

Exxon Valdez Oil Spill Trustee Council

Teleconference

August 26, 2010

9:30 a.m. – 12:30 p.m.

Call in #: 800.315.6338

Code: 8205

# STATE OF ALASKA

# DEPARTMENT OF LAW

OFFICE OF THE ATTORNEY GENERAL

Sean Parnell, Governor

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August 20, 2010

Elise Hsieh Executive Director Exxon Valdez Oil Spill Trustee Council 441 W. 5<sup>th</sup> Avenue, Suite 500 Anchorage, AK 99501-2340

Dear Elise:

I hereby delegate my duties as a Trustee Council Member of the Exxon Valdez Oil Spill Trustee Council to Jennifer Schorr for the August 26, 2010 meeting.

Sincerely,

Daniel S. Sullivan

Attorney General

cc: Craig Tillery

# Womac, Cherri G (EVOSTC)

From: Sent: To: Cc: Subject: Hsieh, Elise M (EVOSTC) Wednesday, August 25, 2010 9:45 AM Hartig, Lawrence L (DEC) Easton, Dan (DEC); Fishwick, Claire (DEC); Womac, Cherri G (EVOSTC) RE: Tomorrow's meeting

Thank you Larry.

From: Hartig, Lawrence L (DEC)
Sent: Wednesday, August 25, 2010 8:57 AM
To: Hsieh, Elise M (EVOSTC)
Cc: Easton, Dan (DEC); Fishwick, Claire (DEC)
Subject: Tomorrow's meeting

Elise,

I will need to attend the OCS hearing tomorrow in Anchorage that is scheduled to go from 8 - 11 a.m. I am delegating my EVOS duties to Dan Easton, who will attend the Trustee's meeting tomorrow on my behalf. I will still try to make the last part of EVOS meeting but am unsure whether I'll get out of the hearing in time.

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Thanks, Larry

# Agenda

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# DRAFT8/20/10

Exxon Valdez Oil Spill Trustee Council

441 W. 5th Ave., Suite 500 • Anchorage, AK 99501-2340 • 907 278 8012 • fax 907 276 7178

AGENDA EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL August 26, 2010, 9:30 a.m. – 12:30 p.m. Anchorage, Alaska

Trustee Council Members:

DANIEL S. SULLIVAN Attorney General Alaska Department of Law

LARRY HARTIG Commissioner Alaska Department of Environmental Conservation

DENBY S. LLOYD Commissioner Alaska Department of Fish and Game CRAIG O'CONNOR Special Counsel National Oceanic & Atmospheric Administration U.S. Department of Commerce

KIM ELTON Senior Advisor to the Secretary for Alaska Affairs Office of the Secretary U.S. Department of the Interior

STEVE ZEMKE Trustee Alternate Chugach National Forest U.S. Department of Agriculture

Meeting in Anchorage, Trustee Council Office 441 West 5<sup>th</sup> Avenue, Suite 500 Teleconference number: 800.315.6338. Code: 8205

Federal Chair: \_\_\_\_\_

1. Call to Order – 9:30 a.m.



Federal Trustees U.S. Department of the Interior U.S. Department of Agriculture National Oceanic and Atmospheric Administration





Consent Agenda

2.

	<ul> <li>Approval of Agenda*</li> <li>Approval of Meeting Notes*</li> <li>June 23, 2010</li> </ul>	
3.	Public comment – 9:35 a.m. (3 minutes per person)	
4.	Public Advisory Committee comments (9:40 a.m.)	Gary Fandrei, PAC Vice-chair or Doug Mutter, USDOI Designated Federal Officer
5.	Executive Director's Report (25 min.) Investment Fund Spending Scenarios for Invitation	Elise Hsieh EVOSTC Executive Director Bob Mitchell, DOR
6.	FY'11 Administrative Budget* (15 min.)	Linda Kilbourne EVOSTC Administrative Assistant
7.	Project 11100808 Amendment, Esler* (10 min.) Nearshore Synthesis – sea otters and sea ducks	Dede Bohn, USGS
8.	FY'11 Work Plan (Multi-year Projects)* (10 min.)	Catherine Boerner EVOSTC Science Management
9.	Draft IHRP* (15 min.)	Catherine Boerner EVOSTC Science Management
10.	Draft Supplemental Environmental Impact * (15 min.) Statement (DSEIS)	Craig O'Connor, NOAA Laurel Jennings, NOAA
11.	Executive Session	
12.	Public Advisory Committee selection* (15 min.)	Doug Mutter, USDOI Designated Federal Officer
Adjou	rn – by 12:30 p.m. * Indicates action items	

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June 23, 2010 TC Meeting Notes

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# Exxon Valdez Oil Spill Trustee Council

441 W. 5th Ave., Suite 500 • Anchorage, AK 99501-2340 • 907 278 8012 • fax 907 276 7178



# TRUSTEE COUNCIL MEETING NOTES Anchorage, Alaska June 23, 2010

Chaired by: Craig Tillery Trustee Council Member

Trustee Council Members Present:

Steve Zemke, USFS \* Kim Elton, US DOI Craig O'Connor, NOAA \*\* • Craig Tillery, ADOL \*\*\* Denby Lloyd, ADF&G Larry Hartig, ADEC

- Chair
- \* Steve Zemke alternate for USFS
- \*\* Craig O'Connor alternate for James Balsiger
- \*\*\* Craig Tillery alternate for Daniel Sullivan

The meeting convened at 9:35 a.m., June 23, 2010 in Anchorage at the EVOS Conference Room.

1. Approval of the Agenda

APPROVED MOTION: Motion to approve the June 23, 2010 agenda

Motion by O'Connor, second by Tillery

# 2. Approval of May 14, 2010 meeting notes

APPROVED MOTION: Motion to approve the May 14, 2010 meeting notes

Motion by Zemke, second by Tillery

# There were no Public Advisory Committee (PAC) comments.

Public comment opened at 9:40 a.m.

# There were no public comments offered.

# 3. Science Management Services Contract

APPROVED MOTION: Motion to approve Resolution 10-08 authorizing the Executive Director to enter into a contract for Science Management Services July 1, 2010 through September 30, 2011 with Catherine Boerner of Natura Consulting in the amount of \$119,332 which includes nine percent General Administration (GA). The remaining amount in the FFY 2010 Administrative Budget devoted to Catherine's FFY 2010 salary is no longer to be used for that purpose. Project management fees are not applicable to this contract.

Motion by O'Connor, second by Zemke

# 4. Habitat - Capjohn parcel KAP 3002

APPROVED MOTION: Motion to approve Resolution 10-11 reauthorization of funds in the amount of \$192,000 authorized for the purchase of the Capjohn parcel KAP 3002. Authorization shall terminate if a purchase agreement is not executed by June 30, 2011.

Motion by Tillery, second by O'Connor

# 5. Habitat - Leisnoi

APPROVED MOTION:

Motion to approve Resolution 10-12 authorizing expenditure of \$43,600 which includes nine percent General Administration (GA) from FFY 2010 funds for due diligence expenses, consistent with State and Trustee Council requirements, in support of Kodiak Island Habitat Protection Efforts for lands

owned by the Leisnoi Native Corporation. Authorization of the approved funding shall terminate if not executed by September 30, 2011.

Motion by Tillery, second by Elton

# 6. Habitat - Coal Creek Moorage Subdivision KEN 3006

APPROVED MOTION:

Motion to approve Resolution 10-13 authorizing expenditure of \$100,000 for the State of Alaska to purchase all of the Seller's rights and interests in small parcel KEN 3006 comprised of Lots 4 and 5, Block 1 of Coal Creek Moorage Subdivision. Authorization of the approved funding shall terminate if the purchase agreement is not executed by July 31, 2011.

Motion by O'Connor, second by Tillery

# 7. Draft Integrated Herring Restoration Program

APPROVED MOTION: Motion to approve releasing the Draft Integrated Herring Restoration Program (IHRP) for public comment after incorporating comments from the Alaska Department of Fish and Game

Motion by Lloyd, second by Zemke

# 8. Project 070836-B Amendment, Boufadel, Factors

APPROVED MOTION: Motion to approve Boufadel Project 070836-B Amendment requesting additional funds in the amount of \$81,030, which includes nin percent General Administration (GA). NOAA waives the project management fees.

Motion by O'Connor, second by Zemke

9. Adjourn

Motion to adjourn by O'Connor

Off the record 11:35 a.m.

July 22, 2010 PAC Meeting Summary

( )

# Meeting Summary DRAFT

A. GROUP: Exxon Valdez Oil Spill (EVOS) Public Advisory Committee (PAC)

**B. DATE/TIME:** July 22, 2010

C. LOCATION: Anchorage, Alaska

**D. MEMBERS IN ATTENDANCE:** (T = via teleconference)

Name	Principal Interest
Jason Brune	Public-at-Large
Gary Fandrei (T)	Aquaculture/Mariculture
Jennifer Gibbins (T)	Conservation/Environmental
Amanda Bauer (T)	Commercial Tourism
Kurt Eilo (T)	Sport Hunting/Fishing

# **E. NOT PRESENT:**

Name	Principal Interest
Torie Baker	Marine Transportation
John French	Regional Monitoring
Stacy Studebaker	Recreation Users
Bill Rosetti	Science/Technical
Larry Evanoff	Native Landowners
Patience Andersen Faulkner	Subsistence
David Totemoff	Tribal Government
John Renner	Commercial Fishing
Lori Polasek	Public-at-Large
Vacant	Local Government

# F. OTHER PARTICIPANTS:

Name	Organization
Elise Hsieh	Executive Director, Trustee Council
Doug Mutter	Designated Federal Official, DOI
Cherri Womac	Trustee Council Staff
Catherine Boerner	Trustee Council Staff
Linda Kilbourne	Trustee Council Staff
Carrie Holba (T)	Trustee Council Staff
Barat LaPorte	Patton Boggs
Carol Fries (T)	Alaska Department of Natural Resources (ADNR)
Pete Hagen (T)	National Oceanic and Atmospheric Administration (NOAA)
Nancy Bird (T)	Prince William Sound Science Center (PWSSC)
Dede Bohn (T)	U.S. Geological Survey (USGS)
Fran Ulmer (T)	University of Alaska Anchorage/Oil Spill Commission

# **H. SUMMARY:**

At 9:35 a.m. Gary Fandrei, PAC Vice-Chair, opened the session with a welcome and introductions by all in attendance. Doug Mutter took roll and noted that a quorum was not present.

The session was opened for public comment. Fran Ulmer, as a member of the President's Oil Spill Commission, requested those with experience with the Exxon Valdez Oil Spill response and restoration who wished to provide comments, suggestions, lessons learned to the commission could do so via their web site at: <u>www.oilspillcommission.gov</u>, or could contact her directly at <u>chancellor@uaa.alaska.edu</u>. The Commission report is due to the President in 6 months. She hopes to focus on better, safer ways to develop off shore oil and gas resources. Jason Brune asked about when to provide comments and what the end result of the report would be. He thanked her for her service. She responded to send in comments now, that she did not think the Commission would meet in Alaska, and that she was unsure of whether the report would result in new legislation, regulation, policy, or some combination.

Cherri Womac reminded PAC members that if they wish to continue for the next 2-year PAC term, they need to inform her and submit their information to her by August 6. There will be 10 seats on the PAC for the 2010-2012 term. The Trustee Council will make their nominations at the August 26 meeting. Currently, 8 PAC members have indicated their intention to serve another term. If PAC members do not wish to serve, it would be helpful if they would recommend someone else who may be interested. Brune asked what the selection process was. Womac said the nomination materials are compiled into a notebook and spreadsheet, she then consults with Mutter, and the Executive Director makes recommendations to the Trustee Council, who meets to decide who to nominate, then the nomination package goes to Mutter for submission to the Secretary of the Interior, who makes the appointments.

Fandrei asked about the PAC work load over the next 2 years. Elise Hsieh replied that the bulk of work was going on now with review of many documents, she expects the workload in the future to be somewhat less due to fewer meetings and fewer proposals to review.

Linda Kilbourne reviewed the proposed FY 2011 budget (previously e-mailed), noting the budgeted amounts for each category:

•	Administration and Management	\$820,897
٠	Data Management	152,080
٠	Science Management	231,336
•	Public Information/Outreach	0
٠	PAC	37,060
٠	Trustee Council Members	29,975
•	Habitat Protection	109,000
٠	Liaison Program Support	339,774
	ARLIS	138,100
	TOTAL	\$1,858,222

This is subject to some changes among categories. Of this total, \$153,432 is for the 9% General Administrative (GA) agency overhead costs. Elise Hsieh stated that Catherine Boerner would be

working from Seattle, that a reduction in cash funding for ARLIS would be taking place, that office remodeling was completed, and a new IT person was hired.

Brune asked who gets the 9% GA funding, thinking that it is not needed. Kilbourne and Dede Bohn explained that it goes to individual agencies to provide overhead support for the general EVOS activities of each organization, including telephone, copier, mail, IT, etc. This does not support projects or habitat work. This is not billed, just paid to the agencies.

Brune asked if there was information on actual expenditures for past years, other than just the budgeted amounts. Kilbourne replied that she was compiling this information for 2009 and 2010, but did not have it beyond that. Hsieh said they would produce this information. If agencies do not spend all of their EVOS allocations, the money is returned to EVOS in the fall of each year. Brune said that they should be able to track how the EVOS funds are spent. The large reductions in science, data management, and public outreach are concerns; and he believes more outreach and transparency is needed. Hsieh explained that the majority of outreach funds for last year were for the special 20<sup>th</sup> anniversary events, and that reduced outreach funds were now part of the Administration budget. She said there has been a significant amount of time spent since April responding to public and media inquiries resulting from the Gulf of Mexico oil spill, both at EVOS offices and ARLIS.

Boerner stated that expenses for development of the Integrated Herring Restoration Plan have been reduced since that plan is nearly completed. Hsieh said a more focused Science Panel also results in lower costs. Brune stated that spending more on science and public information and less on administration is better, and that the public would probably agree with that point of view. Hsieh agreed, noting that after 2013, there would probably be significant changes in agency support needs. She said the Trustee Council wants to control costs, but also has need for staff support. Jennifer Gibbins agreed with Brune's comments. Fandrei said he also agrees. He said it might be shortsighted to reduce public outreach too much. Hsieh reiterated that much of the last year's expenses for outreach were for the 20<sup>th</sup> anniversary and the National Environmental Policy Act work. They will continue to send out information to the public and maintain the EVOS web site.

Brune said it would be a shame not to use EVOS information and lessons learned for the Gulf of Mexico spill. Carrie Holba said ARLIS has responded to over 500 requests since the spill occurred. She has prepared a "Frequently Asked Questions" paper. Boerner also noted that she had provided information to the states of Louisiana and Mississippi and to scientists working the spill. Hsieh said that many agency liaisons had also been involved. Mutter noted that Trustee Council member Kim Elton had been deployed to the Gulf to work on the spill.

Kurt Eilo expressed his concerns about reduced public outreach and transparency in the program. EVOS presentations at the annual Alaska Marine Science Symposium do not reach the public. He believes public outreach should continue to be ramped up. Gibbins suggested that PAC members be used more to provide outreach to communities. Hsieh asked that ideas for effective public outreach be submitted to her. Events such as at the Anchorage zoo attract a lot of people not familiar with the EVOS program.

Hsieh provided a status report on the draft Invitation for Proposals for FY 2012 (previously sent via e-mail). The Trustee Council has not reviewed the current draft. If the Trustee Council moves forward with the proposal to reduce or eliminate centralized administration and staff by the end of 2013 and continue with the 5 major areas of continued restoration work proposed: 1) herring, 2)

lingering oil, 3) long-term monitoring of marine conditions, 4) harbor protection and marine restoration, and 5) habitat acquisition and protection; then they and the PAC would meet only annually to review the status of restoration work at a program level. She expects a Trustee Council review this fall--another draft will be out next week. She asked that any comments submitted be targeted with specific recommendations. Proposals will probably be due in March 2011.

Fandrei asked for a synopsis of the herring plan. Boerner said it will be the basis for the proposals in 2012. The main focus is the 9 restoration options and a 20-year horizon for work. They expect proposers to review the work to date and offer feasible implementation projects. Brune asked whether the holistic approach was still being sought; he hoped EVOSTC was not going to piece-meal the herring program. Boerner said they were taking the wide view approach and asking for a program, not parts or pieces. Hsieh said both the herring and monitoring programs were to be holistic. They were addressing recommendations on approach cited in the National Research Council evaluation of the proposed Gulf Ecosystem Monitoring (GEM) Plan. Brune stated that it would be good to address non-recovered resources and close out work on them when a success point is achieved--the program should not continue, just to continue. Hsieh said some level of monitoring was needed annually, but that the Trustee Council's focus was on expending the remaining funds efficiently which did not necessarily include spending additional monies on some of the unrecovered resources.

Hsieh said that some changes have been made to the 1994 Restoration Plan (previously e-mailed) to accommodate new directions, but that the Plan was still applicable. Mostly the changes were of a housekeeping nature.

Fandrei asked if there were other comments by PAC members:

- Gibbins announced that the Cordova Center was having a groundbreaking ceremony on August 6, and that since EVOS funded part of the center, PAC members were invited to come and participate in the celebration.
- Eilo said that in a recent trip to the Alaska SeaLife Center (ASLC), he noticed that the EVOS display, while roomy, was not up to date and could be improved and serve as a public information mechanism for the Trustee Council's restoration program. Hsieh said that was not one of the original purposes for EVOS funding at the ASLC, but they may want to revisit that concept. Fandrei said that was a good idea.
- Brune was disappointed that the PAC did not have a quorum today, even though the meeting was noticed well ahead of time and the date coordinated with PAC members. A quorum is needed for the PAC to be most effective. Mutter said that PAC member attendance records were provided to the Trustee Council when they make their decisions on PAC nominations.
- Hsieh and Gibbins suggested that PAC members should attend or listen in to the Trustee Council meetings, as that would help them understand what type of inputs the Trustee Council could use from the PAC. Gibbins stated that Stacy Studebaker encouraged this.
- Brune, Fandrei, Eilo, and Gibbins all agreed that EVOS staff communication with the PAC was excellent. Gibbins noted that Cherri Womac's support to the PAC has been fabulous.

The meeting was adjourned at 11:05 a.m.

# I. FOLLOW-UP:

- 1. Hsieh will distribute to PAC members, the "Frequently Asked Questions" about EVOS.
- 2. Hsieh will prepare and distribute to PAC members, a summary of EVOS responses to inquiries stemming from the BP Gulf of Mexico spill.
- 3. Fandrei will provide an oral report on the PAC meeting to the Trustee Council at their August 26 meeting.
- 4. PAC members are to get any comments on the latest draft Invitation for Proposals to Hsieh and Boerner as soon as possible after the draft comes out next week.
- 5. PAC members are to get any comments on the Integrated Herring Restoration Plan to Boerner next week.

