## ASsquare_logo.tif Coastal Fund Agenda

## Associated Students

Tuesday, 5/1/18, Nati Conference Room

**CALL TO ORDER** 6:02 by Tristen, minutes recorded by Hannah

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) |
| **Tristen Thron**  **Chair** | **Present** | **Jem Unger Hicks**  **Outreach Coordinator** | **Present** |
| **Matias Eusterbrock**  **Co-Chair** | **Present** | **An Nguyen**  **Outreach Coordinator** | **Present** |
| **Aral Greene**  **Undergraduate Rep** | **Excused** | **Senate Liason** |  |
| **Jordan Gallagher**  **Undergraduate Rep** | **Present** | **Rebecca Nishide**  **Administrative Assist** | **Present** |
| **Maria McCausland**  **Undergraduate Rep** | **Present** | **Hannah Bone**  **Administrative Assist** | **Present** |
| **Alana Ayasse**  **Graduate Student Rep** | **Present** | **Sarah Siedschlag**  **Advisor** | **Present** |
| **Courtney Thomas**  **Graduate Student Rep** | **Present** |  |  |

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

*MOTION/SECOND: Tristen/Courtney*

*Motion language: motion to approve the attendance*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **Approval of Minutes**

*MOTION/SECOND: Tristen/Jordan*

*Motion language: motion to approve the minutes from last week*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **PUBLIC FORUM**

(Announcements, appreciations, concerns, requests to have items added to agenda)

* Discuss CF rubric and extension/reallocation criteria.

1. **REPORTS**
   1. **Advisor Report: Siedschlag**
      1. Going over to COVO at 6:30 PM
      2. Interviewing undergraduates tomorrow at 12:30
         1. Need skype account
   2. **Chair Report: Thron**
      1. Grad student interviews next week
         1. 3 people
   3. **Senate Report**
   4. **Administrative Report: Nishide**
   5. **Coastal Service Program Report: Bone**
   6. **Outreach and Education Report: Nguyen & Unger Hicks**
      1. Approve funds for costco snacks
      2. Need people for EDC Event
      3. Photos next week
      4. Flash talks email out tomorrow
         1. So far we have
            1. EDC Oil Trains
            2. ACIDD
            3. Aquaculute
            4. Debris flow or Patricia Holden
      5. 11 responses for posters
   7. **Sub-Committee Reports**
      1. Put together a rubric
         1. Guide reading and discussion to create some objective criteria
         2. Some comments
            1. How often a group comes to us
            2. Objective assessment
         3. Evaluation of extension/reallocation requests
2. **AGENDA**
3. **Approval of Agenda/Additions to Agenda**

*MOTION/SECOND: Tristen/Jordan*

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

*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 18-16 Emergency Reallocation Request**

*MOTION/SECOND: Tristen/Courtney*

*Motion language: motion to approve winter 18-16 emergency reallocation*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **WIN 18-16 Emergency Extension Request**

*MOTION/SECOND: Tristen/Alana*

*Motion language: motion to approve winter 18-16 extension request*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **FALL 17-29 Extension Request**

*MOTION/SECOND: Jordan/Alana*

*Motion language: motion to approve fall 17-29 extension request*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **FALL 17-29 Reallocation Request**

*MOTION/SECOND: Alana/Courtney*

*Motion language: motion to approve fall 17-29 reallocation request*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **Approve $50 for “Broke” Screening**

*MOTION/SECOND: Tristen/Courtney*

*Motion language: motion to approve $50 for Broke Screening food*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **(item)**

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

*Motion language:*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **DISCUSSION**
   1. Interview Questions

2. Discuss CF rubric and extension/reallocation criteria.

3. Intern/assistant payment

* Potential increase to it since minimal payments seem worthless

1. **PROJECT REVIEW**

Project Title: SPR 18-08: Enhancing environmental education, research and outreach through a student-run hatchery

Sponsoring Organization: MSI

Presenter Name: Carrie Culver

Summary: With the realized and anticipated environmental changes in California and elsewhere, and

the recognized need for additional food sources, there is a critical need to improve

knowledge about local ocean resources, factors affecting them, and opportunities and

challenges of utilizing them. The goal of this project is to establish a hatchery where

students and others learn about local marine organisms and conditions for life that

enhance environmental literacy while gaining research and workforce skills. Through

hands-on activities, students will come to understand the life cycle of organisms and

factors that impact each stage and the implications for preserving, conserving and

restoring them. Working with the REEF educators, they will share the knowledge gained

through development of educational materials that will be integrated with REEF tours

and Oceans to Classroom activities. The resulting hatchery will provide opportunities for

future education, research and workforce training.

