



**MLML Governing Board Meeting  
Via Video Conference  
30 May 2020**

## **MINUTES**

**Governing Board Voting Members in Attendance:**

Lee, Michael (Chair, CSU East Bay - Faculty)  
Murray, James (CSU East Bay – Faculty)  
Richaud, Mathieu (Vice Chair, CSU Fresno - Faculty)  
Lawson, Andrew (CSUMB – Dean, Admin)  
Lindholm, James (CSUMB - Faculty)  
Coleman, Ronald (CSU Sac - Faculty)  
Hammersley, Lisa (CSU Sac - Administration)  
Wagner, Amy (CSU Sac - Faculty)  
Evans, Dave (CSU Stan - Admin)  
Sardella, Brian (CSU Stan - Faculty)  
Bernstein, Sophie (MLML/SJSU – Student Body President)  
Connolly, Tom (MLML/SJSU - Faculty)  
Graham, Mike (MLML/SJSU – Faculty)  
Hamilton, Scott (MLML/SJSU - Faculty)  
Harvey, Jim (MLML, Director - Admin)  
Nielson, Karina (SF State - Faculty)  
Gabet, Manny (SJSU - Faculty)  
Kaufman, Michael (SJSU - Dean, College of Science)  
Stacks, Pam (SJSU - AVP, Research)

**Governing Board Alternates and Non-Voting Attendees:**

Kramer, Krista (COAST – Director)  
Logan, Cheryl (CSUMB - Faculty)  
Bhaduri, Rhitin (CSU Stan – Faculty)  
Ackerman, Brian (MLML/SJSU Marine Ops Manager)  
Aiello, Ivano (MLML/SJSU – Faculty)  
Bishop, Ann (MLML/SJSU – Student)  
Bugbee, Bennett (MLML/SJSU – Student)  
Donahue, Kathleen (MLML/SJSU Asst. to Director)  
Douglas, Jocelyn (MLML/SJSU EHS Officer)  
Flaniken, Stephanie (MLML/SJSU – Student)  
Geller, Jon (MLML/SJSU – Faculty)  
Grand, Max (MLML/SJSU - Faculty)

Kahn, Amanda (MLML/SJSU – Faculty)  
Keefe, Michelle (MLML/SJSU – Staff)  
Lage, Katie (MLML/SJSU - Faculty, Librarian)  
Matthews, Kinsey (MLML/SJSU – Student)  
McDonald, Gitte (MLML/SJSU – Faculty)  
Neylan, Katherine (MLML/SJSU – Student Body, Vice President)  
Prince, Mike (MLML - Staff)  
Radojevic, Michael (MLML/SJSU – Staff)  
Sawyers, Kate (MLML/SJSU – Staff)  
Tenarashi, Grace (MLML/SJSU – Student)  
Webster, Jane (MLML/SJSU - Staff)  
Abousalem, Mohamed (SJSU – VP, Research and Innovation)  
Del Casino, Vincent (SJSU – Provost)  
Kunde, Eugene (SJSU Research Foundation, Interim Executive Director)  
Shaffer, Scott (SJSU - Faculty)

Call To Order: 10:20 am

**Minutes:** Caroline Rodriguez, MLML Graduate Student, Invertebrate Ecology Lab

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### **Items to put forth to vote**

- Election of new Chair and Vice Chair, Item #4

### **Acceptance of Fall 2019 Gov Board Meeting Minutes**

- Michael Lee: no objections. Approved by unanimous consent
- Motion to accept the minutes passed

### **Administrative Campus Update**

- Dean Kaufman (SJSU, Dean, CoS) gave a summary of the background, report of recommendations, and creation of a Working Group who will review the MLML GB ByLaws and identify sections to be changed or updated.
  - Pay for Play Model, consideration of sustainable funding for the lab.
  - Transfer of tuition revenue to SJSU for delivering academic program.
  - Arrange for provision of student services by CSUMB and corresponding transfer of fees.
- In March the implementation team had an in-person meeting. CSUMB wants to put all of the things related to transfer of money into one agreement. Discussed how tenure track faculty are chosen at MLML. They will continue to work on this document this summer.
- Michael Lee (Chair, CSU East Bay): Collected info from survey about pay to play model. The questions were more what they valued about MLML and what they want for the future. Sense is that consortium schools value their relationship with MLML, but hopefully if certain parts of the recommendations go through (housing, Academic

Village) their involvement will increase. They want to know what the price looks like to better understand how involved they can be.

- Michael Kaufman (SJSU, Dean, CoS): we need a better idea of what campuses want so all of the consortium campuses are represented.
- Proposal for Updated ByLaws: didn't get as much done as hoped. Propose that implementation team has a multi-day working session on the bylaws so they can get sustained progress on the bylaws.
- James Lindholm (CSUMB): Without more concrete information, it's hard for the campuses to give more substantive feedback.
- Andrew Lawson (CSUMB): role of Director and Gov Board in facilitating consortium. Want this to be explicit for both Director and Gov Board.
- Michael Lee (chair, CSU East Bay): mechanism to solicit feedback wasn't very effective. Need something more pointed and specific and maybe the multi-day working bylaw session could work to create a more concrete survey. Michael Kaufman (SJSU) agrees it should be a working group, but separate from the ByLaws session

#### *Discussion*

- Ronald Coleman (SCU Sac): Housing at MLML is critical. Survey needs to be more specific (yes/no) instead of vague questions.
- Tom Connolly (MLML): a specific timeline on when services will be transferred will be helpful for students so they know when they will be able to access resources at CSUMB.
- Andrew Lawson (CSUMB): all MLML students will be given an OtterID so they can receive all of the resources at CSUMB. This has been worked out and Student Services is pretty much there. It just needs to be all put together as a package.

### **News/Updates from Consortium Campuses**

#### *James Lindholm (CSUMB)*

- Central issues for CSUMB are to find a resolution for the role of CSUMB consortium faculty advisors who are not on staff at MLML. The criteria for committee chair at MLML states MLML TT Faculty member must act as Advisor and there's a history there. CSUMB want faculty from the consortium to be able to advise MLML students and be committee chair. Has this been resolved? It needs to be resolved sooner rather than later.
- Krista Kamer (CSU COAST): tracking COAST scholarships is confusing. Who is a MLML or CSUMB student? They need to know for tracking scholarships; it is unclear.
- James Lindholm (CSUMB): MLML tenure track faculty have to be chair of committee and a certain number of MLML faculty have to be on committee too. So, even though a CSUMB advisor is the primary advisor, MLML lists a MLML faculty member as the primary.
- Michael Lee (Chair, CSU East Bay) and Dean Kaufman (SJSU): We will talk with Andrew Lawson about this. This is a front burner topic that needs to be addressed this summer.

#### *Michael Kaufman (SJSU)*

- We need to wrap up fiscal agreement, figure out what changes need to be made to the ByLaws, and resolve the issue James Lindholm (CSUMB) brought up.

## **Voting for Chair and Co Chair**

*Jim Harvey*

- We solicited the Gov Board to see if anyone else was interested in being chair or Vice Chair. No one responded.
- For a long time Gov Board operated with just a chair and not a Vice Chair. The Gov Board realized that was incorrect and added a Vice Chair.
- Michael Lee and Mathieu Richaud are allowed to stay on as Chair and Vice Chair.
- Proposed that Michael Lee and Mathieu Richaud remain as Chair and Vice Chair.
- Michael Lee and Mathieu Richaud have both had two 2-year terms. Bylaws have no term limits.