# J. NEXT MEETINGS:

--Trustee Council in Anchorage on August 26, 2010 --PAC to be determined (probably March 2011)

# K. ATTACHMENTS (handed out at the meeting): NONE

# L. CERTIFICATION:

PAC Chairperson

Date

PAC 2010-2012 (under separate cover)

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# APDI 4-Year Budget Comparison FY08 - FY11

Component	FY08 Budget	FY09 Budget	FY10 Budget	FY11 Budget
Administration Management	\$743,824	\$720,572	\$804,663	\$813,693
Data Management	\$214,294	\$210,902	\$149,991	\$152,080
Science Management	\$368,202	\$696,129	\$468,539	\$231,336
Public Information & Outreach	\$40,330	\$183.665	\$136,850	\$0
Public Advisory Committee (PAC)	\$37,060	\$48,505	\$37,605	\$33,136
Trustee Council Member Direct Expenses	\$29,975	\$29.975	\$29,975	\$17,985
Habitat Protection Program	\$109,000	\$109,000	\$109,000	\$109,000
Liaison Program Support/Project Management	\$363,951	\$354,339	\$367,033	\$339,774
Alaska Resource Library & Information Services	\$167,533	\$177,565	\$166,372	\$137,119
Total	\$2,074,169	\$2,530,652	\$2,270,028	\$1,834,123
	Does not include FY08		FY10 Actuals YTD:	-
	NOS Grant of \$89,040.		\$1,072,880 / Anticipated	
	Total \$2,163,209		actuals spent by 9/30/10-	
			\$1,287,456	

Cost Type	FY08 Request	FY09 Request	FY10 Request	FY11 Request
Personnel	\$1,313,100	\$1,433,092	\$1,312,115	\$1,112,766
Travel	\$98,500	\$78,000	\$69,000	\$52,400
Contractual	\$468,807	\$795,607	\$632,480	\$466,015
Commodities	\$22,500	\$15,000	\$34,000	\$27,000
Equipment	\$0	\$0	\$35,000	\$24,500
Subtotal	\$1,902,907	\$2,321,699	\$2,082,595	\$1,682,681
GA – 9%	\$171,262	\$208,953	\$187,433	\$151,442
Total	\$2,074,169	\$2,530,652	\$2,270,028	\$1,834,123

#### FY10 Budget FY11 Budget Change Component Administration Management \$804,663 \$813,693 \$9,030 Data Management \$149,991 \$152,080 \$2,089 Science Management \$468,539 \$231,336 (\$237,203) Public Information & Outreach \$136,850 \$0 (\$136,850) Public Advisory Committee (PAC) \$37,605 \$33,136 (\$4,469) Trustee Council Member Direct Expenses \$29,975 \$17,985 (\$11,990) Habitat Protection Program \$109,000 \$109,000 \$0 Liaison Program Support/Project Management \$367,033 \$339,774 (\$27,259) Alaska Resource Library & Information Services \$166,372 \$137,119 (\$29,253) \$2,270,028 \$1,834,123 (\$435,905) Total

PJ 100 Budget Request Comparisons - FY10 to FY11

Cost Type	FY10 Request	FY11 Request	Change
Personnel	\$1,312,115	\$1,112,766	(\$199,349)
Travel	\$69,000	\$52,400	(\$16,600)
Contractual	\$632,480	\$466,015	(\$166,465)
Commodities	\$34,000	\$27,000	(\$7,000)
Equipment	\$35,000	\$24,500	(\$10,500)
Sub-Tota	\$2,082,595	\$1,682,681	(\$399,914)
GA-9%	\$187,433	\$151,442	(\$35,991)
Tota	\$2,270,028	\$1,834,123	(\$435,905)

Amounts in red/parenthesis are savings, black are increases. As of 7-28-10

Total FY10 APDI Budget by Agency											
Cost Type	ADFG	ADEC	ADNR	ADOL	NOAA	DOI USGS	DOI USFWS	DOI SEC	DOI OPEC	USFS	Total Budget
Personnel	\$963,587	\$31,300	\$60,000	\$0	\$90,000	\$53,622	\$55,858	\$21,875	\$7,500	\$28,373	\$1,312,115
Travel	\$47,000	\$5,500	\$0	\$5,500	\$5,500	\$0	\$0	\$5,500	\$0	\$0	\$69,000
Contractual	\$344,820	\$0	\$42,250	\$0	\$0	\$222,660	\$0	\$0	\$0	\$22,750	\$549,480
Commodities	\$34,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$34,000
Equipment	\$35,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$35,000
Sub-Total	\$1,424,407	\$36,800	\$102,250	\$5,500	\$95,500	\$276,282	\$55,858	\$27,375	\$7,500	\$51,123	\$1,999,595
GA – 9%	\$128,196	\$3,312	\$9,203	\$495	\$8,595	\$24,895	\$5,027	\$2,464	\$675	\$4,601	\$179,963
FY10 Total Budget	\$1,552,603	\$40,112	\$111,453	\$5,995	\$104,095	\$301,147	\$60,885	\$29,839	\$8,175	\$55,724	\$2,270,028

	Total FY11 APDI Budget by Agency											
Cost Type	ADFG	ADEC	ADNR	ADOL	NOAA	DO1 USGS	DOI FWS	DO1 SEC	DO1 OEPC	DOI BLM	USFS	Total Budget
Personnel	\$771,014	\$31,300	\$61,734	\$0	\$81,000	\$44,145	\$57,400	\$22,300	\$7,500	\$8,000	\$28,373	\$1,112,766
Travel	\$39,200	\$3,300	\$0	\$3,300	\$3,300	\$0	\$0	\$3,300	\$0	\$0	\$0	\$52,400
Contractual	\$283,015	\$0	\$40,000	\$0	\$0	\$126,000	\$0	\$0	\$0	\$4,500	\$12,500	\$466,015
Commodities	\$27,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$27,000
Equipment	\$24,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,500
Subtotal	\$1,144,729	\$34,600	\$101,734	\$3,300	\$84,300	\$170,145	\$57,400	\$25,600	\$7,500	\$12,500	\$40,873	\$1,682,681
GA – 9%	\$103,026	\$3,114	\$9,156	\$297	\$7,587	\$15,313	\$5,166	\$2,304	\$675	\$1,125	\$3,679	\$151,442
FY11 Total Budget	\$1,247,755	\$37,714	\$110,890	\$3,597	\$91,887	\$185,458	\$62,566	\$27,904	\$8,175	\$13,625	\$44,552	\$1,834,123

PJ 100 Budget Comparisons – FY10 to FY09 – 7/28/10

# *Exxon Valdez* Oil Spill Trustee Council FY11 Annual Program Development and Implementation (APDI) Budget October 1, 2010 – September 30, 2011

This budget structure is designed to provide a clearly identifiable allocation of the funds supporting Trustee Council activities. The program components are:

- Administration Management
- Data Management
- Science Management
- Public Advisory Committee (PAC)
- Habitat Protection Program
- Trustee Council Member Direct Expenses
- Liaison Program Support/Project Management
- Alaska Resources Library & Information Services (ARLIS)

The budget estimates detailed within those specified program components are projected based upon prior year actual expenditures and include the application of estimated merit step increases, as well as payroll benefits increases. Detailed budget component items are either "continuing" or "ongoing" from program directives already approved by the Trustee Council and cover necessary day-to-day operational costs of the *Exxon Valdez* Oil Spill Restoration Office and administrative costs associated with overseeing current Trustee Council program objectives.

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# **BUDGET SUMMARY INFORMATION - \$1,834,123**

The Council's FY11 APDI Budget will be funded by the *Exxon Valdez* Oil Spill Investment Fund managed by the Alaska Department of Revenue. The following summary tables show budget allocations by component, cost type, and agency. The remainder of the document specifies the uses to which the monies for each component of the budget will be applied and the agency distribution for each item.

		-		Total Budget
	Component		$\sim$	FY11
Administration Man	agement		1.3.7	\$813,693
Data Management				\$152,080
Science Managemen	nt		1 the 1	\$231,336
Public Advisory Cor	mmittee (PAC)	- Real		\$33,136
Trustee Council Me	mber Direct Exper	ises	`,	\$17,985
Habitat Protection P	rogram			\$109,000
Liaison Program Su	pport/Project Man	agement		\$339,774
Alaska Resources L	ibrary & Informati	on Services	5 A	\$137,119
			/ Total	\$1,834,123
				* ****
	Cost Type	Total Bu	dget	
and the second	Personnel	\$1,112	2,766	* * *
	Travel	\$52	2,400	S)
his in the second se	Contractual	\$466	5,015	
	Commodities	\$27	7,000	
L'ECH -	Equipment	\$24	,500	
	Subtotal	\$1,682	2,681	
	GA-9%	`\_`^\$151	,442	

Total FY11 APDI Budget by Agency												
Cost Type	ADFG	ADEC	ADNR	ADOL	7 NOAA	DOI USGS	DOI FWS	DOI SEC	DOI OEPC	USFS	DOI BLM	TOTAL BUDGET
Personnel	\$771,014	\$31,300	\$61,734	\$0	\$81,000	\$44,145	\$57,400	\$22,300	\$7,500	\$28,373	\$8,000	\$1,112,766
Travel	\$39,200	\$3,300	\$0/	\$3,300	\$3,300	\$0	\$0	\$3,300	\$0	\$0	\$0	\$52,400
Contractual	\$283,015	\$0	\$40,000	\$0	\$0	\$126,000	\$0	\$0	\$0	\$12,500	\$4,500	\$466,015
Commodities	\$27,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$27,000
Equipment	\$24,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,500
Subtotal	\$1,144,729	\$34,600	\$101,734	\$3,300	\$84,300	\$170,145	\$57,400	\$25,600	\$7,500	\$40,873	\$12,500	\$1,682,681
GA – 9%	\$103,026	\$3,114	\$9,156	\$297	\$7,587	\$15,313	\$5,166	\$2,304	\$675	\$3,679	\$1,125	\$151,442
FY11 Total Budget	\$1,247,755	\$37.714	\$110,890	\$3,597	\$91.887	\$185,458	\$62,566	\$27,904	\$8,175	\$44,552	\$13,625	\$1,834,123

Total

\$1,834,123



FY11 Annual Program Development & Implementation Budget – 08/24/10 Resolution 10-XX – Attachment A. T:\Project Information\2011\11100100 - EVOS Administration\DPD

# ADMINISTRATION MANAGEMENT - \$813,693

	<b>Total Budget</b>
Personnel	\$503,727
Travel	\$6,000
Contractual	\$201,780
Commodities	\$15,000
Equipment	\$20,000
Subtotal	\$7 <u>46</u> ,507/
GA - 9%	\$67,186
Total	\$813,693
	CALLEY OF an

# **PERSONNEL - \$498,256**

24 <sup>e</sup>		N. AND MAN	
ge/Step	Months	Monthly Cost	Annual Cost
28/B	9	\$8,284	\$109,317
6/B	9	\$7,733	\$102,697
9/B	12	\$5,002	\$93,182
8/K	12	\$5,877	\$107,495
5/L	12	\$4,868	\$91,036
el Total	JAN ST	\$31,764	\$503,727
	ge/Step 8/B 6/B 9/B 8/K 5/L el Total	ge/Step         Months           8/B         9           6/B         9           9/B         12           8/K         12           5/L         12           el Total         12	ge/StepMonthsMonthly Cost8/B9\$8,2846/B9\$7,7339/B12\$5,0028/K12\$5,8775/L12\$4,868el Total\$31,764

Monthly cost is w/o-benefits, annual is w/benefits.

# TRAVEL - \$6,000

Travel support for Executive Director and Administrative staff to attend meetings and trainings.

# CONTRACTUAL - \$201,780

• Professional Development \$3,000 Administrative funds are budgeted for training and professional meetings with state, federal and program agency representatives on administrative, program and budget issues as necessary. Funds will be utilized for in-state training opportunities.

# • Trustee Council's Office Space

The lease for the Trustee Council's office space is administered by the Government Services Administration (GSA) through the U.S. Geological Survey of the Department of the Interior. This amount includes a monthly PBS fee to GSA and a mandatory Homeland Securities fee. To decrease costs, this space was reduced by approximately 37% during 2010. This cost is an estimate as of 7-12-10 until final billing is received.

# • Annual Parking Fees for Trustee Office Staff & Parking Validation

EVOS has 5 parking permits; 3 are provided with the building lease and 2 paid directly to the Anchorage Parking Authority by EVOS (\$95/mo per space; \$150 per month validation minimum charge).

# Audit Contract

These funds are used to support a contract to conduct a financial audit of the FY10 records of the Trustee Office and all agencies receiving EVOSTC funds.

FY11 Annual Program Development & Implementation Budget – 08/24/10 Resolution 10-XX – Attachment A. T:\Project Information\2011\11100100 - EVOS Administration\DPD

# \$35,000

\$4,080

\$126,000

Pg. 4 of 17

### **Telephone Service**

\$4,500

\$3,000

\$2,500

\$1,200

\$4,500

\$2.500

These funds are to cover telecommunications, teleconferencing meetings, and long distance phone services.

### **Trustee Council Meetings**

These funds are to cover expenses for up to six Trustee Council meetings, at an estimated cost of \$500.00 per meeting.

### **Public Notices**

These funds are to cover the cost of advertising Trustee Council public meetings and workshops in newspapers in the spill affected areas.

### **Postage & Courier Services**

These funds are to cover cost of US Postal Service mailings, express mailings, and courier services.

# Equipment Maintenance and Agreements

These funds are for the postage meter annual rental, copier annual maintenance agreement, and any unforeseen maintenance expenses on other office equipment.

### Transcription

These funds are to cover transcription services. (Last renewal option utilized- contract ends 6/30/11)

#### . Interagency Contracted Services

These funds are to cover the Trustee Office's share of the Reimbursable Services Agreement Costs for the EPR Telecommunications, Computer Services, ADA, Central Mail and AKSAS & AKPAY charge-backs paid by all ADF&G divisions. These costs are based on the number of full-time positions divided by the total cost.

### **COMMODITIES - \$15,000**

Office supplies \$10,000 These funds are to cover the cost of miscellaneous office supplies, paper, toner, meeting materials etc. Also includes anticipated supplies needed to complete the official record.

# Interpretive Information:

These funds are to purchase materials to produce documents in-house for public outreach and information.

# **EQUIPMENT - \$20,000**

**Multifunction copier** 

These funds are to cover the cost of a new copier/fax/scanner and a maintenance agreement. The new machine replaces the Lanier 375 Printer/copier/scanner purchased 10/20/2006.

### FY11 Annual Program Development & Implementation Budget - 08/24/10 Resolution 10-XX - Attachment A. T:\Project Information\2011\11100100 - EVOS Administration\DPD

\$5,000

\$20,000

\$15,500

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Admin Mgmt	ADFG	USGS	Total
Personnel	\$503,727	\$0	\$503,797
Travel	\$6,000	\$0	\$6,000
Contractual	\$75,780	\$126,000	\$201,780
Commodities	\$15,000	\$0	\$15,000
Equipment	\$20,000	\$0	\$20,000
Subtotal	\$620,057	\$126,000	\$746,507
GA - 9%	\$55,846	\$11,340;	\$67,186
Component Total	\$676,353	\$137,340	\$813,693

FY11 Annual Program Development & Implementation Budget – 08/24/10 Resolution 10-XX – Attachment A. T:\Project Information\2011\11100100 - EVOS Administration\DPD 

# DATA MANAGEMENT - \$152,080

Cost Category	Total Budget
Personnel	\$121,023
Travel	\$1,500
Contractual	\$2,000
Commodities	\$10,500
Equipment	\$4,500
Subtotal	\$139,523
GA - 9%	\$12,557
Total	\$152,080

# **PERSONNEL - \$121,023**

	1111100000000		166601	
Position	Range/Step	Months	Monthly Cost	Annual Cost
Data Systems Manager – Karen Hickling	22/E	12	\$6,740	\$121,023
La contraction of the second sec	Personnel Total	L'ES J	\$6,740	\$121,023
Monthly cost is w/o benefits an	nual is w/henefit	e la		5.4P

Monthly cost is w/o benefits, annual is w/benefits.

# TRAVEL - \$1,500

Travel support for Data Management staff to attend meetings and participate in data management training.

# CONTRACTUAL - \$2,000

Professional Development		\$1,000
These funds are to cover registration fees	s to participate in training.	
• Equipment Maintenance	and the second sec	\$1,000

These funds are for minor equipment maintenance/repairs.

# **COMMODITIES - \$10,500**

# • Computer Software, Hardware & Upgrades

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These funds are to cover ongoing support and upgrades to computer hardware, software, and networking equipment for the Trustee Council Office.

# • Equipment supplies

These funds are to cover miscellaneous supplies for equipment.

\$10,000

\$500

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• This figure includes costs to replace obsolete equipment (\$4,500).

# AGENCY DISTRIBUTION

ADFG
\$121,023
\$1,500
\$2,000
\$10,500
\$4,500
\$139,523
\$12, <u>557</u>
\$152,080

# SCIENCE MANAGEMENT – \$231,336

Cost Category	Total
	Budget
Personnel	\$0
Travel	\$10,000
Contractual	\$202,235
Commodities	\$0
Equipment	\$0
Subtotal	\$212,235
GA - 9%	\$19,101
Component Total	\$231,336
	AN MAR

# **TRAVEL - \$10,000**

Travel for meetings and symposia as needed.

# CONTRACTUAL - \$202,235

- Science Management Contract: Catherine Boerner \$84.235 This contract provides science management services including project management, FY12 Invitation for Proposals coordination and implementation, and Annual Work Plan support. The Council has approved these funds through FY11 on July 23, 2010 in Resolution #10-08.
  - Alaska Marine Sciences Symposium

\$10.000 These funds are to assist with the support of the annual Alaska Marine Sciences Symposium.

\$3,000

Science Panel, Herring, and Long-Term Monitoring Groups \$105.000 The Science Panel, Herring, and Long-Term Monitoring groups are tasked with providing the following

services to the Trustee Council for FY11:

- Provide funding recommendations on scientific proposals to the Executive Director. This includes review of both the pre-proposals and final proposals from preferred proposers.
- Provide assistance on special projects at the Executive Director's or Trustee Council's request

The members are: Gary Cherr, Charles Peterson, Ronald O'Dor, Tom Dean, Robert Spies, Doug Hay, Marilyn Sigman, Jeep Rice, Phil Mundy, Doug Woodby, and Kimberly Trust. Jeep Rice (NOAA), Phil Mundy (NOAA), Doug Woodby (ADFG), and Kimberly Trust (USFWS) are not eligible for compensation, but contracts will be put in place for the remainder of the group. Each contract will cover services provided October 1, 2010 through September 30, 2011, and will not exceed \$15,000 per member.

### **Peer Review Contracts**

To ensure the scientific integrity of the findings, the Trustee Council requires scientific peer review by nationally recognized experts within appropriate and respective disciplines. This contract line item provides compensation for the scientific and technical review of EVOS final reports.

# **AGENCY DISTRIBUTION:**

		1
Cost Category	ADFG	
Personnel	\$0	
Travel	\$10,000	
Contractual	\$202,235	192
Commodities	\$0	
Equipment	\$0	
Subtotal	\$212,235	
GA - 9%	\$19,101	
Component Total	\$231,336	

Dudget
Duugei
\$7,500
\$18,400
\$3,000
\$1,500
\$0
\$30,400
\$2,736
\$33,136

# **PUBLIC ADVISORY COMMITTEE (PAC) - \$33,136**

# PERSONNEL - \$7,500

Annual funds are provided for the designated federal officer (currently Doug Mutter) assigned to the PAC as required by the Federal Advisory Committee Act (FACA). This individual coordinates the scheduling of meetings, development of the agenda and meeting minutes, and provides assistance to the PAC Chair and the Restoration Office as needed.

# **TRAVEL - \$18,400**

#### PAC Meetings •

Travel support for 10 PAC members to attend approximately two meetings for an estimated average cost of \$800 per person per trip to include: airfare, ground transportation, per diem, and lodging.

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• **TC** Meetings

\$2,400 Travel support for the PAC chair (currently Stacy Studebaker) to attend all non-telephonic Trustee Council meetings for an estimated average cost of \$800 per trip to include: airfare, ground transportation, per diem, and lodging.

# CONTRACTUAL - \$3,000

**PAC Meetings** •

These funds cover public announcements.

# COMMODITIES - \$1,500<sup>\*</sup>

• PAC Meetings

These funds cover public meeting materials and incidentals.

# \$16,000

\$3,000

\$1,500

# AGENCY DISTRIBUTION

Cost Category	ADFG	DOI-OEPC	Total
Personnel	\$0	\$7,500	\$7,500
Travel	\$18,400	\$0	\$18,400
Contractual	\$3,000	\$0	\$3,000
Commodities	\$1,500	\$0	\$1,500
Equipment	\$0	<u></u> \$\$\$\$\$	\$0
Subtotal	\$22,900	\$7,500	\$30,400
GA - 9%	\$2,061	\$675	\$2,736
Component Total	\$24,961	\$8,175	\$33,136

FY11 Annual Program Development & Implementation Budget – 08/24/10 Resolution 10-XX – Attachment A. T:\Project Information\2011\11100100 - EVOS Administration\DPD

# **TRUSTEE COUNCIL MEMBER EXPENSES- \$17,985**

Cost Category	Total				
	Budget				
Personnel	\$0				
Travel	\$16,500				
Contractual	\$0				
Commodities	\$0				
Equipment	\$0				
Subtotal	\$16,500				
GA - 9%	\$1,485				
Component Total	\$17,985				

### **TRAVEL - \$16,500**

#### • **ADFG Trustee Council Member Travel**

Travel support for the Trustee Council member or Alternate's travel expenses to participate in approximately three one-day meetings/in Anchorage at a cost of approximately \$1,100 per trip.

DOI Trustee Council Member Travel

Travel support for the Trustee Council member or Alternate's travel expenses to participate in approximately three one-day meetings in Anchorage, at a cost of approximately \$1,100 per trip.

# NOAA Trustee Council Member Travel

Travel support for the Trustee Council member or Alternate's travel expenses to participate in approximately three one-day meetings in Anchorage, at a cost of approximately \$1,100 per trip.

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# ADEC Trustee Council Member Travel

# Travel support for the Trustee Council member or Alternate's travel expenses to participate in approximately three one-day meetings in Anchorage, at a cost of approximately \$1,100 per trip.

### • DOL Trustee Council Member Travel

\$3,300 Travel support for the Trustee Council member or Alternate's travel expenses to participate in approximately three one day meetings in Anchorage, at a cost of approximately \$1,100 per trip

# **AGENCY DISTRIBUTION**

Cost Category	ADFG	DOI-SEC	NOAA	ADEC	ADOL	Total
Personnel	ši \$0	\$0	\$0	\$0	\$0	\$0
Travel	\$3,300	\$3,300	\$3,300	\$3,300	\$3,300	\$16,500
Contractual	\$0	\$0	\$0	\$0	\$0	\$0
Commodities	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$3,300	\$3,300	\$3,300	\$3,300	\$3,300	\$16,500
GA - 9%	\$297	\$297	\$297	\$297	\$297	\$1,485
Component Total	\$3,597	\$3,597	\$3,597	\$3,597	\$3,597	\$17,985

\$3,300

\$3.300

# \$3,300

\$3,300

Cost Category	Total Budget		
Personnel	\$43,000		
Travel	\$0		
Contractual	\$57,000		
Commodities	\$0		
Equipment	\$0		
Subtotal	\$100,000		
GA - 9%	\$9,000		
Component Total	\$109,000		

# HABITAT PROTECTION PROGRAM - \$109,000

# **PERSONNEL - \$43,000**

Funds are provided in support of agency efforts to bring viable small parcel proposals to the Council for consideration. Expenses such as title review, hazmat review and survey review and similar expenses are appropriate due diligence efforts which may be undertaken by sponsoring agencies under this program. The budgeted due diligence expenditures under personnel are those to be accomplished through the use of in-house staff as most efficient and/or cost effective. The purchase of any interest in land requires additional Trustee Council review and approval.

