## ASsquare_logo.tif Coastal Fund Agenda

## Associated Students

Tuesday, 4/23/19, Nati Conference Room

**CALL TO ORDER 6:03**) by Lauren, minutes recorded by Emily and Rebecca

1. **ATTENDANCE**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Note:**absent (excused/not excused)arrived late (time)departed early (time) | **Name** | **Note:**absent (excused/not excused)arrived late (time)departed early (time) |
| **Lauren Enright****Chair** | **Present** | **Jem Unger Hicks****Outreach Coordinator** | **Present** |
| **Jeremy Francoeur** **Vice-Chair** | **Present** | **An Nguyen****Outreach Coordinator** | **Present** |
| **Kate Mcleod****Undergraduate Rep** | **Present** | **Sarah Siedschlag****Advisor** | **Present** |
| **Cyrus Kayhan****Undergraduate Rep** | **Present** | **Rebecca Nishide****Administrative Assist** | **Present** |
| **Juliette Verstaen****Graduate Student Rep** | **Present** | **Emily Orr****Administrative Assist** | **Present** |
| **Alana Ayasse****Graduate Student Rep** | **Present** | **Alex Funk****Senate Liaison** |  |
|  |  | **Alli Adam****Senate Liaison** |  |

1. **COMMITTEE BUSINESS**
2. **Approval of Attendance and Proxies**

*MOTION/SECOND: Lauren/Alana*

*Motion language: Motion to approve attendance and proxies*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **Approval of Minutes**

*MOTION/SECOND: Lauren/Jeremy*

*Motion language: Motion to approve minutes*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **PUBLIC FORUM**
* Bren defense presentations at Hilton on Friday, poster session after
* IV Earth Day Saturday at park
1. **REPORTS**
	* **Advisor Report: Siedschlag**
* Vote
	+ **Chair Report: Enright**
* Cookies and strawberries
	+ **Senate Report: Funk & Adam**
* NA
	+ **Administrative Report: Nishide**
* late grant complication
	+ we received monday, they sent it friday
	+ should we accept it, or ask her to reapply as minor grant?
		- Alana: apply as minor grant
	+ **Coastal Service Program Report: Orr**
* made too much ham
	+ **Outreach and Education Report: Unger Hicks & Nguyen**
* Tabling Saturday at earth day
* meant with MAPAS last night: went well
	+ offering a lot this quarter and growing rapidly
* working on gala stuff, grantees wanting to submit posters and displays
	+ currently have 11 grantee showcases, not all just posters
	+ **Sub-Committee Reports**
* NRS Grant
	+ did not previously have field component
	+ are not in field sciences; not doing this work regularly
	+ App due Friday week 6 quarter before class is taught
	+ vote week 8
	+ summer: fall classes, apps due august 1st and decisions made through email
	+ launch, fall 2019 and first award would be winter 2020
	+ Meeting: Thursday (4/25) at 10 am
		- by then, should have budget and updated application
* Long term funding
	+ would have to be by invitation, and we would have criteria for invitation
		- continuing board and subcommittee would be required
	+ would happen on rolling basis, 1-2 per quarter, advertise quarter before, could present week 2 and have apps due by week 1
	+ probably be good for three years, would have to send them money once a year
	+ annual check in due to board turnover
	+ however, lots of details to figure out funding structure
		- Alana: says to look into last 3 years and figure out how much we give an org for three years, go through budgets and GMS to figure out who to invite
	+ Rebecca: good idea because it would help to alleviate stress on rest of quarter
	+ would redistribute our money in a way so that new grants have more of a chance
	+ someone would need to work on the budget analysis and figure out how attainable this would be
	+ Sarah: allows potential for more major grants, would allow for us to expand program, gives us more predictably in our budget from quarter to quarter
	+ important for annual check ins
	+ invite 2-3 apply per quarter and stagger, but would disperse money for the group once a meeting
	+ needs to be headed up by someone, hopefully someone who will be here for a couple quarters
	+ need to think of rules for what we can give them, and what conditions they can apply for other money for (minor grants, etc)
	+ 3 years is arbitrary! We could fund two years, allow them to choose, etc.
	+ how specific do we want their budget to be?
		- way to alleviate “sticker shock”
	+ we need to have an eligibility requirement to why certain orgs get bigger chunks of money
		- not random to who we invite
	+ does create more work for the board
1. **AGENDA**
2. **Approval of Agenda/Additions to Agenda**

*MOTION/SECOND: Lauren/Juliette*

*Motion language: Motion to approve agenda and additions to the agenda*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **OLD BUSINESS**
2. **(item)**

*MOTION/SECOND: (name)/(name)*

*Motion language:*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **NEW BUSINESS**
2. **WIN 19-20 Reallocation Request**