*Discussion*

- Michael Lee is happy to keep doing it or let someone else do it. The idea is that since a new Director is coming to MLML, it may be a good idea to have both stay on since they have a lot of institutional knowledge.
- Michael Kaufman (SJSU, Dean, CoS): it's also good to have new people coming into leadership roles. Kudos to Michael and Mathieu.

Motion to Vote: Jim Harvey

No objections

Passed: Michael Lee and Mathieu Richaud will remain as Chair and Co-Chair of Gov Board

## **Director's Report**

*Jim Harvey*

- COVID-19: MLML shut down and transitioned to all online classes for Spring 2020 classes. No research or field work conducted by MLML during the shutdown. SJSU provided essential MLML staff with access to the buildings to keep essential activities going.
  - No one in MLML community has tested positive (to our knowledge).
- Transition to research: A lot of work by MLML Faculty and Staff to plan for re-opening has been put into a 25-page draft. The draft plan explains how MLML would operate for field, laboratory, diving, and boating work. It was submitted to SJSU.
  - Created an online form for all researchers and asked them questions about what resources they would need to continue their research, what are their contingency plans if someone gets sick, what is the timeline for their research, etc.
  - Will go through phased approach. Things that need to be conducted now (time sensitive) or can be done safely (i.e. fieldwork with social distancing) will hopefully be approved first. Then try to, slowly, open up the lab safely. Hopefully over time MLML will continue to add on projects.

- MLML has been operating under SJSU, Santa Clara and Monterey County directives. Luckily both counties have had similar orders. There is still some questions that need to be resolved about which agency rules MLML students should follow. Still unclear in the future if CSUMB MLML students will operate under the SJSU rules, but currently, every MLML student is following SJSU rules.
  - James Lindholm (CSUMB): is every student at MLML required to follow SJSU policies? Or can they follow their home campus policies?
  - Michael Kaufman (Dean, SJSU): SJSU will decide who comes back into MLML because SJSU is the administrative campus. SJSU will approve anything that falls under the auspices of MLML (field work, boating, etc.) One of the challenges in the current consortium structure becomes obvious when things like this come up. If a CSUMB student at MLML works for the SJSU RF, which rules do they follow? A student could get caught in the middle of competing requirements, so to avoid confusion, it's easiest if all MLML students follow what SJSU says.
  - Andrew Lawson (CSUMB): agrees with Michael Kaufman, but it depends on where the research is being conducted. It doesn't matter where the student is registered, it matters where the research is being conducted. If a student is working at CSUMB, they are under CSUMB rules.
- Faculty changes: Nick Welschmeyer retired at the end of 2019. SJSU/MLML conducted a search and hired Dr. Sarah Smith, MLML alumnus, Bio Oce Lab 2009, currently employed at the Venter Institute. She will start in August 2021 as the new Biological Oceanographer.
- Visiting Scientist: Cheryl Logan (CSUMB) is finishing her tenure as VS.
  - Scott Shafer (SJSU) will start in the Fall. He's a physiologist and ecologist that does a lot of work on marine mammals.
  - VS for 21-22 is still up and the position is open. July 1<sup>st</sup> is closing date for that position

## Faculty Updates

*Ivano Aiello (MLML)*

- Spring 2020 we had 74 students in the MS program and 8 non-MS students.
  - 23.3 FTES from CSUMB, 7.7 FTES from SJSU (75% of FTE comes from CSUMB and 25% from SJSU)
  - Taught 8 classes
  - In March moved classes completely online. It was tough, but successful
  - 4 students graduated (one completely online) in Spring 2020
  - In Fall, 2019 8 students graduated. Thus a total of 12 students graduated in the 2019-2020 school year
- Scholarships: 27 students got scholarships
- Fall 2020: 91 applications and offered 36 students admission, 30 students accepted (19 SJSU and 10 CSUMB and 1 CSU East Bay)

- Fall 2020: 7 classes will be offered. Some will be in-person, some will be hybrid. This is possible because of MLML's small class size and MLML's large seminar room where students can be spaced out. Labs will be operated in sub-groups and other methods to ensure social distancing. Still waiting to see if this will be approved.
- There will be PPE and cleaning before and after classes.

### *Discussion*

- Michael Kaufman (SJSU, Dean CoS): as much as possible should be moved virtually, but MLML is uniquely set up to manage this plan for in-person classes. SJSU says that anyone that is able, work at home, and should telework so that other people that need the spaces can use them.
- James Lindholm (CSUMB): what % of the admitted students will actually show up? What proportion do we think will actually show up?
  - Ivano Aiello (MLML): Fewer than 30 will show up, but not sure
- Ron Coleman (CSU Sac): MLML draws people from a distance and MLML doesn't have great housing options so they need to decide what to tell students as soon as possible so that students can decide to move or not.
- Vincent del Casino (SJSU, Provost): density of staff at MLML will be an issue especially for shared offices. Virtual work will remain as an important part of CSU system. All classes will be turned into the CSU system and there's a conversation at the system level about in-person and hybrid courses.
- Michael Lee (CSU East Bay, Chair): is there any opportunity for incoming students to defer? On campus housing will be modified and this could mean that there's fewer residential opportunities for CSUMB and MLML students.
  - Ivano Aiello (MLML): students can reapply, but hadn't considered housing
  - Andrew Lawson (CSUMB): dorms will not be open at CSUMB (where 60% of students live). For graduate students, they should still be able to have space on East campus for MLML students as long as the classes are in-person. If the program is not face-to-face, they would not be eligible for on campus housing. Since the MLML program requires research which is in-person, MLML students are eligible for housing.
  - Michael Lee: would SJSU enrolled MLML students be able to get housing at CSUMB?
    - Andrew Lawson (CSUMB): not sure. CSUMB wanted to empty all housing so not sure if there will be housing for SJSU students, but any program that requires in-person attendance will be allowed to use CSUMB housing. So maybe.
    - Not sure what CSUMB is thinking about for East Campus housing. All East Campus housing is available for any student (normally it's upperclassmen and grad students). Typically has between 4000-5000 students living on campus.

- Jim Harvey (MLML): this is the largest incoming class in the last 30 years. All of the 30 students have accepted, but not sure how many students will actually come.

## **Marine Operations**

*Brian Ackerman (MLML)*

- Developing protocols to keep research safe once field operations are allowed to resume.
- Plan to start with state mandated research and slowly increase the amount of work and hopefully one day be able to do thesis cruises and class cruises.
- Created a protocol for using vessels and an online form that researchers can fill out.
- Developing a survey for students to find out what students need and how Marine Ops can facilitate ongoing research.
- The question about research in other places is also relevant for Marine Ops. If someone is conducting research in another state, do they follow MLML policies or that location's policies.
- UNOLS has COVID-19 protocols.
- New Vessel
  - Not much progress since last Gov Board meeting/COVID
  - Invited to speak at Sant Francis Yacht Club July 1 about the Ocean Planet Explorer 111 and SJSU/MLML. Jim Harvey and Emily Lane (Tower) are invited to join
- Del Mar Wharf
  - Met with MBARI (Mike Kelly). They have no collaborative interest at this time
  - Are collaboration efforts with other institutions including NPS, COAST, UCSC, USGS, etc.
  - Mixed use project: Fisheries, Public Access, MLML new vessel, guest berthing, loading and instrumentation
- Payment for all of this: all of the Marine Ops staff is writing grants. Going to apply for a DOT grant for port development for <\$10,000,000. Sent this out for bidding and two companies are putting together quotes.

