

Executive Summary by the Legislative Fiscal Analyst

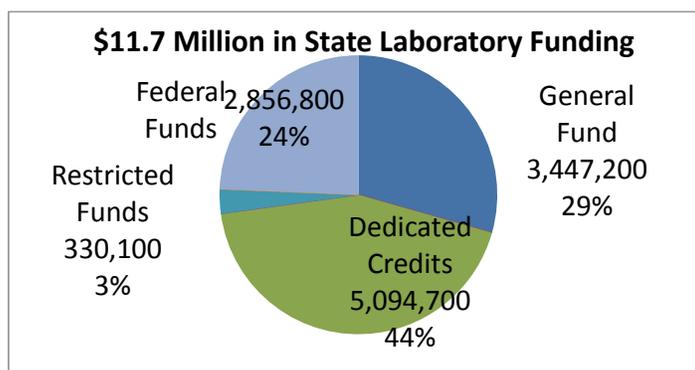
The table below shows the General Fund used by each area of the State Laboratory. Of the \$3.4 million General Fund used by the State Laboratory, \$2.8 million is in the top six categories.

FY 2011 State Laboratory Function Areas	General Fund	%	Dedicated Credits	%	Restricted Funds	%	Federal Funds	%	Total
Lab for UDEQ - Water, Soil, Air Testing	890,000	100%	0	0%	0	0%	0	0%	890,000
State Medical Examiner - Cause of Death Testing	683,900	100%	0	0%	0	0%	0	0%	683,900
Technical Services, Operations and Maintenance of Lab	395,600	76%	124,600	24%	0	0%	0	0%	520,200
New Lab Building - Operations and Maintenance	369,800	100%	0	0%	0	0%	0	0%	369,800
Laboratory Administration	248,400	86%	40,900	14%	0	0%	0	0%	289,300
Business Services (Billing, Purchasing, etc.)	242,600	100%	0	0%	0	0%	0	0%	242,600
Influenza & Other Respiratory Virus Testing	80,000	21%	0	0%	0	0%	300,800	79%	380,800
Organic/Radiation Chemistry Testing	77,000	71%	30,805	29%	0	0%	0	0%	107,805
Immunology Testing	70,000	19%	139,400	38%	0	0%	160,000	43%	369,400
Inorganic Chemistry Testing	67,100	35%	122,065	65%	0	0%	0	0%	189,165
Food Testing	65,000	39%	14,000	8%	0	0%	89,000	53%	168,000
Metals Testing	63,800	51%	62,309	49%	0	0%	0	0%	126,109
Bureau Administration - Chemistry and Environmental Services	56,200	18%	263,900	82%	0	0%	0	0%	320,100
Lab Safety Training and Quality Assurance	42,300	80%	10,600	20%	0	0%	0	0%	52,900
Environmental Micro Testing	33,600	83%	6,720	17%	0	0%	0	0%	40,320
Utah Law Enforcement Agencies - DUI, crimes, etc.	32,000	9%	9,700	3%	330,100	89%	0	0%	371,800
Bureau Administration - Forensic Toxicology	15,900	99%	100	1%	0	0%	0	0%	16,000
Tuberculosis & Mycobacteriology Testing	9,000	1%	566,700	86%	0	0%	80,000	12%	655,700
Bacteria ID Confirmation and Subtyping	5,000	1%	317,900	84%	0	0%	55,700	15%	378,600
Data Exchange		0%	0	0%	0	0%	87,000	100%	87,000
New Equipment - Federal Earmarks		0%	0	0%	0	0%	594,000	100%	594,000
Public Health Threat/Chemical Terrorism Preparation		0%	8,401	2%	0	0%	453,142	98%	461,543
Bureau Administration		0%	120,600	100%	0	0%	0	0%	120,600
Environmental Lab Certification		0%	219,500	100%	0	0%	0	0%	219,500
Clinical Lab Certification		0%	0	0%	0	0%	137,600	100%	137,600
New Lab Equipment		0%	0	0%	0	0%	91,000	100%	91,000
Bureau Administration		0%	345,100	90%	0	0%	36,800	10%	381,900
Newborn Metabolic Screening		0%	2,638,900	100%	0	0%	0	0%	2,638,900
Public Health Threat/Bioterrorism Preparation		0%	52,500	6%	0	0%	771,745	94%	824,245
TOTALS	3,447,200	29%	5,094,700	43%	330,100	3%	2,856,800	24%	11,728,800

The Department provides the following primary reasons why General Fund is being used by different areas of the State Laboratory:

1. Checking prices vs. the private sector predicts higher costs to the State for using private laboratories
2. Level of data needed not available/desired in the private sector, but needed to identify sources of outbreaks/contamination
3. Not an identifiable party to bill
4. low volume test, so private laboratories do not provide the service
5. Recipient is another State or local government entity

The chart below shows the distribution of the \$11.7 million total funds in the FY 2011 State Laboratory budget.



All of the pages below come from the Department of Health and the Department of Environmental Quality.

Funding Sources Report for the Unified State Laboratories: Public Health

The Unified State Laboratories: Public Health (USLPH) receives funds through five appropriation codes (LEA, LEC, LEE, LEF, and LEG) representing five distinct units within the laboratory. These units, listed in decreasing order of budget size, are as follows:

- 1.) Microbiology (LEG)
- 2.) Chemistry and Environmental Services (LEC)
- 3.) Forensic Toxicology (LEF)
- 4.) Laboratory Operations (LEE)
- 5.) Administration (LEA)

Each laboratory unit listed above has a different mixture of funding sources. This report will address each unit individually, highlighting its budget, fee-for-service work (i.e., dedicated credits), and select funding issues in order to best respond to questions from the Health & Human Services Appropriations Subcommittee concerning laboratory fees.