# CONTRACTUAL - \$57,000

Funds are provided in support of agency efforts to bring viable proposals to the Council for consideration. Expenses such as title review, hazmat review and survey review and similar expenses are appropriate due diligence efforts which may be undertaken by sponsoring agencies under this program. The budgeted due diligence expenditures under contractual services are those contracted out by the agency as most efficient and/or cost effective. The purchase of any interest in land requires additional Trustee Council review and approval.

Cost Category	ADNR	DOI-FWS	DOI-BLM	USFS	Total
Personnel	\$10,000	\$25,000	\$8,000	\$0	\$43,000
Travel	\$0	\$0	\$0	\$0	\$0
Contractual	\$40,000	\$0	\$4,500	\$12,500	\$57,000
Commodities	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0
Subtotal	\$50,000	\$25,000	\$12,500	\$12,500	\$100,000
GA - 9%	\$4,500	\$2,250	\$1,125	\$1,125	\$9,000
Component Total	\$54,500	\$27,250	\$13,625	\$13,625	\$109,000

# **AGENCY DISTRIBUTION**

FY11 Annual Program Development & Implementation Budget – 08/24/10 Resolution 10-XX – Attachment A. T:\Project Information\2011\11100100 - EVOS Administration\DPD
### LIAISON PROGRAM SUPPORT/PROJECT MANAGEMENT – \$339,774

Cost Category	Total Budget
Personnel	\$311,719
Travel	\$0
Contractual	\$0
Commodities	\$0
Equipment	\$0
Subtotal	\$311,719
GA - 9%	\$28,055
<b>Component Total</b>	\$339,774
	1 North

### **PERSONNEL - \$311,719**

#### Project Management - \$138,079

Project Management funds provide lead Trustee Agencies with funds necessary to manage contracts and report on the status of projects; to facilitate communication between the agencies, Principal Investigators, and the Restoration Office; to assist with the annual financial audit; and perform other administrative functions necessary for implementation of projects authorized by the Trustee Council. Project management funds are also included below for management of multi-year projects that have been previously authorized to continue in FY11. Additional funds (one month's salary per project managed – up to 12 months maximum) will be included in this approved budget to manage the new FY11 projects once they have been approved.

	Sec. 3.	NAC	<u>k.</u>		
DNR – Carc	l Fries		1 1	\$	12,934
DOI/USGS	– Dede Bohn	a land all a so	64 1	\$4	44,145
NOAA – Pe	te Hagen 🔪 👌		19 AN	<u>\$1</u>	31,000
TOTAL		ar an		\$13	38,079
1977 C	and the second s		1. S. L.		

### TC Council Support - \$173,640

Trustee Council Support funds provide Trustee Agencies with funds necessary to cover liaison staff costs for time and expenses related to preparing for, communicating with, and representation of Trustee Agency positions at EVOS sponsored meetings or when participating in EVOS program activities and providing future program direction, unless waived by the agency.

ADFG – Tom Brookover	\$20,467
ADNR – Carol Fries	\$38,800
USFS – Steve Zemke	\$28,373
NOAA – Pete Hagen	\$0
ADEC – Marit Carlson-Van Dort	\$31,300
DOI/FWS – Veronica Varela	\$32,400
DOI/SEC – Federal Budget Officer – Bruce Nesslage	<u>\$22,300</u>
TOTAL	\$173,640

### **AGENCY DISTRIBUTION:**

Cost Category	ADEC	ADFG	ADNR	DOI/USGS	USFS	NOAA	FWS	DOI/SEC	Total
Personnel	\$31,300	\$20,467	\$51,734	\$44,145	\$28,373	\$81,000	\$32,400	\$22,300	\$311,719
Travel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Contractual	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commodities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$31,300	\$20,467	\$51,734	\$44,145	\$28,373	\$81,000	\$32,400	\$22,300	\$311,719
GA - 9%	\$2,817	\$1,842	\$4,656	\$3,973	\$2,554	\$7,290	\$2,916	\$2,007	\$28,055
<b>Component Total</b>	\$34,117	\$22,309	\$56,390	\$48,118	\$30,927	\$88,290	\$35,316	\$24,307	\$339,774

FY11 Annual Program Development & Implementation Budget – 08/24/10 Resolution 10-XX – Attachment A. T:\Project Information\2011\11100100 - EVOS Administration\DPD

### ALASKA RESOURCES LIBRARY & INFORMATION SERVICES – \$137,119 (ARLIS)

Cost Category	Total Budget
Personnel	\$125,797
Travel	\$0
Contractual	\$0
Commodities	\$0
Equipment	\$0
Subtotal	\$125,797
GA - 9%	\$11,322
Component Total	\$137,119

### **PERSONNEL – \$125,797**

Position	Range/Step	Months	Monthly Cost	Annual Cost
Librarian III – Carrie Holba	19/N	12	\$7,016	\$125,797
	Personnel Total		\$7,016	\$125,797

Monthly cost is w/o benefits, annual is w/benefits.

Funding provides 1.0 FTE librarian to meet the ongoing information and research needs of the Trustee Council staff, Public Advisory Committee, researchers, and the general public, manage the EVOS collection at ARLIS, and represent the Trustee Council on the ARLIS Management Team.

### **AGENCY DISTRIBUTION:**

Cost Category	ADFG
Personnel	\$125,797
Travel	\$0
Contractual	\$0
Commodities	\$0
Equipment	\$0
Subtotal	\$125,797
GA - 9%	\$11,322
Component Total	\$137,119

Esler PJ 11100808 Amendment

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### Project Title: FY11 amendment to EVOSTC restoration project 11100808: Nearshore synthesis – sea otters and sea ducks.

Project Period for the Amendment: October 1, 2010 - September 30, 2011

Primary Investigator: Dan Esler, Simon Fraser University and Pacific WildLife Foundation

Study Location: Western Prince William Sound

Abstract:

As part of EVOSTC restoration project 070808, harlequin ducks (along with other nearshore vertebrates) were examined for lingering exposure to residual *Exxon Valdez* oil. This work determined that harlequin ducks in oiled areas of PWS continued to show biomarker evidence of elevation of cytochrome P4501A through 2009, which was interpreted to indicate exposure to *Exxon Valdez* oil up to 20 years after the spill (Esler et al. 2010). In this amendment, I am requesting additional funding to replicate the harlequin duck sampling in March 2011 and conduct laboratory analyses, to continue to track the timeline over which exposure is indicated. This information will be used to gauge the status of recovery of harlequin ducks from the 1989 spill.

FY11 EVOS funds requested, including GA: \$103,200 Lead agency: U.S. Geological Survey

### Procedural and Scientific Methods

Objective 1. Harlequin duck CYP1A sampling and analysis.

Section :

Methods will replicate those from previous work (Trust et al. 2000, Esler et al. 2010) to facilitate comparisons. In brief, in March 2011 we will capture harlequin ducks in several areas that were oiled during the *Exxon Valdez* spill, including Bay of Isles, Herring Bay, Crafton Island, Lower Passage, and Green Island, as well as in nearby unoiled northwestern Montague Island. In each area, 20 harlequin ducks will have small (< 0.5g) liver biopsies taken while under general anesthesia. Biopsies will be frozen in liquid nitrogen immediately and will be maintained in a frozen state until laboratory analysis at UC Davis by collaborators Keith Miles, Jack Henderson, and Barry Wilson. CYP1A induction will be determined by measuring hepatic 7-

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Amendment to project 11100808 - June 9, 2010 ethoxyresorufin-O-deethylase (EROD) activity, which is a catalytic function principally of hydrocarbon-inducible CYP1A enzymes. Data analysis will follow that of Esler et al. (2010) and will evaluate average differences in EROD between oiled and unoiled areas, accounting for any effects of age, sex, or mass.

### Estimated budget

Personnel:			
Esler	3 mo @ \$8K	24.0	κ
Lead Tech	1 mo @ \$3.5K	3.5	Κ
Techs	1 mo @ 2.0K *2 20 davs @	4.0	K
Vet	\$0.5K/day	10.0	K
Travel:			
Vancouver to A	NC (*5)	5.0	Κ
Misc Travel		1.5	К
Shipping		2.0	K
Boat Charter (*	l4 days @ \$1.8K)	25.2	К
Supplies:			
Vet Supplies (\$	\$100/bird * 40)	4.0	к
Misc		3.0	K
Lab Analysis:			
EROD Activity	(UC Davis; 40*\$200)	- 8.0	K
Subtotal		90.2	К
PWLF Adminis	trative Fees (5%)	4.5	к
Subtotal		94.7	к
USGS GA (9%	)	8.5	к
	ΓΔΙ	103.2	ĸ
		100.2	i v

### Measurable Project Tasks

- FY 2011, 1<sup>st</sup> quarter (October 1, 2010 December 31, 2010) Project funding approved by the Trustee Council Begin arrangements of field logistics, personnel, and contracts
- FY 2011, 2nd quarter (January 1, 2011– March 31, 2011) Continue with field logistics and contracts

Amendment to project 11100808 June 9, 2010

2

Prepare field gear Conduct field work during March 2011

- FY 2011, 3rd quarter (April 1, 2011 June 30, 2011) Ship samples to UCDavis Maintain and store field gear Finalize project administration
- FY 2011, 4<sup>th</sup> quarter (July 1, 2011 Sept. 30, 2011) Receive results from laboratory Conduct data analyses Prepare report of findings by 30 September as an amendment to 090808 final report

### References Cited:

- Esler, D., K. A. Trust, B. E. Ballachey, S. A. Iverson, T. L. Lewis, D. J. Rizzolo, D. M. Mulcahy, A. K. Miles, B. R. Woodin, J. J. Stegeman, J. D. Henderson, and B. W. Wilson. 2010. Cytochrome P4501A biomarker indication of oil exposure in harlequin ducks up to 20 years after the Exxon Valdez oil spill. Environmental Toxicology and Chemistry 29:1138-1145.
- Trust, K. A., D. Esler, B. R. Woodin, and J. J. Stegeman. 2000. Cytochrome P450 1A induction in sea ducks inhabiting nearshore areas of Prince William Sound, Alaska. Marine Pollution Bulletin 40:397-403.

Amendment to project 11100808 June 9, 2010

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FY 2011 Work Plan (multi-year projects)

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Project Number & Date Approved:	Lead Agency & Principal Investigator:	Project Title:	Approved FY10 Amount:	Requested and Approved FY11 Amount:	Approved FY12 Amount:	Approved FY13 Amount:	Total Multi- Year Budget Approved:
11100100 08/26/2010	ADF&G EVOS Admin.	EVOS 2011 Annual Program Development and Implementation (APDI) Budget	\$0	<b>\$1,247,755</b> (\$1,144,729 + GA \$103,026)	\$0	\$0	\$0
<b>Continuing</b> Pr	ojects:						
10100340 08/31/2009	ADF&G Weingartner, T.	Long-Term Monitoring of the Alaska Coastal Current	\$141,500 (\$129,800 + GA \$11,700)	<b>\$138,700</b> (\$127,200 + GA \$11,400)	\$133,600 (\$122,600 + GA \$11,000)	\$0	\$413,800
10100128 08/31/2009	ADF&G Quinn, T.	Historical Humpback Whale Abundance in PWS in Relation to Pacific Herring Dynamics	\$94,300 (\$86,500 + GA \$7,800)	<b>\$69,500</b> (\$63,800 + GA \$5,700)	\$0	\$0	\$163,800
10100839 08/31/2009	ADF&G Hollmen, T.	Evaluating Injury to Harlequin Ducks	\$218,300 (\$200,300 + GA \$18,000)	<b>\$32,400</b> (\$29,700 + GA \$2,700)	\$0	\$0	\$250,700
		ADF&G Subtotal:	\$0	\$1,488,355	\$0	\$0	\$0
11100100 08/26/2010	ADEC EVOS Admin.	EVOS 2011 Annual Program Development and Implementation (APDI) Budget	\$0	<b>\$37,714</b> (\$34,600 + GA \$3,114)	\$0	\$0	\$0
		ADEC Subtotal:	\$0	\$37,714	\$0	\$0	\$0
11100100 08/26/2010	ADNR EVOS Admin.	EVOS 2011 Annual Program Development and Implementation (APDI) Budget	\$0.00	<b>\$110,890</b> (\$101,734 + GA \$9,156)	\$0	\$0	\$0
		ADNR Subtotal:	\$0	\$110,890	\$0	\$0	\$0
11100100 08/00/2010	ADOL EVOS Admin.	EVOS 2011 Annual Program Development and Implementation (APDI) Budget	0	<b>\$3,597</b> (\$3,300 + GA \$297)	\$0	\$0	\$0
		ADOL Subtotal:	\$0	\$3,597	\$0	\$0	\$0
		State of Alaska subtotal:	\$0	\$1,640,556	\$0	\$0	\$0



Project Number & Date Approved:	Lead Agency & Principal Investigator:	Project Title:	Approved FY10 Amount:	Requested and Approved FY11 Amount:	Approved FY12 Amount:	Approved FY13 Amount:	Total Multi- Year Budget Approved:
11100100 08/26/2010	NOAA EVOS Admin.	EVOS 2011 Annual Program Development and Implementation (APDI) Budget	\$0	<b>\$91,887</b> (\$84,300 + GA \$7,587)	\$0	\$0	\$0
Continuing Pr	ojects:						
10100132 08/31/2009	NOAA Pegau, S.	PWS Herring Survey: Community Involvement, Outreach, Logistics, & Synthesis	\$343,100 (\$314,800 + GA \$28,300)	<b>\$385,600</b> (\$353,800 + GA \$31,800)	\$354,300 (\$325,000 + GA \$29,300)	\$97,400 (\$89,300 + GA \$8,000)	\$1,180,400
10100132-A 08/31/2009	NOAA Campbell, R.	PWS Herring Survey: Plankton & Oceanographic Observations	\$201,500 (\$184,800 + GA \$16,600)	<b>\$197,300</b> (\$181,000 + GA \$16,300)	\$200,100 (\$183,600 + GA \$16,500)	\$64,400 (\$59,100 + GA \$5,300)	\$663,200
10100132-B 08/31/2009	NOAA Thorne, R.	PWS Herring Survey: Assessment of Juvenile Herring Abundance & Habitat Utilization	\$170,300 (\$156,200 + GA \$14,100)	<b>\$196,700</b> (\$180,500 + GA \$16,200)	\$173,600 (\$159,200 + GA \$14,300)	\$56,200 (\$51,600 + GA \$4,600)	\$596,700
10100132-C 08/31/2009	NOAA Kline, T.	PWS Herring Survey: Pacific Herring Energetic Recruitment Factors	\$258,700 (\$237,300 + GA \$21,400)	<b>\$256,600</b> (\$235,400 + GA \$21,200)	\$265,000 (\$243,100 + GA \$21,900)	\$218,300 (\$200,300 + GA \$18,000)	\$998,600
10100132-D 08/31/2009	NOAA Heintz, R.	PWS Herring Survey: Predictors of Winter Preformance	\$99,000 (\$90,800 + GA \$8,200)	<b>\$99,000</b> (\$90,800 + GA \$8,200)	\$0	\$0	\$306,600
1000132-E 08/31/2009	NOAA Gay, S.	PWS Herring Survey: Physical Oceanographic Characteristics of Nursery Habitats of Juvenile Pacific	\$88,400 (\$81,100 + GA \$7,300)	<b>\$83,100</b> (\$76,200 + GA \$6,900)	\$90,000 (\$82,600 + GA \$7,400)	\$91,500 (\$84,000 + GA \$7,600)	\$353,000
10100132-F 08/31/2009	NOAA Brown, E.	PWS Herring Survey: Sound-wide Juvenile Herring, Predator, & Competitor Density via Aerial Surveys	\$160,141 (\$146,918 + GA \$13,223)	<b>\$153,056</b> (\$140,418 + GA \$12,638)	\$153,056 (\$140,418 + GA \$12,638)	\$35,001 (\$32,111 + GA \$2,890)	\$501,253
10100132-G 08/31/2009	NOAA Bishop, M.	PWS Herring Survey: Top-Down Regulation by Predatory Fish on Juvenile Herring	\$185,500 (\$170,200 + GA \$15,300	<b>\$183,200</b> (\$168,100 + GA \$15,100)	\$193,400 (\$177,500 + GA \$16,000)	\$116,700 (\$107,100 + GA \$9,600)	\$678,900



Project	Lead Agency &			Requested and			Total Multi-
Date	Principal		Approved FY10	Approved FY11	Approved FY12	Approved FY13	Year Budget
Approved:	Investigator:	Project Title:	Amount:	Amount:	Amount:	Amount:	Approved:
10100290 08/31/2009	NOAA Carls, M	<i>Exxon Valdez</i> Trustee Hydrocarbon Database	\$9,300 (\$8,500 + GA \$800)	<b>\$9,300</b> (\$8,500 + GA \$800)	\$9,300 (\$8,500 + GA \$800)	\$9,300 (\$8,500 + GA \$800)	\$37,200
10100574 08/31/2009	NOAA Lees, D.	Reassessment of Bivalve Recovery on Treated Beaches in PWS	\$133,600 (\$122,600 + GA \$11,000)	<b>\$95,500</b> (\$87,600 + GA \$7,900)	\$32,600 (\$29,900 + GA \$2,700)	\$0	\$261,600
10100624 08/31/2009	NOAA Bychov, A.	Measuring Interannual Variability in the Herring's Forage from the Gulf of Alaska	\$61,900 (\$56,800 + GA \$5,100)	<b>\$63,600</b> (\$58,300 + GA \$5,200)	\$65,100 (\$59,700 + GA \$5,400)	\$15,000 (\$13,800 + GA \$1,200)	\$205,600
10100742 08/31/2009	NOAA Matkin, C.	Monitoring, Tagging, Feeding Studies, & Restoration of Killer Whales in PWS & Kenai Fjords	\$132,310 (\$121,385 + GA \$10,925)	<b>\$132,310</b> (\$121,385 + GA \$10,925)	\$125,775 (\$115,390 + GA \$10,385)	\$0	\$390,394
		NOAA Subtotal:	\$0	\$1,947,153	\$0	\$0	\$0
11100100 08/26/2010	DOI-USGS EVOS Admin.	EVOS 2011 Annual Program Development and Implementation (APDI) Budget	\$0	<b>\$185,458</b> (\$170,145 + GA \$15,313)	\$0	\$0	\$0
11100808 08/26/2010	DOI-USGS Esler, D.	Nearshore Synthesis - Sea Otters and Sea Ducks	\$0	<b>\$103,200</b> (\$94,700 + GA \$8,500)	\$0	\$0	\$0
Continuing Pro	ojects:		の語を言いた。				
10100132-I 08/31/2009	DOI-USGS Hershberger, P.	PWS Herring Survey: Herring Disease Program	\$81,800 (\$75,000 + GA \$6,800)	<b>\$284,100</b> (\$260,600 + GA \$23,500)	\$295,800 (\$271,400 + GA \$24,400)	\$313,500 (\$287,600 + GA \$25,900)	\$975,200
10100808 08/31/2009	DOI-USGS Bodkin, J.	Monitoring for Evaluation of Recovery & Restoration of Injured Nearshore Resources	\$166,419 (\$152,678 + GA \$13,741)	<b>\$166,419</b> (\$152,678 + GA \$13,741)	\$165,329 (\$151,678 + GA \$13,651)	\$103,412 (\$94,873 + GA \$8,539)	\$601,579
		DOI-USGS Subtotal:	\$0	\$739,177	\$0	\$0	\$0