## **Aquaculture Center**

*Scott Hamilton (MLML)*

- Exponential growth of research at aquaculture center
- Working to get approval to designate it as the Center for Aquaculture which would be able to serve the consortium and the whole CSU. It's at the Provost level right now.
- Industry partners on site: Monterey Abalone Company is still operating, MB Seaweeds is still operating. Business is slow for both.
- Projects currently happening: integrated culture of seaweeds and shellfish so growing them together to mitigate ocean acidification (working on a publication for that)
  - Ranching purple sea urchins. Bring them into aquaculture facility and fatten them up and sell them. Did this with aquaculture class. Led to NPR segment.



- Proposal has been sent to see if it can be profitable working with someone at the Middlebury Institute for International Studies, Monterey (MIIS).
- White abalone babies will be kept for 2 years and will then be outplanted into the wild. Several students will work on this
- Purple hinge rock scallops project to develop them as a new species for aquaculture
- What local species of seaweeds can we cultivate and use a feedstock to reduce methane production in livestock? Collected a bunch of local seaweed species and each will be screened to see which ones have good methane reduction potential when they're fed to cows
- Develop alternative feeds for two fish species. Replacing fish oils with the algae for feed to see if the fish will do well
- Culturing monkeyfaced eels to be used as sustainable alternative to unagi. They eat seaweed so will grow seaweed at lab and test the growth of eels. Will use new feeding mill.
- Ocean acidification and hypoxia studies. Testing the effects of these stressors on different species (4-5 students currently working on this)
- Proposals out
  - Develop new techniques to grow bull kelp in the center and test techniques to outplant them in the wild
  - Developing techniques for cultivating sea stars and outplant them into the wild
  - Feed mill. Someone from China was supposed to come and train staff how to use the feed mill, but delayed due to COVID 19
  - Understanding socio economics of aquaculture and some of the ecosystem services provided by aquaculture
  - Biofuel. How you can produce biogas from seaweeds
  - Another researcher (Maya de Vries, SJSU) is working on a proposal (for new faculty) to work at the MLML aquaculture center.
  - Sent in a pre-proposal for another project that was approved for a full proposal

### *Discussion*

- Mike Graham (MLML, Faculty)
  - President made an Executive Order to streamline the permitting process to make NOAA the head of all permitting for national aquaculture. Doesn't really open up CA right away, but having a national leader on permitting would be great.
  - Anticipate that funding will increase and MLML is well primed for funding. So we might see a lot more RFPs showing up related to aquaculture
- Michael Lee (Chair, CSU East Bay): Luke is the lead person on aquaculture development at the state level. Will be good for MLML
- Jim Harvey: Dr. Luke Gardner is a CA Sea Grant Aquaculture Specialist hired by UC San Diego and assigned to work onsite at MLML. MLML pays 25% of Luke Gardner's salary and CA Sea Grant pays 75% of his salary. MLML got involved in aquaculture



early on and clearly the work is blooming at MLML. Hopefully MLML will be an important player in the future because of our early.

## **Budget**

*Jim Harvey*

- Funding sources: for State funding most goes to salaries and benefits (80% of that budget goes to salaries and benefits). Some funding from consortium campuses and CSUMB gives \$50,000 per year. Then a variety of other small sources.
- State funding
  - \$3 million of the \$3.8 million goes to salaries
  - Not many administrative operating expenses.
  - Startup faculty money and money to SeaGrant extension agents. The money for office supplies and stuff is very small.
  - Instructional supplies is about \$52K. \$10K goes to diving. Enviro Health and Safety Officer has small budget (this may need to grow due to COVID 19). Facilities budget is \$140K. Library services \$110K from MLML and the same from MBARI to serve both institutions needs. IT \$34K
  - Budget may change in August due to COVID financial crisis if CSU budget is affected. Still waiting to see the financial impact to the lab. Tried to find places in state budget where they could cut funds if the state budget gets reduced
- SJSU Research Foundation F&A Return for Admin and Facilities
  - \$10-18 million in grants each year and some of this money is returned to MLML (average F&A for many years was between \$500,000-600,000 per year).
  - MLML grant activity has gone down a little bit over the years because we lost the Point Sur ship. The expenses needed by university have gone up. Combination has reduced the F&A returned to MLML dramatically (estimate for Oct 2020 is \$20,000, which is a dramatic change for MLML).
  - MLML is going to have to make difficult decisions for how to cut cost. Jim is going to work with Dean Kaufman to resolve this.
  - We hope that income will increase in the future and hopefully we'll get out of these dire straights.
- SJSU Tower Foundation
  - Philanthropic arm of SJSU
  - We get some money from the Tower Foundation. Total donations AY19-20 to MLML was \$160K.
  - MLML hopes to be much more active in the philanthropic world in the future. University Advancement at SJSU is going to do a campaign that may involve MLML in the fundraising. The wharf and research vessel at Marine Ops would be included but the focus is on building housing at MLML. The land is ready, just need the funds and permits to build the Academic Village
- The budget will probably have to be re-visited if the state budget gets modified

## **Annual Report AY 19-20**

*Jim Harvey*

- MLML is still considered a CSU affinity group and is required to submit an annual report to the CO via the SJSU President each year.
- MLML is waiting for approval of the AY18-19 report from SJSU. Once approved and submitted to the CO, the annual report will be posted to the MLML website and Gov Board will be notified

## **Outreach and Education - Open House**

*Jim Harvey*

- Largest fundraising event for grad students
- Students ran a crowdfunding campaign. Typically, students raise \$8000-\$12,000 from Open house events. This year raised \$23,000 on the crowdfunding campaign alone
- Next year will likely return to the normal public Open House

## **Closing Remarks – Jim’s Retirement**

*Jim Harvey*

- Will retire at the end of the year 2020
- Plan is that the search will begin in early Fall semester and hopefully conclude it before the end of semester
- Hope to have someone in place by January 1 2021. If not, an interim director would hold the space until a new director has been hired and is in place

*Discussion*

- Michael Lee (Chair, CSU East Bay): the Gov Board will have a role in the search for a new Director, but unclear what that role is
- Michael Kaufman (SJSU, Dean of CoS): the Gov Board will have a role
- Kudos to Jim Harvey for all of his work at MLML

## **Motion to adjourn**

Michael Lee

Meeting adjourned: at 12:38



**Governing Board Meeting**  
**29 May 2020**  
**Via ZOOM Video Conference**  
<https://sjsu.zoom.us/j/211934377>  
**PASSWORD: lab2020**

<b>10:00 am</b>	<b>CALL TO ORDER</b>
<b>Chair Michael Lee</b>	<p><b>ZOOM Protocols - How meeting will be moderated</b></p> <p><b>Introductions – Roll Call by moderator</b></p> <ul style="list-style-type: none"> <li>• Members, New Members and MLML Attendees</li> <li>• Update Consortium Campus Info in Directory via email to <a href="#">Kathleen Donahue</a></li> </ul> <p><b>Acceptance of Fall 2019 Minutes, currently in Draft</b></p>
<b>10:30 am</b>	<b>MEETING CONVENES</b>
	<b>ADMINISTRATIVE CAMPUS – IMPLEMENTATION TEAM UPDATE</b>
<b>Dean Michael Kaufman</b>	<ul style="list-style-type: none"> <li>• Summary of background, timeline of events</li> <li>• Implementation Team update</li> <li>• News or updates from consortium campuses?</li> </ul>
<b>11:15 am</b>	<b>VOTE</b>
<b>Michael Lee</b>	New Chair and Vice Chair
<b>11:30 am</b>	<b>DIRECTOR’S REPORT</b>
<b>Jim Harvey</b>	<p><b>MLML and COVID19</b></p> <p><b>Faculty</b></p> <ul style="list-style-type: none"> <li>• Professor Nick Welschmeyer, Biological Oceanography retired January 2020. He joined MLML in 1989 and served as main advisor to 24 alumni between 2001 –present. Nick’s research focused primarily on assessment of ballast water management and abatement of aquatic invasive species; this research has been conducted in collaboration with Cal Maritime Academy since 2010. <ul style="list-style-type: none"> <li>○ Nick will remain at MLML as an Emeritus and researcher</li> <li>○ MLML conducted a faculty recruitment for a new Biological</li> </ul> </li> </ul>

