TRAFFIC INJURY RESEARCH FOUNDATION

NEVADA FORENSIC TOXICOLOGY LABORATORY: IMPLEMENTATION PLAN BRIEFING

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THE TRAFFIC INJURY RESEARCH FOUNDATION

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IMPLEMENTATION PLAN BRIEFING

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Introduction

Nevada is one of two U.S. jurisdictions without a state forensic toxicology laboratory. Instead, three public forensic toxicology laboratories provide limited contracted services across the state (City of Henderson, Las Vegas and Washoe County). The capacity of these labs has declined as new and competing functions have been added at local levels, resulting in growing backlogs and leaving some counties underserved. The absence of a state laboratory forces some state agencies to rely on costly contracted services in order to carry out essential functions or demonstrate due diligence in the delivery of services.

As just one example, the lack of consistent and standardized toxicological data is an impediment to understanding the magnitude of the impaired driving problem in Nevada. Similarly, the lack of standardized testing and data collection is a barrier to decision-making in terms of policy development and resource allocation. This problem has become more pronounced as a result of cannabis legalization. Moreover, without a state lab to conduct independent testing, it is challenging to enforce regulatory requirements related to cannabis production and sale.

As evidence of the extent of the problem, impaired driving is a leading road safety priority in Nevada:

- The reported five-year average number of fatalities was 316 between 2014 and 2019 according to the Nevada Office of Traffic Safety.[1]
- Fatal road crashes involving one or more impairing substances continue to represent a large percentage of overall statistics in Nevada with more than 50% of fatal crashes involving an impairing substance or combination of substances (polysubstance).
- Polysubstance involved fatal crashes increased by nine percent between 2016 and 2018. Marijuana was by far the most common substance present in 75% of polysubstance impaired driving cases.
- In 2018, an analysis of impaired driving samples by the City of Henderson Lab revealed the presence of drugs in 55% to 75% of samples per month with drugs detected in an average of 62% of impaired driving cases overall, and almost half of all impaired driving samples had a BAC > .08 as well as drugs present. Las Vegas Metro lab similarly reported 60% of all impaired driving cases screened positive for marijuana in 2018. Generally, after alcohol, marijuana is the drug most commonly detected.
- The burden of these cases on the court system is substantial with the Nevada Department of Public Safety (DPS), Committee on Testing for Intoxication reporting 12,860 arrests and 3,457 completed court cases for impaired driving (alcohol and drugs) in 2019.

The legalization of recreational marijuana has had profound, real-world implications. In California, Washington and Colorado, this move increased the prevalence of impaired drivers on the road and in fatal crashes.

[1] Source: 2019 Nevada Office of Traffic Safety Annual Report.

Consistent toxicological testing of all suspected drivers is essential to ensure impaired drivers are systematically identified and removed from the road, and toxicological results are essential to the prosecution of these offenses. Small numbers of Drug Recognition Expert (DRE) officers further reduce the likelihood drug-impaired drivers are detected and the use of DREs is not a substitute for toxicological results in court.

Technical Assistance Team & Scope of Work

The Traffic Injury Research Foundation (TIRF; www.tirf.ca), an independent road safety research institute, provided technical assistance to Nevada to conduct a gap analysis of existing lab services and develop an implementation plan for a state toxicology laboratory.

Two separate budget scenarios were developed and costed. The first budget is based on first establishing a main, larger lab in the southern, most populous region of the state (Henderson) followed by a second, satellite lab in Carson City. This approach makes it possible to serve the largest client-base and generate more revenue as soon as possible, as well as reduce the number of contracted labs from three to just one until the Carson City lab is operational. The second scenario involves establishing the smaller lab in Carson City first to take advantage of a state-owned building and reduce costs, and then building a second, larger lab in Henderson. In this scenario, services would be provided to the northern region only, and continued contracted services with Henderson and Las Vegas would be required until the second facility could be established in Henderson. TIRF worked with a team of national experts and this work was made possible through TIRF's cooperative agreement with the National Highway Traffic Safety Administration (NHTSA).