Project Number &	Lead Agency &		Approved EV10	Requested and	Approved EV12	Approved EV12	Total Multi-
Approved:	Investigator:	Project Title:	Amount:	Amount:	Amount:	Amount:	Approved:
11100100 08/26/2010	DOI-USFWS EVOS Admin.	EVOS 2011 Annual Program Development and Implementation (APDI) Budget	\$0	<b>\$62,566</b> (\$57,400 + GA \$5,166)	\$0	\$0	\$0
<b>Continuing Pro</b>	ojects:						
10100132-H 08/31/2009	DOI-USFWS Kuletz, K.	PWS Herring Survey: Trends in Seabird Predation	\$147,200 (\$135,000 + GA \$12,200)	<b>\$163,900</b> (\$150,400 + GA \$13,500)	\$150,900 (\$138,400 + GA \$12,500)	\$102,900 (\$94,400 + GA \$8,500)	\$564,900
10100751 08/31/2009	DOI-USFWS Irons, D.	PWS Marine Bird Surveys, Synthesis, & Restoration	\$254,500 (\$233,486 + GA \$21,014)	<b>\$39,240</b> (\$36,000 + GA \$3,240)	\$0	\$0	\$293,740
		DOI-USFWS Subtotal:	\$0	\$265,706	\$0	\$0	\$0
11100100 08/26/2010	DOI-BLM EVOS Admin.	EVOS 2011 Annual Program Development and Implementation (APDI) Budget	\$0	<b>\$13,625</b> (\$12,500 + GA \$1,125)	\$0	\$0	\$0
		DOI-BLM Subtotal:	\$0	\$13,625	\$0	\$0	\$0
11100100 08/26/2010	DOI-SEC EVOS Admin.	EVOS 2011 Annual Program Development and Implementation (APDI) Budget	\$0	<b>\$27,904</b> (\$25,600 + GA \$2,304)	\$0	\$0	\$0
		DOI-SEC Subtotal:	\$0	\$27,904	\$0	\$0	\$0
11100100 08/26/2010	DOI-OEPC EVOS Admin.	EVOS 2011 Annual Program Development and Implementation (APDI) Budget	\$0	<b>\$8,175</b> (\$7,500 + GA \$675)	\$0	\$0	\$0
		DOI-OEPC Subtotal:	\$0	\$8,175	\$0	\$0	\$0
11100100 08/26/2010	USFS EVOS Admin.	EVOS 2011 Annual Program Development and Implementation (APDI) Budget	\$0	<b>\$44,552</b> (\$40,873 + GA \$3,679)	\$0	\$0	\$0
		USFS Subtotal:	\$0	\$44,552	\$0	\$0	\$0
		United States subtotal: Grand Total:	\$0 \$0	\$3,046,292 \$4,686,848	\$0 \$0	\$0 \$0	\$0 \$0



# State of Alaska Projects - FY2011

Project							Sub-Total Per
Number:	Principal Investigator (PI):	Project Title:	Agency:	<b>Budget Amount:</b>	<u>GA - 9%:</u>	<u>Total:</u>	Agency:
11100100	EVOS Administration	FY 2011 APDI	DEC	\$34,600.00	\$3,114.00	\$37,714.00	and a state of the
		Subtotal DEC:		\$34,600.00	\$3,114.00	\$37,714.00	\$37,714.00
11100100	EVOS Administration	FY 2011 APDI	DNR	\$101,734.00	\$9,156.00	\$110,890.00	The Real
		Subtotal DNR:		\$101,734.00	\$9,156.00	\$110,890.00	\$110,890.00
11100100	EVOS Administration	FY 2011 APDI	DOL	\$3,300.00	\$297.00	\$3,597.00	
		Subtotal DOL:		\$3,300.00	\$297.00	\$3,597.00	\$3,597.00
11100100	EVOS Administration	FY 2011 APDI	F&G	\$1,144,729.00	\$103,026.00	\$1,247,755.00	
Continuing Projects:							
		Long-Term Monitoring of the					
10100340	Weingartner, T.	Alaska Coastal Current	F&G	\$127,200.00	\$11,400.00	\$138,700.00	
10100128	Quinn, T.	Historical Humpback Whale Abundance in PWS in Relation to Pacific Herring Dynamics	F&G	\$63,800.00	\$5,700.00	\$69,500.00	
		Evaluating Injury to Harlequin					Solida - Tarredo - A
10100839	Hollmen, T.	Ducks	F&G	\$29,700.00	\$2,700.00	\$32,400.00	
		Subtotal F&G:		\$1,365,429.00	\$122,826.00	\$1,488,355.00	\$1,488,355.00
		State of Alaska Grand Total:		\$1,505,063.00	\$135,393.00	\$1,640,556.00	\$1,640,556.00

# United States Projects (Federal) - FY2011

Project			Read State	Budget			Sub-Total Per
Number:	<u>PI:</u>	Project Title:	Agency:	Amount:	<u>GA - 9%:</u>	<u>Total:</u>	Agency:
11100100	<b>EVOS</b> Administration	FY 2011 APDI	NOAA	\$84,300.00	\$7,587.00	\$91,887.00	Salara and
<b>Continuing Pro</b>	jects:						
10100132	Pegau, S.	PWS Herring Survey: Community Involvement, Outreach, Logistics, and Synthesis	NOAA	\$353,800.00	\$31,800.00	\$385,600.00	
10100132-A	Campbell, R.	PWS Herring Survey: Plankton & Oceanographic Observations	NOAA	\$181,000.00	\$16,300.00	\$197,300.00	
10100132-B	Thorne, R.	PWS Herring Survey: Assessment of Juvenile Herring Abundance & Habitat Utilization	NOAA	\$180,500.00	\$16,200.00	\$196,700.00	
10100132-C	Kline, T.	PWS Herring Survey: Pacific Herring Energetic Recruitment Factors	NOAA	\$235,400.00	\$21,200.00	\$256,600.00	
10100132-D	Heintz, R.	PWS Herring Survey: Predictors of Winter Performance	NOAA	\$90,800.00	\$8,200.00	\$99,000.00	
10100132-Е	Gay, S.	PWS Herring Survey: Physical Oceanographic Characteristics of Nursery Habitats of Juvenile Pacific Herring	NOAA	\$76,200.00	\$6,900.00	\$83,100.00	
10100132-F	Brown, E.	PWS Herring Survey: Sound-wide Juvenile Herring, Predator, & Competitor Density via Aerial Surveys	NOAA	\$140,418.00	\$12,638.00	\$153,056.00	
10100132-G	Bishop, M.	PWS Herring Survey: Top-Down Regulation by Predatory Fish on Juvenile Herring	NOAA	\$168,100.00	\$15,200.00	\$183,300.00	
10100290	Carls, M.	<i>Exxon Valdez</i> Trustee Hydrocarbon Database	NOAA	\$8,500.00	\$800.00	\$9,300.00	
10100574	Lees, D.	Reassessment of Bivalve Recovery on Treated Mixed-Soft Beaches in PWS	NOAA	\$87,600.00	\$7,900.00	\$95,500.00	



# United States Projects (Federal) - FY2011

Project			4 84.63	Budget			Sub-Total Per
Number:	<u>PI:</u>	Project Title:	Agency:	Amount:	<u>GA - 9%:</u>	<u>Total:</u>	Agency:
10100624	Bychov, A.	Measuring Interannual Variability in the Herring's Forage Base from the Gulf of Alaska	NOAA	\$58,300.00	\$5,200.00	\$63,500.00	
10100742	Matkin, C.	Monitoring, Tagging, Feeding Studies, & Restoration of Killer Whales in PWS/Kenai Fjords Subtotal NOAA:	NOAA	\$121,385.00 <b>\$1,786,303.00</b>	\$10,925.00 <b>\$160,850.00</b>	\$132,310.00 <b>\$1,947,153.00</b>	\$1,947,153.00
11100100	EVOS Administration	FY 2011 APDI	DOI-USGS	\$170,145.00	\$15,313.00	\$185,458,00	
11100808	Esler, D.	Nearshore Synthesis - Sea Otters and Sea Ducks	DOI-USGS	\$94,700.00	\$8,500.00	\$103,200.00	
Continuing Projects:							
11100132-I	Hershberger, P.	PWS Herring Survey: Herring Disease Program	DOI-USGS	\$260,600.00	\$23,500.00	\$284,100.00	
11100808	Bodkin, J.	Monitoring for Evaluation of Recovery & Restoration of Injured Nearshore Resources	DOI-USGS	\$152,678.00	\$13,741.00	\$166,419.00	
		Subtotal DOI-USGS:		\$678,123.00	\$61,054.00	\$739,177.00	\$739,177.00
11100100	<b>EVOS Administration</b>	FY 2011 APDI	DOI-FWS	\$57,400.00	\$5,166.00	\$62,566.00	
<b>Continuing</b> Pro	jects:						
110100132-Н	Kuletz, K.	PWS Herring Survey: Trends in Seabird Predation	DOI - FWS	\$150,400.00	\$13,500.00	\$163,900.00	
11100751	Irons, D.	PWS Marine Bird Surveys, Synthesis, & Restoration	DOI-FWS	\$36,000.00	\$3,240.00	\$39,240.00	
		Subtotal DOI-FWS:		\$243,800.00	\$21,906.00	\$265,706.00	\$265,706.00
11100100	EVOS Administration	FY 2011 APDI	DOI-SEC	\$25,600.00	\$2,304.00	\$27,904.00	
		Subtotal DOI-SEC:		\$25,600.00	\$2,502.00	\$27,904.00	\$27,904.00
11100100	EVOS Administration	FY 2011 APDI	DOI-OEPC	\$7,500.00	\$675.00	\$8,175.00	
		Subtotal DOI-OEPC:		\$7,500.00	\$675.00	\$8,175.00	\$8,175.00
11100100	EVOS Administration	FY 2011 APDI	DOI-BLM	\$12,500.00	\$1,125.00	\$13,625.00	
		Subtotal DOI-BLM:		\$12,500.00	\$1,125.00	\$13,625.00	\$13,625.00

FY2011 Budget - United States - Final



# United States Projects (Federal) - FY2011

Project				Budget			Sub-Total Per
Number:	<u>PI:</u>	Project Title:	Agency:	Amount:	<u>GA - 9%:</u>	<u>Total:</u>	Agency:
11100100	EVOS Administration	FY 2011 APDI	USFS	\$40,873.00	\$3,679.00	\$44,552.00	A REAL PROPERTY AND
		Subtotal USFS:		\$40,873.00	\$3,679.00	\$44,552.00	\$44,552.00
		United States Grand Total:		\$2,782,199.00	\$250,666.00	\$3,046,292.00	\$3,046,292.00



All Herring Projects Only

1.10	Project	and the second second	The second s		FY11 Budget		
Agency:	Number:	<u>PI:</u>	Project Title:	Multi-Year:	Amount:	FY11 GA - 9%:	FY11 Total:
Continuing	Projects:						
ADF&G	10100128	Quinn, T.	Historical Humpback Whale Abundance in PWS in Relation to Pacific Herring Dynamics	\$163,700.00	\$63,800.00	\$5,700.00	\$69,500.00
NOAA	10100132	Pegau, S.	PWS Herring Survey: Community Involvement, Outreach, Logistics, & Synthesis	\$1,180,400.00	\$353,800.00	\$31,800.00	\$385,600.00
NOAA	10100132-A	Campbell, R.	PWS Herring Survey: Plankton & Oceanographic Observations	\$663,300.00	\$181,000.00	\$16,300.00	\$197,300.00
NOAA	10100132-В	Thorne, R.	PWS Herring Survey: Assessment of Juvenile Herring Abundance & Habitat Utilization	\$596,700.00	\$180,500.00	\$16,200.00	\$196,700.00
ΝΟΑΑ	10100132-C	Kline, T.	Herring Energetic Recruitment Factors	\$998,600.00	\$235,400.00	\$21,200.00	\$256,600.00
NOAA	10100132-D	Heintz, R.	of Winter Preformance	\$306,600.00	\$90,800.00	\$8,200.00	\$99,000.00
NOAA	1000132-E	Gay, S.	Oceanographic Characteristics of Nursery Habitats of Juvenile Pacific Herring	\$353,000.00	\$76,200.00	\$6,900.00	\$83,100.00
NOAA	10100132-F	Brown, E.	PWS Herring Survey: Sound-wide Juvenile Herring, Predator, & Competitor Density via Aerial Surveys	\$501,254.00	\$140,418.00	\$12,638.00	\$153,056.00
ΝΟΑΑ	10100132-G	Bishop, M.	PWS Herring Survey: Top-Down Regulation by Predatory Fish on Juvenile Herring	\$678,900.00	\$168,100.00	\$15,200.00	\$183,300.00
NOAA	10100624	Bychov, A.	in the Herring's Forage from the Gulf of Alaska	\$205,600.00	\$58,300.00	\$5,200.00	\$63,500.00
DOI-FWS	10100132-Н	Kuletz, K.	PWS Herring Survey: Trends in Seabird Predation	\$564,900.00	\$150,400.00	\$13,500.00	\$163,900.00
DOI-USGS	10100132-I	Hershberger, P	PWS Herring Survey: Herring Disease Program	\$975,200.00	\$260,600.00	\$23,500.00	\$284,100.00
				\$7,100,134.00	91,555,510.00	9170,330.00	92,133,030.00

FY2011 Budget - Herring Projects Only - Final

Attachment B

# Herring Suite Only

	Project				FY11 Budget		
Agency:	Number:	<u>PI:</u>	Project Title:	Multi-Year:	Amount:	FY11 GA 9%:	FY11 Total:
NOAA	10100132	Pegau, S.	PWS Herring Survey: Community Involvement, Outreach, Logistics, & Synthesis	\$1,180,400.00	\$353,800.00	\$31,800.00	\$385,600.00
NOAA	10100132-A	Campbell, R.	PWS Herring Survey: Plankton & Oceanographic Observations	\$663,300.00	\$181,000.00	\$16,300.00	\$197,300.00
NOAA	10100132-В	Thorne, R.	PWS Herring Survey: Assessment of Juvenile Herring Abundance & Habitat Utilization	\$596,727.00	\$180,500.00	\$16,200.00	\$196,700.00
NOAA	10100132-C	Kline, T.	PWS Herring Survey: Pacific Herring Energetic Recruitment Factors	\$998,600.00	\$235,400.00	\$21,200.00	\$256,600.00
NOAA	10100132-D	Heintz, R.	PWS Herring Survey: Predictors of Winter Preformance	\$306,600.00	\$90,800.00	\$8,200.00	\$99,000.00
NOAA	1000132-E	Gay, S.	PWS Herring Survey: Physical Oceanographic Characteristics of Nursery Habitats of Juvenile Pacific Herring	\$353,000.00	\$76,200.00	\$6,900.00	\$83,100.00
NOAA	10100132-F	Brown, E.	PWS Herring Survey: Sound-wide Juvenile Herring, Predator, & Competitor Density via Aerial Surveys	\$501,254.00	\$140,418.00	\$12,638.00	\$153,056.00
NOAA	10100132-G	Bishop, M.	PWS Herring Survey: Top-Down Regulation by Predatory Fish on Juvenile Herring	\$678,900.00	\$168,100.00	\$15,100.00	\$183,200.00
DOI-FWS	10100132-Н	Kuletz, K.	PWS Herring Survey: Trends in Seabird Predation	\$564,900.00	\$150,400.00	\$13,500.00	\$163,900.00
DOI-USGS	10100132-I	Hershberger, P.	PWS Herring Survey: Herring Disease Program	\$975,200.00	\$260,600.00	\$23,500.00	\$284,100.00
			Total:	\$6,818,881.00	\$1,837,218.00	\$165,338.00	\$2,002,556.00





DRAFT Work Plan for Federal Fiscal Year 2011

Released July 26, 2010



*Exxon Valdez* Oil Spill Trustee Council 441 W. 5<sup>th</sup> Avenue, Suite 500 Anchorage, AK 99501 Tel: 907-278-8012 Fax: 907-276-7178 www.evostc.state.ak.us

## FISCAL YEAR 2011

### DRAFT WORK PLAN

### July 26, 2010

### Prepared by: Exxon Valdez Oil Spill Trustee Council

DENBY LLOYD Commissioner Alaska Dept. of Fish and Game

LARRY HARTIG Commissioner Alaska Dept. of Environmental Conservation

JOE MEADE Supervisor Chugach National Forest US Department of Agriculture DANIEL SULLIVAN Attorney General Alaska Department of Law

JIM BALSIGER Director, Alaska Region National Marine Fisheries Service

KIM ELTON Director of Alaska Affairs US Department of the Interior

### Notice

The abstract of each proposal was written by the authors of the proposals to describe their projects. To the extent that the abstracts express opinions about the status of injured resources they do not represent the views of the Executive Director or other staff of the *Exxon Valdez* Oil Spill Trustee Council, nor do they reflect policies or positions of the Trustee Council.

The Alaska Department of Fish and Game (ADF&G) administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility please write:

- ADF&G ADA Coordinator, P.O. Box 115526, Juneau, AK 99811-5526.
- The department's ADA Coordinator can be reached via phone at the following numbers: (VOICE) 907-465-6077, (Statewide Telecommunication Device for the Deaf) 1-800-478-3648, (Juneau TDD) 907-465-3646, or (FAX) 907-465-6078.
- U.S. Fish and Wildlife Service, 4040 N. Fairfax Drive, Suite 300 Webb, Arlington, VA 22203.
- Office of Equal Opportunity, U.S. Department of the Interior, Washington DC 20240.

### PLEASE COMMENT

You can help the Trustee Council by reviewing this draft work plan and letting us know your priorities for Fiscal Year 2011. You can comment by:

Mail:	Exxon Valdez Oil Spill Trustee Council 441 W. 5 <sup>th</sup> Avenue, Suite 500 Anchorage, AK 99501 Attn: Draft Fiscal Year 2011 Work Plan
Telephone:	1-800-478-7745 Collect calls will be accepted from fishers and boaters who call through the marine operator.
Fax:	907-276-7178
E-mail:	dfg.evos.projects@alaska.gov

# **Continuing Projects in FY11**

Project #	Principal	Project Title (abbr.)	FY11 Funding	First Year
	Investigator			Funded
10100132-G	Bishop	PWS Herring Survey: Top-Down Regulation by Predatory Fish	\$183,300.00	FY10
10100750	Bodkin	Evaluation of Recovery and Restoration of Injured Nearshore Resources	\$166,419.00	FY10
10100132-F	Brown	PWS Herring Survey: Herring, Predator, and Competitor Density	\$153,055.60	FY10
10100624	Bychkov	Measuring Interannual Variability in the Herring's Forage Base	\$63,600.00	FY10
10100132-A	Campbell	PWS Herring Survey: Plankton and Oceanographic Observations	\$197,300.00	FY10
10100290	Carls	The Exxon Valdez Trustee Hydrocarbon Database	\$9,300.00	FY10
10100132-E	Gay	PWS Herring Survey: Nursery Habitats of Juvenile Pacific Herring	\$83,100.00	FY10
10100132-D	Heintz	PWS Herring Survey: Predictors of Winter Performance	\$99,000.00	FY10
10100132-I	Hershberger	PWS Herring Survey: Herring Disease Program (HDP)	\$284,100.00	FY10
10100839	Hollmen	Evaluating Injury to Harlequin Ducks	\$32,400.00	FY10
10100751	Irons	Prince William Sound Marine Bird Surveys, Synthesis and Restoration	\$39,240.00	FY10
10100132-C	Kline	PWS Herring Survey: Pacific Herring Energetic Recruitment Factors	\$256,600.00	FY10
10100132-H	Kuletz	PWS Herring Survey: Seasonal & Interannual Trends in Seabird Predation	\$163,900.00	FY10
10100574	Lees	Re-Assessment of Bivalve Recovery	\$95,400.00	FY10
10100742	Matkin	Killer Whales in Prince William Sound/Kenai Fjords	\$132,309.70	FY10
10100132	Pegau	PWS Herring Survey: Comm. Involvem., Outreach, Logistics, & Synthesis	\$385,600.00	FY10
10100128	Quinn	Historical Humpback Whale Abundance	\$69,500.00	FY10
10100132-B	Thorne	PWS Herring Survey: Assessment of Juvenile Herring Abundance	\$196,700.00	FY10
10100340	Weingartner	Long-Term Monitoring of the Alaska Coastal Current	\$138,700.00	FY10
Y11 Continuing	Project Funding To	tal	\$2,749,524.30	





# **FY11 New Proposals**

Project Number	Principal Investigator	Project Title (abbr.)	Total Requested	FY11 Requested	Total Approved	Science Panel	Science Coord.	PAC	Executive Director	Trustee Council
11100100	EVOS Administration	EVOS Administration	\$1,856,541.00	\$1,856,541.00	\$0.00	Not Reviewed	Not Reviewed	Pending	Pending	Pending
Total Funds Requested		\$1,856,541.00	\$1,856,541.00	\$0.00						

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# **Descriptions of New FY11 Proposals**



11100100

Project Title: EVOS Administration

Principal Investigator: EVOS Administration

Affiliation: EVOSTC

Co-Pis/Personnel: None

**Project Location:** 

**Project Number:** 

Funding Requested by Fiscal Year:

FY11:	\$1,856,541.00	FY12:	\$0.00	FY13:	\$0.00
FY14:	\$0.00	FY15:	\$0.00	FY16:	\$0.00

Total Funding Requested: \$1,856,541.00

### Abstract:

The budget structure is designed to provide a clearly identifiable allocation of the funds supporting Trustee Council activities. The program components are:

- Administration Management
- Data Management
- Science Management
- Public Advisory Committee (PAC)
- Habitat Protection Program
- Trustee Council Member Direct Expenses
- Liaison Program Support/Project Management
- Alaska Resources Library & Information Services (ARLIS)

The budget estimates detailed within those specified program components are projected based upon prior year actual expenditures and include the application of estimated merit step increases, as well as payroll benefits increases. Detailed budget component items are either "continuing" or "ongoing" from program directives already approved by the Trustee Council and cover necessary day-to-day operational costs of the Exxon Valdez Oil Spill Restoration Office and administrative costs associated with overseeing current Trustee Council program objectives.