	<p>Oceanographer</p> <ul style="list-style-type: none"> <li>○ We are pleased to announce Dr. Sarah Smith as the new Biological Oceanographer at Moss Landing Marine Laboratories. Sarah will defer for 1 year and will plan to start the position in August 2021. Sarah completed her Master's degree at MLML in 2009, studying phytoplankton diversity in Elkhorn Slough. She received her PhD in 2014 from Scripps Institution of Oceanography, studying gene expression and carbon metabolism in diatoms with application to the development of algal biofuels. Since completing her PhD, Sarah has been a post-doc, Staff Scientist, and is currently an Assistant Professor at the J. Craig Venter Institute. Her current research uses a combination of comparative and functional genomics approaches to explore the evolution and molecular mechanisms of physiological regulation in diatoms. Insights from these studies will be used to inform our understanding of the evolution of diatoms and to guide efforts to bioengineer algae as a feedstock for aquaculture and for the cultivation of renewable bioproducts, such as sustainable biofuels.</li> </ul> <p><b><u>Visiting Scientist</u></b></p> <p><b>AY19-20</b></p> <ul style="list-style-type: none"> <li>● Dr. Cheryl Logan, Associate Professor in the School of Natural Sciences at CSU Monterey Bay is finishing her appointment as Visiting Scientist AY19-20.</li> <li>● Cheryl is a member of MLML's Adjunct Faculty and has been collaborating with MLML Faculty and advising students for several years.</li> </ul> <p><b>AY20-21</b></p> <ul style="list-style-type: none"> <li>● Dr. Scott Shaffer, Professor of Biology at SJSU will serve as MLML's visiting scientist during AY20-21. Scott is also an Adjunct Professor with UC Santa Cruz's Ocean Sciences Dept.</li> <li>● He teaches undergraduate courses in physiological ecology, morphology, conservation biology and spatial ecology.</li> <li>● Scott has a wealth of research experience involving field studies on seabirds and marine mammals in remote locations around the globe</li> </ul> <p><b>AY21-22</b></p> <ul style="list-style-type: none"> <li>● The position has been posted and advertised throughout the CSU and it is also in the packet. MLML has only received 2 applicants to date and both are outside the CSU. Please distribute to your campus colleagues so we can try and recruit a faculty member from a consortium campus. <b><u>Post closes 1 July 2020 but MLML may extend.</u></b></li> </ul> <p><b>AY22-23</b></p> <ul style="list-style-type: none"> <li>● The job post is scheduled to go up by the end of July 2020. We will send you a copy to distribute to your campus faculty. The job posting will close in July 2021.</li> </ul>
Ivano Aiello	<p><b><u>Graduate Program Report</u></b></p> <ul style="list-style-type: none"> <li>● FTES</li> </ul>

<p><b>Jim Harvey</b></p> <p><b>Capt. Brian Ackerman</b></p> <p><b>Professor Mike Graham</b></p> <p><b>Jim Harvey</b></p>	<ul style="list-style-type: none"> <li>• Course Schedule</li> <li>• Graduates</li> <li>• Scholarships</li> </ul> <p><b><u>Curriculum Committee</u></b></p> <ul style="list-style-type: none"> <li>• Online Courses</li> <li>• Adjustments and accommodations due to COVID 19</li> <li>• Dr. Max Grand, Chemical Oceanography, Fall 2020</li> <li>• Marine Ecology Fall 2020</li> <li>• Scientific Diving Fall 2020</li> </ul> <p><b><u>Research</u></b></p> <ul style="list-style-type: none"> <li>• Edwards Freeze Dryer</li> <li>• Multi-beam sensor</li> <li>• Research Faculty, Research Affiliate highlights</li> </ul> <p><b><u>Marine Operations</u></b></p> <ul style="list-style-type: none"> <li>• New research vessel and marine ops remodelling</li> <li>• Vessel use and COVID-19</li> </ul> <p><b><u>Aquaculture Center</u></b></p> <ul style="list-style-type: none"> <li>• The aquaculture program at MLML continues to grow exponentially research projects, collaborators and infrastructure.</li> </ul> <p><b><u>Budget Reports</u></b></p> <ul style="list-style-type: none"> <li>• State</li> <li>• SJSU Research Foundation</li> <li>• Tower Foundation</li> </ul> <p><b><u>Annual Report for AY18-19</u></b></p> <ul style="list-style-type: none"> <li>• The Chancellor's Office requires all affinity groups to write an annual report in October each year, signed and submitted by the administrative campus President. A draft of MLML's Annual Report for AY18-19 is currently being reviewed by SJSU.</li> <li>• The Annual report for AY19-20 will be started in July 2020. The report is typically due to the CO by the beginning of October of each year.</li> </ul> <p><b><u>MLML Outreach and Education</u></b></p> <ul style="list-style-type: none"> <li>• Open House 2020 was cancelled due to COVID 19 but the MLML Student Body/Open House Committee worked with SJSU to launch a crowdfunding campaign with the goal to raise \$15,000. They raised \$20,500!!</li> <li>• MLML-SJSU branding – a new logo id being designed using the well-known MLML Wave logo and imposing the SJSU logo in the middle.</li> </ul>
<p><b>12:00 PM</b></p>	<p><b>MEETING ADJOURNS</b></p>



**MLML Governing Board Meeting  
29 May 2020**

**DIRECTOR'S REPORT**

**GRADUATE PROGRAM**

**Enrollment**

**a. Headcount**

- 74 current students in M.S. program
- 8 non-M.S. students taking MLML classes this semester
  - 4 SJSU undergrads
  - 1 CSUMB undergrad
  - 2 CSUMB grad students
  - 1 Open University (CSUMB) student

**b. FTES**

- 31.1 total FTES Spring 2020, by campus as follows:

<i>Campus</i>	Total Students by Level			Total Units by Level		FTES	
	<i>Total (U)</i>	<i>Total (G)</i>	<i>Total Enroll</i>	<i>Total (U)</i>	<i>Total (G)</i>	<i>Total FTES</i>	<i>Campus FTE %</i>
East Bay	0	0	0	0	0	0.00	0.00%
Fresno	0	0	0	0	0	0.00	0.00%
Monterey	2	52	53	8	274	23.37	75.09%
Sacramento	0	0	0	0	0	0.00	0.00%
San Francisco	0	0	0	0	0	0.00	0.00%
San Jose	4	16	20	20	77	7.75	24.91%
Stanislaus	0	0	0	0	0	0.00	0.00%
	6	68	73	36	351	31.1166667	

**TOTALS**

U=Undergraduate; G=Graduate

MLML graduate students enrolled in zero-unit course are included in total enrollment and FTE