NOTE: The Administration appropriation code (LEA) captures the “overhead costs” required to run a complex, modern laboratory. These overhead costs include operation and maintenance, billing, purchasing, inspection/certification, select infrastructure, and other costs. Whenever possible, these costs are built into fees and grants. Allocation of these overhead costs to a specific fee or grant depends on the specific fee or grant, though overall these costs equate to between 10% and 20% of total testing costs at USLPH.

As Laboratory Operations also cover core, non-testing services, and as administrative overhead is part of this core cost, for the purpose of this report the Administration appropriation code will be treated together with the Laboratory Operations appropriation code.

Bureau of Microbiology (BOM)

BOM has five major public health testing functions:

- 1.) Perform bacterial, viral, fungal, and toxin testing of public health importance (e.g., tuberculosis, anthrax, West Nile virus).
- 2.) Provide definitive testing in support of disease outbreak investigations; recent examples include the H1N1 influenza pandemic and Campylobacter bacteria found in raw milk.
- 3.) Perform surveillance testing of agents of import to public health (e.g., respiratory viruses, Salmonella serotyping, molecular subtyping of bacteria)
- 4.) Serves as Utah's sole FBI and CDC designated, Bio-Preparedness reference laboratory working closely with Utah's 1,500 clinical laboratories to confirm and definitively characterize agents of disease, and train first responders and laboratory staff throughout Utah on responses to terrorism and other emergent events.
- 5.) Serves as Utah's sole active member in FERN (i.e., Food Emergency Response Network; a laboratory network funded and administered by FDA and USDA)
- 6.) Serves as Utah's responsible Newborn Screening laboratory (test each baby born in Utah for 37 inherited diseases; NOTE: approximately 55,000 births/year)

The BOM budget for FY2011 totals \$5,797,545 (see below and figure 1). Of this total, only 3.9% comes from Utah taxpayers (i.e., 3.9% is State general funds). The remainder of the budget is dedicated credits (70.3%) and federal funds (25.8%).

The BOM general funds total \$229,000 in FY2011. This revenue is utilized in core public health testing as detailed below.

1.) Influenza testing:	\$80,000
2.) Rabies (Immunology testing)	\$70,000
3.) Food testing:	\$65,000
4.) Tuberculosis and mycobacteria testing:	\$9,000
5.) Bacterial identification and subtyping:	\$5,000

In terms of fees and fee groups (i.e., dedicated credits) potentially supported by State general funds, all five of the above testing areas are significantly supported by State funds. The reasons for this, and the impact if these general funds were lost, are as follows:

- 1.) Influenza: Many laboratories throughout Utah perform influenza **typing** (NOTE: influenza typing asks the following question: is the virus found in the patient influenza type A, B, or C). However, as there is no direct patient benefit in performing influenza **subtyping** (i.e., if the patient's virus is indeed influenza type A, is it an H1N1 subtype of influenza type A, or an H3N2 subtype, or...). such subtyping is not performed by private sector clinical laboratories. USLPH performs influenza **subtyping** for surveillance purposes. As the recent H1N1 pandemic revealed, influenza surveillance data are critical to foster the most efficient and effective use of scarce response resources (e.g., vaccine and antiviral medications) and to respond in a unified, coherent manner to a pandemic.

Impact on influenza testing if laboratory became 100% fee-funded:

a). There is no billable entity for influenza subtyping work. If all general funds were cut, this testing would cease and Utah would be left with a critical data void. Without this influenza surveillance data, allocation of vaccine and antiviral medications during each year's influenza epidemic, as well as the occasional pandemic, would be problematic at best and completely ineffective at worst.

2.) Rabies:

USLPH is the only laboratory in the state that performs rabies testing. While this testing is critical for diagnosis and treatment of human cases as well as disease surveillance in domestic & wild animals, this testing is low volume, technically challenging, personnel & equipment intensive, and must be available 24-7-365. Tests with these types of demands are rarely adopted by the private sector as a viable financial case for them cannot be made.

For much of this testing there is no clear entity to bill. For example, earlier this year a small child brought a bat to school to show his friends. Several dozen children played with the bat before it was realized the bat was ill and could be rabid. In order to prevent dozens of children from being vaccinated (a very expensive five dose vaccine given over 30 days!), the bat was tested at USLPH.

Thankfully, the test was negative for rabies and all of these children were spared the cost and misery of rabies vaccination. This scenario is repeated many times throughout the year in Utah, sometimes with negative test results and other times with positive results.

Impact on rabies testing if laboratory became 100% fee-funded:

a.) As noted above, for most rabies testing there is no clear billable entity. Should all State funding cease for this testing, USLPH would stop rabies testing. As no other laboratory in Utah performs this work, Utah citizens would need to seek testing at an out of state public health laboratory. This would result in clear delays in diagnosis, and many citizens (predominantly children) enduring the 5-dose, 30 day long, rabies vaccine regimen. In addition, the overall cost of this vaccine administration would exceed the total cost of the USLPH rabies testing program (NOTE: In an average year USLPH performs between 500 and 700 rabies tests. Assuming a low estimate, the cost of vaccine for 500 persons per year at an average of \$500 per 5-dose vaccine course would equal $500 \times \$500 = \$250,000$).

3.) Food Testing: USLPH and the laboratories of the Department of Agriculture and Food share responsibility for food-related testing. In general, during a disease outbreak potentially involving food (e.g., the recent Salmonella in peanut butter outbreak) USLPH tests the human samples (e.g., stool) as well as the "downstream" or finished products (e.g., peanut butter or lettuce) while UDAF, in collaboration with FDA and USDA, tests the upstream products and their production sites (e.g., the farm, factory, and raw materials). It is important to note that while both USLPH and UDAF participate in the FDA's Food Emergency Response Network (FERN), and report disease outbreak related test results to the network, no State funds are utilized to support this participation. Rather, FERN provides a national structure for all food

related testing in order to ensure data quality and testing integrity across the country.