Gap Analysis Results

Notable findings emerging from the gap analysis in Nevada revealed:

- Blood samples from impaired drivers are not consistently tested for drugs. Testing panels and cutoff thresholds for drugs are not uniform across existing labs contracted to perform toxicological analysis.
- Existing labs struggle with competing priorities and limited resources. Top priorities for the three existing labs in terms of toxicological testing are:
  - inadequate staff and instrumentation to keep pace with testing;
  - insufficient training resources for lab staff; and,
  - insufficient space.
- Existing labs lack capacity to consistently educate key stakeholders, including police agencies and prosecutors among whom turnover is quite common. This compounds the resource issue and contributes to delays in testing and backlogs.
- Demand for court testimony from toxicologists is substantial and subpoenaed in 40% to 80% of impaired driving cases but delivered in approximately 70-75 cases per year. Case preparation time is still required, however, and significantly depletes staff time for analysis.

> Some rural areas may be underserviced due to long travel times and inadequate budgets.

Moreover, cannabis compliance testing is a critical need and strong oversight of private labs is essential to ensure compliance with state and federal regulations on the cultivation, and sale of marijuana-derived products. The current system of unregulated private laboratories performing this testing leads to inconsistencies in testing quality and undermines the credibility of regulatory enforcement. More concerning, it makes it impossible for the State to demonstrate due diligence and exposes state agencies to liability for unsafe cannabis products.

The absence of a state laboratory is an impediment to understanding the size and characteristics of the impaired driving problem in Nevada and developing countermeasures to address it. Similarly, a fragmented approach to testing means data collection is inconsistent and fails to inform policy decisions, the use of countermeasures, or the allocation of resources. In addition, the enforcement of regulatory requirements related to cannabis production and sale is difficult without a state lab to rely upon for independent testing.

In summary, existing problems are substantial and require new solutions. Continued reliance on the status quo is untenable and creates enormous liability for the State. It is simply not feasible to wait any longer to address this problem. It has cascading consequences for law enforcement, courts, the health system, and tourism in Nevada and will ultimately increase the cost to taxpayers. The COVID-19 pandemic has further depleted the ability of existing labs to keep pace with toxicology analysis.

As evidence of the magnitude of the problem, in the US, marijuana legalization and the opioid crisis have moved drug-impaired driving to the top of the road safety agenda. This issue is further underscored as the World Health Organization (WHO) has identified road crashes as a top public health priority and one of the top 10 leading causes of death worldwide.

Proposed Scope of State Lab Services

It is proposed a state lab be created to provide toxicological analysis services to all levels of government in the state and ensure capacity exists to serve all geographic areas. Initial services would focus on the analysis of impaired driver biological samples and could be expanded to meet other priority needs and services as determined by the State.

Based on the analysis by TIRF staff and designated experts, it is recommended the state lab conduct all toxicological analysis for impaired driving samples because this is the most efficient and cost-efficient solution for the State to address significant gaps. Continued contracted services with existing labs is not a sustainable strategy in light of the current situation in Nevada. This recommendation from experts is based on the following considerations:

> Existing labs contracted to perform toxicology analyses struggle with competing priorities, and large caseloads related to other crime priorities. The lack adequate staff, instrumentation and space makes it difficult to keep pace with the demand for toxicological analyses which produces backlogs that impact courts and the prosecution of cases. More resources directed to these labs will not resolve existing inefficiencies and inconsistencies and serves to merely escalate the continued drain on resources due to duplication.

- The set-up costs for a state lab are substantial, making it financially impractical to spend the resources required to establish a lab only to perform a proportion of the total testing required. Moreover, conducting only a portion of the testing fails to address inconsistencies in testing protocols and ultimately makes it impossible for the lab to become self-sustaining.
- A more efficient use of resources is for a state lab to perform all the toxicological testing and associated services currently performed by the three contracted labs. This would permit these three labs to focus their resources on essential crime lab functions, increase efficiencies, and potentially expand services to neighboring jurisdictions.