## Class Schedule – Spring 2020

Course		Units	Instructor(s)	Day	Time
MS 131/231	Marine Botany/Biology of Seaweeds	4	Mike Graham	M	9-5
MS 143	Chemical Oceanography	4	Max Grand	W	9-5
MS 180	Independent Study: Ocean Turbulence	2	Tom Connolly	n/a	n/a
MS 204	Sampling & Experimental Design	4	Gitte McDonald	T	9-5
MS 263	Data Analysis Techniques	4	Tom Connolly	T	9-5
MS 272	Subtidal Ecology	4	Hamilton/Steller/Kahn	Th	9-5
MS 274	Advanced Topics: Population Biology	4	Amanda Kahn	M	9-5
MS 285/274	Grad Seminar & Advanced Topics: Climate Change & Sci. Communication	4	Ivano Aiello	Th	1-5

## Graduates

### *Spring 2020*

- Sharon Hsu, Vertebrate Ecology  
*Using stable isotopes to determine foraging areas of leatherback sea turtles: limitations of the isotope tracking technique in the western Atlantic Ocean*
- Cynthia Michaud, Physical Oceanography  
*Effects of phytoplankton composition and biominerals on the episodic pulses of particulate organic carbon to abyssal depths*
- Miya Pavlock-McAuliffe, Physical Oceanography  
*Drivers of sub-seasonal to interannual shoreline change at sunset state beach in Monterey Bay, CA*
- Emily Pierce, Invertebrate Zoology and Molecular Ecology  
*Quantifying the emanation and decay of environmental DNA from three marine molluscs*



## **Fall 2019**

- Amanda Heidt, Invertebrate Zoology and Molecular Ecology  
*Spatial characterization of meiofaunal diversity along the California coasts and potential abiotic drivers*
- Elizabeth Ramsay, Phycology  
*Morphological variability within Dictyonema californica and Dictyonema reticulatum along a wave exposure gradient on the Monterey Peninsula*
- Brijonnay Madrigal, Vertebrate Ecology  
*Determining ecotype presence and the call repertoire of killer whales (Orcinus orca) from passive acoustic monitoring near Point Hope, Alaska in the Southeastern Chukchi Sea*
- Jessica Jang, Pacific Shark Research Center/Ichthyology *Reproductive strategies of the Big Skate (Beringa binoculata, Girard 1855) with evidence of multiple paternity*
- Alex Olson, Chemical Oceanography  
*The biogeochemical behavior and speciation of mercury in the sea surface microlayer: implications for transport to watersheds via fog*
- Laurel Lam, Fisheries and Conservation Biology/Ichthyology *Geographic and habitat-based variation in Lingcod (Ophiodon elongatus) demography and life history along the U.S. West Coast*
- Steve Cunningham, Phycology  
*Biological and Physical Consequences of Giant Kelp, M. Pyrifera, removals within a central CA kelp forest*
- Drew Burrier, Physical Oceanography  
*The internal wave dynamics of Barkley Submarine Canyon* 2020 MLML

## **SCHOLARSHIPS 2020**

*John H. Martin Scholarship (\$3000.)*

Emily Pierce, Invertebrate Zoology and Molecular Ecology

*Xiphias Martin Scholarship (\$500)*

Vivian Ton, Ichthyology

*James Nybakken Scholarship (\$2500.)*  
Felicia Miller, Invertebrate Zoology and Molecular Ecology

*Bill Watson Memorial Scholarship (\$2500.)*  
Sloane Lofy, Phycology

*Signe Lundstrum Memorial Scholarship (\$1000)*  
Hannah Bruzzio, Ichthyology

*Sonia Linnik Hamilton Marine Science Scholarship (\$1000.)*  
Katie Neylan, Aquaculture/Ichthyology

*Simpkins Family Marine Science Scholarships (\$1000.-\$2000.)*  
Annie Bodel, Geological Oceanography  
Matt Elliott, Phycology  
Vivian Ton, Ichthyology  
Lauren Cooley, Vertebrate Ecology

*Loury Family Marine Science Outreach Scholarship (\$1000.)*  
Greg Bongey, Geological Oceanography

*MLML Student Body Scholar Awards (\$2000. ea.)*  
Amanda Camarato, Physical Oceanography  
Lauren Parker, Ichthyology

*MLML Student Body Wave Awards (\$500.- \$900. each)*  
Bennett Bugbee, Phycology  
Sierra Fullmer, Vertebrate Ecology  
Gammon Koval, Ichthyology  
Matt Hoehn, Aquaculture/Ichthyology  
Rachel Aitchison, Pacific Shark Research Center/Ichthyology  
Kinsey Matthews, Fisheries and Conservation Biology/Ichthyology  
Mina Sattari, Phycology  
Caroline Rodriguez, Invertebrate Zoology  
Shawn Hannah, Vertebrate Ecology  
Katie Cieri, Fisheries and Conservation Biology/Ichthyology  
Helaina Lindsey, Ichthyology  
Shelby Penn, Phycology  
Sophie Bernstein, Ichthyology  
Holly Doerr, Ichthyology

## Admissions 2020

- 91 applications received
- 36 offers of admissions made
- 30 confirmed incoming M.S. students for Fall 2020
  - 19 SJSU
  - 10 CSUMB
  - 1 CSU East Bay

## FACULTY

**Dr. Ivano Aiello, Professor, Geological Oceanography:** Dr. Aiello and colleagues from Aix-Marseille Université & Universität Bremen published their research about the phenomena of 'suspended' seafloors through the journal of Deep Sea Research Part II: Topical Studies in Oceanography, "*Anatomy of a 'suspended' seafloor in the dense brine waters of the deep hypersaline Urania Basin*". He also received donations and State funding to expand capabilities his seafloor mapping instrumentation.

**Dr. Greg Cailliet, Professor Emeritus, Ichthyology:** continues to serve as a Trustee (and now President) of the Myers Oceanographic Trust, which provides grants to graduate students at MLML and other Monterey Bay area research and educational institutions.

**Dr. Tom Connolly, Assistant Professor, Physical Oceanography:** Co-authored a paper with Dr. Anthony R. Kricinch of [Woods Hole Oceanographic Institution \(WHOI\)](#) published in the *Journal of Geophysical Research: Oceans*. They found that drastic variations in water temperatures occurred often and within short distances along Martha's Vineyard coastline which were caused by several influences, such as bathymetry. In terms of data collection, this information is valuable to scientists because it demonstrates the need to take temperature readings at multiple locations within the study area.

**Dr. Scott Hamilton, Professor, Ichthyology:** Received two CA SeaGrant awards for new research to support sustainable aquaculture and resilient coastal communities. One was awarded to his student Katherine Neylan "[Evaluating microalgae supplemented feeds for sablefish nutrition and growth](#)" and the second for the "[Development of techniques for the cultivation of monkeyface pricklebacks as a sustainable alternative to unagi](#)".

**Dr. Amanda Kahn, Assistant Professor, Invertebrate Zoology:** Returned from a successful research cruise on MBARI's *R/V Western Flyer* to observe deep-sea sponge and coral grounds at Sur Ridge and octopus brooding grounds at Davidson Seamount. She also published a paper in *Deep-Sea Research Part II*, which mined 30 years of time-lapse camera imagery to describe several behaviors of sponges and cnidarians on the abyssal plain. Her research cruise was

broadcast live and featured on CNN, BBC and NBC's Today Show with footage of her now famous "Octopus' Garden".