The majority of USLPH testing in support of food-related outbreaks is on human samples. The test results from these samples do not directly benefit individuals or impact their care. As such, no fee can be charged to the individual or an insurance company to cover testing costs. The benefit from this testing accrues to the general public, either because the test results support interventions that end the outbreak and thus protect persons as yet unaffected by the implicated food, or because the test of the investigation identify a change in regulation, food preparation, or infection control processes that prevents future outbreaks.

Impact on food testing if laboratory became 100% fee-funded

a.) As noted above, food-related testing performed by USLPH has no direct, individual, patient care benefit and thus there is no option to bill either insurance companies or individual patients. If this laboratory were to become 100% fee funded, this testing would cease. The resulting lack of food testing data would cause more disease outbreaks as the same tainted, but unrecognized, food product or food source remained in the marketplace and continued spreading disease. In addition, each outbreak that did occur would be larger as the lack of available laboratory data linking ill individuals to a specific food or food establishment prevented public health officials from recognizing and recalling or addressing the tainted product or procedure in a timely manner.

4.) Tuberculosis and Mycobacteria characterization: In Utah, as in most states, Tuberculosis testing is performed by only a handful of laboratories. Private sector laboratories performing tuberculosis testing work do so to identify the bacterial agent that causes the disease tuberculosis. When testing reveals tuberculosis, appropriate patient care is instituted. When testing identifies a related bacterium not known to cause tuberculosis, testing is stopped as no clinical benefit is gained from further characterization of a bacterial agent not known to cause human tuberculosis. USLPH performs that further characterization to definitively identify the bacterial agent found in the cultures to assess whether new agents are emerging and what effects they may have on human health. While this testing does not initially impact patient care, and hence is not reimbursable by health insurance companies, it is important in bacterial and disease surveillance. An example of this import is the recently discovered severe skin diseases resulting from pedicures and manicures at salons with poor infection control practices. The bacteria causing these skin infections (*Mycobacterium chelonae* and *M. fortuitum*) are closely related to the bacterium causing human tuberculosis (*M. tuberculosis*) but are not picked up by routine, private sector, tuberculosis testing methods. Ongoing disease surveillance of this type is critical to “keeping up with the bugs” and thus preventing additional illness that requires costly treatment. In addition, while this testing only amounts to a total of \$9,000 in a tuberculosis testing program of some \$650,000, federal tuberculosis testing mandates prevent USLPH from rolling the costs of this characterization work into our current tuberculosis test costs.

Impact on tuberculosis testing if laboratory became 100% fee-funded:

a.) As most of this testing is not clinically reimbursable, and as this testing requires a highly trained staff and costly laboratory equipment, this testing would stop. The result would be a loss of important surveillance data shown to identify new agents and prevent human disease. In addition, Utah would lose scientific staff who currently are utilized during other respiratory disease outbreaks (e.g., pandemic influenza).

5.) Bacterial identification and subtyping: Just as item four above (i.e., “Tuberculosis and Mycobacteria characterization”) discusses further characterization and surveillance of important “tuberculosis-like” bacteria; item five addresses the same characterization of other bacteria. The classic example is the serotyping of Salmonella. In a typical disease outbreak, if Salmonella is found in a patient they are treated and that is the end of the clinical intervention. However, Salmonella exists in dozens of closely related subtypes or serotypes. The identification of each subtype allows public health to link seemingly unrelated disease amongst persons in different cities, counties, or states to a single restaurant, farm, or food product. Such testing, while not changing the care of any individual patient, markedly improves the care of a population by stopping disease outbreaks quickly and preventing their recurrence. As with item 3 (food testing) the benefit of this testing accrues to the general public and not to a person or entity who can be billed for the testing.

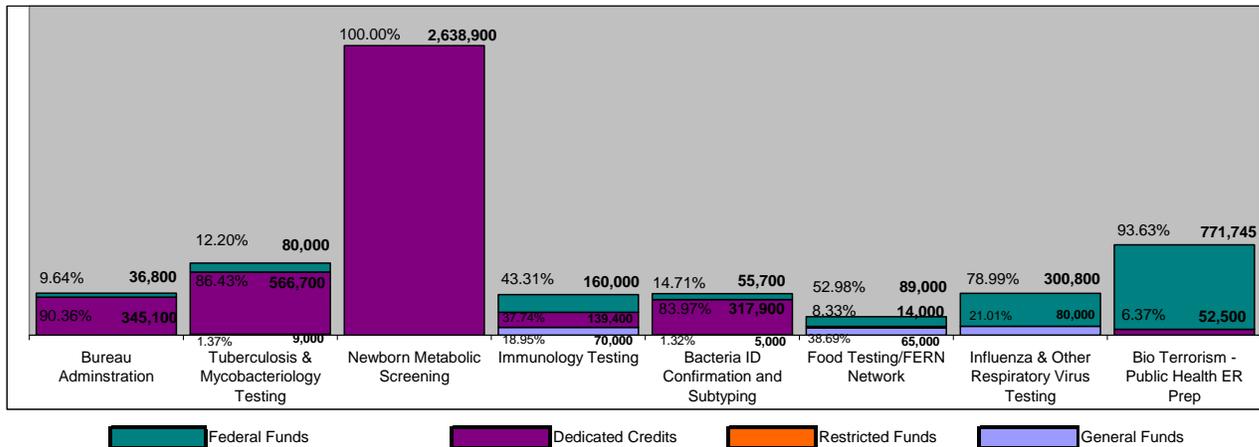
Impact on bacterial identification and subtyping if laboratory became 100% fee-funded:

a.) As this laboratory work has no clear billable entity, moving to a 100% fee-funded structure would result in the cessation of this testing. Without this type of data, disease outbreaks would occur more frequently, and each outbreak that did occur would involve more persons. Finally, as some of this testing involves bacterial identification for the Medical Examiner to determine cause of death, an alternate source for this work, at greater expense to UDOH and thus the State of Utah, would need to be found.