Science Panel Comments: Not Available

Science Panel Recommendation: Pending

Science Coordinator Comments: Not Available

Science Coordinator Recommendation: Pending

Public Advisory Committee Comments: Not Available



Public Advisory Committee Recommendation: Pending

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Executive Director Comments: Not Available

Executive Director Recommendation: Pending

Trustee Council Comments: Not Available

Trustee Council Decision: Pending

# **Descriptions of Continuing Projects**

Project Title:PWS Herring Survey: Top-Down Regulation by Predatory Fish on Juvenile HerrinPrincipal InvestigatorMary Anne BishopAffiliation:Prince William Sound Science CenterCo-Pls/Personnel:Sean Powers	g
Principal Investigator:Mary Anne BishopAffiliation:Prince William Sound Science CenterCo-Pls/Personnel:Sean Powers	
Affiliation: Prince William Sound Science Center   Co-Pls/Personnel: Sean Powers	
Co-Pls/Personnel: Sean Powers	
Disbursing Agency: NOAA	
Project Location: Prince William Sound	
Project Type: Continuing	
Funding Approved by Fiscal Year:	
FY10:   \$185,500.00   FY11:   \$183,300.00   FY12:   \$193,400.	00
FY13:   \$116,700.00   FY14:   \$0.00   FY15:   \$0.00	

Total Funding Approved: \$678,900.00

#### Abstract:

Based on population trends, the Prince William Sound (PWS) Pacific herring population does not show signs of recovering. Predation pressure on juvenile herring has been cited as an important factor in preventing recovery. Juvenile herring are heavily predated by multiple species of fish, including rockfish, a species group injured by the Exxon Valdez Oil spill with unknown recovery status. This proposal is for a four-year study to investigate fish predation on the 0 age class herring over winter, a critical bottleneck for recruitment. We will examine the spatial and temporal abundance of fish predators in and around juvenile herring schools, as well as the physical and biological characteristics of the herring schools on which they feed. We will also conduct laboratory experiments to determine fish predators' daily rations and prey preferences. Our project is a component of the PWS Herring Survey program and relies on predator surveys being performed on integrated November and March cruises. Our models will provide estimates of juvenile herring consumption by the most important fish predators. Ultimately, this study will improve understanding of the role of fish predation on herring recruitment, will provide protocols and recommendations for long-term fish predator monitoring and management, and will help to identify candidate sites for herring supplementation efforts.

### **Science Panel Comments:**

Predation has been identified as a significant constraint to the recovery of herring in PWS. The Trustees have recently funded two projects investigating the impact of seabird and whale predation on herring. This study will provide a more complete picture of the role predation plays in the herring lifecycle by determining the influence of fish predators.

Science Panel Recommendation: Fund

### Science Coordinator Comments:

The effects of predatory fish on herring have not been studied even though it has been identified as a potential limiting factor for the restoration of herring. The data collected in this project will further our understanding of the impact of this type of predation and will give a deeper understanding of herring's lack of recovery.

Science Coordinator Recommendation: Fund

Public Advisory Committee Comments:

Possible reduction as a function of the recommended overall 10% decrease of the 10100132 PWS Herring Survey - see 10100132.

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Public Advisory Committee Recommendation: Fund Reduced

Executive Director Comments: Not Available

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Executive Director Recommendation: Fund

Trustee Council Comments: Not Available

Trustee Council Decision: Fund

Project Number: 10100750

Project Title: Monitoring for Evaluation of Recovery and Restoration of Injured Nearshore Resources

Principal Investigator: James Bodkin

Affiliation:US Geological SurveyCo-Pls/Personnel:Tom DeanDisbursing Agency:USGSProject Location:Western Prince William SoundProject Type:ContinuingFunding Approved by Fiscal Year:FY11: \$166,419.00FY12: \$165,329.00

FY14: \$0.00

Total Funding Approved: \$622,288.60

#### Abstract:

FY13: \$103,411.60



The proposed project is designed to assist in the evaluation of recovery and restoration of injured resources in Prince William Sound. The primary objective is to initiate or continue recovery and restoration monitoring in the nearshore in Prince William Sound following the plan developed in Restoration Project 050750 and tested in Restoration Project 070750. The goal of this program is to evaluate the current status of EVOS injured resources and services (recreational, subsistence, and passive use), to determine when populations may be considered recovered, and to foster recovery of those resources by identifying and recommending actions in response to factors limiting recovery. The National Park Service and USGS began implementation of a similar nearshore monitoring plan outside of Prince William Sound (i.e., along the Katmai, Kenai Fjords, and Lake Clark National Park coasts, including both oiled and unoiled sites) in 2006. This program is collecting information similar to the data sets that have been used to assess recovery of injured resources in Prince William Sound (e.g., population abundance and survival of sea otters, population abundance of harlequin ducks and other nearshore birds, abundance estimates for mussels, clams, and other intertidal organisms). Contrasts among trends in injured resources in and outside Prince William Sound, including both oiled and unoiled areas will provide the primary means of resource evaluation. Funds for conducting some of these studies in Prince William Sound (e.g., bird and mammal surveys, D. Irons USFWS) are being sought by other proposals submitted to the Trustee Council and are not addressed herein. Our purpose is to implement a nearshore monitoring program in Western Prince William Sound related to EVOS injured resources and to make it comparable to the program being carried out by the National Park Service in the Gulf of Alaska outside of Prince William Sound. This proposed nearshore sampling in Prince William Sound, in conjunction with nearshore sampling and data management supported by NPS and USGS will provide the foundation of a comprehensive restoration monitoring program for the entire oil spill area.

### Science Panel Comments:

This proposal provides a logical next step in development of a program to determine long-term health of the intertidal community and associated resources that were clearly impacted by the spill. It specifically addresses recovery status of injured intertidal communities for which little current information is available. The proposal builds on work funded by other agencies to provide an important gulf-wide perspective.

### Science Panel Recommendation: Fund

Science Coordinator Comments:

I concur with the science panel recommendation.

FY15: \$0.00

Science Coordinator Recommendation: Fund

Public Advisory Committee Comments: Not Available

Public Advisory Committee Recommendation: Fund

Executive Director Comments: Not Available

Executive Director Recommendation: Priority Fund

Trustee Council Comments: Not Available

Trustee Council Decision: Fund

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Project Number:	10100132-F						
Project Title:	PWS Herring Survey: Sound Wide Juvenile Herring, Predator, and Competitor Density via Aerial Surveys, submitted under the BAA AB133F-09-RP-0059						
Principal Investigator:	Evelyn Brown						
Affiliation:	Flying Fish Ltd.						
Co-Pls/Personnel:	None						
Disbursing Agency:	NOAA						
Project Location:	PWS						
Project Type:	Continuing						
Funding Approved by	Fiscal Year:						
FY10: \$160,140.60	FY11: \$153,055.60 FY12: \$153,055.60						
FY13: \$35,001.00	FY14: \$0.00 FY15: \$0.00						

Total Funding Approved: \$501,252.80

### Abstract:



As a component of the integrated PWS Herring Survey (Pegau, P.I.), this project provides 1) a sound-wide, spatiallyexplicit map of juvenile herring densities, 2) synoptic distributions of herring predator and competitors, and 3) builds on 5 years of previous PWS surveys. June-August surveys map age 1 overwinter survivorship, the timing, spatial extent, and density of age 0 recruiting to nursery habitat, summer mortality of age 1 herring, as well as associated changes in predator/competitor densities. Validation sampling will be provided by a shared vessel with the PWS Herring Survey monthly zooplankton cruises (Campbell, P.I.). Combined with data from other projects within and outside of the PWS Herring Survey, this project's data provides 1) inputs, outputs, and validation for overwinter survival and densitydependent models of predation, growth and disease, 2) an initial estimate of age 2 immature herring recruitment, and 3) spatial information needed to plan, initiate, and evaluate intervention actions.

### Science Panel Comments:

The objectives, while good, are probably not achievable with the proposed level of effort suggested. Consequently the results could fall short of the objectives. Regardless some of the results could be very useful, even with inherent limitations. The main technical issues noted by the panel concern species identification from the air: it is not sufficient that the observer is convinced of the species identity – there must be a validation process that is transparent and convincing. Some form of ground-truthing is required. The Science panel also wondered about limitation of quantitative estimates of fish schools and why there was no explicit reference to analysis of photographic records. Although the Science panel was highly skeptical of many of the claims made in the proposal it recognized that interest and dedication of the researchers, and acknowledges that areal work could provide a valuable support for the herring Survey team. Therefore the recommendation was to fund the project for one year and re-evaluate the proposal before further support.

Science Panel Recommendation: Fund Reduced

#### **Science Coordinator Comments:**

While I concur with several of the science panel's comments on this project, I do believe that this work will provide valuable data for the Council's herring restoration efforts. The researcher is experienced in this type of data collection and will be coordinating closely with the other members of the PWS Herring Survey team to ground-truth the aerial observations.

### Science Coordinator Recommendation: Fund

Public Advisory Committee Comments:

Possible reduction as a function of the recommended overall 10% decrease of the 10100132 PWS Herring Survey - see 10100132.

Public Advisory Committee Recommendation: Fund Reduced

Executive Director Comments: Not Available

Executive Director Recommendation: Fund

Trustee Council Comments: Not Available

Trustee Council Decision: Fund

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**Project Number:** 10100624 **Project Title:** Measuring Interannual Variability in the Herring's Forage Base from the GOA -Submitted Under the BAA Principal Investigator: Alexander Bychkov Affiliation: PICES Co-Pls/Personnel: Sonia Batten **Disbursing Agency:** NOAA **Project Location:** Shelf waters SW of PWS, Cook Inlet, northern GOA **Project Type:** Continuing

Funding Approved by Fiscal Year:

FY10:	\$61,900.00	FY11:	\$63,600.00	FY12:	\$65,100.00
FY13:	\$15,000.00	FY14:	\$0.00	FY15:	\$0.00

Total Funding Approved: \$205,600.00

### Abstract:



Herring from Prince William Sound feed on zooplankton, some originating within the Sound and some from the Gulf of Alaska (GOA) introduced to PWS via a variety of processes. Additionally, adult herring almost certainly forage outside of the Sound, feeding on zooplankton over the wider Alaskan shelf. Understanding the sources of variability in the herring forage base is essential to efforts to understand the herring recovery process and to address basic resource management questions. Direct measurements inside PWS do not explain how the interannual variation in ocean food sources creates interannual variability in PWS zooplankton, nor when changes in ocean zooplankton are to be seen inside PWS. A ten-year time series of seasonal zooplankton data from the Alaskan shelf and northern oceanic GOA has been maintained through support from a variety of agencies including the EVOS TC. The Continuous Plankton Recorder (CPR) survey is a cost-effective, ship-of-opportunity based sampling program that includes community involvement and has a proven track record. The existing time series shows considerable interannual variation in GOA zooplankton abundance and is essential baseline data to underpin herring restoration efforts. EVOS TC support is now requested to maintain the sampling in this region at the current resolution while we examine the linkages between PWS and GOA zooplankton.

#### **Science Panel Comments:**

This project provides the only long-term record of plankton abundance and species composition important to understanding the inter-annual variation in herring food from the Gulf of Alaska. This information is necessary to understand herring mortality and long-term trends in herring abundance. The proposers are global leaders in the field and have successfully maintained a time series of such information for a decade using a consortium of funders, including the EVOSTC. The approach using vessels of opportunity and continuous plankton recorders has provided information of the highest quality for the lowest costs for over 50 years. This is the longest plankton time series in the Pacific.

Science Panel Recommendation: Fund

**Science Coordinator Comments:** 

I concur with the science panel recommendation.

Science Coordinator Recommendation: Fund

Public Advisory Committee Comments: Not Available

Public Advisory Committee Recommendation: Fund

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Executive Director Comments: Not Available

Executive Director Recommendation: Fund

Trustee Council Comments: Not Available

Trustee Council Decision: Fund



Project Number: 10100132-A

Project Title: PWS Herring Survey: Plankton and Oceanographic Observations, Submitted Under the BAA

Principal Investigator: Robert Campbell

Affiliation: Prince William Sound Science Center

Co-Pls/Personnel: None

Disbursing Agency: NOAA

Project Location: Prince William Sound

Project Type: Continuing

Funding Approved by Fiscal Year:

FY10:	\$201,500.00	FY11:	\$197,300.00	FY12:	\$200,100.00
FY13:	\$64,400.00	FY14:	\$0.00	FY15:	\$0.00

Total Funding Approved: \$663,300.00

### Abstract:



Herring stocks collapsed in the years following the Exxon Valdez Oil Spill. The cause of the collapse remains highly controversial, and several empirical and theoretical studies have implicated different factors, including the spill, disease outbreaks, fishing activity, and ecosystem productivity. Herring stocks have not rebounded since the collapse in the early 90's and show no signs of recovery; similarly controversial, varied, and not necessarily mutually exclusive. The work described in this proposal is part of several collaborative proposals to survey herring in PWS, and seeks to monitor the environmental and food climate experienced by herring in order to address the hypothesis that carrying capacity can be limiting the recovery of herring. Observations of environmental conditions and plankton abundance over time will be integrated with observations of herring distributions and energetics, in order to assess how the food climate in Prince William Sound may structure herring populations in space and time.

### Science Panel Comments:

The science panel endorsed this project because it addressed fundamental issues related to the role of food availability and the decline or lack of recovery of herring. Food limitation over the winter is seen to be a credible explanation as a factor affecting the survival of age 0+ herring over the winter. This project will address a basic part of the hypothesis. The work also could have implications for factors affecting other species, including competitors and predators of herring. The reviews were positive and the PI appears to be productive. Also the proposal is connected and coordinated with other concurrent projects in the herring survey.

Science Panel Recommendation: Fund

### Science Coordinator Comments:

I concur with the science panel recommendation.

Science Coordinator Recommendation: Fund

### Public Advisory Committee Comments:

Possible reduction as a function of the recommended overall 10% decrease of the 10100132 PWS Herring Survey - see 10100132.

Public Advisory Committee Recommendation: Fund Reduced

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Executive Director Comments: Not Available

Executive Director Recommendation: Fund

Trustee Council Comments: Not Available

Trustee Council Decision: Fund

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Project Number:	10100290
Project Title:	The Exxon Valdez Trustee Hydrocarbon Database
Principal Investigator:	Mark Carls
Affiliation:	NOAA/NMFS Auke Bay Laboratory
Co-Pls/Personnel:	Marie Larsen
Disbursing Agency:	NOAA
Project Location:	Auke Bay Laboratories – TSMRI, Juneau, AK
Project Type:	Continuing
Funding Approved by	Fiscal Year:

FY10:	\$9,300.00	FY11:	\$9,300.00	FY12:	\$9,300.00
FY13:	\$9,300.00	FY14:	\$0.00	FY15:	\$0.00

Total Funding Approved: \$37,200.00

#### Abstract:

This is an on-going service project that provides data and sample archiving services for all samples collected for hydrocarbon analysis in support of Exxon Valdez Oil Spill Trustee Council projects. These data represent samples collected since the oil spill in 1989 to the present and include National Resource Damage Assessment (NRDA) studies (environmental and laboratory) and Restoration and Recovery data. This project serves as an archive for chemical analyses and sample data and storage of physical samples that have not been analyzed and provides copies of the ACCESS database to interested parties. The project also responds to several Freedom of Information Act (FOIA) requests each year for information associated with these data. Interpretative services for these data are available.

# Science Panel Comments:

This proposal provides ongoing support for maintaining, updating, and serving hydrocarbon data that are critical to future evaluations of recovery and restoration.

Science Panel Recommendation: Fund

Science Coordinator Comments: I concur with the science panel recommendation.

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Science Coordinator Recommendation: Fund

Public Advisory Committee Comments: Not Available

Public Advisory Committee Recommendation: Fund

Executive Director Comments: Not Available

Executive Director Recommendation: Fund

Trustee Council Comments: Not Available

Trustee Council Decision: Fund

Project Number: 10100132-E

Project Title:	PWS Herring Survey: Physical Oceanographic Characteristics of Nursery Habitats of Juvenile Pacific Herring, submitted under the BAA AB133F-09-RP-0059
Principal Investigator:	Shelton Gay
Affiliation:	Prince William Sound Science Center
Co-Pls/Personnel:	None
Disbursing Agency:	NOAA
Project Location:	Prince Willam Sound, Alaska
Project Type:	Continuing
Funding Approved by	Fiscal Year:
FY10: \$88,400.00	FY11: \$83,100.00 FY12: \$90,000.00

FY14: \$0.00

Total Funding Approved: \$353,000.00

#### Abstract:

FY13: \$91,500.00



The objectives of this research are to build upon a physical oceanographic data base started during the SEA project and continued under a recent EVOS funded project: Physical Oceanographic Factors Affecting Productivity in Juvenile Pacific Herring Nursery Habitats. The rationale of this project is based upon past research of juvenile Pacific herring in PWS, which has shown that recruitment is highly influenced by conditions within nursery sites affecting survival within the first year. Important among these conditions is the pre-winter condition of juvenile (age-0) herring and the effects of water temperatures on metabolism and hence over-winter survival. Past studies of the physical oceanography of nursery fjords has indicated that each site has a unique set of hydrographic conditions that are influenced by both local processes and water exchange between the GOA and PWS. These factors vary significantly depending on geographic location, basin morphometry, watershed topography and proximity to tidewater glacial fjords. The proposed study will continue monitoring the physical properties within the four SEA nursery fjords and additional sites as determined by future herring surveys, and collect time-series data on temperature, salinity and fluorescence to determine the variation among nurseries in factors such as ocean climate, stratification, mixing, phytoplankton biomass, and energy constraints imposed on juvenile herring by seasonal changes in water temperatures. The data will also assist in evaluating potential sites for future supplementation efforts in restoring the herring population.

### Science Panel Comments:

This project will continue to make key hydrographic and circulation measurements in PWS. Such measurements are critical to other studies, like that of Kline, and to constructing a synthetic population model for herring.

Science Panel Recommendation: Fund

#### **Science Coordinator Comments:**

I concur with the science panel recommendation.

Science Coordinator Recommendation: Fund

**Public Advisory Committee Comments:** 

Possible reduction as a function of the recommended overall 10% decrease of the 10100132 PWS Herring Survey - see 10100132.

FY15: \$0.00

Public Advisory Committee Recommendation: Fund Reduced

Executive Director Comments: Not Available

Executive Director Recommendation: Fund

Trustee Council Comments: Not Available

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Project Number: 10100132-D

Project Title:	PWS Herring Survey: Value of Performance in YOY Herring f	Growth and Energy Storage as P rom PWS	redictors of Winter					
Principal Investigator:	Ronald Heintz	Ronald Heintz						
Affiliation:	NOAA/NMFS Auke Bay Laborat	ory						
Co-Pls/Personnel:	JJ Vollenweider							
Disbursing Agency:	NOAA							
Project Location:	Eaglek, Simpson, Whale and Za	ikof and other bays						
Project Type:	Continuing							
Funding Approved by	Fiscal Year:							
FY10: \$99,000.00	FY11: \$	699,000.00	<b>FY12:</b> \$99,000.00					
FY13: \$9,600.00	FY14: \$	60.00	FY15: \$0.00					

Total Funding Approved: \$306,600.00

# Abstract:



This proposal examines the reliability of fall growth rates as an indicator of over-winter performance among YOY herring in Prince William Sound. The Trustee Integrated Herring Restoration Program cites the need for identifying parameters that reliably indicate condition. Parameters such as size or energy density can provide misleading results. While size is a good predictor of over-winter survival in a given year, there is no critical size that predicts survival across years. Similarly, changes in energy density may not reflect the severity of winter. We propose that fall growth rate predicts performance because herring acquire the bulk of their lipid in fall. Individuals experiencing high growth in fall are likely to obtain disproportionately large energy reserves. We propose using models relating RNA/DNA ratios to growth obtained under another Trustee study to estimate growth in field specimens collected during the survey period. In addition we will examine how energy is partitioned between structural and storage compartments. Combining these data with those of other projects being proposed under the PWS Herring Survey will allow us to test the hypothesis that growth in fall is the most consistent indicator of over winter survival because fall growth provides for the greatest provisions of stored energy

# Science Panel Comments:

The science panel noted concern that ongoing work by the PI should be brought to completion before starting a new project. Further there was concern that the proposed sample size was too small and not random enough to provide convincing results.

Science Panel Recommendation: Do Not Fund

# Science Coordinator Comments:

This project will provide information that will be important in understanding over winter performance of young of the year herring in PWS.

Science Coordinator Recommendation: Fund

# Public Advisory Committee Comments:

Possible reduction as a function of the recommended overall 10% decrease of the 10100132 PWS Herring Survey - see 10100132.