Presentation Notes:

* Work with communities to get them involved and help solve various issues; also does research and outreach that has led her to this project relating to aquaculture
* Aquaculture as a research and education tool; successful aquaculture requires good understanding of organism and ecosystem
* Attempting to build a training facility- about environmental literacy as well as training to produce food
* Student run hatchery for students to gain hands on experience
* Has funding from donation, but it is for building equipment. Need a student to work with Carrie to help run/setup hatchery
* Concept is similar to the reef in which once its set up the students will manage it
* Hope to bring in a wider variety of students- chemistry, engineering, bio, enviro
* About education and research so fits in mission statement well
* Not just about food production, but about experiencing the complexities of sea life and will be a good educational tool for resource management
  + Want to develop displays, educational component with bigger picture recourse use, what is going on in offshore aquaculture

Board Questions:

* What is the accessibility once this is up and running? Classroom visits? Open to public?
  + Not entirely certain yet, will figure it out once it gets developed - it will become part of REEF
  + Idea is to have schools involved but it is primarily created for students here to gain work skills and be engaged in research
  + Students will be involved through research
  + Professor excited to have organisms produced for research
* Do you have criteria developed for the types of species you will potentially use in this hatchery?
  + No criteria, will depend on what research is looking at
  + With expected increase in aquaculture offshore, we are looking at rock scallop research to help industry
  + Some species are harder than others
  + Hoping for community input
* What type of role do you see the interns playing in this project?
  + Hopefully be doing everything
  + Different systems that need to be up and running and will pair up interns to work on these different systems
  + Want them to be involved in educational roles so they learn about how to communicate what they are working on
* Have you considered any potential effects of hatchery water flowing back into goleta?
  + Haven't worried because there is regulations that must be met
  + Rock scallops are native
* In terms of the interns, you’d prefer they’d have some kind of experience working with organisms? What are you looking for in general?
  + Like to try to get a mix if students with different backgrounds
  + Need people comfortable with with marine life, wet area because stuff needs to be set up - probably mostly marine science and environmental science
* Clarify, the hatching center may or may not become open to the public on a regular basis?
  + It will be in the sense that it is part of Reef, but we do not know what the space will look like
  + Will be hands on
* Can you talk about the goals for the outreach materials that will come out of this?
  + About how you culture rock scallops, feed, lifecycles
  + Bigger picture ideas to educate on characteristics of marine animals, how that plays into restoration and climate change, offshore aquaculture
  + Students will help with this as systems fall into place
  + Will work with REEF education people for guidance
  + Idea is to create some displays
* In the application it mentions there may be an opportunity for dive certified undergraduate to choose root stock but what is the condition for this?
  + Depends on timing, when people can come in and if we can collect food stock
  + If someone is interested who has the certifications, they are going to try to get it done
* Most of the funding is requested for a lab assistant position, is this person already hired?
  + Couple people in mind, based on experience
  + Position will require a lot of day to day maintenance and setting up, much better for someone who knows about equipment
  + Will help supervise interns, carrie will be very involved but can’t watch everything
* What are your thoughts on where this project is going to go after this funding cycle? What future funding sources are you going to look into?
  + Not sure yet
  + Concept is that maintenance will be very procedural
  + Work in with REEF maintenance
  + Hopefully go on for a long time, not sure what it will morphe into
  + Possibly will produce organisms/seed for revenue
* How are REEF interns currently funded?
  + Different grants fund, not sure
* Where will this be in REEF
  + Both inside and outside, will have some public area
* Is the outreach and education part, is that only going to come into play once its up and successful or will it be worked on throughout the process?
  + Should be happening throughout process of putting aquaculture together
* Where could you make cuts?
  + Growing and feeding organisms is important, have to produce food
  + Have to have money to take past that phase to when they settle and sit on bottom of culture, but that makes the grant a lot bigger
  + Would need half - ⅔ of everything to shorten timeline
  + Fewer quarters, less months of help

Board goes into closed Discussion.

*MOTION/SECOND: Courtney/Tristen*

*Motion language: motion to table spring 18-08 with intent to at least partially fund*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **PROJECT REVIEW**

Project Title: SPR 18-09:Internships and additional funding support for conservation, education, and restoration

programs for summer and fall 2018

Sponsoring Organization: Coal Oil Point Reserve

Presenter Name: Jessica Nielsen

Summary: Coal Oil Point Reserve (COPR, Reserve) requests funds to provide UCSB students with

paid internships for summer and fall quarters of 2018. UCSB student interns and

assistants will participate in the Snowy Plover Docent Program, Land Stewardship

(restoration, maintenance, resource management), Subtidal Monitoring, Nature Center

Interpretation, Online Field Guide Development and Scientific Illustration. The

internships at the Reserve will provide UCSB students with opportunities to acquire

experience to enhance their professional development.