It is acknowledged this approach has important political and fiscal implications for other agencies currently providing services, and it will require consultation and negotiation with multiple stakeholders. Alternative solutions will simply cost more and fail to meet the needs of the State.

- The proposed services delivered by the state lab include:
  - toxicological analyses for alcohol and drug-impaired driving biological samples from living and deceased road users;
  - provision of expert testimony in impaired driving cases;
  - maintenance of evidence, records and data;
  - breath instrument and evidential instrument calibration and maintenance records as well as alcohol solution and gas standards;
  - training for stakeholders;
  - managing and reporting aggregate toxicological impaired driving data to the Legislature;
  - testing and evaluating new breath testing instruments for the State; and,
  - oversight of private labs testing cannabis products for producers, and testing of cannabis products initially failing private lab testing.

Legal Structure

It is recommended the Nevada State Laboratory be established similar to other state Executive Branch agencies in Nevada that operate under their own authority. This approach is adopted in five other jurisdictions, including Alabama, Arkansas, District of Columbia, Indiana, and Virginia. This agency would require the authority to impose and collect fees.

This approach was selected for several important reasons:

- This model enables the toxicology lab to develop a self-sustaining business model and reduce the burden on taxpayers in the longer-term. An independent entity could more easily secure private partnerships to generate funding for establishing the lab. It could also diversify its revenue streams to reduce appropriations from the State budget. Several sectors are potential sources of funding once the lab becomes operational including:

- Hospitals who require surveillance of clinical samples for research and who have access to research funding.
- Public health entities interested in bio-surveillance which is essential to identify and respond to emerging health crises. These data are essential as early warning systems for opioid epidemics as well as pandemics such as COVID-19 to ensure hospitals and first responders are able to act quickly and efficiently to control and manage the spread. This is essential to protect residents and reduce the costs to state agencies.
- Heavy industry employers managing workplace alcohol and drug testing programs and who require access to credible and independent testing facilities and a source of education and training as well as knowledge of drug trends.
- Grant funding opportunities for appropriate drug research applications through foundations.

> Moreover, this model permits the lab to establish policies and procedures best-suited for its operations and purpose instead of requiring the lab to adopt and adapt to broader agency policies and priorities not aligned with its core services and day-to-day operations.

It is further proposed the state toxicology lab cultivate strong, coordinated working relationships with existing labs, county agencies, police services and related state agencies. Not only can the lab be an important training resource, but it can also provide much-needed data to support the operations of these agencies and avoid multiple agencies delivering overlapping services to meet similar needs.

Business Model & Financial Structure

The business model for the laboratory is based on a diversified funding strategy to reduce the burden on taxpayers. Two separate budget scenarios are provided for consideration:

> Budget scenario 1 is based on establishing the Henderson lab location first.

> Budget scenario 2 is based on establishing the Carson City lab location first.

A balanced budget is achievable using this cost-sharing approach and establishing the state lab as a self-directed state agency would facilitate this funding model.

In this regard, 50% of the funding would be obtained through a state appropriation (which would include the re-direction of existing funds currently paid to contracted labs to perform similar services) while the remaining 50% of funding is secured from private industry (i.e., the alcohol, cannabis and pharmaceutical industries). This aligns with the corporate social responsibility profile of many corporations, and short-term investment to establish a functioning state lab is no doubt preferable to a permanent tax or fee for corporations or taxpayers. Together Safer Roads is just one example of major industry investment in road safety (see: https://www.togetherforsaferroads.org/members/).

The funding model includes:

> a 50/50 split of public/private funding;

- a $75 surcharge paid by convicted offenders for designated offenses (which represents an increase of the $60 chemical analysis fee collected by counties and municipalities; see NRS 484C.510) and this money would now flow to the State;
- a fee for service strategy charged to police agencies and coroners on a cost-recovery basis;
- a fee for service strategy charged to cannabis producers and private cannabis labs to undertake due diligence of the State in relation to cannabis product testing.