Public Advisory Committee Recommendation: Fund Reduced

Executive Director Comments: Not Available

Executive Director Recommendation: Do Not Fund

Trustee Council Comments: Not Available



Project Number:	10100132-i		
Project Title:	PWS Herring Survey: Herring Disease Program (HDP)		
Principal Investigator:	Paul Hershberger		
Affiliation:	US Geological Survey		
Co-Pls/Personnel:	Maureen Purcell, Jim Winton		
Disbursing Agency:	USGS		
Project Location:	Prince William Sound, Sitka Sound, Puget Sound, USGS - Marrowst	tone Marin	ne Field Station
Project Type:	Continuing		
Funding Approved by	Fiscal Year:		
<b>FY10:</b> \$81,800.00	<b>FY11:</b> \$284,100.00	FY12: \$	\$295,800.00

FY14: \$0.00

Total Funding Approved: \$975,200.00

#### Abstract:

FY13: \$313,500.00



The Herring Disease Program (HDP) is part of a larger integrated effort, the PWS herring survey: Community Involvement, Outreach, Logistics, and Synthesis submitted under the BAA (outlined in a separated proposal by Dr. Scott Pegau), that is intended to identify juvenile rearing bays, measure factors limiting the success of juvenile herring, and provide recommendations for spatial and temporal coverage of future monitoring efforts. Within this integrated effort, the HDP is intended to evaluate the impact of infectious and parasitic diseases on the failed recovery of the PWS herring population by placing special emphasis on disease processes affecting juvenile cohorts. The framework for the 2010 -2013 HDP involves a combination of field surveillance efforts and laboratory-based empirical disease process studies. Field surveillance efforts will provide continued and expanded infection and disease prevalence data for herring populations in Prince William Sound (PWS), Sitka Sound, and Puget Sound. Additionally, samples from field surveillance efforts will be processed using newly-developed disease forecasting tools to provide annual risk assessments that quantify the potential for future disease epizootics. Empirical disease process studies will provide an understanding of cause and effect epidemiological relationships between the host, pathogen, and environment; understanding of these relationships represents a first step towards developing additional disease forecasting tools. Specific emphasis will be placed on refining our understanding disease processes specific to viral hemorrhagic septicemia (VHS) and ichthyophoniasis, two primary diseases of herring in PWS.

#### Science Panel Comments:

This proposal describes continuation of herring disease monitoring and research into its role in combination with other interacting stressors in suppressing herring recovery in PWS. This is done in coordination with the broader Herring Survey program proposed by Scott Pegau. Although a continuation of an ongoing project, this proposal clearly identifies a set of new objectives that are appropriate and compelling. Specifically, the laboratory experiments evaluating the cause-effect epidemiology of how host, parasite, and environmental factors interact to dictate disease impacts is especially promising. The survey work also focuses on disease effects on YOY herring in ways that may lead to much improved understanding of disease impacts on herring because of the complex role of historical exposure and immunity in determining impacts later in the life history. Herschberger and colleagues have been exceptionally productive in their past EVOS work. Although this project is expensive over its 4 years, the costs are appropriate for the type of research required, involving sophisticated lab assessments of multiple diseases.

The Science Panel recommends FUND – even if the entire Herring Survey is not funded or slow to be funded because this project can stand on its own merits (although needs field ship platforms for collections of herring).

Science Panel Recommendation: Fund

FY15: \$0.00

Science Coordinator Comments: I concur with the science panel recommendation.

Science Coordinator Recommendation: Fund

Public Advisory Committee Comments:

Possible reduction as a function of the recommended overall 10% decrease of the 10100132 PWS Herring Survey - see 10100132.

Public Advisory Committee Recommendation: Fund Reduced

Executive Director Comments: Not Available

Executive Director Recommendation: Priority Fund

Trustee Council Comments: Not Available



Project Number:	10100839
Project Title:	Evaluating Injury to Harlequin Ducks
Principal Investigator:	Tuula Hollmen
Affiliation:	Alaska SeaLife Center
Co-Pls/Personnel:	Kathrine Springman
Disbursing Agency:	ADFG
Project Location:	Prince William Sound
Project Type:	Continuing
Funding Approved by I	Fiscal Year:
FY10: \$218,300.00	<b>FY11:</b> \$32,400.00

FY12: \$0.00 FY15: \$0.00

Total Funding Approved: \$250,700.00

### Abstract:

FY13: \$0.00



Evaluation of harlequin duck (Histrionicus histrionicus) population trends, survival measures, and biomarker indicators of exposure suggests that the species is recovering, but has not fully recovered from the effects of the 1989 Exxon Valdez oil spill (EVOS) in the Prince William Sound (PWS). In areas oiled by the EVOS, elevated cytochrome P4501A biomarker induction has been observed in harlequin ducks as recently as March 2007, providing evidence of continued exposure. The magnitude of injury and its implications for populations of harlequin ducks caused by chronic oil exposure and long-term induction of central enzymatic processes is unknown. This study applies a panel of in vitro harlequin duck and surrogate cell line bioassays for a species-specific toxicological assessment of site-specific hydrocarbons from PWS. A combination of bioassays that measure direct effects on cell viability and DNA damage provide a new method to assess and quantify injury. Also, a battery of laboratory bioassays provides a method to link P4501A biomarker induction with other measures of cellular injury, and a comprehensive assessment of potential short- and long-term toxicity.

FY14: \$0.00

**Science Panel Comments:** 

Not Applicable

Science Panel Recommendation: Not Reviewed

Science Coordinator Comments: Not Applicable

Science Coordinator Recommendation: Not Reviewed

Public Advisory Committee Comments: Not Applicable

Public Advisory Committee Recommendation: Not Reviewed

Executive Director Comments: Not Available Executive Director Recommendation: Priority Fund

Trustee Council Comments: Not Available



**Project Number:** 10100751 **Project Title:** Prince William Sound Marine Bird Surveys, Synthesis and Restoration Principal Investigator: David Irons Affiliation: U.S. Fish and Wildlife Service Co-Pls/Personnel: Kathy Kuletz **USFWS Disbursing Agency: Project Location:** Prince William Sound **Project Type:** Continuing Funding Approved by Fiscal Year:

FY10:	\$254,499.70	FY11:	\$39,240.00	FY12:	\$0.00
FY13:	\$0.00	FY14:	\$0.00	FY15:	\$0.00

Total Funding Approved: \$293,739.70

### Abstract:



We propose to conduct small boat surveys to monitor abundance of marine birds in Prince William Sound, Alaska, during March and July 2010. Ten previous surveys have monitored population trends for marine birds and mammals in Prince William Sound after the Exxon Valdez oil spill. We will use data collected in 2010 to examine trends from summer and from winter to determine whether populations in the oiled zone are increasing, decreasing, or stable. We will also examine overall population trends for the Sound. Continued monitoring of marine birds and synthesis of the data are needed to determine whether populations injured by the spill are recovering. Data collected from 1989 to 2007 in the oiled area indicated that common loons (Gavia immer), and cormorants (Phalacrocorax spp) are increasing. Numbers of all other injured species are either not changing or are declining in the oiled area. Populations of harlequin ducks (Histrionicus histrionicus), black ovstercatchers (Haematopus bachmani), Kittlitz's Murrelets (Brachyramphus brevirostris), and common murres (Uria aalgae) are showing no trend in the oiled area; pigeon guillemots (Cepphus columba) and marbled murrelets (Brachyramphus marmoratus)) are declining in the oiled areas of Prince William Sound. We have found high inter-annual variation in numbers of some bird species and therefore recommend continuing to conduct surveys every two years. These surveys are the only ongoing means to evaluate the recovery of most of these injured marine bird species. A survey in 2010 would also benefit the ongoing Pigeon Guillemot Restoration Research Project by providing a Sound-wide pigeon guillemot population trend estimate through 2010, facilitating a comparison to the population trend on Naked Island.

# **Science Panel Comments:**

The proposal is to continue one of the most valuable studies on long-term trends of marine populations in Prince William Sound. It includes multiple populations of sea birds as well as sea otters. The proposed work is a straightforward continuation of a well-proven and valuable survey method. Previous surveys have recently been conducted at about 3 year intervals. The P.I.s have used sophisticated statistical approaches to analyzing the data in various parts of PWS and reported their work in the scientific literature periodically. The project is cost-effective for the spatial and species extent for which data will be obtained.

Science Panel Recommendation: Fund

#### **Science Coordinator Comments:**

I concur with the science panel recommendation.

Science Coordinator Recommendation: Fund

Public Advisory Committee Comments: Not Available

Public Advisory Committee Recommendation: Fund

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Executive Director Comments: Not Available

Executive Director Recommendation: Fund

Trustee Council Comments: Not Available



Project Number: 10100132-C

Project Title:	PWS Herring Survey: Pacific Herring Energetic Recruitment Factors
Principal Investigator:	Thomas Kline
Affiliation:	Prince William Sound Science Center
Co-Pls/Personnel:	None
Disbursing Agency:	NOAA
Project Location:	Prince William Sound
Project Type:	Continuing
Funding Approved by	Fiscal Year:

FY10:	\$258,700.00	FY11:	\$256,600.00	FY12:	\$265,000.00
FY13:	\$218,300.00	FY14:	\$0.00	FY15:	\$0.00

Total Funding Approved: \$998,600.00

### Abstract:



This project is one component of the greater integrated study titled PWS herring survey: Community Involvement, Outreach, Logistics, and Synthesis (Pegau, P.I.). This proposed effort seeks to improve understanding of habitat utilization by juvenile herring, especially age 0, and to help identify candidate sites that could be potentially used for supplementation efforts. This particular proposal builds on 15 years of experience in assessment of juvenile herring in PWS using isotope and energetic techniques. We propose to measure energy levels of juvenile herring and other fishes in 8 juvenile herring nursery areas. Four of these areas, Simpson Bay, Eaglek Bay, Whale Bay and Zaikof Bay, were the focus of earlier investigation by the Sound Ecosystem Assessment (SEA) program in 1995-96 as well as a current Council-funded "PWS Herring Forage Contingency" project. Four additional sites will be selected based on historical data and community input and the 'blitz' sampling program. We propose to conduct surveys three times per year, preand post-winter and summer, for three years (including a planning year). The pre- and post-winter series will complement other studies that propose to examine overwinter change in energetics. The pre- and post-winter periods have been examined for the past three years. The summer period will provide a link between a more dispersed age 0 herring distribution following larvae drift and the subsequent overwintering locations. The fourth year of the project will focus on data analysis, synthesis and reporting.

# Science Panel Comments:

The science panel recognized that although highly specialized, past work has made a substantial contribution to the scientific literature on herring in PWS and elsewhere. The reviews were positive and the only negative comment concerned the high costs of sample analysis. Now there is increasing recognition that herring research in PWS must be coordinated with other projects, both conceptually and operationally. The Science panel would have preferred to see how this proposal would be connected and integrated with other concurrent work.

Science Panel Recommendation: Fund

# **Science Coordinator Comments:**

I concur with the science panel recommendation.

Science Coordinator Recommendation: Fund

Public Advisory Committee Comments:

Possible reduction as a function of the recommended overall 10% decrease of the 10100132 PWS Herring Survey - see 10100132.

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Public Advisory Committee Recommendation: Fund Reduced

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Executive Director Comments: Not Available

Executive Director Recommendation: Fund

Trustee Council Comments: Not Available



Project Number: 10100132-H

Project Title: PWS Herring Survey: Seasonal & Interannual Trends in Seabird Predation on Juvenile Herring

Principal Investigator: Katherine Kuletz

Affiliation: US Fish & Wildlife Service

Co-Pls/Personnel: Mary Anne Bishop

Disbursing Agency: USFWS

Project Location: Prince William Sound

Project Type: Continuing

Funding Approved by Fiscal Year:

FY10:	\$147,200.00	FY11:	\$163,900.00	FY12:	\$150,900.00
FY13:	\$102,900.00	FY14:	\$0.00	FY15:	\$0.00

Total Funding Approved: \$564,900.00

# Abstract:



Predation pressure on juvenile Pacific herring has been identified by the 2008 Integrated Herring Restoration Plan as one of five potential factors limiting recovery of Prince William Sound herring. Juvenile herring are heavily predated by multiple species of seabirds, including six species initially injured by the Exxon Valdez oil spill and three species that have not yet recovered (Marbled Murrelet, Kittlitz's Murrelet and Pigeon Guillemot). This study will investigate the spatial and temporal abundance of seabird predators in and around juvenile herring schools during three time periods: August, November and March. We will also examine the physical and biological characteristics of the fish schools seabirds feed on. Our project is a component of the integrated, multi-project PWS Herring Survey program and relies on seabird surveys being performed on vessels associated with hydroacoustic juvenile herring surveys. Our bioenergetic models will provide estimates of juvenile herring consumption by the most important seabird predators, including inter- and intra-annual variability in consumption rates. This study will improve understanding of the role of seabird predation on herring recruitment and will help to identify candidate sites for herring supplementation efforts.

# Science Panel Comments:

This study will investigate the spatial and temporal abundance of seabirds around juvenile herring schools during three time periods: August, November and March. It will also examine the physical and biological characteristics of the herring schools on which seabirds feed. This is a fairly well conceived and systematic approach to evaluating one source of predation pressure on Pacific herring. However, the project is strongly oriented towards herring as a source of nutrition for seabirds rather than as predators of herring. The most important objective of this study should be to quantify the amount of juvenile herring consumed by sea birds rather than the importance of herring to the diet of sea birds. Sea birds are likely important predators on juvenile herring, but it should not take 3 or 4 years to make a rough estimate of how important seabirds are as juvenile herring predators relative to other predators, i.e. marine mammals. A first order estimate might even be reasonably done with the data at hand.

# Science Panel Recommendation: Do Not Fund

# **Science Coordinator Comments:**

While I agree with some of the science panel's concerns, only five surveys have been completed to date and more data will be needed to make an educated estimate of the effect of seabird predation on herring. The addition of night surveys will allow the team to relate seabird densities concurrent with Dr. Richard Thorne's nighttime herring hydroacoustic surveys.

# Science Coordinator Recommendation: Fund

# **Public Advisory Committee Comments:**

Possible reduction as a function of the recommended overall 10% decrease of the 10100132 PWS Herring Survey - see 10100132.

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Public Advisory Committee Recommendation: Fund Reduced

Executive Director Comments: Not Available

Executive Director Recommendation: Do Not Fund

Trustee Council Comments: Not Available



Project Number: 10100574

Project Title:	Re-Assessment of Bivalve Recovery on Treated Mixed-Soft Beaches in Prince William Sound
Principal Investigator:	Dennis Lees
Affiliation:	Littoral Ecological & Environmental Services
Co-Pls/Personnel:	None
Disbursing Agency:	NOAA
Project Location:	Prince William Sound, from Eleanor Island south to Latouche Island
Project Type:	Continuing
Funding Approved by I	Fiscal Year:

FY10:	\$133,600.00	FY11:	\$95,400.00	FY12:	\$32,600.00
FY13:	\$0.00	FY14:	\$0.00	FY15:	\$0.00

Total Funding Approved: \$261,600.00

# Abstract:

Studies from 1989 through 1997 suggested that bivalve assemblages on beaches in Prince William Sound (PWS) treated with high-pressure hot-water washing remain damaged. An EVOS-funded study in 2002 confirmed this hypothesis; hardshell clams were only one-third as abundant at washed sites as at unwashed sites. Considering the importance of hardshell clams to sea otters, other nearshore predators, and humans, this finding is important.

Using information from 1989, we constructed a preliminary recovery trajectory. This model predicts that clam assemblages at washed sites in PWS will require more than five decades to recover. Subsequently, a less extensive study of clam assemblages in PWS and research in other areas suggest that hardshell clams may be experiencing recruitment failures throughout the Pacific Northwest. By re-evaluating the status of clam populations at 40 sites sampled in 2002, this project will provide insights into: 1) the recovery trajectory for PWS clam assemblages by adding a third point for abundance at washed sites; and 2) the generality of the hypothesis that hardshell clams are experiencing recruitment failures throughout the Pacific Northwest.

# **Science Panel Comments:**

This proposal was responsive to the guidance of the science panel and trustee council staff. The addition of FitzGerald provides a geomorphologist of obvious experience with a sufficient level of effort in each year to have a good chance of developing a viable means of quantifying this difficult concept of armoring. I consider the increase of 23% in the budget to be appropriately defended and necessary. This proposal is now appropriate for funding and important because it will address an injured resource (Clams), update its recovery status, and develop geomorphological methods of measuring armoring.

Science Panel Recommendation: Fund

Science Coordinator Comments:

I concur with the science panel's recommendation.

Science Coordinator Recommendation: Fund



# Public Advisory Committee Comments:

The PAC recommends this project for funding if the PI satisfactorily collaborates with Project 10100829 (Shigenaka) and if their combined effort does not exceed \$150,000 in FY10.

Public Advisory Committee Recommendation: Fund Contingent

Executive Director Comments: Not Available

Executive Director Recommendation: Could Wait

Trustee Council Comments: Not Available

Project Number: 10100742

Project Title:	lonitoring, Tagging, Feeding Studies, and Restoration of Killer Whales in Prince /illiam Sound/Kenai Fjords 2010-2012 Submitted under the BAA					
Principal Investigator:	Craig Matkin	aig Matkin				
Affiliation:	North Gulf Oceanic Society					
Co-Pls/Personnel:	None					
Disbursing Agency:	NOAA					
Project Location:	Prince William Sound/ Kenai Fjords					
Project Type:	Continuing					
Funding Approved by	Fiscal Year:					
FY10: \$132,309.70	FY11: \$132,309.70	FY12: \$125,775.10				
FY13: \$0.00	FY14: \$0.00	FY15: \$0.00				

Total Funding Approved: \$390,394.50

# Abstract:



The proposed project is a continuation of the monitoring of AB pod and the AT1 population killer whale populations in Prince William Sound. These groups of whales suffered serious losses at the time of the spill and have not recovered at projected rates. The project also extends the scope of the basic monitoring to include an innovative satellite tagging program to examine habitat preference and incorporates a more extensive examination of feeding habits using observational and chemical techniques. The project will delineate important habitat and variations in pod specific movements and feeding behavior within a temporal and geographic framework. Results will allow us to more closely examine the potential for restoration. The project will more clearly delineate the role of killer whales, both fish eating and mammal eating in the nearshore ecosystem and possible effects on the restoration recovery of harbor seals and sea otters. Community based initiatives, educational programs, and programs for tour boat operators will continue to be integrated into the work to help foster restoration by improving public understanding and reducing harassment of the whales.

### **Science Panel Comments:**

This proposal continues the monitoring of killer whales in PWS, focusing on the injured resident AB pod and the transient AT1 population. New tagging technologies and expanded temporal sampling into the winter help expand the understanding of recovery processes that will emerge from this work. Matkin's past performance on EVOS studies has been excellent and public and scientific interest is still intense. The top apex consumer of the entire coastal ecosystem can have dramatic impacts on the entire ecosystem so this study is central to a system-wide understanding of its status.

Science Panel Recommendation: Fund

# Science Coordinator Comments:

I concur with the science panel recommendation.

Science Coordinator Recommendation: Fund

Public Advisory Committee Comments: Not Available Public Advisory Committee Recommendation: Fund

Executive Director Comments: Not Available

Executive Director Recommendation: Priority Fund

Trustee Council Comments: Not Available



Project Number: 10100132

Project Title: PWS Herring Survey: Community Involvement, Outreach, Logistics, and Synthesis, Submitted Under the BAA

Principal Investigator: William Pegau

Affiliation: Prince William Sound Science Center

Co-Pls/Personnel: None

Disbursing Agency: NOAA

Project Location: Prince William Sound

Project Type: Continuing

Funding Approved by Fiscal Year:

FY10:	\$343,100.00	FY11:	\$385,600.00	FY12:	\$354,300.00
FY13:	\$97,400.00	FY14:	\$0.00	FY15:	\$0.00

Total Funding Approved: \$1,180,400.00

# Abstract:

This proposal contains the overview of a coordinated set of ten proposals from multiple organizations that are designed to address the Herring Surveys section of the Invitation for Proposals. It describes how individual components are being integrated to provide information needed to make informed decisions on herring restoration.

The objectives of the integrated herring survey program are:

1) Identify juvenile rearing bays for use in restoration planning.

2) Measure factors that may limit the success of herring recruitment including factors of oceanographic conditions, food availability, disease, overwinter energetics of juvenile herring, and predation.

3) Provide protocols and recommendations for spatial and temporal coverage of monitoring projects for potential inclusion in the core herring restoration effort.

This proposal describes the community involvement and outreach efforts, the integration of programs, sharing of logistics, and the responsibility for developing the final synthesized report.

Science Panel Comments:

Not Available

Science Panel Recommendation: Fund

# **Science Coordinator Comments:**

This proposal will serve as the unifying point for the entire PWS Herring Survey team and will provide appropriate outreach to the spill-effected communities. Dr. Pegau will be responsible for synthesizing the nine scientific research projects completed as part of the herring survey, which will be critical in understanding the state of herring in the Sound and assisting the Council in determining next steps for herring restoration.

Science Coordinator Recommendation: Fund



# Public Advisory Committee Comments:

The PAC recommended an overall 10% decrease in funding on the entire suite of 10100132 PWS Herring Survey proposals. This decrease would be determined by the team leader/synthesizer for this effort.