Funding Sources Allocated by Area

	GF	%	DC	%	RF	%	FF	%	Budget Total
LEG Bureau of Microbiology (BOM)	229,000	3.95%	4,074,500	70.28%	0	0.00%	1,494,045	25.77%	5,797,545
<i>Bureau Administration</i>		0.00%	345,100	90.36%		0.00%	36,800	9.64%	381,900
<i>Tuberculosis & Mycobacteriology Testing</i>	9,000	1.37%	566,700	86.43%		0.00%	80,000	12.20%	655,700
<i>Newborn Metabolic Screening</i>		0.00%	2,638,900	100.00%		0.00%		0.00%	2,638,900
<i>Immunology Testing</i>	70,000	18.95%	139,400	37.74%		0.00%	160,000	43.31%	369,400
<i>Bacteria ID Confirmation and Subtyping</i>	5,000	1.32%	317,900	83.97%		0.00%	55,700	14.71%	378,600
<i>Food Testing/FERN Network</i>	65,000	38.69%	14,000	8.33%		0.00%	89,000	52.98%	168,000
<i>Influenza & Other Respiratory Virus Testing</i>	80,000	21.01%		0.00%		0.00%	300,800	78.99%	380,800
<i>Bio Terrorism - Public Health ER Prep</i>		0.00%	52,500	6.37%		0.00%	771,745	93.63%	824,245

** Data from the BudgetPrep system, using SFY2011 numbers, and manually aligned into broad program categories which do not correlate perfectly with budget object codes.



Bureau of Chemistry and Environmental Services (BCES)

BCES has four main public health testing functions:

- 1.) Serve as the laboratory for the State of Utah's Dept. of Environmental Quality, performing approximately 120,000 tests per year ensuring the quality of water, soil and air throughout Utah.
- 2.) Serve as Utah's only FBI and CDC-designated Chemical Threat Response laboratory ensuring timely and accurate responses to suspicious packages/letters, environmental catastrophes, and terrorist events.
- 3.) Provide definitive testing in support of local health department environmental testing needs (e.g., industrial accidents, environmental spills, as well as routine reference testing as required by State and federal mandates).
- 4.) By federal mandate serve as Utah's sole EPA-designated "Primacy Laboratory." In this capacity, work with water utilities across Utah, and UDEQ, to collectively ensure the quality of drinking water throughout the State.

NOTE: Primacy is an EPA program whereby the Federal government allows local control of environmental monitoring and regulations provided certain national requirements are met. One of these requirements is the designation of a "Primacy Laboratory" which has the overall responsibility for the testing of drinking water in the State.

The BCES budget for FY2011 totals \$2,816,042 (see below and figure 1). Of this total, 42.18% are general funds, 17.55% are dedicated credits, and 40.27% are federal funds. The above percentage of general funds equates to \$1,187,700. Of this sum, each year approximately 75% (or \$890,000 for FY2011) is allocated to water, soil, and other testing for UDEQ. The remaining 25% (\$297,700 for FY2011) is allocated as follows:

- a.) Bureau administration and operations = \$56,200
- b.) Organic Chemistry = \$77,000. Testing for several hundred types of organic chemicals which include: semi-volatile organic chemicals (e.g., pesticides, herbicides), volatile organic chemicals (e.g., benzene, toluene, xylene), and disinfection byproducts such as trichloro-methanes, and haloacetic acids. This laboratory also serves as Utah's EPA designated laboratory for testing samples for the Unregulated Contaminated Monitoring Regulation (UCMR2).
- c.) Environmental Microbiology = \$33,600. BCES is Utah's EPA designated laboratory for testing cryptosporidium in water.
- d.) Inorganic Chemistry = \$67,100. Testing of inorganic chemicals for nutrients in lakes and rivers as well as for toxic nitrates and cyanide in water.
- e.) Metals Testing = \$63,800. Testing for trace and heavy metals in water, soil and hazardous waste.

NOTE: BCES performs approximately \$500,000/year in fee for service work. This billable work is performed for water utilities, local health depts., and a variety of environmental spill/accident firms. Unfortunately, much environmental work remains that is not billable, and it is this work that is captured in items "b" through "e" above. Examples of

this work include the following:

- a.) Testing for chemicals in abandoned drums or other containers (such testing generally has no billable customer but is of public health import as testing characterizes exposure risks and aids in cleanup and future prevention efforts).
- b.) Surveillance and disease outbreak testing for events tied to contaminated water (e.g., in 2009 Utah had the nation's largest ever cryptosporidium outbreak from contaminated swimming pool water; USLPH, being the only Intermountain West laboratory able to perform this testing in pool water, was enlisted to help identify and characterize affected swimming pools thus fostering a timely and complete response, which ultimately helped stop the spread of this disease from swimming pool exposure).

Impact on Environmental and Chemical testing if the BCES laboratory became 100% fee-funded:

- a.) As approximately 75% of general funds in BCES are dedicated to the provision of laboratory services to UDEQ, the loss of these funds would most directly affect that State agency. Several private sector laboratory cost assessments have been completed. Each has revealed that UDEQ would require at least 140% of current general funds to purchase a comparable volume of laboratory services in the private sector. Even at that cost, however, UDEQ would not be able to purchase the same level of expertise and flexible customer service.
- b.) As for the remaining BCES testing areas, the issues of "billable entity" and testing of public health import arise. As noted above, essentially all of the general funds allocated to BCES that are not utilized for DEQ testing go to perform testing of public health import (e.g., environmental spills or accidents) that have no clear billable entity. Should this funding disappear, testing of this type would cease. The result of this cessation would be a lack of critical data used to efficiently direct response efforts and exposure investigations.

Testing of UDEQ samples by UDOH Laboratories

In the early 1990's the Department of Environmental Quality was created by carving it out of UDOH. At that time an MOU was drafted and signed by the Executive Directors of both agencies. The MOU contained several "general" and three "core" agreements between the agencies. The core agreements are as follows: 1.) The Chemistry & Environmental Services laboratory would remain with UDOH; 2.) Laboratory testing-related general funds would remain with UDOH; and 3.) UDOH would provide testing to UDEQ on a year to year negotiated basis, based on available resources.