*MOTION/SECOND: Lauren/Alana*

*Motion language: Motion to approve Winter 19-20 Reallocation Request*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **SPR 18-07 Extension Request**

*MOTION/SECOND: Alana/Juliette*

*Motion language: Motion to approve an extension request for Spring 18-07*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

* seems fine, out of their control
* Lauren: abstains, hired her roommate after we passed it
1. **DISCUSSION**
	* (first item)
2. **PROJECT REVIEW**

Project Title: SPR 19-04 Coastal Zone debris flow hazard of Montecito and Santa Barbara

Sponsoring Organization: Environmental Studies

Presenter Name: Edward Keller/ Vivian Stopple

Summary:

Presentation Notes:

* 3 grad students currently
	+ 2 pHDs one masters, from debris flow in Montecito
* Gave about 15 talks around town
* First paper on debris flow came out today
* Brought in flip chart showing the debris flow patterns
	+ Understand where debis ended up, generation of flow
	+ Ended up at ocean and spread out a lot; fan pattern
	+ Lot more uncertainty by ocean than at top of flow
	+ Last year; did not go into creek, went down by casino
		- Creek flowed there a while ago
* Initially avoided studying interface at ocean
	+ Wanted to work way down
	+ Huge hazard related to fan changing
	+ Can’t have resiliency for hazards if we don’t understand
* Does not get along with county; they were trying to tell people we were gonna have huge debris flows every time it rains
	+ These big events are really are in reality
	+ Lots of undergrads on this project, 10-15, like working in the field, has gotten money from the university
* NSF Rapid Grant after event for about 20k, ran out pretty quick
* Applied to us this year because they are now down on the beach, which they have not studied previously
* Huge boulders in surf by casino; not sure which debris flow they are from
	+ Penultimate event; most recent to last one
	+ Just started studying it; earthquake and debris flow history
	+ Huge chumash village right on top of debris flow and tons of history
* Radiocarbon dates on mitten and debris flow deposits, boulder deposits, muddy tail
	+ Debris flow leaves muddy tail; laminar flow
	+ Expect to be able to date three levels
* Chandler working on boulders
	+ Measure weathering rinds; oxidized outer layer
	+ Goes from 1-2 mm, 3-6 mm, and 3-20 cm depending on years to find the penultimate event was
	+ Needs to go to the other creeks still
* Biggest debris flows go to the ocean
	+ Smaller ones go to fans
	+ 3-4 made it to the ocean; has to be really big
* Social scientists continuing to interview people
	+ Money from montecito resilience to pay for social study
	+ Got 700 back, Sarah Anderson now analyzing that
	+ Some personal interviews; 2-3 hours at a time from survivors
* Work to plan with architects, ect
* Continuing outreach, second objective
	+ Over 15 talks last year
	+ Writing for SB independent
	+ Talking to new people
* Fire and debris flow is mixed
* In terms of flux
* Use the money to mostly hire undergrads
* Some for radiocarbon date; pretty cheap now
	+ Lab at UCI is about $70-100 for each date

Board Questions:

* How do you get the samples?
	+ Look for them/charcoal
	+ Cosmogenic dating: Be10/Ne21 bombards earth all the time
		- Sample accumulation and ratio, explain flux
	+ Talked about MIS/sea level history
	+ Just want some dates and undergrad money
* Drafting figures budget line?
	+ Drawing not his thing; give rough drawing, generate publication schematic
		- Does not think grad students should not have to waste their time drawing/programming if they do not want to
* Who else is doing it?
	+ Paul dunne doing physics of flow
	+ Professor hunter in education; helping with questionnaire
	+ 5 social scientists, 5-6 physical scientists
	+ Want to get it done in about two years so it stays relevant; has been asked to help by planners
	+ Summer Gray, Sarah Anderson
* What kind of changes of coastal planning would be helpful?
	+ Need to know where they are going where they have been
	+ Study lower parts
	+ Learn something about earthquakes
	+ Controversy: magnitude 7 plus earthquakes proposed in ventura
		- Some evidence in SB that they are going to look at
		-
	+ Proposals are all going to separate agencies, need to write multiple small grants
	+ Era of big grants are over
	+ Montecito has paid for about $30,000 worth of stuff
		- Big outreach
	+ We will do it either way but it will help support the undergrads

Board Discussion: Board goes into closed discussion

*MOTION/SECOND: Alana/Lauren*

*Motion language: Motion to table Spring 19-04*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

Project Title: SPR 19-05 Kelp forest and rocky reef monitoring student fellowship

Sponsoring Organization: MSI

Presenter Name: Katie Davis Koehn

Summary:

Presentation Notes:

* Katie and Parson are presenting to us
* Work on campus for Cassel PISCO lab
* Goal is to better understand and study CA marine ecosystem
* Main emphasis is to do policy relevant science
	+ In their lab: evaluate effectiveness of MPAs
* Data used in 10 year review of channel island MPA
	+ Another review coming up for MPA statewise that their data will be used in
* Major focus is training and mentorship of undergraduate scientists
	+ Kelp forest monitoring; over 100 scientific divers, mostly UCSB undergraduates
	+ Often a good first opportunity
	+ View it has mutually beneficial, students are vital to their research and in return training and experience is provided
* Created a blog for National Geographic last summer
* Funding for field work has been dropping off
	+ Receive limited funding from David and Lucier packard foundation; just enough for basic framework and core staff at this point
	+ Main source for next three years is from state to keep program running at scale
	+ Part of 2020 statewide MPA, so state funding is giving them for the next 3 years
	+ Budget was cut by about 30%, cut paid positions for students for the next 3 years
	+ Requested funding for 2, but usually fund about 6
* Have volunteer positions over years, hard for students to volunteer that much time
* Realized they were discriminating against students who couldn’t afford to volunteer and still live in SB
	+ Full time works out better than part time; program is intensive because field work has to be done in limited time window
	+ Really hard to do with a part time job on the side
* Provides the opportunity to “live” in the kelp forests for a summer
	+ Good starting point for any bio or ecology major, especially someone in marine or conservation
	+ Many students have used the opportunity and data as part of senor theses
* 20 years of data
* Comments from student workers
	+ National geographic open explorer program
	+ Made one student curious and gave her the tools to do so
	+ PISCO has allowed her to do important research
	+ Basically, students say good things about PISCO
	+ Skill set developed
	+ Data with a purpose
* Really really mutually beneficial to work with so many undergraduates
	+ They want to continuously engage people
* Both volunteered for PISCO at UCSB as undergrads

Board Questions:

* $2000 for dive equipment?
	+ Personal dive equipment
	+ Undergrads are on their own for equipment with program, some groups provide equipment but it is uncommon
	+ Avery helps assist teach the scientific dive program
	+ Hurdle with becoming scientific diver is obtaining equipment, good equipment is important
		- Economic hurdle, hopefully will be able to help students in buying some of the equipment
		- First year students usually don’t have best equipment
	+ It wouldn’t stay with the PISCO lab; something they could change to match what we fund
		- Malleable
		- They are set up so they could have lab equipment
		- Regulators and BCEs would have a long impact
	+ Equipment would be a one time request
* How many dives do you think an undergrad does over the summer?
	+ Research dive program one of largest in world
	+ PISCO does most dive in all programs
	+ On average, about 100-130 during the summer internship period per individual
* Repeat funding in future? One funding cut a lot recently
	+ Three year one chunk of money is what they just received
	+ Going to apply to us once a year for this three year period
	+ In the future, wants to market this as CF fellow, receive extra training on data analyses, develop a senior project
	+ Hopefully would propose in the winter
	+ Lauren let them know that they should search for future funding, not a guarantee for funding, advised to apply in winter
		- We make our decisions week 9 of the quarter
		- Seems that they can make this all work
* Big assessment coming up in 2022
	+ Last two sections of the coast are ours and up north, ours are only going to be 10 years old!
	+ Data is public
	+ Full MPA network will be 10 years old
* Which MPA’s
	+ Tons in each region
	+ 18% of state waters are now protected

Board Discussion: Board goes into closed discussion

**ADJOURNMENT AT (time)**

*MOTION/SECOND: Lauren/Juliette*

*Motion language: Motion to table Spring 19-05*

*ACTION: Consent*

*Additional approval required: NO*

Project Title: SPR 19-06 Lobster aggregations form biogeochemical hotspots that structure benthic communities in kelp forests

Sponsoring Organization: MSI

Presenter Name: Joseph R. Peters

Summary:

Presentation Notes:

* Grad student in EEMB
* We funded first project that started this, gave opportunity to 3 undergrads
	+ Examined key players in kelp forests
	+ Invertebrates make up largest biomass
		- Collected excretion rates from 20 invertebrates
* Looks at how animals in kelp forests drive cycles
	+ Ammonium and urea
* Really nice bar graph!
	+ Excretion rates of 20 animals
	+ Y axis: excretion rates, x axis: year
	+ Only 5 main groups are being present
		- Sea stars, urchins, boring clams, other taxa ~ten different species
		- Lobsters emerge in later years
* Invertebrates provide a lot of ammonium over time
	+ Big dip in 2014 because sea stars wiped out by warming anomaly - \*\*%
		- Recycling rates went down
	+ In 2012, when MPA’s were established, lobster populations rose
* Shift in sea star nutrient regulation to lobster regime
	+ Other species not changing much
	+ Spiny lobsters
* Increased inside of MPAs and outside of MPAs
	+ Spillover effect supplementing population outside MPA?
	+ Evidence: histogram of size range of lobsters in and out of MPA
		- Units on y axis: micromols of ammonium
	+ Lobsters are getting bigger; spill out of MPAs
* Excretion is heterogenous on landscape
	+ Hotspots
	+ Are the nutrients from lobsters increasing species richness? Adding to resources?
* Lots of different depictions and graphs
* New project based on old project: do lobster nutrient hotspots fuel kelp growth?
* Wants to make kelp and plant them to see if the growth rates are consistent with lobster nutrients hot spots
	+ Took into account prevalent tides/winds
* Project they’re applying for is how to understand if the nutrients are being actually used
* Hotstops might give surge of nutrients
* Excretion rates are projected estimate
* Evaluate if lobsters are restructuring local communities
	+ Find hotspots, measure ecosystem response
	+ Are projected values detectable?
	+ Nitrogen will quickly be sucked up by other consumers
	+ Measure kelp rates
* Want to propogate spores at increasing distances from hotspots
	+ Assume growth rates are highest around hotspots
	+ East and west; direction of currents
	+ Measure with quadratic benthic community composition
* This project is the flipside of what they first looked at
	+ First: supply of nitrogen
	+ Now: is nitrogen being used, is it of benefit to community
*

Board Questions:

* Lobster rituals? How far do they go?
	+ Hang out in hidey holes and then find others
	+ Use chemical cues, safety in numbers during day
	+ Similar approach with blacksmith fish back in 80’s
		- Daytime foraging, nighttime shelter
		- Benefited kelp forests as well
	+ Foraging during the night is important because thats when photosynthesis occurs
	+ Always a net movement along the shore
		- Lobster community at large knows the best lobster hang outs
	+ So many in IV they are attracting each other, even if it is different individuals, there will probably be lobsters in these hotspots
* Seastar population comeback?
	+ Will impact it, but not sure how it will affect the nutrient regime
	+ Some are back on the rise though
* Eat urchins? macroalgae?
	+ Don’t eat macroalgae,
	+ Still a mystery, don’t really know what they’re eating except for purple urchins and mussels
* What the trophic cascade effects would be?
	+ Bart dip???? Is curious about trophic cascade
	+ Not sure, nuance, hard to target
	+ In SD been looking at lobster effects on urchins, can only eat small urchins
	+ Only strictly focused on nutrients
* Are you measuring microsystems as a proxy, are you worried about predatory affect
	+ Only ones we put out ourselves
	+ Experiment to see if they are taking up nitrogen
* Undergrad research assistant? Duties? Roles? Have someone in mind?
	+ No one in mind right now, want to put out in listserv to get wider range of interest
	+ Has had undergrad volunteers
	+ Required to be dive certified
	+ Would like to take a younger undergrad to get them started, there could be a spin off from this project
	+ Alex primo was undergrad he mentored last quarter, looked at urchin excretion rates over course of day
		- Change on hourly basis
		- Going to publish paper, sees undergrad opportunity for independent research spinoff
* R tutorials and workshops?
	+ First year he did not teach a year long R workshop
	+ 10-15 students trying to learn R from the beginning
	+ SBC data
	+ 2 students did their own projects
	+ Want to start back up next fall
	+ Wants to open it up to people who work with data in general so that they can learn analysis
* Question for us: what do we think about the project?
	+ He noted that this hasn’t been thought of really, last time was back in the 80s
	+ A lot of him thinking on his own, not asking for a yes or no from the board
	+ Jeremy: curious why he’s doing it in the ocean rather than a tank
		- Main reason is space
		- Cool natural experiment which takes into account aggregations
* Any expectations about microcystis (?) ?
	+ That’s what they’re hoping for, that when they’re closer they’ll have increased growth rate
* What about the current? What if current takes nutrients away, and how would you tell if that happened?
	+ Currently have profilers at every site
	+ Rare that ripping currents come through during the summer
	+ Would be a combination of water sampling
	+ Going to be more than one kelp baby per site, not shown on graphic for simplicity
	+ Good question!

Board Discussion:

*MOTION/SECOND: Lauren/Jeremy*

*Motion language: Motion to table spring 19-06*

*ACTION: Consent*

*Additional approval required: NO*

Project Title: SPR 19-14 Restoration Interns: Fall 2019, Winter & Spring 2020

Sponsoring Organization: CCBER

Presenter Name: Lisa Stratton

Summary:

 **reschedule**

Presentation Notes:

Board Questions:

Board Discussion:

**ADJOURNMENT AT 8:53PM**

*MOTION/SECOND: Lauren/jeremy*

*Motion language: Motion to adjourn at 8:53 Pm*

*ACTION: Consent*

*Additional approval required: NO*