**Dr. Gitte McDonald, Assistant Professor, Vertebrate Ecology:** Published a new paper In *NATURE: Climate Change*. This study uses biologging data from crabeater seals to project future shifts in their foraging habitat in the rapidly changing western Antarctic Peninsula.

**Dr. Nick Welschmeyer, Professor (retired), Biological Oceanography:** SJSU/MLML's biological oceanographer, Dr. Nick Welschmeyer, weighs in on the 'best available science' for rendering non-viable organisms for use by ballast water treatment protocols. Dr. Welschmeyer's lab utilizes techniques/instrumentation fundamental to the understanding of growth and physiology of marine plankton.

## **RESEARCH FACULTY AND AFFILIATES**

**Dr. Dustin Carroll, Physical Oceanography, Jet Propulsion Laboratory:** In *Geophysical Research Letters*, Dr. Dustin Carroll co-authored the article "*Distinct Frontal Ablation Processes Drive Heterogeneous Submarine Terminus Morphology*". Using ship-based observations in Greenland fjords, Dr. Carroll and his collaborators mapped the subsurface, three dimensional face of a glacier to better understand how they melt from warming ocean waters. He also continues his research that seeks to better understand the interactions between melting glaciers and marine ecosystems. Dr. Carroll co-authored a recent study, published in *Nature Communications*, examining glacier samples from around the world. Years ago, former MLML Director, Dr. John Martin, made the remarkable discovery that the element, iron, can stimulate phytoplankton production. In the recent study, Dr. Carroll and colleagues examine iron content and its distribution within glaciers so as to better understand the manner in which iron fertilizes the polar regions for phytoplankton growth.

**Dr. Colleen Durkin, Biological Oceanographer:** Selected for a CSU COAST grant development award "*Ecological mechanisms of carbon export in the California Current resolved by a fleet of autonomous imaging robots*". Two articles published in *Deep Sea Research II* that each use new approaches to identify the biological contents of sinking particles that are responsible for deep ocean carbon sequestration.

**Dr. Diana Steller, MLML Scientific Diving Safety Officer and Phycologist:** Is conducting CA Sea Grant funded research on '*Assessing the disturbance impacts of boat mooring on the rhodolith beds of Catalina Island*'. This research is a collaborative grant between MLML and the SDSU.

**Dr. Alison Stimpert, Vertebrate Ecologist and Bioacoustics:** Co-authored an exciting new paper in the journal of [Science](#). The study synthesizes a decade of cetacean tagging research. This study found that whales' large bodies help them consume their prey at high efficiencies, but their gigantism is limited by prey availability and foraging efficiency. She also published a paper about noise produced by scientific equipment during fisheries surveys so as to better understand how this noise affected the general soundscape of a rockfish habitat in *The Journal of the Acoustical Society of America*.

**Central Coast Wetland Group (CCWG):** Working with the City of Santa Cruz to complete a plan for climate hazards along the famous West Cliff Dr. CCWG received the "Climate Ready Grant" from the CA Coastal Conservancy which is funding the Salinas River State Beach Dune Restoration Project aimed at reducing erosion caused by rising sea levels. CCWG is working with the North Monterey County School District on the North Monterey County Amphibean Habitat Enhancement Project and received funding through USEPA Region 9 to conduct wetland monitoring and assessments. CCWG continues their efforts to monitor nutrients in agriculture run off. A 12-channel, 10,000 sq. foot bioreactor was built and installed in Castroville Slough.

## MARINE OPERATIONS

*COVID 19 required shut down since 17 March.*

- Crew tasked with grant research, development of training tools and mitigation procedures for safe working conditions which align with SJSU, State and County mandates.
- Captains designated as "Essential Personnel" and maintaining boats and facilities.

R/V John H Martin

- Supported commercial diving operations to repair the sea water intake (76.5 hrs).
- Cities of Watsonville/Marina State required Sea Water surface sampling (8 hrs).
- Cal-Am CTD for Desal monitoring (3.75 hrs).
- UW Bottom Trawling for Midshipmen (10 hrs).
- MLML Subtidal Diving (7.5 hrs).

Small Boats

- 73.8 hrs total hours, 7 hrs billable to MBARI (Lobo Maintenance).

R/V Sheila B

- has been out of the water for engine repairs.

## **Marine Ops YTD 2020 Summary**

	Operating Costs	Salary & Benefits	Revenue	MORA	Balance
<b>John H Martin</b>	\$43,587	\$10,673	\$7,069	-\$48,907	-\$74,752
<b>Sheila B</b>	\$10,585	\$2,460	\$0	\$2,000	-\$6,125
<b>RHIB</b>	\$2,836	\$2,213	\$0	\$1,000	\$377
<b>Mar Ops</b>	\$40,985	\$30,580	\$0	\$0	-\$10,405
<b>Tombolo</b>	\$15,478	\$0	\$17,738	\$0	\$2,260
<b>Small Boats</b>	\$2,682	\$1,473	\$385	-\$800	-\$1,624
<b>Total</b>	\$116,153	\$47,399	\$25,192	-\$46,707	-\$137,668
<b>Total - S&amp;B</b>					-\$90,269

## MEDIA AND OUTREACH

**OPEN HOUSE 2020/STUDENT BODY FUNDRAISER:** Because MLML's annual Open House was cancelled due to COVID19, the Student Body worked with SJSU University Advancement to launch a crowdfunding campaign with a goal to raise \$15,000. In concert with the crowdfunding, MLML also held a "Virtual Open House" on social media which garnered up to 800 views of past Open House videos, puppet shows and tours of MLML labs. The end total raised was \$22,835!

**MONTEREY HERALD/SANTA CRUZ SENTINEL (May 26, 2020):** *"Is the pandemic giving aquaculture a jump start?"* The SJSU/MLML Aquaculture Facility was featured in the latest issue of the [Monterey Herald](#) and the Santa Cruz Sentinel. Drs. Mike Graham and Luke Gardner were interviewed regarding the future of aquaculture and the impacts of Covid-19 on the industry. The MLML Aquaculture Facility aims to develop novel technologies for enhancing the sustainability and productivity of current aquaculture practices through research, education, and policy initiatives.

**NOAA News-Featured Story (May 18, 2020):** Captain John Douglas, MLML Marine Operations and NOAA Whale Entanglement Responder served on trained response team to free a humpback whale in Monterey Bay. It had become so severely entangled and weighed down by commercial dungeness crab fishing gear that it could not move. "It was anchored in place," said Justin Viezbicke, California Marine Mammal Stranding Response Coordinator for NOAA Fisheries' West Coast Region. "We were fortunate to have an experienced team that could respond so quickly. They deserve a lot of credit for sticking with it for three days and safely freeing the whale."

**NBC – BAY AREA (May 2020):** MLML's Sea Otter Savvy Program Manager, Gena Bentall was interviewed about how the Covid-19 pandemic is affecting our local wildlife, the need to prevent wildlife disturbance and sea otter conservation.

**TERRA X (April 2020):** German nature show, [Terra X](#) selected MLML for their episode on *"Kelp – What super algae can do"*. Phycology student, Ann Bishop and researchers from MLML's Central Coast Wetland Group taught viewers about bull kelp, the kelp canopy, the kelp forest ecosystem and the importance of kelp habitats to ocean health.