Public Advisory Committee Recommendation: Fund Reduced

Executive Director Comments: Not Available

Executive Director Recommendation: Fund

Trustee Council Comments: Not Available

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 Project Number:
 10100128

 Project Title:
 Historical Humpback Whale Abundance in Prince William Sound in Relation to Pacific Herring Dynamics

 Principal Investigatory
 Torroppo Output

Principal Investigator: Terrance Quinn

Affiliation: University of Alaska Fairbanks

Co-Pls/Personnel: John Moran, Jan Straley, Olga Von Ziegesar-Matkin

Disbursing Agency: ADFG

Project Location: Prince William Sound

Project Type: Continuing

Funding Approved by Fiscal Year:

FY10:	\$94,200.00	FY11:	\$69,500.00	FY12:	\$0.00
FY13:	\$0.00	FY14:	\$0.00	FY15:	\$0.00

Total Funding Approved: \$163,700.00

# Abstract:



The principal objective of this study is to analyze historical data on humpback whales to develop time series of abundance for humpback whales in Prince William Sound. This historical data is currently inaccessible, and has never been analyzed. Annual high-quality surveys used photoidentification, so that numbers were counted accurately. In this proposal, a relative index will be calculated from sightings and sampling effort. Mark-recapture models will be developed from sighting histories. These data will be used in an age-structured assessment model of Pacific herring to estimate the historical effect of whale predation on herring, leading to Suzie Teerlink's Master's thesis and three journal articles. This project is an offshoot from Project 090804, Rice's Significance of Whale Predation on Natural Mortality Rates of Pacific Herring in PWS, and will give a 30 year perspective to the findings of that project. This study develops a historical perspective to provide a better framework for understanding herring recovery. No field work is required for this data salvage project.

# **Science Panel Comments:**

This project is an outgrowth of the Rice study over the past 2-3 years on the role of whale predation on herring. This study is exciting, novel, and important to the critical goal of evaluating the temporally changing role of humpback whale feeding on herring and its potential to suppress herring recovery. The PI joins with a co-PI from the Eye of the Whale Society to mine 30 years of past photo surveys of humpback whales in PWS to determine how whale abundance in the sound have changed during this periods. Overall, the north Pacific population of humpbacks has grown at about 6-7% annually during this period of international collaboration on whale conservation. How closely whale numbers in PWS follow the regional trend can be determined from the careful records from Eye of the Whale because each whale has individual markings and all sighting were photographically documented. This permits clever use of mark-recapture methods developed from small mammal trapping to be applied to the whale re-sighting data to estimate population numbers. The surveys done over the 30-year period by the society involved careful repetition of methods and terrific documentation, allowing corrections for changing survey effort. Once this project completes the annual estimation of whale abundances in PWS, it will then combine those numbers with feeding rate information from the Rice study just ending to construct a population dynamics model for Pacific herring to evaluate the potential role of growing humpback numbers on herring dynamics and recovery potential. The Science Panel considers this a necessary part of the herring monitoring program and an important contribution to developing herring recovery strategies.

Science Panel Recommendation: Fund



Science Coordinator Comments: I concur with the science panel recommendation.

Science Coordinator Recommendation: Fund

Public Advisory Committee Comments: Not Available

Public Advisory Committee Recommendation: Fund

Executive Director Comments: Not Available

Executive Director Recommendation: Could Wait

Trustee Council Comments: Not Available



Project Number: 10100132-B

Project Title:	PWS Herring Survey: Assessment of Juvenile Herring Abundance and Habitat Utilization, Submitted Under the BAA	
Principal Investigator:	Richard Thorne	
Affiliation:	Prince William Sound Science Center	
Co-Pls/Personnel:	None	
Disbursing Agency:	NOAA	
Project Location:	Prince William Sound	
Project Type:	Continuing	
Funding Approved by	Fiscal Year:	

FY10:	\$170,200.00	FY11:	\$196,700.00	FY12:	\$173,600.00
FY13:	\$56,200.00	FY14:	\$0.00	FY15:	\$0.00

Total Funding Approved: \$596,700.00

### Abstract:



The objectives of the proposed effort are to improve understanding of habitat utilization by juvenile herring, especially age 0, and to help identify candidate sites that could be potentially used for supplementation efforts. The proposal builds on three years of experience in assessment of juvenile herring in PWS using hydroacoustic techniques. We proposed to measure juvenile herring and other fish abundance in several potential juvenile herring nursery areas. Four of these areas, Simpson Bay, Eaglek Bay, Whale Bay and Zaikof Bay, were the focus of earlier investigation by the SEA program in 1995-96 as well as a current Council-funded project, "Trends in adult and juvenile herring distribution and abundance in Prince William Sound". Additional sites will be selected based on historical data and community input. We propose to conduct surveys three times per year: pre- and post-winter and summer. The pre- and post-winter series will complement other studies that propose to examine overwinter mortality, including energetics. The pre- and post-winter periods have been examined for the past three years. The summer period will provide a link between a more dispersed age 0 herring distribution following larvae drift and the subsequent overwintering locations. In addition, a 4-day survey of adult herring will be conducted in conjunction with the post-winter juvenile survey. This project will provide essential data on the distribution and abundance of juvenile herring and their competitors and predators. It will also assist development of a "Core Data Collection" program. The project is one part of a collaborative program for PWS herring surveys coordinated through the Prince William Sound Science Center.

# **Science Panel Comments:**

This proposal represents a continuation of basic acoustic survey work for herring in PWS. The reviews were positive with the only concern mentioned was that the work had developed into a monitoring exercise and not a test of hypotheses. Indeed, past work has provided support for ADFG assessment work, but there also are a number of peer-reviewed scientific papers that have developed from this work. The Science panel noted that this proposal supports several other projects in the herring survey Team proposal. The Science panel also recognized the cooperative work with the ADFG and the solid publication record from previous work.

Science Panel Recommendation: Fund

#### **Science Coordinator Comments:**

I concur with the science panel recommendation.

Science Coordinator Recommendation: Fund

Public Advisory Committee Comments:

Possible reduction as a function of the recommended overall 10% decrease of the 10100132 PWS Herring Survey - see 10100132.

Public Advisory Committee Recommendation: Fund Reduced

Executive Director Comments: Not Available

Executive Director Recommendation: Fund

Trustee Council Comments: Not Available



Project Number:	0100340					
Project Title:	Long-Term Monitoring of the Alaska Coastal Current					
Principal Investigator:	Thomas Weingartner					
Affiliation:	University of Alaska Fairbanks					
Co-Pls/Personnel:	None					
Disbursing Agency:	ADFG					
Project Location:	Gulf of Alaska					
Project Type:	Continuing					
Funding Approved by	Fiscal Year:					
FY10: \$141,500.00	FY11: \$138,700.00 FY12:					
FY13: \$0.00	FY14: \$0.00 FY15:					

Total Funding Approved: \$413,800.00

# Abstract:

This program continues a 39-year time series of temperature and salinity measurements at hydrographic station GAK 1. The data set, which began in 1970, now consists of monthly CTDs and a mooring with 6 - 7 temperature/conductivity recorders throughout the water column, a fluorometer and nitrate sensor at 20 m depth and a nitrate sensor at 150 m depth. The project monitors five important Alaska Coastal Current ecosystem parameters and to quantify and understand interannual and longer period variability in:

1. Temperature and salinity throughout the 250 m deep water column,

- 2. □Near surface stratification,
- 3. Near and subsurface nitrate supply on the inner shelf,
- 4. Fluorescence as an index of phytoplankton biomass, and

5.□Atmosphere-ocean heat fluxes.

In aggregate these variables are basic descriptors of the Alaska Coastal Current, an important habitat and migratory corridor for organisms inhabiting the northern Gulf of Alaska, including Prince William Sound.

#### **Science Panel Comments:**

The proposal was extremely well written and clearly outlined the historical importance of the GAK1 line that has provided basic oceanographic observations (temperature and salinity) for three decades. In addition, the proposal clearly states how these data are critical to restoration. The proposal seeks continued funding for the GAK1 line and includes funds for addition of nitrate and fluorescence sensors at that site. The continued funding of GAK1 is critical to understanding the oceanographic environment, its influence on biological resources over time, recovery of injured resources, and potential restoration activities. No specific changes to the project were recommended, although access to more recent data through the website would be helpful. Currently only summaries of data obtained after 2006 are available. A more synthetic analysis of current GAK1 data and those obtained from elsewhere (e.g. as part of herring or nearshore projects) would also be welcomed in future proposals.

Science Panel Recommendation: Fund

Science Coordinator Comments:

I concur with the science panel recommendation.

\$133,600.00

\$0.00

Science Coordinator Recommendation: Fund

Public Advisory Committee Comments: Not Available

Public Advisory Committee Recommendation: Fund

Executive Director Comments: Not Available

Executive Director Recommendation: Priority Fund

Trustee Council Comments: Not Available

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# Womac, Cherri G (EVOSTC)

From: Sent:	Hsieh, Elise M (EVOSTC) Friday, August 20, 2010 11:46 AM
То:	Womac, Cherri G (EVOSTC); 'Craig O'Connor (Craig.R.O'Connor@noaa.gov)'; Tillery, Craig J (LAW); Sullivan, Daniel S (LAW); Lloyd, Denby S (DFG); 'Jim Balsiger
	'Steve Zemke (szemke@fs.fed.us)'; 'Pat Pourchot (Pat_Pourchot@ios.doi.gov)'; Sniffen, Clyde E (LAW); Brookover, Thomas E (DFG); Schorr, Jennifer (EVOSTC); 'Michael
	Zevenbergen (Michael.Zevenbergen@usdoj.gov)'; Fries, Carol A (DNR); 'Dede Bohn (Dede_Bohn@usgs.gov)'; 'Jenifer Kohout (Jenifer_Kohout@fws.gov)'; Carlson-Van Dort, Marit K (DEC): 'Peter Hagen (Peter.Hagen@Noaa.gov)': 'Veronica Varela
	(Veronica Varela@fws.gov)'
Cc:	Carol Schirmer (Carol.Schirmer@NOAA.gov)'; Fishwick, Claire (DEC); 'Lesia Monson (Lesia_Monson@ios.doi.gov)'; Schlosser, Mary A (DFG); Korting, Nancy A (LAW); 'Pat
	Kennedy '; 'Tauline_Davis@ios.doi.gov'; Holba, Carrie A (EVOSTC); 'Carrie Holba (carrie@arlis.org)'; Boerner, Catherine (EVOSTC sponsored); Hickling, Karen A (EVOSTC); Kilbourne, Linda L (EVOSTC): Mitchell, Bob G (DOR); Jennings, Laurel
Subject:	Invitation FY'12 Comments Received and Issues Ripe for Discussion
Attachments:	Hsieh letter, 8-20.PDF; PWSSCComments-DraftInvitation-Aug2010.doc; AOOS comments on
	draft Invitation.doc; Copy of Research Fund Spending Scenarios Aug 2010 b (2).xlsx

Chesse

#### Hello All,

At the meeting Wednesday, Bob Mitchell will give a brief presentation on the investment funds and potential spending scenarios. Over the last year, the Council, along with staff, science advisors, liaisons and the public, has fleshed out what it would ideally like to pursue in five focus areas. In addition, these discussions have added more detail to administration and oversight for these programs.

These discussions have been helpful and productive and have prepared the Council for the next stage of decision making. As has been discussed during this initial planning process, the funds remaining are not sufficient to fund the desired level of administration and oversight, each of the focus areas as desired and two long-term monitoring programs.

Thus, the Council's next stage for decision making in this area is to now further identify its priorities for spending the remaining funding. My initial recommendation is that the Council discuss the following:

- Reduce the long-term programs to 10-15 years, which will also reduce overall administration and allow for the addition of additional funding for a data component to the programs, which is recommended by our science advisors and each of public comments appended. I have included some projections for a 13-year timeline to give an example of spending levels. By shortening the timeline, the Council can devote close to 30 million dollars to the long-term monitoring and herring programs.
- 2. With regard to herring: select the enhanced monitoring program (Option 2 from the IHRP) and discard the direct intervention options. There is significant overlap of this Option with the recommended long-term monitoring projects which would allow for cost savings and increased efficiency.
- 3. Consider whether the focus areas should be further reduced to allow for the remaining funding to be concentrated on the long-term programs, which have received wide-spread public and scientific support.

he DSEIS and IHRP may proceed to final form on Wednesday. The Invitation and Investment Spending Scenarios are on he agenda for discussion purposes only, as the Invitation can be finalized when ready at the following Council meeting. Thank you for all of your attention to these issues. After over a year of hard work, we're nearing the final stage and I appreciate how difficult these budget decisions can be. I also appreciate how hard the Council, liaisons, PAC, scientific advisors, Laurel and EVOSTC staff have worked during this planning process to get us to this stage.

Please let me know if I can provide you any other information and we'll look forward to your participation at the meeting on Wednesday.

Elise







August 20, 2010

Ms. Elise Hsieh Executive Director Exxon Valdez Oil Spill Trustee Council 441 West 5th Avenue, Suite 500 Anchorage, AK 99501

Dear Ms. Hsieh:

RE: Comments on draft Invitation for Proposals (slated for release October 1, 2010)

We recently became aware that comments were being sought on this proposal and so would like to offer the following brief suggestions:

- 1. We are of the view that this work ought (as we proposed in comments on the SEIS) to be viewed as a long term investment in the lead science institutions in the communities most affected by the spill and so would strongly encourage emphasis being given within the proposal to supporting local research consortia that can both deliver quality research and who connect the science being undertaken with local education/extension and capacity building efforts.
- 2. The scope of the long-term monitoring programs seems likely to exceed the amount of funds the Invitation indicates will be available. The examples of monitoring programs (included in the draft Invitation) suggested for inclusion within the long-term monitoring of ocean conditions program are excellent, but (based on our recent experience framing a Gulf of Alaska Integrated Ecosystem Research Program at the NPRB) we do not believe it would be possible to implement such a program for less than \$1.5-2m/year (or \$30-20 million over 20 years).
- 3. The draft Invitation requires each entity managing the long-term monitoring programs to have and manage a science advisory panel and also a public advisory group. In addition, the EVOS Trustee Council is proposing to maintain its Science Panel and Public Advisory Committee. This approach seems redundant.

We would welcome the opportunity to discuss these concerns further with the Council. I'd also reiterate our long standing invitation for the Council to visit the Alaska SeaLife Center to see the positive impact that your initial investments have generated over the past 12 years.

Yours sincerely

Ian M Dutton, Ph.D. President and CEO

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August 19, 2010

Elise Hsieh Executive Director Exxon Valdez Oil Spill Trustee Council 441 West 5th Avenue, Suite 500 Anchorage, AK 99501

Sent via email: elise.hsieh@alaska.gov

RE: Comments on draft Invitation for Proposals (slated for release October 1, 2010)

Dear Ms. Hsieh:

Thank you for this opportunity to comment on the Draft Invitation for Proposals. While I'd hoped to discuss with you several questions prior to submitting formal comments, I've been unable to connect with you this week and am out of my office for the next few days. Having reviewed and compared the July 12<sup>th</sup> draft of the Invitation with the more recent July 28<sup>th</sup> version, I recognize considerable work has gone into preparing this document. I appreciate your efforts to develop a process for long-term, high quality, multi-disciplinary research programs to be supported with the least amount of administrative expense.

Let me first provide some specific comments on the July 28<sup>th</sup> draft Invitation and then share the questions that remain for me. As I'm sure you are aware, the programs proposed in the Invitation are very ambitious. One of my first reactions is that **the Invitation requests proposals for programs that cannot be implemented for the amount of funding estimated to be made available.** For example, the goals described for the herring and long-term monitoring of ocean conditions programs are great and we'd very much like to help in achieving those goals. However, if only \$8 to16 million, at most, is going to be allocated over 20 years for an ongoing herring research and restoration program, it must have very limited focus if it's to be successful.

While I recognize the utility of having percentage ranges for spending in the focus areas, **my first recommendation is to strongly encourage a specific dollar amount** be decided and included in the Invitation for the five-year proposals. This is necessary for investigators to understand the funding limitations when putting together a proposal.

1. The goals for the herring and long-term monitoring programs far exceed the amount of funds the Invitation indicates will be available. The current herring program is funded at \$6.8 million over four years; a minimum of \$1.5 million annually is required to continue the Integrated Herring Research Program, and

that does not include costs for data management and information products and, also scientific and public advisory groups.

The examples of programs (included in the draft Invitation) suggested for inclusion within the long-term monitoring of ocean conditions program compose an excellent monitoring program, but it's not one possible to implement for less than \$30-35 million over 20 years.

The draft Invitation requires each entity managing the herring and long-term monitoring programs to have and manage a science advisory panel and also a public advisory group. In addition, the EVOS Trustee Council will maintain its Science Panel and Public Advisory Committee. This approach seems unnecessarily redundant and confusing. If the goal is to minimize administrative overhead and maximize the availability of funding for actual programs, we recommend eliminating these requirements at the program level. If not, the scale of each of these should be clarified, and appropriate funding provided for each.

- 4. Two issues arise relating to data management. First, there seems to be no plan for long-term archiving of data and access to the wealth of data collected by the various Trustee Council funded projects since 1989. Funding should be provided as a separate focus area to support this effort.
- 5. Second, we recommend the addition of funds for a data management and infomatics program including cataloging, discovery, access and archive components, as well as data visualization and integration products. These are key elements of any long-term research or monitoring program. I understand that it's now commonly assumed that such a program should equal approximately 25-30% of the cost of the overall program. Additional funding for this program should be included as add-ons to the herring and long-term monitoring programs, or be included as a separate program that would be required to work with and support the data management needs of the herring and long-term monitoring programs.
- 6. Finally, to reiterate my first comment, the Trustee Council needs to provide a firmer targeted dollar amount for the herring and long-term monitoring programs. Without this, it will be extremely difficult to develop effective programs.
  - a. The herring program requires at least \$1.5 million annually for a 20-year program (total of \$30 million).
  - b. For the long-term monitoring program, the currently proposed range of spending over 20 years is also too low. We recommend \$35 million to be spent over 20 years.

Table 1 is a spreadsheet drafted so I could better understand the overall expenditures proposed through the draft Invitation. While I'm sure you are familiar with these numbers, I include it with this letter primarily for others who are reviewing comments received on the draft Invitation. The column marked "high range" percentages (suggested for each focus area) shows a total of only \$55 million in program expenditures of the \$76 million balance. Where might the remaining funds be spent, on lingering oil programs, administration or something else?

I noted a number of additional questions as I reviewed the draft Invitation. I expect answers to many of them will become obvious during discussions at the upcoming Trustee Council meeting.

- What is the total amount currently in the EVOS Trustee Council restoration account? What assumptions are being used to anticipate the availability of funding over time as a result of investment earnings? Why is the funding available in the draft Invitation differ from the funding used in other documents (e.g., SEIS \$81 million, other?)? If all the funding available is not included in this draft Invitation, why not? What are other plans for the funding? What is the process for evaluating funding availability over time?
- What is the Trustee Council's plan for lingering oil? If a claim has been filed under the Reopener, what does the Council anticipate as necessary future activities under the current settlement and funding?
- The 9 percent General Administration required for each proposal does not appear to include other EVOS Trustee Council administrative costs that will be associated with implementation of the four or five focus areas (such as Science Advisory Panel, Public Advisory Group, other?). Does the Trustee Council plan to have those EVOS administration duties not covered by the G.A. be done through an existing state or federal agency, and if so, what are the estimated costs for this administration?

Thanks again for providing an opportunity to comment on the draft Invitation. I look forward to further discussions and plan to attend next week's meeting.

Sincerely,

Manay abid

Nancy Bird President

cc: EVOS Trustee Council members

Analysis of Spending Proposed in EVOS Trustee Council draft Invitation Dollar amounts based on percent ranges included in the draft Invitation

Total proposed to allocate for Research, Monitoring & General Restoration	All figures in Millions of \$ \$76			# Years
	mid range	low range	high range	
	high %	<u>%</u>	<u>%</u>	
Herring	\$12	\$8	\$16	20 yrs
Long-term monitoring of ocean conditions a) Recovery of injured resources b) Monitoring factors that may inhibit recovery	\$15	\$11	\$19	20 yrs
Harbor protection, marine restoration & lesse	ane loarnad			2-5
a) Waste disposal and harbor projects	s6	\$2	\$10	yıs
b) marine debris removal	\$5	\$6	\$6	
c) Lessons learned/Outreach	\$4	\$4	\$4	
Lingering oil	?	?	?	
Totals proposed to spend	\$43	\$32	\$55	
Balance not yet allocated from \$76 million	\$33	\$44	\$21	
Data Archive and Informatics @ 25 percent - Note: we recommend this new area be included in the Invitation	\$11	\$8	\$14	20 yrs
Revised totals proposed to spend	\$54	\$40	\$69	
Balance not allocated from \$76 million	\$22	\$36	\$7	
Overall Program Administration	?	?	?	
Additional program from separate funds				
Habitat acquisition and protection	\$25	\$25	\$25	12 yrs


August 20, 2010

Elise Hsieh Executive Director Exxon Valdez Oil Spill Trustee Council 441 West 5th Avenue, Suite 500 Anchorage, AK 99501

Sent via email: elise.hsieh@alaska.gov

RE: Comments on 2010 draft Invitation for Proposals

Dear Ms. Hsieh:

Thank you for this opportunity to comment on the Draft Invitation for Proposals. I submit these comments on behalf of the Alaska Ocean Observing System (AOOS), a consortium of state and federal agencies and research institutions committed to observing Alaska's coasts and oceans. We are considering submittal of a proposal under the terms of this Invitation, and submit these comments with that in mind.