During the nearly 20 years since the creation of UDEQ, UDOH has utilized approximately 65% to 75% of its Chemistry/Environmental general funds to provide testing services for UDEQ. This work is not billed or performed on a "fee for service" basis. Rather, each year UDOH assesses the total amount of resources available for DEQ testing (based on both allocated general funds and the year on year change in the total cost of each test). This estimate is reported in WTUs (i.e., work time units, which are a blended and generic measure of total laboratory testing time assigned to each test). UDOH then reports this resource estimate to UDEQ, after which UDEQ's six divisions meet to determine their internal testing needs and the allocation of available testing resources within the department. NOTE: In FY2011, 75% of these general funds equaled approximately \$890,000 of the appropriated general funds for the Chemistry/Environmental Laboratory.

A few caveats concerning the UDOH/UDEQ relationship are worth noting:

- 1.) UDEQ alone determines their agency's testing needs, based mainly on State and Federal mandates (e.g., SDWA, TSCA, RCRA, CAA), but also on local and political exigencies
- 2.) UDEQ's six divisions collaboratively decide the total amount of UDOH testing resources that will be allocated to each division from the UDOH provided resource estimate
- 3.) Monthly reports from UDOH are provided to UDEQ concerning the current use of the allocation's and the allocation resources remaining for the year

ANALYTICAL SERVICES DOH LABORATORIES PROVIDE TO DEQ

The Department of Health Laboratory (DOHL) provides analytical services for environmental programs administered by the Department of Environmental Quality (DEQ). The vast majority of the analyses are done for programs administered by the Division of Water Quality (DWQ) under the authority of the Clean Water Act (CWA). Some analytical work is also done for programs administered by the Divisions of Drinking Water, Environmental Response and Remediation, and Solid and Hazardous Waste. These programs are administered under the authority of various State and Federal statutes.

Division of Water Quality:

The Division of Water Quality maintains several delegated Clean Water Act (CWA) programs which rely on the collection of water quality data and sample analyses at the DOHL. The primary goal of DWQ's monitoring and lab testing is to provide reliable data for scientific review, decision making and regulation in several key areas. These include:

- Establishment of water quality standards to protect beneficial uses.
- Assessment of the condition of surface waters to identify water bodies not meeting standards for drinking water, aquatic life support, recreation, and drinking water beneficial uses.
- Data reporting to EPA and Congress.
- Development of pollution reduction strategies for those water bodies not meeting standards.
- Establishment of permit limits for discharges from municipal, industrial and agricultural sources to the waters of the state.

Other DEQ Divisions:

Other Divisions within DEQ will also periodically need services provided by DHOL. Most drinking water is sampled by a public water utility and submitted to a DHOL certified laboratory for analysis. An estimated 35% of public water systems submit their samples to DHOL and except as noted below, the water utility pays for the analysis. During an emergency event or as may be used for an enforcement action, the Division of Drinking Water may sample drinking water as part of its oversight responsibility and submit such samples to DOHL for analysis. The Division of Environmental Response and Remediation will sometimes need analytical services for emergency response or environmental cleanup projects. The Division of Solid and Hazardous Waste provides oversight of solid and hazardous waste management and disposal in Utah and will occasionally need analytical services.

Benefits of DOHL:

Based on existing data needs, DEQ estimates that analysis and testing at private labs offering equivalent or similar services would range from 1 to 1.4 million dollars per year.

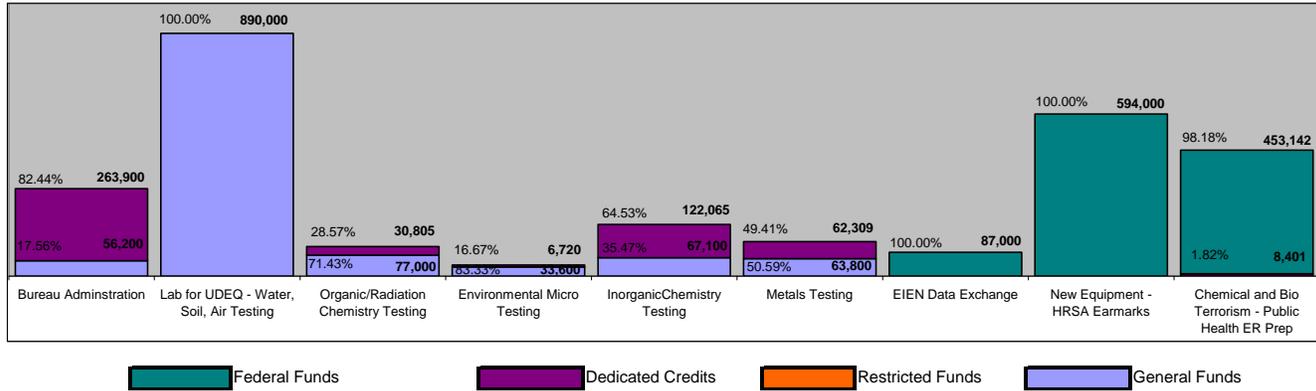
The analytical data produced by DOHL provides DEQ with the critical information necessary to ensure that the waters of the state are healthy, and the public and environment are protected from harmful contaminants.

The services provided by DOHL helps DEQ complete its mission to protect public health and the environment and maintain primacy over the environmental programs administered in the state. In the absence of primacy, USEPA would administer these programs in Utah.