Presentation Notes:

* Requesting mostly internships for various projects
  + Most of them are repeats but there are a few more projects were adding on like ones involving the nature center
* Nature center gives a base with offices at coal oil point, making it easier to have student volunteers
* Snowy Plover Restoration Project Interns
  + Habitat protected with docents and signage
* In the summer we want more interns than in the fall because its the peak of nesting season
* Asking for land steward assistant for fall quarter, working with Kip Kallahan
  + Trailering, Vegetation ID skills
  + Land steward mentors
* Subtidal monitoring assistant
  + Diving to do kelp forest surveys
  + Been doing this for two years now
* Interns to do research interpretation for nature center
  + Open hours 9-1PM saturday
  + Intern would be at nature center during open hours, give tours
  + Well versed in research at reserve, help with online field guide
* Water quality monitoring intern
  + Project we’ve been doing for a year monitoring the water quality of goleta slough
  + Helpful to have lead intern to train water quality volunteers
* Scientific Illustration internship
  + Incorporate art in exhibits, good way to catch someone's eye and convey to public
  + There is an art class using the nature center this quarter

Board Questions:

* Why the nature center opening was delayed?
  + Delayed due to construction issues, but opened in November
  + By the time we had it up and open, it was holiday hours so it was difficult to find an intern so it was delayed a little more
  + First saturdays of the month from 9 AM- 1 PM
* How does subtidal monitoring that COPR does differ from LTER
  + Follow the same protocols as LTER it’s just an additional site
* Do you collaborate data with LTER, other researchers
  + We make our data accessible and work with another lab who does the fish surveys
  + Work with Love lab
* Have you had issues recruiting interns
  + Never had an issue recruiting we typically get more applicants than we have spaces for
* How do you choose intern applicants
  + For snowy plover, a lot volunteer anyways
  + Choose from good volunteers who want to do it, showed interest
  + Different class levels
* How many people are starting to come to the first saturdays for tours? What about the open facility?
  + Tours- about 15-30 for the full loop tour
  + Everyone from the tour went into nature center
  + Some people passing by went in
  + Decent turn-out, but want more
  + In addition to tour participants, 10-15 people per day
* The application mentions special projects for land steward intern, what are some potential projects they could work on?
  + Kip started last march, interested in restoration planning
  + How we want reserve to look over time, what we have and what we wanna have
* How do you usually recruit? What listservs do you use?
  + Undergrad bio, ES, facebook, instagram, CAB, EAB
  + Looking to start reaching out to more listservs
* What internships are the highest priority for you?
  + Longer term internships, snowy plover crucial for successful nesting season
  + Land steward assistant crucial help for Kip
* AS far as dive monitoring, do you keep the same student or is it high turnover?
  + So far it's high turnover just because we've hired graduating seniors the last two time
* Why is the hourly wage for the two specialized interns differ?
  + Subtidal one is higher since they have to take a certification course and have to have some more skills/experience
* Do interns play a part in framing outreach and education material
  + We have our exhibits set, but we also have unpaid writing interns that work at the reserve right now

Board goes into closed discussion

*MOTION/SECOND: Tristen/Courtney*

*Motion language: motion to table discussion for SPR 18-09 with possible cuts down to one research intern*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

1. **PROJECT REVIEW**

Project Title: SPR 18-10: Modeling the effects of connected impervious surfaces on groundwater recharge rates and nitrogen uptake in an urban semi-arid environment

Sponsoring Organization: Bren School of Environmental Science and Management,

Presenter Name: Rachel Torres

Summary: In Santa Barbara, during storms, steep slopes combined with conventional stormwater

infrastructure route most surface flows directly to streams and into the ocean, decreasing

the opportunities for groundwater recharge and elevating potentially harmful nitrogen

loading to the nearshore coastal ecosystem. Connecting impervious surfaces to interstitial

green spaces within the urban environment may be a way to reduce these effects. This

type of green infrastructure has increasingly been promoted as a measure to improve

ecosystem health in urban environments. Estimating the potential impacts of different

urban green infrastructure types, locations and vegetation composition, however, is

needed to help design and promote cost effective strategies. This research will address

this need by using a state-of- the-art eco-hydrology model, calibrated with local data to

assess alternative scenarios

Presentation Notes:

* Interested in how water and energy flow in urban environment
* Would like to start during summer, will lead her into what she does for thesis
* Urbanization changes the natural hydrological processes
  + More runoff into streams in ocean
* Globally, growing urban populations, big push for more ecology and hydrology
* People moving to water limited area (south west), drought prone
  + Managing natural resources
* One way that cities are looking at changing that is green infrastructure, best management practices, roadside bioswales, anything that involves urban transportation
* Focus for summer research will be stormwater management
  + How will we implement green infrastructure
* In SB/SoCal, it looks differently than places that are currently doing reasearch
  + Current research is focused on places w more rain, more humid
* Other component is irrigation, a lot of water is put into urban green spaces and we need to think about the tradeoffs
  + How do these different interactions play out?
* What decisions go into urban layouts with green infrastructure in to them?
* Three things missing in arid research for green infrastructure, water management
  + Types of trees and vegetation - want to look at rooting depth
    - Where water is stored
    - What is more drought resistant
  + Hydrologically connected impervious surfaces, how are we increasing development
    - When there is storm events, where is the water being routed to? Drainage or green spaces? What is that effect
  + Irrigation, unknown if water is going into recharge of trees
    - Irrigation is a main component of that in local environment
    - Main source of residential water is groundwater
* There's a lot of different things going into this question, it would be hard to go out and measure these things
  + Planning on using a model, high res,
  + Uses RHEESES
  + Will use geography department for remote sensing data, very high res, put into RHEESES model for more accurate results
  + Use long terms ecological data to validate data
* Model looking at connected and disconnected impervious surfaces for groundwater recharge/tree nitrate uptake
* Expand to modeling for increased development
* Will dive in this summer, already has partial funding for this summer
* Sounds like will be basis for her thesis
* Hoping to present at american geophysical union in December

Board Questions:

* LTER data - what does that data look like, how will you use that to validate your data
  + There is stream flow data in various parts of SB, so I would run it for the entire watershed of mission creek over a certain time period with the same climate inputs as well as land cover % and then what comes out is stream flow/time period
  + Model has been run in SB before and thats how they calibrate it
* Will irrigation be an input into the model, how will you quantify that
  + Building off of another paper that has done a similar study in which she took residential use/year or season and its indoor use and you take it over an entire year and that is outdoor use
* How are you handling vegetation for remote sensing inputs? Tree v grass v shrub?
  + Eventually, species level but it takes high level resolution so for now would start over fractional cover of each picture
* What would intern be helping you do ?
  + May potentially already have funding from McNair scholarship
  + Teach her some model stuff, using R, data processing
* Do you have any idea of how much of a concern urbanization is in SB in particular and how it may inform practices in the city at all?
  + I do not know about further in development in SB, hoping for broad development
  + SB cares a lot about conservation, trees, not sure how much improvement can be made and where she would fit in, but would eventually like to be in contact with city planners
* To clarify, the funding you received already is listed in the grant?
  + Yes, already listed and secured
* When would the intern find out about her funding?
  + Takes 2-3 weeks and she applied last week
  + Will let us know
* If you receive funding, will the budget change?
  + Will let us know how it changes the budget
  + GREC awarded $3000, summer stipend can’t be more than 8 so won’t ask for more than $3000
* How did you recruit this undergrad?
  + She contacted me and she’s highly interested
* Are there any negative effects of water pollutants entering urban green or is it just all good? What are impervious and how does that change?
  + More nutrients will probably help grow, expect benefits
  + Anything that water can’t penetrate
  + A lot of new surfaces are pervious
  + Not really sure not interested in water quality
* Will things from automobiles get into these surfaces?
  + Less on the side of water quality
* In terms of results, is there anywhere else you would share your data or how would you expect it to be useful?
  + Get in touch with the city to share data, haven’t started that side of the process but would love to share it with park planners or city people
  + For GREC, will have to present with them and will go and make connections there
* If the undergrad wants to do a senior thesis on this, would you be willing to help her out?
  + Very interested in mentoring and giving back so very willing to help out undergrads who may want to pursue the opportunity
* How do you see this project playing into your broader thesis/dissertation?
  + More complex and will help delve into it better
  + How to integrate it with model

Board goes into closed discussion

*MOTION/SECOND: Jordan/Tristen*

*Motion language: motion to table discussion of SPR 18-10 with intent to partially fund*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

**ADJOURNMENT AT 9:26 PM**

*MOTION/SECOND: Tristen/Courtney*

*Motion language: motion to adjourn meeting at 9:26 PM*

*ACTION: Consent*

*Additional approval required: NO*