The State would incur the upfront costs to set up the lab and recoup approximately 50% of the start-up costs from private industries over each five years of operation (as instruments are replaced). It would take an estimated eighteen months to two years to make the first lab operational and obtain accreditation once the facility, instruments and core staff are in place. Following accreditation, the Henderson main lab (if established first) would be designed to initially operate at 85% capacity and scale up to 100% capacity during the first six to eight months of operation whereas the Carson City lab (if established first) would operate at 100% capacity upon opening.

Establishing a main, larger lab and a smaller satellite lab would be ideal to ensure high-quality and efficient service delivery across the state. This would ultimately be dependent on available funding. One lab would be established first and the second lab would be a longer-term goal once the first lab becomes fully operational to spread capital costs over a longer timeframe. Once the first lab is established, it would take at least 18 months before the second lab could be opened.

Costs are higher in year 1 and 2 in both scenarios due to the first lab not being fully functional until year 3.

- On average, approximately $800,000 in private funding (across three industries: alcohol, cannabis, pharmaceutical) is required annually in budget scenario 1 with the main lab in Henderson.
- In budget scenario 2 with the main lab in Carson City, approximately $431,000 in private funding would be required annually. This is not an unreasonable amount; for reference Washington State receives $300,000 from a liquor revolving fund.[2]

Budget Overview

The estimated budget for the main laboratory is based on the assumption proposed fees and revenues, described previously, are collected by the State and private funding is secured. Of note, contract services with existing labs providing toxicology services would no longer be required and these funds could be redirected to support the state lab.

[2] **Washington.** Some funding comes from a liquor revolving fund and disbursement to the toxicological services. The fund collects spirits, beer, and wine licensing fees from restaurants, private clubs, nightclubs, VIP airport lounges and sports entertainment facilities by appropriation from the death investigations of $300,000. See**: RCW 66.08.180 Liquor revolving fund—Distribution—Reserve for administration—Disbursement to universities and state agencies. (Effective until January 1, 2020.)** WA Rev Code § 66.08.180 (2019) https://law.justia.com/codes/washington/2019/title-66/chapter-66-08/section-66-08-180/.

Two budget scenarios are provided. Of note, the budgets in scenario 1 and scenario 2 are not directly comparable since the set-up of the Henderson lab is a larger facility with more capacity, staff and instruments compared to the lab set up in Carson City

In the first scenario the main larger lab in Henderson is established first to deliver services to the largest population and client base sooner. This has the advantage of generating more revenue earlier and permits the contracted services with Henderson and Las Vegas labs to be discontinued sooner as well as to ensure a larger capacity for service is available to meet demands. It is estimated the main lab is a leased 5,000 square foot facility located in Henderson. The cost is based on current real estate listings for a similar space in the area. This is the space required to operate a fully functional toxicology lab and accommodate the requisite number of staff, instruments and equipment described below. Of importance often the space required to make a lab function efficiently is underestimated in lab setups, and as staff move into the facility the space limitations become readily apparent. The building would be leased for 10 years.

In the second budget scenario, the main but smaller lab of approximately 3,750 square feet minimum is established in Carson City first to take advantage of existing building space available at no cost for a lab set up. However, this location is situated farther away from the main population and client base. This means existing contracted services with labs in Henderson and Las Vegas will be necessary longer which brings additional costs not included in the budget. It also includes relocation costs for the Chief Toxicologist and Quality Assurance Manager and Operations Manager to relocate to Henderson to set up the main lab. It makes the most sense for these senior staff to be based in Henderson in the larger facility with more staff and instruments as well as clients. Travel costs for training and maintenance would also be higher to deliver services in the southern region. Finally, in this scenario, the chemist can be hired at the outset to undertake private lab inspections and oversee cannabis product re-testing, however, they will have to be located in Henderson where clients are mainly situated. Hence a work-from-home scenario would have to be adopted during the first two year while the Carson City lab is established, and the chemist would be unavailable to assist with the lab set up as needed.