Funding Sources Allocated by Area

	GF	%	DC	%	RF	%	FF	%	Budget Total
LEC - Bureau of Chemistry and Env Services (BCES)	1,187,700	42.18%	494,200	17.55%	0	0.00%	1,134,142	40.27%	2,816,042
<i>Bureau Administration</i>	56,200	17.56%	263,900	82.44%		0.00%		0.00%	320,100
<i>Lab for UDEQ - Water, Soil, Air Testing</i>	890,000	100.00%		0.00%		0.00%		0.00%	890,000
<i>Organic/Radiation Chemistry Testing</i>	77,000	71.43%	30,805	28.57%		0.00%		0.00%	107,805
<i>Environmental Micro Testing</i>	33,600	83.33%	6,720	16.67%		0.00%		0.00%	40,320
<i>InorganicChemistry Testing</i>	67,100	35.47%	122,065	64.53%		0.00%		0.00%	189,165
<i>Metals Testing</i>	63,800	50.59%	62,309	49.41%		0.00%		0.00%	126,109
<i>EIEN Data Exchange</i>		0.00%		0.00%		0.00%	87,000	100.00%	87,000
<i>New Equipment - HRSA Earmarks</i>		0.00%		0.00%		0.00%	594,000	100.00%	594,000
<i>Chemical and Bio Terrorism - Public Health ER Prep</i>		0.00%	8,401	1.82%		0.00%	453,142	98.18%	461,543

** Data from the BudgetPrep system, using SFY2011 numbers, and manually aligned into broad program categories which do not correlate perfectly with budget object codes.



Bureau of Forensic Toxicology (BFT)

BFT has two main public health testing functions:

- 1.) Serve as the principle laboratory for the State Medical Examiner to assist in determining cause and manner of death
- 2.) Serve as the principal laboratory for Utah Law Enforcement agencies (~220) that investigate driving under the influence events (DUI) (e.g., alcohol and/or drugs), automobile homicides, and other crimes

In the above roles BFT serves the critical function of providing data to ensure that criminals are put behind bars, impaired drivers are pulled off Utah roads, and suspicious deaths are thoroughly investigated to prevent ongoing risks to Utah citizens.

In a typical year BFT has essentially no dedicated credits or federal funds and its budget is approximately 65% general funds and 35% restricted funds. These funds support all testing in BFT. The general funds (\$731,800 for FY2011) are allocated approximately as follows:

- a.) Law Enforcement testing = 55% (or \$402,490 for FY2011)
- b.) Medical Examiner testing = 45% (or \$329,310 for FY2011)

NOTE: 1.) Law enforcement testing includes alcohol, heroin, cocaine, marijuana, methamphetamine, prescription drugs, etc.

2.) Medical Examiner testing includes the illegal substances and medications noted above, plus other chemicals/agents that could cause human death (e.g., wood alcohol or methanol ingestion).

3.) Restricted funds come from paid DUI fines. This fund is collected and administered by DPS

4.) In FY2010 - 2011 BFT was successful in securing two grants and thus approximately 8% of the total budget came from federal funds during each of those years. These grant funds were restricted to equipment purchases only and thus did not directly assist with BFT operations

The absence of dedicated credits, or “fee for service” work, in BFT has several causes:

- 1.) There is no clear billable entity for nearly all testing conducted at BFT:
 - When tests are performed on a decedent during an autopsy investigation to determine cause of death, the laboratory cannot bill the decedent, the decedent's kin, nor the decedent's insurance for these services.
 - When tests are performed on an arrestee during an alleged DUI investigation, the laboratory cannot bill the arrestee for these services.

NOTE: USC 26-1-30(2): ... UDOH shall (q) have a procedure to test blood alcohol for fatal crashes and (g) establish programs that ameliorate major causes of death. Administrative rule

R438-010.2(2) the analyses for fatal crashes will be done at the State Health Lab.

- 2) Billing when both the service provider and the billed entity lie within the same department results in no net financial gain to the State of Utah.
- Since the Office of the Medical Examiner and BFT are housed under the same parent agency (i.e., the Utah Department of Health) implementing fees for services would not impact the UDOH or State budget

There are several full service, private sector laboratories offering forensic toxicology services around the nation. Approximately every two years BFT staff check test prices in the private sector and compare them to internal costs. The last assessment, in August 2010, was for Medical Examiner testing; the quote from the private sector laboratory was approximately twice the cost of the services provided by BFT. To date, we have found no private sector laboratory that meets the testing needs of the Medical Examiner or Utah's 220 Law Enforcement agencies at a comparable price.

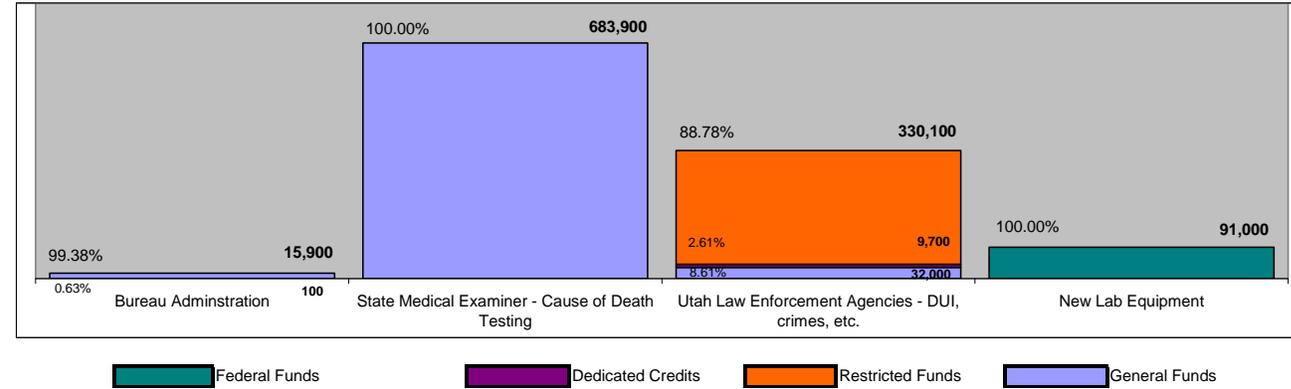
Impact on Medical Examiner and Law Enforcement toxicology testing if laboratory became 100% fee-funded:

- a.) As noted above, for Medical Examiner toxicology testing there is no clear billable entity: Dead persons have no insurance company to bill, nor is there a secondary entity to bill for determining the cause and manner of death. As such, should this program become 100% fee for service, all testing would cease, and the Medical Examiner would be forced to contract with the private sector for laboratory work at a net higher cost to UDOH and the State of Utah. Additionally, it is worth noting that the collaboration between the Medical Examiner and USLPH Toxicology performed as designed in that this relationship discovered the recent epidemic of prescription drug overdose deaths in Utah. The discovery of this epidemic, and the resultant successful response by UDOH, vividly illustrates the importance of the work performed by both of these programs.
- b.) Law Enforcement toxicology testing is similar to Medical Examiner testing in that determining a billable entity is quite difficult. In addition, past efforts to obtain sufficient DUI fines money to run the program have been unsuccessful---despite multiple attempts. If this program were to become 100% fee funded, toxicology testing would cease and Utah's ~220 Law Enforcement agencies would be forced to contract for services at a markedly higher price in the private sector. The net result of this would surely be fewer tests performed and thus more impaired drivers on our roads and more criminals "un-prosecuted."

Funding Sources Allocated by Area

	GF	%	DC	%	RF	%	FF	%	Budget Total
LEF Bureau of Forensic Toxicology (BFT)	731,800	62.94%	9,800	0.84%	330,100	28.39%	91,000	7.83%	1,162,700
Bureau Administration	15,900	99.38%	100	0.63%		0.00%	0	0.00%	16,000
State Medical Examiner - Cause of Death Testing	683,900	100.00%		0.00%		0.00%		0.00%	683,900
Utah Law Enforcement Agencies - DUI, crimes, etc.	32,000	8.61%	9,700	2.61%	330,100	88.78%		0.00%	371,800
New Lab Equipment		0.00%		0.00%		0.00%	91,000	100.00%	91,000

** Data from the BudgetPrep system, using SFY2011 numbers, and manually aligned into broad program categories which do not correlate perfectly with budget object codes.



Bureau of Laboratory Operations (BLO)

BLO has five major public health functions:

- 1.) Inspect and certify all clinical laboratories in Utah (n = 1,500)
- 2.) Inspect and certify all environmental laboratories working in Utah (n = 120)
- 3.) Investigate and assist in root cause analysis of untoward events at clinical laboratories and prepare response for Federal oversight authorities
- 4.) Investigate complaints concerning test result quality from certified environmental laboratories
- 5.) Serves as responsible program for operation and maintenance of Utah's sole public health laboratory facility

The BLO budget for FY2011 totals \$1,050,800 (see below and figure 1). Of this total, 45% are dedicated credits, 42% are general funds, and 13% are federal funds.

The 13% of BLO's budget that are federal funds are used to support the federally mandated CLIA program, which inspects and certifies all 1,500 clinical laboratories in Utah. No state funds are co-mingled with the CLIA program.

For Environmental Laboratory certification in Utah, all dedicated credit resources are completely secured from inspections of these laboratories. This program, required under Federal EPA mandates, is 100% supported by fees and has no co-mingled State dollars supporting it.

The BLO general funds for FY2011 total \$437,900 and are allocated as follows:

- 1.) Technical services and operations = \$395,600

NOTE: Technical Services includes all core laboratory operations (e.g., sample receiving, sample processing, results reporting, mailing and shipping, kit preparation, glassware washing, autoclaving & disposition of infectious waste, emergency response, preparedness activities, IT systems, etc.)

- 2.) Laboratory safety, training, and quality assurance = \$42,300

NOTE: This area includes required vaccinations, OSHA mandated training and certification for hazardous materials handling, independent quality system oversight for all scientific bureaus, etc.

- 3.) As noted at the beginning of this report, the Administration appropriations code includes core overhead costs, in parallel to those costs of BLO. As such, they are treated together in this section.

The sum total of overhead costs, that is BLO plus Administration, represents the overhead costs of USLPH. Where possible these overhead costs, which represent between 10% and 20% of the total cost of testing, are built into fees and grants.

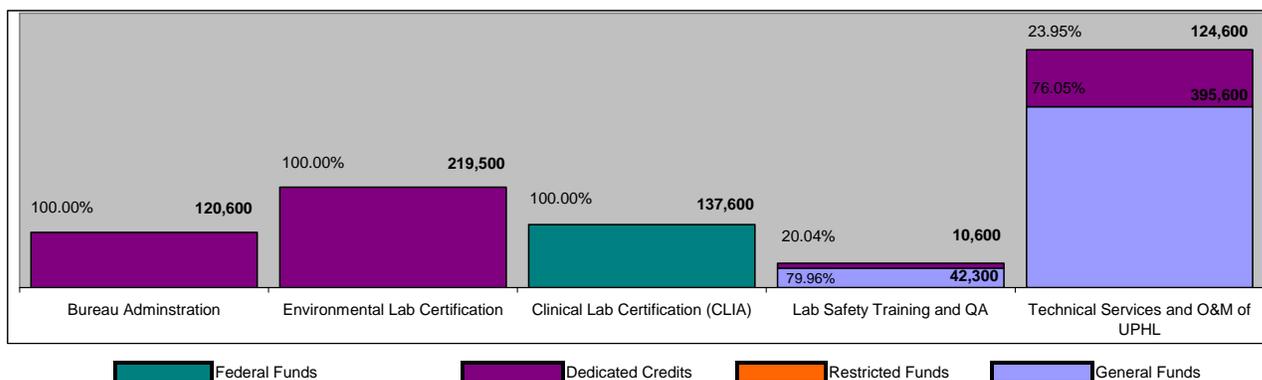
Impact on BLO and Administration if laboratory became 100% fee-funded:

a.) BLO and Administration general funds support core operations of USLPH, which in turn allow the scientific bureaus to perform critical public health testing. To the extent allowed by State and Federal laws, the cost of these core operations are already included in applicable fees and are charged to applicable grants. If all general funds in these areas were eliminated, a small amount of costs could be captured by fee increases in other bureaus--- perhaps 10%. Unfortunately, many of these costs could not be captured by fee increases elsewhere as these costs involve non-billable emergency response, preparedness training of public health partners (e.g., Utah’s 12 local health departments), etc. Each of these areas represents a non-billable, unrecoverable cost.

