthy SWRCB
11:15	Laboratory standards and regulation	Christine Sotelo SWRCB
11:40	Remaining tasks and vision for the future	Christine Sotelo SWRCB
12:00	Lunch (provided on site for $10)	

Stakeholder Perspectives

1:00	ELTAC and SAC perspectives	Andy Eaton Eurofins Eaton Analytical
1:30	State agency partner committee perspective	Bruce LaBelle Department of Toxic Substances Control
2:00	Results of US EPA Program Audit	Andy Lincoff EPA – Region IX
2:30	US EPA Perspective	Dan Hautman EPA – Cincinnati
2:50	Break	
3:10	Perspective of labs that have recently undergone inspections	Patrick Jones Jones Environmental Jill Brodt Brelje and Race Laboratories Mindy Boele City of Vacaville
4:10	Challenges facing small laboratories	Daniel Jackson City of Benecia
4:30	Public comments	

5:30 Adjourn for the day

6:00 Dinner (Panel members & ELAP management team only)

***Day 2* – Wednesday, February 1**

8:00 Panel deliberations (Panel members only)

9:00 Interviews with ELAP support staff (Panel members only)

10:00 Panel deliberations (Panel members only)

12:00 Lunch on-site (Panel members only)

1:00 Panel deliberations (Panel members only)

5:00 Adjourn for the day

6:00 Dinner (Panel members only)

***Day 3* – Thursday, February 2**

8:00 Panel deliberations (Panel members only)

Panel Report Out (open to public)

10:30	The Panel's initial findings	Panel Chair
11:00	Public comment and questions for the Panel	
11:45	Timeline for completing Panel reporting	Steve Weisberg SCCWRP

12:00 Adjourn