Budget Scenario 1 – Main Lab in Henderson established first.

Year 1

- capital investment is $6.72 million
- operating costs is $1.9 million (State pays $968,000 and private industry pays $968,000)
- revenues are $2,406,982

Year 2

- capital investment is $0
- operating costs is $1.9 million (State pays $960,000 and private industry pays $960,000)
- revenues are $2,389,520

Year 3

- capital investment is $0
- operating costs is $981,000 (State pays $490,000 and private industry pays $490,000)
- revenues are $3,302, 885

The cost breakdown is as follows:

- **Capital costs.** The capital costs in Year 1 total $6.72 million and include lab fit-up, instrumentation and other equipment. The costs would be paid upfront by the State and 50% of this cost would be recovered from private industry funding over five years. It is assumed none of these costs would be financed.
- **Operating costs.** The total cost to operate the main lab (including lease) is $1.9 million (State pays $968,000 and private industry pays $968,000) in year 1; $1.9 million (State pays $960,000 and private industry pays $960,000) in year 2; and, $981,000 (State pays $490,000 and private industry pays $490,000).
- **Revenues.** It is anticipated some revenues would be earned in year 1 including the surcharge of $75 for chemical analysis for designated offenses, training for police services and maintenance of breath testing devices. In addition, it is anticipated inspections of private cannabis testing labs would occur as well as oversight of retesting of cannabis product samples. In year 3, additional revenues would be earned for toxicology analysis of impaired driving and post-mortem samples.
  - Year 1 - $2,406, 982
  - Year 2 - $2,389,520
  - Year 3 - $3,302,885
- **Satellite lab costs.** In addition, it is estimated the satellite lab requires $2.98 million capital cost lab fit up and instrumentation and other equipment. These costs would be incurred during year 3 of the main lab to spread out capital costs and reduce operating cost. The lab cannot be functional until the SOPs and QAP are developed. The operational costs to run the satellite lab (including amortization, salary expenses and overhead) is $1.10 million in Year 1 of the satellite lab with comparable costs in Year 2 and Year 3. This is excluding any revenues.

Budget Scenario 2 – Main Lab in Carson City established first.

Year 1

- capital investment is $4.5 million
- operating costs is $1.16 million (State pays $582,000 and private industry pays $582,000)
- revenues are $1,634,856

Year 2

- capital investment is $0
- operating costs is $1.2 million (State pays $602,000 and private industry pays $602,000)
- revenues are $1,675,036

Year 3

- capital investment is $350,000
- operating costs is $220,000 (State pays $110,000 and private industry pays $110,000)
- revenues are $1,684,028

The cost breakdown is as follows:

- **Capital costs.** The capital costs in Year 1 total $4.5 million and include lab fit-up, instrumentation and other equipment, and $350,000 in year 3.The costs would be paid upfront by the State and 50% of this cost would be recovered from private industry funding over five years. It is assumed none of these costs would be financed.
- **Operating costs.** The total cost to operate the main lab (including lease) is $1.16 million (State pays $582,000 and private industry pays $582,000) in year 1; $1.2 million (State pays $602,000 and private industry pays $602,000) in year 2; and, $220,000 (State pays $110,000 and private industry pays $110,000).
- **Revenues.** It is anticipated some revenues would be earned in year 1 including the surcharge of $75 for chemical analysis for designated offenses, training for police services and maintenance of breath testing devices. In addition, it is anticipated inspections of private cannabis testing labs would occur as well as oversight of retesting of cannabis product samples. In year 3, additional revenues would be earned for toxicology analysis of impaired driving and post-mortem samples.
  - Year 1 - $1,634,856
  - Year 2 - $1,675,036
  - Year 3 - $1,684,028
- **Satellite lab costs.**

  Similar to the previous budget, the set up costs for the second lab would not change significantly, however additional costs for continuing to contract with Henderson and Las Vegas labs would be incurred for the duration of time it takes to establish this lab.
  - In addition, it is estimated the satellite lab requires $2.98 million capital cost lab fit up and instrumentation and other equipment.