Funding Sources Allocated by Area

	GF	%	DC	%	RF	%	FF	%	Budget Total
LEE Bureau of Laboratory Operations (BLO)	437,900	41.67%	475,300	45.23%	0	0.00%	137,600	13.09%	1,050,800
Bureau Administration		0.00%	120,600	100.00%		0.00%		0.00%	120,600
Environmental Lab Certification		0.00%	219,500	100.00%		0.00%		0.00%	219,500
Clinical Lab Certification (CLIA)		0.00%		0.00%		0.00%	137,600	100.00%	137,600
Lab Safety Training and QA	42,300	79.96%	10,600	20.04%		0.00%		0.00%	52,900
Technical Services and O&M of UPHL	395,600	76.05%	124,600	23.95%		0.00%		0.00%	520,200

** Data from the BudgetPrep system, using SFY2011 numbers, and manually aligned into broad program categories which do not correlate perfectly with budget object codes.



**Utah Unified State Laboratories: Public Health
Funding Sources Allocated by Area**

FIGURE 1

	GF	%	DC	%	RF	%	FF	%	Budget Total
LEA - Administration	860,800	95.46%	40,900	4.54%	0	0.00%	0	0.00%	901,700
Laboratory Administration	248,400	85.86%	40,900	14.14%		0.00%		0.00%	289,300
Business Services (Billing, Purchasing, etc.)	242,600	100.00%		0.00%		0.00%		0.00%	242,600
New Lab Building - O&M	369,800	100.00%		0.00%		0.00%		0.00%	369,800
LEC - Bureau of Chemistry and Env Services (BCES)	1,187,700	42.18%	494,200	17.55%	0	0.00%	1,134,142	40.27%	2,816,042
Bureau Administration	56,200	17.56%	263,900	82.44%		0.00%		0.00%	320,100
Lab for UDEQ - Water, Soil, Air Testing	890,000	100.00%		0.00%		0.00%		0.00%	890,000
Organic/Radiation Chemistry Testing	77,000	71.43%	30,805	28.57%		0.00%		0.00%	107,805
Environmental Micro Testing	33,600	83.33%	6,720	16.67%		0.00%		0.00%	40,320
Inorganic Chemistry Testing	67,100	35.47%	122,065	64.53%		0.00%		0.00%	189,165
Metals Testing	63,800	50.59%	62,309	49.41%		0.00%		0.00%	126,109
EIEN Data Exchange		0.00%		0.00%		0.00%	87,000	100.00%	87,000
New Equipment - HRSA Eemarks		0.00%		0.00%		0.00%	594,000	100.00%	594,000
Public Health Threat/Chemical Terrorism Preparation		0.00%	8,401	1.82%		0.00%	453,142	98.18%	461,543
LEE - Bureau of Laboratory Operations (BLO)	437,900	41.67%	475,300	45.23%	0	0.00%	137,600	13.09%	1,050,800
Bureau Administration		0.00%	120,600	100.00%		0.00%		0.00%	120,600
Environmental Lab Certification		0.00%	219,500	100.00%		0.00%		0.00%	219,500
Clinical Lab Certification (CLIA)		0.00%		0.00%		0.00%	137,600	100.00%	137,600
Lab Safety Training and QA	42,300	79.96%	10,600	20.04%		0.00%		0.00%	52,900
Technical Services, Operations and Maintenance of UPHL	395,600	76.05%	124,600	23.95%		0.00%		0.00%	520,200
LEF - Bureau of Forensic Toxicology (BFT)	731,800	62.94%	9,800	0.84%	330,100	28.39%	91,000	7.83%	1,162,700
Bureau Administration	15,900	99.38%	100	0.63%		0.00%	0	0.00%	16,000
State Medical Examiner - Cause of Death Testing	683,900	100.00%		0.00%		0.00%		0.00%	683,900
Utah Law Enforcement Agencies - DUI, crimes, etc.	32,000	8.61%	9,700	2.61%	330,100	88.78%		0.00%	371,800
New Lab Equipment		0.00%		0.00%		0.00%	91,000	100.00%	91,000
LEG - Bureau of Microbiology (BOM)	229,000	3.95%	4,074,500	70.28%	0	0.00%	1,494,045	25.77%	5,797,545
Bureau Administration		0.00%	345,100	90.36%		0.00%	36,800	9.64%	381,900
Tuberculosis & Mycobacteriology Testing	9,000	1.37%	566,700	86.43%		0.00%	80,000	12.20%	655,700
Newborn Metabolic Screening		0.00%	2,638,900	100.00%		0.00%		0.00%	2,638,900
Immunology Testing	70,000	18.95%	139,400	37.74%		0.00%	160,000	43.31%	369,400
Bacteria ID Confirmation and Subtyping	5,000	1.32%	317,900	83.97%		0.00%	55,700	14.71%	378,600
Food Testing/FERN Network	65,000	38.69%	14,000	8.33%		0.00%	89,000	52.98%	168,000
Influenza & Other Respiratory Virus Testing	80,000	21.01%		0.00%		0.00%	300,800	78.99%	380,800
Public Health Threat/Bioterrorism Preparation		0.00%	52,500	6.37%		0.00%	771,745	93.63%	824,245
TOTALS	3,447,200	29.39%	5,094,700	43.44%	330,100	2.81%	2,856,787	24.36%	11,728,787

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