**NATURE (March 2020):** *"30 Years of The Iron Hypothesis of Ice Ages"* featured the research by MLML's former Director and Oceanographer, Dr. John Martin. He revolutionized oceanographic research in the 1980's, when he proposed that iron added to regions of the ocean that are otherwise rich in nutrients but poor in chlorophyll (so-called high-nutrient, low-chlorophyll, or HNLC, regions) can stimulate the growth of phytoplankton. This discovery is considered one of the most significant oceanographic discoveries in the past 50 years. Thanks to Martin's iron hypothesis, scientists now know iron supply to the oceans was a key factor controlling climate over many glacial, interglacial cycles. *"With half a ship load of iron...I could give you an ice age"* (John Martin, 1988).

**NATURE (March 2020):** Faculty member, Dr. Gitte McDonald's research contributed to this massive study which tracked marine predators to protect Southern Ocean ecosystems: *"10 years of work, 17 species, and 40,000 tracks later...using tracking data to identify biodiversity hot spots in the Southern Ocean"*.

**CNN/BBC/NBC Today Show:** Dr. Amanda Kahn, Assistant Professor, Invertebrate Ecology was featured in segments about her research cruise aboard MBARI's R/V *Western Flyer* and discovery of the *"Octopus' Garden"*. Viewers were treated to her excitement and amazing footage of the seafloor covered in purple octopus.

**SANTA CRUZ SENTINEL:** Ross Clark, Program Manager for the Central Coast Wetland Group at MLML continues his column *Earth Matters* covering topics such as marine science education resources for K-12 during COVID19, local conservation and marine science research throughout the Monterey Bay area.

**ASK-A-SCIENTIST:** Alumnus, Dr. Lisa Natanson was featured on this popular, educational program talking about her vast shark research experience with Atlantic White Shark Conservancy.

## **FINANCIAL REPORTS**

- 1. SJSU-College of Science-MLML General Fund**
- 2. SJSU Research Foundation-MLML F&A Return Overhead**
- 3. SJSU Tower Foundation-MLML Fundraising/Donations**
- 4. MLML Space Rental Revenue (SJSU Misc Trust Acct)**



## MLML State Budget FY 19/20 &amp; FY 20/21 Proposed

		<i>FY 19/20</i>	<i>Actuals as of</i>	<i>Projected</i>	<i>FY 20/21</i>
		<i>Budget</i>	<i>4/30/2020</i>	<i>Year End</i>	<i>Proposed</i>
			<sup>10</sup>		<i>Budget</i>
<b>REVENUE</b>	Salary	2,065,164 <sup>12</sup>	1,796,314	2,080,058	2,080,058
	Benefits	976,490	902,721	976,490	976,490
	<sup>9</sup> OE&E	228,743 <sup>13</sup>	228,743	228,743	228,473
	Utilities	280,900	233,636	310,775	310,775
	<sup>2</sup> Salary Recovery / Reimbursement	(25,407)	(38,216)	(38,216)	-
	Benefits Reimbursement	-18,135	(28,393)	(28,393)	-
	Visiting Scientist Support	21,425	-	21,425	21,425
	Other Reimbursement/Support	37,880	42,000	42,000	12,000
	CSUMB Contribution	50,000	50,000	50,000	50,000
	Prior Year Balance Forward	163,107	123,403	123,403	39,854 <sup>16</sup>
	<sup>1</sup> Roll-Forward Encumbrances		32,087	36,649	
<b>TOTAL REVENUE</b>		<b>\$ 3,780,167</b>	<b>\$ 3,342,295</b>	<b>\$ 3,802,935</b>	<b>\$ 3,719,075</b>
<b>SALARIES (Salary \$)</b>					
	<sup>3</sup> Faculty	922,320	745,555	890,054	933,829
	<sup>4</sup> Staff	925,944	784,316	934,492	901,044
	<sup>5</sup> Temporary Faculty	-	8,669	8,669	-
<b>SALARIES (OE&amp;E)</b>					
	<sup>6</sup> Visiting Scientist	30,000	26,807	30,311	30,000
	<sup>7</sup> Graduate Assistants	63,700	58,802	70,418	71,123
	<sup>8</sup> Student Assistants	123,200	133,949	147,345	147,345
<b>BENEFITS</b>		976,490	874,348	976,490	976,490
<b>TOTAL SALARIES &amp; BENEFITS</b>		<b>\$ 3,041,654</b>	<b>\$ 2,632,446</b>	<b>\$ 3,057,779</b>	<b>\$ 3,059,831</b>
<b>OPERATING EXPENSES</b>					
	<i>ADMINISTRATION</i>				
	Taxes / Liability Premiums	1,400	836	836	1,400
	Office Supplies	5,000	2,616	2,616	5,000
	Copiers & Maintenance	8,000	7,309	7,609	8,000
	Furniture/Equipment	4,500	3,252	3,252	4,500
	Postage / Postage Meter Rental	1,605	1,267	2,017	1,605
	Telecommunications	6,000	5,400	5,400	6,000
	Memberships	5,400	5,880	5,880	5,880
	Faculty / Staff Recruitment	15,000	9,841	9,841	15,000
	Startup Funds	22,000	20,424	20,424	-
	SeaGrant Position Reimb. (25%)	27,000	22,418	27,000	27,000
	Travel / Training	4,000	2,432	2,432	4,000
	Miscellaneous	2,500	629	629	2,500
	Reimbursable Grant/Award Exp.		16,163	16,163	
	Roll-Forward Expenses	-	7,436	7,436	

<b>TOTAL ADMINISTRATIVE EXPENSES</b>	<b>\$ 102,405</b>	<b>\$ 105,901</b>	<b>\$ 111,533</b>	<b>\$ 80,885</b>
<i>INSTRUCTIONAL SUPPLIES</i>				
Equipment/Services	18,000	47,794	47,993	18,000
Aquarium Room Refresh	1,000	-	-	1,000
Class Materials & Supplies	8,000	3,148	3,148	8,000
Baja/Chile Course	5,000	-	-	5,000
Miscellaneous	1,000	797	797	1,000
Roll-Forward Expenses	-	836	836	
<b>TOTAL INSTRUCTIONAL SUPPLIES</b>	<b>\$ 33,000</b>	<b>\$ 52,576</b>	<b>\$ 52,775</b>	<b>\$ 33,000</b>
				<i>FY 19/20</i>
	<i>FY 19/20</i>	<i>Actuals as of</i>	<i>Projected</i>	<i>Proposed</i>
	<i>Budget</i>	<i>3/31/2019</i>	<i>Year End</i>	<i>Budget</i>
<i>MARINE SCIENCE DIVING</i>				
Supplies & Repairs	10,000	8,305	10,000	10,000
Roll-Forward Expenses		-	-	
<b>TOTAL MAR. SCI. DIVING EXPENSES</b>	<b>\$ 10,000</b>	<b>\$ 8,305</b>	<b>\$ 10,000</b>	<b>\$ 10,000</b>
<i>ENVIRONMENTAL HEALTH &amp; SAFETY</i>				
Supplies & Permitting	8,600	3,821	5,018	8,600
Museum	1,500	1,393	1,500	1,500
Roll-Forward Expenses	-	-	-	
<b>TOTAL EHS EXPENSES</b>	<b>\$ 10,100</b>	<b>\$ 5,214</b>	<b>\$ 6,518</b>	<b>\$ 10,100</b>
<i>FACILITIES</i>				
Janitorial Services & Supplies	33,425	27,178	28,236	33,425
Landscaping / Restoration	5,040	1,680	1,680	5,040
Vehicle Maintenance & Repair	7,000	2,607	3,000	7,000
Gasoline Charges	8,000	6,234	6,434	8,000
Marine Operations	3,000	3,773	3,773	3,000
Proposed Facility Projects	20,000	10,969	12,000	20,000
Scheduled Maintenance & Repair	10,000	4,212	5,162	10,000
General Supplies & Repairs	34,750	23,889	25,000	34,750
Seawater System	21,000	25,213	26,000	21,000
Roll-Forward Expenses		10,085	10,085	
<b>TOTAL FACILITIES EXPENSES</b>	<b>\$ 142,215</b>	<b>\$ 115,841</b>	<b>\$ 121,370</b>	<b>\$ 142,215</b>
<i>UTILITIES</i>				
Electricity	203,000	188,366	226,039	226,039
Gas	48,600	44,010	52,812	52,812
Water	5,700	4,411	5,293	5,293
Sewage	7,300	6,279	7,534	7,534
Trash	16,300	15,914	19,097	19,097
<b>TOTAL UTILITY EXPENSES</b>	<b>\$ 280,900</b>	<b>\$ 258,979</b>	<b>\$ 310,775</b>	<b>\$ 310,775</b>
<i>LIBRARY</i>				
Books/ILL/Supplies	17,000	13,642	15,591	17,000
Periodicals	92,220	75,432	86,208	92,220
Roll-Forward Expenses		13,729	13,729	