- These costs would be incurred during year 3 of the main lab to spread out capital costs and reduce operating cost. The lab cannot be functional until the SOPs and QAP are developed.
- The operational costs to run the satellite lab (including amortization, salary expenses and overhead) is $1.1 million in Year 1 of the satellite lab with comparable costs in Year 2 and Year 3. This is excluding any revenues.

Budget implications for other state, county and municipal agencies

The use of a fee-based structure has important implications for state, municipal and county agencies because funds may be redirected to the State to support the lab.

- $75 fee for chemical analysis to State instead of $60 fee to county and municipal agencies.
- Cost recovery fee to police agencies on a per sample or pro-rated basis based on agency size to cover analysis costs.
- $1,500 fee to police agencies for training (this service is included in total costs of contracts with three existing labs).
- Fees to coroner offices for analysis of post-mortem samples should be set lower than the cost these offices currently pay to private labs, and $300 is a cost-recovery basis.
- $1,300 for each inspection of private labs testing cannabis products; there are 10 labs and each would be inspected twice annually.
- $150 fee charged to cannabis producers for overseeing the retesting of a cannabis product that failed one or more tests.

Options to decrease operating costs to state

- Increase private funding thresholds
- Delay purchase of the 2nd QToF instrument
- Reduce time commitment for court testimony to encourage online approaches

Options to increase revenues

- Increase fees for private lab inspections
- Increase administrative fees to oversee cannabis product testing
- Increase chemical analysis fee for convicted offenders

CONCLUSIONS

A state toxicology lab is a critical need in Nevada and essential for state agencies to ensure the safety and security of its residents. Demand for toxicological analysis is substantial and already surpasses the ability of the State to keep pace, as evidenced by backlogs in impaired driving cases and court caseloads. Moreover, the legalization of recreational cannabis will undoubtedly contribute to increases in the prevalence of impaired driving based on experiences in other jurisdictions. Of equal importance, it is imperative the State is able to demonstrate due diligence in the testing of cannabis products to reduce its liability for poor quality or unsafe products.

To date, the reliance on contracted services from county and municipal labs has been adequate to meet the needs of the State. These labs have provided professional services and worked diligently to accommodate growing demands for toxicology analysis, even in the face of an expanding list of crime lab functions and competing priorities. However, this model is no longer feasible or practical without significant financial investment. As such, it is recommended the State implement a toxicology lab to undertake analyses of all impaired driving toxicological samples. Not only is this approach the most cost-efficient strategy to implement a state lab, but it also makes possible the application of standardized test protocols, drug test panels and cut-off values. This would make Nevada one of the first in the US to do so and provide an important foundation for research studies to investigate the impact of differences in cut-off values, as well as provide insight into the most appropriate cut-off values to use for impaired driving toxicological samples. As such, the standardized and consistent analysis of impaired driving samples would have considerable research value and generate interest among potential funders, thereby creating additional revenue streams for the state lab. More importantly, it would also provide consistent and standardized collection of data to inform policy decisions and measure the magnitude of the impaired driving problem.

Of course, the reduced reliance on contracted services would also permit the county and municipal labs who have provided these services to re-focus activities on essential crime lab functions. This is a recognized need in the state that is under-met. This approach would enable these labs to increase their services in other areas and also expand their services to meet the needs of other police agencies. This proposed division of labor is strategic and cost-efficient to avoid the duplication of lab space, lab infrastructure and lab instrumentation, all required for toxicological analyses.

The location of the lab is a critical issue with important cost and service implications. The inclusion of a main lab in Henderson in the southern region of the state was purposeful to be located in close proximity to the largest population base and ensure ease of access to the majority of clients requiring services while also being sensitive to cost. Furthermore, this location is quite important to ensure the state lab is able to develop a self-sustaining funding model by being near to private industry and able to accommodate their needs. The identification of Carson City for a satellite lab in the northern part of the state was similarly selected to ensure more rural populations are adequately served through a centralized and accessible point of contact.