<b>TOTAL LIBRARY EXPENSES</b>	<b>\$ 109,220</b>	<b>\$ 102,803</b>	<b>\$ 115,528</b>	<b>\$ 109,220</b>
<i>NETWORK</i>				
Hardware	17,000	7,336	13,236	17,000
Software/Training/Misc.	16,300	2,019	2,307	16,300
Roll-Forward Expenses	-			- <sup>11</sup>
<b>TOTAL NETWORK EXPENSES</b>	<b>\$ 33,300</b>	<b>\$ 9,355</b>	<b>\$ 15,543</b>	<b>\$ 33,300</b>
<b>TOTAL OPERATING EXPENSES</b>	<b>\$ 721,140</b>	<b>\$ 658,974</b>	<b>\$ 744,041</b>	<b>\$ 729,495</b>
<b>TOTAL EXPENSES</b>	3,762,794	3,291,420	3,801,821	3,789,326
<b>TOTAL REVENUE</b>	3,780,167	3,342,295	3,802,935	3,719,075
<b>CASH FLOW BALANCE</b>	17,373	50,875	1,114	(70,251)
<b>ADJUSTED BALANCE</b>	<b>\$ 17,373</b>	<b>\$ 50,875</b>	<sup>13</sup> <b>\$ 1,114</b>	<b>\$ (70,251)</b>

**Notes:**

- <sup>1</sup> Open encumbrances from previous fiscal year are rolled forward into the next year's budget
- <sup>2</sup> Faculty buyout
- <sup>3</sup> Faculty = 10
- <sup>4</sup> Staff = 10 (1 position covered 30% by CoS)
- <sup>5</sup> Temporary Faculty: AY 2019 (1 position 75% covered by SeaGrant), Fall 2019 = 2, Spring 2019 = 1
- <sup>6</sup> OE&E Salaries - MLML pays salaries and all benefits
- <sup>7</sup> Graduate Assistants: AY 2019 , Fall 2019 = 7, Spring 2020 = 5
- <sup>8</sup> Student Assistants: AY 2019, Summer 2019 = 14, Fall 2019 = 17, Spring 2020 = 14
- <sup>9</sup> Includes State Support OE&E budget and \$50K from Provost
- <sup>10</sup> Actual expenses only, no blanket encumbrances
- <sup>11</sup> Expenses on rolled encumbrances from the previous fiscal year
- <sup>12</sup> Salary budget based on estimated totals for FY 19/20; salary monies are now centrally held, so any salary savings are eliminated.
- <sup>13</sup> OE&E reduced to cover salaries that do not have regular salary lines (SA, GA, TF)
- <sup>14</sup> Faculty buyout now held centrally, can only be used as credit to hire TF replacements
- <sup>15</sup> MLML reimburses UC San Diego for 25% of salary and benefits for SeaGrant Aquaculture position
- <sup>16</sup> Balance from MLML's Cost Recovery Fund, currently being held centrally until FY 20-21

**FY 19/20 Projects**

TBD	9,000
New Invert Lab fixtures	7,500
Flume & Fish Food Mill installation expenses	3,500
<b>TOTAL</b>	<b>\$ 20,000</b>

**FY 20/21 Projects**

TBD	20,000
Shore Lab seawater line	
<b>TOTAL</b>	<b>\$ 20,000</b>

## MLML Operating Budget: SJSU Research Foundation: FY19-20 and FY20-21

*Includes MLML Operations, Norte, Del Mar, Sandholdt, Firehouse and Shore Lab*

REVENUE	FY 2019-2020 ESTIMATED	FY 2020-2021 PLANNED
Carryover From Prior FY	(262,590)	(450,000) <i>estimate</i>
Other Income Estimated - Cost Center Revenue	335	335
Rental Income (Del Mar, Sandholdt Center)	127,000	127,000
F&A Return <i>(Less 10% to PI's, Res 198, Reserve)</i>	68,836	20,342
SJSURF Admin and Facility Supplement	190,000	190,000
<b>Revenue</b>	<b>123,581</b>	<b>(112,323)</b>
<b>Operating Budget:</b>	<b>612,694</b>	<b>572,944</b>
<b>Projected Year End Balance:</b>	<b>-489,113</b>	<b>-685,267</b>

OPERATING EXPENSES AY19-20	FY 2019-2020 PLANNED	FY 2019-2020 SPENT TO DATE	FY 2020-2021 PLANNED
Salaries, Wages and Benefits	406,094	329,668	406,094
Administrative Costs - primarily insurance	35,000	35,512	34,850
Information Technology	20,000	26,913	20,000
Supplies and Equipment	15,000	2,176	10,000
Services & Facility Costs	84,600	65,120	51,000
Construction, Maintenance and Repairs	34,000	17,005	34,000
Diving Costs	3,000	1,696	2,000
Small Boat Support	15,000	15,000	15,000
<b>Operating Costs:</b>	<b>612,694</b>	<b>493,090</b>	<b>572,944</b>

RESERVE	FY 2019-2020	FY 2020-2021
Balance Reserve Account	563,513	563,513

REFINANCING ACCOUNT	FY 2019-2020	FY 2020-2021
Balance Refinancing Account	(2,969,142)	(2,969,142)

Dean Kaufman and Director Jim Harvey are working on a financial plan to address MLML's current F&A Return budget issues.

## DONATIONS (SJSU TOWER FOUNDATION)

<b>MLML General Fund</b>	<b>77,840</b>
<i>50th Anniversary Book Donations</i>	<i>7,693</i>
<i>Simpkins Endowment</i>	<i>18,865</i>
<i>Library Upgrade Donations</i>	<i>3,403</i>
<b>TOTAL DONATIONS OBLIGATED:</b>	<b>29,961</b>
<b>Balance Available for General Use:</b>	<b>47,879</b>
<b>Friends of MLML Tours</b>	<b>503</b>
<b>Store</b>	<b>3,685</b>
<b>Total MLML Donations To Date</b>	<b>163,294</b>

## CLASSROOM AND SPACE RENTAL REVENUE AY19-20

Seminar Room and Classroom Rental Revenue **\$4,062**

SJSU-University of Alaska Fairbanks Space Use Agreement **\$26,880**