In this regard, two budget scenarios have been prepared for consideration. These budgets are not directly comparable in cost due to the fact the Henderson lab is much larger with more staff, instruments and greater capacity to serve clients as compared to the smaller lab in Carson City situated in the Northern region of the state with a much smaller population and client base. Establishing the larger lab in Henderson first has the advantage of reducing existing costs to the state sooner and avoids re-locating the Chief Toxicologist, QA Manager and Operations Manager from Carson City to Henderson to set up the second lab after the northern lab is operational.

Another important consideration relating to the location and staffing of the main lab and satellite lab is the demand for court testimony and training. These are significant demands on the time of lab staff which erode the time available to conduct analyses and finalize reports describing results. Much more efficient approaches to the use of court testimony would enable toxicologists to spend time preparing testimony and delivering it, but also minimize the time required to travel to various court locations. As such, increased adoption and acceptance of video testimony would be greatly beneficial to support the timely prosecution of cases without detracting from the rights of defendants. This would also increase the availability of toxicologists to travel to police agencies to deliver much-needed training with respect to drug-impaired driving, or alternatively, permit the development of webinars and online training models for police as well.

The recommended legal structure and business model proposed in this report are intimately connected with the sole objective of cultivating a self-sustaining business model and reducing the burden on state agencies and, ultimately, taxpayers. Of course, leadership from DPS during the implementation phase of the state lab is paramount to ensure it receives much-needed political support and budget allocations for it to be viable. However, it is equally important that an Advisory Board of key stakeholders is created, comprised of a cross-section of agencies and expertise, to ensure the success of the lab in becoming self-sustaining. A critical objective is to secure private sector funding and investment and pro-actively diversify the revenue streams to support the lab; independence is vital to this goal. A state lab must be unencumbered by overarching policy and protocol which may constrain its ability to do business, enter new partnerships, and adapt to a changing environment.

Finally, it is acknowledged that full compliance testing of cannabis products is a priority in the state. This activity is only described with respect to the inspection of private labs testing cannabis products as well as oversight of re-testing of cannabis products failing initial testing. Developing an implementation plan for a full cannabis testing laboratory is beyond the scope of the technical assistance TIRF can provide. However, it is important to note the implications of conducting cannabis product testing in a state lab. Notably, full physical separation of lab space, lab instruments and ventilations systems would be required between a toxicology lab and cannabis testing lab to avoid cross-contamination. At present and to the knowledge of experts contributing to this report, in other states, cannabis product testing it generally undertaken by private labs, including in Colorado and Washington state. The complexity and specialization of testing requires specific technical expertise which makes it costly and inefficient for state agencies to undertake. The only type of cannabis testing typically performed by a state crime lab is to distinguish between cannabis and hemp for the purpose of criminal charges. Of course, if Nevada wishes to pursue this

activity it would be necessary to hire a qualified consultant to conduct an assessment and estimate costs.

Looking forward, as the state makes a determination to move forward with the implementation of a state lab, the hiring of a suitable project director with expertise in lab implementation is an essential step. As described in this report, establishing a state lab involves coordination of many moving pieces, technical expertise and the commitment of dedicated time to ensure the lab meets accreditation standards and is achieved within an approved timeline and on budget. It will also involve coordination with existing labs, state agencies and other stakeholders. As such, a project director can serve as a designated point of contact and authority with full working knowledge of what is required to make the state lab a success.

Many state agencies can gain tremendous value with the strategic and cost-efficient implementation of a state lab. In light of current demands and the state context, it is simply not feasible or practical to wait any longer to create a state lab. The plan and recommendations described in this report is based on current standards, best practices, and knowledge and experience from leading experts. The budget is detailed and conservative to make this an affordable venture with many benefits for the state. Appendices also contain many examples to provide guidance and examples to assist the state as it moves forward. TIRF will continue to be available to provide assistance to the state with respect to important road safety priorities.