I appreciate the efforts of the Trustee Council to develop a process for long-term, high quality, multi-disciplinary research programs to be supported with the least amount of administrative expense. As a former Executive Director of the Trustee Council, I was actively involved in development of the proposed Gulf Ecosystem Monitoring – or GEM – Program, that was approved by a prior Trustee Council. The Council at the time anticipated an endowment of at least \$100 million to fund this program well into the future, providing \$3-\$5 million a year for ecological monitoring of physical, chemical and biological parameters of the spill-impacted region.

Given the above, I am concerned about the level of funding available for the Trustee Council's proposed comprehensive long-term monitoring program as described in the draft Invitation. The suggested funds ranging from \$11 million to \$19 million over a 20year period would only provide somewhere between \$550 thousand and \$950 thousand a year. Not many of the suggested monitoring projects described in the Invitation could be included under this funding scenario. I hope the Trustee Council is aware that the proposed program is overly ambitious for the available funding, and suggest that the expectations described in the Invitation be re-focused accordingly. As a practical matter, I also recommend that the Council set an exact dollar figure as it would be difficult to develop a proposal for such a broad range of funding scenarios. One of the main goals of AOOS has been to provide more public access to ocean and coastal data. Certainly the various Trustee Council funded projects have collected a wealth of data since 1989. For that reason, I hope you would provide funding as a separate focus area for long-term archiving and management of Council-funded data.

In addition, funds for a data management program (including data cataloging, discovery, access and archive components, as well as development of data visualization and integration products) should be included as a key element of the long-term herring and monitoring programs, either as an add-on, or as a separate program. Too often data management is considered as an "after-thought" when developing a program, rather than a significant component of the initial overall program, funded at an appropriate level (recommended at 25% or so).

I also have questions about the requirements for scientific and public advice. The draft Invitation requires the entity managing the long-term monitoring program to have and manage a science advisory panel and also a public advisory group. In addition, the EVOS Trustee Council will continue to maintain its own Science Panel and Public Advisory Committee. This approach is confusing, and appears to be redundant. If the goal is to minimize administrative overhead and maximize the availability of funding for actual programs, you might consider eliminating these requirements at the program level. If not, I hope you consider clarifying the requirements of each of these, and providing appropriate funding.

I appreciate the challenges you have in developing this initiative, and hope you find these comments constructive.

Sincerely,

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Molly McCammon Executive Director



Invitation for Proposals Federal Fiscal Year 2012

Released October 1, 2010 July 28 DRAFT

#### **Glossary of Terms**

Fiscal Year – The Council operates on a federal fiscal year (FFY) that begins on October 1 and ends on September 30.

Focus Area – The Council has selected five areas on which to focus the remaining funds, four of which are addressed in this Invitation: herring, long-term monitoring of marine conditions and injured resources, harbor protection and marine restoration and lingering oil.

Plan – is a multi-year program request for funding that includes all administrative and costs to run each program area.

Preferred Proposer – after reviewing proposals submitted under this Invitation, the Council will identify a Preferred Proposer for each focus area and direct Council staff to work with each Preferred Proposer to revise the subject proposals to satisfy any scientific, technical or programmatic concerns. This identification is not a commitment to fund.

Program – is a 20-year plan for spending the funds for each program area.

Project – An individual task that is led by a primary investigator and is attempting to address a specific scientific hypothesis.

Team Leader – Individual who represents proposed program and is responsible for communicating with the Council.

Workplan - an annual request for funding that includes all administrative and project costs.



Spill Area – see map below:

# I. Background and Purpose of the FFY12 Invitation for Proposals

In 1992, the *Exxon Valdez* Oil Spill Trustee Council (Council) was formed by six trustees, three State of Alaska trustees and three federal trustees, to oversee restoration of the natural resources and ecosystem damaged by the 1989 *Exxon Valdez* oil spill (EVCS). The Council was funded by settlement of civil claims brought against Exxon Comparies by the State of Alaska and the United States. The Council initiated an extensive public process to begin the work of restoration using these joint trust funds and, in 1994, adopted a Restoration Plan to guide restoration through research and monitoring, habitat protection, and general restoration.

As part of this effort, the Council also adopted an official list of resources and services injured by the spill. When the 1994 Plan was drafted, the distinction between the effects of the spill and those of other natural or human-caused stressors on injured resources or services was not fully understood. Through the hundreds of studies conducted over the last twenty years, the Council has come to recognize that ecosystem restoration is not easily addressed. The interactions between a changing environment and the injured resources and services are only beginning to be understood, and, as time passes, the ability to distinguish the effects of the oil from other factors affecting fish and wildlife populations becomes more difficult. These complexities and the difficulties in measuring the continuing impacts from the spill result in some inherent uncertainty in defining the status of a resource or service for an updated list of injured species and services.

The 1994 Plan also outlined an ecosystem-based approach to restoration, a more integrated view that has become increasingly recognized as essential. Even before the Plan was final, the Council began efforts to better understand the coastal marine ecosystem. This approach has provided and continues to provide an abundance of information on fish, marine birds, and mammals.

Of the approximately 780 million dollars of joint trust funds initially funding the Council, more than 180 million dollars have been used for research, monitoring and general restoration and more than 375 million dollars have funded habitat protection. Council annual program development, implementation and administration have cost more than 45 million dollars. Approximately 76 million dollars remain available for research, monitoring and general restoration. Recognizing that funding for future restoration is limited and that it is becoming increasingly difficult to distinguish between spill impacts and other effects in measuring recovery, the Council is considering an organized and strategic transition to a modest ecosystem restoration process that would focus the remaining funds on the following focus areas: herring; long-term monitoring of marine conditions and injured natural resources; harbor protection and marine restoration; lingering oil; and habitat acquisition and protection.

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This Invitation calls for proposals in the four focus areas of 1) herring; 2) long-term monitoring of marine conditions and injured resources; 3) harbor protection and marine restoration and 4) lingering oil. This Invitation uses a several-step process, as detailed below in *Schedules and Cycles of Review and Funding*, to assist in refining preferred proposals into final proposals submitted and reviewed by the Council for funding in late summer 2011.

With the exception of Lingering Oil, this Invitation requires proposals for multi-year programs administered by a single or multiple entities in each of these focus areas. For these multi-year programs, the Council asks for proposals from a single entity or an organization of multiple entities, such as teams or consortiums, that are capable of directing and implementing the component studies for these applicable focus area(s). Proposing entities may submit proposals in more than one focus area, and organizations and individuals may participate in more than one competing proposal within a single focus area.

# II. Schedule and Cycles of Review and Funding

The schedule for the receipt, review and approval of FFY12 proposals and proposals is shown below:

October 1, 2010	Invitation for Proposals issued
November 1, 2010	Proposers' Teleconference for Q & A session (see website for call-in
	information)
January, 7, 2011	
	call-in information)
March 1, 2011	
Mid-April 2011	
AND NO.	Work Plan issued
April 16 – July 31, 20	011EVOSTC staff works with Preferred Proposers to revise proposals
August 1, 2011	Proposal Revision Period Closes
September 2011	Funding decision made by Trustee Council
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The *Exxon Valdez* Oil Spill Trustee Council operates on a federal fiscal year. The FFY12 fiscal year begins on October 1, 2011 and ends on September 30, 2012. *See each Focus Area for additional schedule and funding review information.* 

# **III.** Project Invitation by Focus Area

Building on its past efforts, the Council has identified five areas of focus for its remaining work: (1) herring; (2) long-term monitoring of marine conditions and injured resources; (3) harbor protection and marine restoration; (4) lingering oil; and (5) habitat acquisition and protection. The following sections elaborate on the details of the first four of these proposed areas of focus that are the subject of this Invitation.

HERRING

The Council has classified the Prince William Sound (PWS) population of Pacific herring (*Clupea pallasi*) as a resource that has not recovered from the effects of the 1989 oil spill. The PWS herring population was increasing prior to 1989 with record harvests reported just before the spill. The 1989 year class was one of the smallest cohorts of spawning adults recorded and by 1993 the fishery had collapsed with only 25 percent of the expected adults returning to spawn. The PWS fishery was closed from 1993 to 1996, but reopened in 1997 and 1998, based on an increasing population. Numbers again declined in 1999, and the fishery remains closed today. The 1993 collapse can be explained by several competing hypotheses; however, data uncertainty makes it unlikely that the reasons will be fully understood.

The Council recognizes the uncertainty over the role of the 1989 spill in the current and ongoing depressed state of the PWS herring population. However, herring are considered a keystone species in the marine ecosystem and play a vital role in the food chain of many injured species. Thus, rebuilding the herring population has the potential to support the restoration of these injured species. Species injured by the spill included fishable species such as salmon. Supporting a healthy herring population may also compensate for some of those losses in fishing opportunities that resulted from the spill. In April 2006, prompted by public comments about the continuing impacts to communities and commercial fishermen from herring losses, the Council convened scientists and researchers, commercial and subsistence fishermen, and natural resource managers for a herring workshop. One of the most important outcomes of the workshop was reaching consensus that a long-term strategic herring restoration program was needed if viable herring recovery activities were to be implemented. From 2006 to 2008, Council representatives met with natural resource managers, commercial fishers, scientists, the Public Advisory Committee (PAC), and Alaska Native residents of spill-area communities to gain sufficient input to draft a cost-efficient, scientifically credible, and coordinated program. This effort produced the first draft of the Integrated Herring Restoration Program (IHRP) in December 2008.

The goal of the IHRP is to determine what, if anything, can be done to successfully restore PWS herring; to determine what steps can be taken to examine the reasons for the continued decline of herring in the Sound; to identify and evaluate potential recovery options; and to recommend a course of action for restoration. This document is appended to this Invitation and serves as a general road map for the Council's herring-related funding decisions. Proposals in this area of focus should be responsive to the topics and issues within the IHRP.

The Council has proposed to use approximately 11% - 21% of the available funding for research in this area over a twenty-year period.

#### **Considerations Applicable to Proposers**

The following are <u>mandatory requirements</u> for potential proposers. Proposals that do not meet each of these criteria will be considered non-responsive to the Invitation and excluded from the review process. Proposers must demonstrate that they have:

- 1. A proposal which is focused within the oil spill-affected area;
- 2. A proposal which responds to the Herring focus area, as described in this Invitation.
- 3. A proposal for a program that complies with the Council's founding documents and related policies and procedures. *See References*.

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- 4. An existing administrative structure to manage funds and projects; the proposer may be an existing organization or collaboration among existing entities and individuals.
- 5. A structure to communicate with the Council through a single Team Leader; regardless of the structure of the proposers, they must produce a single, comprehensive proposal.
- 6. A Team Leader who will work with and be responsive to Council's objectives and requirements.
- 7. A Team Leader who will facilitate the most cost-effective and scientifically-supportive stream of funding among the parties and projects involved.
- 8. A program science panel to review potential projects and give guidance and oversight on the direction of the program.
- 9. The ability and commitment to make all data, documents, annual and final reports available electronically to the public.
- 10. A mechanism for public outreach and opportunities for public comment on program activities.

The following are <u>preferred requirements</u> for potential proposers. Proposers that meet these requirements will be rated more highly during the review process. The Council is seeking a Herring Program that:

- 1. Continues to reassess the program's progress and relevancy and considers newlyavailable technologies.
- 2. Demonstrates an understanding and synthesis of existing scientific literature, research results, and scientific knowledge that includes outcomes of prior Council work and which recognizes the available research infrastructure.
- 3. Demonstrates an effective and balanced use of funds, including establishing appropriate collaborations with other organizations and experts, achieving the most efficient use of funds, and taking advantage of existing infrastructure.
- 4. Provides a detailed plan for local and native community involvement in the program.
- 5. Provides a detailed public outreach plan that describes specific products. These could include the creation and dissemination of simple web-accessible exhibits, newsletters disseminated to spill communities and other data users, real-time data streaming for use in public settings like aquaria and visitor's centers, and submissions to public data consortiums.
- 6. Establishes realistic and detailed timelines and milestones specific to the individual projects and the overall program.
- 7. Demonstrates a credible, feasible, and detailed administrative structure and scientific implementation of the program, including project team qualifications (education, experience, related work efforts, proposed time commitment, past performance), and availability of facilities and other requirements necessary for project success.

The following are <u>mandatory requirements for each fiscal year</u> of the program. The submitted budget for each year shall include the staffing and funds necessary to meet these requirements.

- 1. An annual report must be presented to the Council and will include the following:
  - a. A financial accounting of any Council funding received in the past year including a comparison of the requested budget versus the actual budget.

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- b. A summary of the projects funded, including brief annual reports from each.
- 2. A funding request must be presented to the Council each fiscal year and will include the following:
  - a. An administrative budget that details the costs of running the program.
  - b. An executive list and summary of projects proposed for funding and the scientific basis thereof.

#### Herring Program Cycles of Review and Funding

The Herring and Long-Term Monitoring focus areas under this Invitation will be funded as a single program for each focus area (one for Herring, one for Long-Term Monitoring. Proposing entities may submit proposals in more than one focus area, and organizations and individuals may participate in more than one competing proposal within a single focus area.

*Funding Review of Program: Five-Year Contract, subject to annual Council Approval* These Herring and Long-Term Monitoring programs are administered as multi-year contracts renewable every 5 years for a total of twenty years. Below is a draft schedule for science and funding review for the 5-year contracts:

Year 1:	Sept. 2011:	Fund Program, with organizations and individual projects identified
Year 2:	June 2012: Sept. 2012:	Program submits proposed FFY13 workplan for Council review Funding decision made by Council on FFY 2013 workplan
Year 3:	June 2013: Sept. 2013: Winter 2014:	Program submits proposed FFY14 workplan for Council review Funding decision made by Council on FFY14 workplan Workshop with Herring and Long-Term Monitoring individual researchers' presentations and presentations by proposers on cross- disciplinary syntheses. See Scientific Review of Program, below, for details.
Year 4:	June 2014: Sept. 2014:	Program submits proposed FFY15 workplan for Council review Funding decision made by Council on FFY 2015 workplan
Year 5:	May 2015: Sept. 2015: June 2016: H Sept. 2016: H	Program submits Five-Year Plan for FFY17-22 and workplan for FFY16. Funding decision made by Council on FFY16 workplan and review of Five-Year Plan for FFY17-FFY22 Program submits proposed FFY17 workplan Funding decision made by Council on FFY17 workplan (Cycle repeats until approximately 2032)

#### Scientific Review of Program

As outlined above, a Council science panel selected by the State and Federal Administrators will review the progress of the Herring Program's five-year contract in the third year of funding. The selected proposer's Team Leader will be responsible for providing written cross-disciplinary

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syntheses to the Council's science panel and the Administrators at least three months prior to the review meeting. These syntheses should address fundamental drivers, trends, and status in a way that contributes to the Council's and public understanding of the effects of EVO. These may include such topics as a synthesis of retrospective data, climate drivers, lingering oil recovery, and the effects of human interventions.

In the third year of funding, the Council will also fund a workshop at which these crossdisciplinary syntheses will be presented. Individual researchers funded under the five-year contracts will also provide brief presentations. These presentations should include information about the availability of data to user groups and how this information can be or is being used to further Council goals and with respect to program objectives and also its utility beyond the program. As noted above, this workshop will also include parallel presentations by the Long-Term Monitoring researchers to allow for an even broader ecosystem-based consideration of the ongoing research.

The Council's science panel may provide written recommendations to the Council for any potential changes to the scope of the program that may be required and a consideration of whether the program is meeting its objectives. This information will be shared with the Herring Program Team Leader for discussion and response before any actions are taken by the Council.

# LONG-TERM MONITORING OF MARINE CONDITIONS AND INJURED RESOURCES AND SERVICES

In the twenty-one years since the *Exxon Valdez* oil spill, it has become apparent that the ocean ecosystem can undergo profound changes and such changes may hinder a return to pre-spill conditions. The 1994 Restoration Plan (Plan) recognized that recovery from the spill would likely take decades. A Restoration Reserve was created from the Plan in part to provide for long-term observation of injured resources and services and for appropriate restoration actions into the future. To further this effort, in 1999 the Council also supported the development of a long-term research and monitoring program.

Long-term monitoring after a spill has two components: monitoring the recovery of resources from the initial injury and monitoring how factors other than oil may inhibit full recovery or adversely impact recovered resources. This second type of monitoring collects data on physical and biological environmental factors that drive ecosystem-level changes. The information that is produced from such monitoring may be used to manage individual injured species and resources. However, such data are increasingly valuable in illuminating the larger ecosystem shifts that impact and influence a broad variety of species and resources injured by the spill.

By monitoring these changes, agencies and interested parties may be able to adjust their activities and management strategies to adapt to what may lay ahead and to further support injured resources. The Council has a history of supporting oceanographic monitoring by helping to establish and fund long-term data collection projects. In this initiative, the Council envisions developing partnerships with scientific entities or consortia able to sustain those data collections, to maximize the Council funding, to develop science-based products that will inform the public of changes in the environment and the impacts of these changes on injured resources and services.

The Council proposes to fund this effort with approximately 15% -25% of the available funding over a twenty-year period.

The Council has discussed specific ecosystem components that are of particular interest and include environmental drivers, pelagic monitoring, and benthic monitoring. The following are examples of the types of projects in each area that could potentially be part of a comprehensive monitoring program. The list is based on projects that have been funded in the past or work that may provide further insight into the current status of PWS. This list is not comprehensive and the projects listed are not mandatory.

#### **Environmental Drivers:**

- 1. Oceanographic conditions These include water temperature, salinity, and turbidity and potentially alkalinity. Perpetuation of an existing long-term oceanographic monitoring station relevant to the spill area is favored, especially in cooperation with co-funding partners. Proposers may want to consider information gathering at Hinchinbrook Entrance and Montague Strait that would allow inference on fluxes in and out of Prince William Sound (PWS).
- 2. Weather stations Small, inexpensive land-based weather stations may be considered as a method to obtain data. Current station locations and historic data collection should be assessed prior to any new weather station deployment.
- 3. Continuous plankton recorder data to measure zooplankton abundance, productivity, and quality as food. The proposer may want to consider using a ship of opportunity that would provide a transect within PWS and intersect the current transect being conducted by the Sir Alister Hardy Foundation for Ocean Science. The zooplankton data should include information on high-and low-lipid species.
- 4. Satellite observation monitoring This would include surface temperature, salinity and color, providing insight into primary production, ocean surface conditions, and other drivers over multiple geographic scales including broader scales than can be achieved from moorings and ship-based instrumentation.

#### Pelagic Monitoring

- 1. Pelagic seabird monitoring This would include the PWS monitoring of nearshore pelagic foraging birds including pigeon guillemots and murrelets (marbled and Kittlitz's). These surveys are currently being conducted on a three-year interval and this schedule is expected to continue, using the same design and methodology to ensure ability to sustain the trend lines and analyses. If the proposer feels that this timeline should be altered, there should be an explanation in the proposal of why and what the modified timeline would include.
- 2. Forage fish surveys A comprehensive survey of the forage fish available in the PWS to determine if a lack of high-quality forage fish could be a limiting factor in the recovery and restoration of several injured resources and services. Presumably this survey would

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include sand lance, capelin, and eulachon, with herring information provided by the Herring Program. It is critical that this work be conducted in a cooperative fashion with the Herring Program.

- 3. Humpback whale monitoring This would include an estimate of the numbers and seasonal residency of whales in the PWS, observations on what they are eating, and estimates of how much. It is critical that this work be conducted in a cooperative fashion with the successful proposer for the herring Program.
- 4. Killer whale monitoring A continuation of monitoring of resident pods and transient populations of PWS killer whales that addresses potential recovery from EVOS injury, ranges occupied, habitat preferences, feeding locations and prey species on a pod-by-pod basis.

#### **Benthic Monitoring**

- Sea otter monitoring Sea otters have been a key indicator species for lingering oil in PWS. Monitoring must include: sustaining the annual spring survey of sea otter carcasses with tooth extraction to determine age-of-death and matching the previous sampling design and methodology; continuing aerial surveys of abundance and distribution that have been conducted every 3 years in a fashion that allows rigorous analysis of the temporal trends; sustaining the survey of foraging behavior to examine diet and foraging success as a function of location and habitat; and collecting and analyzing tissue samples to assess levels of P450 induction.
- 2. Benthic foraging seabirds This should include the monitoring of PWS abundance and distribution of benthic foraging birds, including black oystercatchers, harlequin ducks, and Barrow's goldeneyes. These surveys, which include tissue sampling to assess P450 induction to assess hydrocarbon toxicity exposure, are currently being conducted at three-year intervals and this schedule is expected to continue. If the proposer feels that this timeline needs to be altered, there should be a discussion of why and what the modified timeline would include.
- 3. Monitoring of area coverage of seagrass and kelp habitat in the shallow subtidal zone together with select associated fauna, including stichaeid fishes, seastars, and large crabs like Telmesus. This monitoring should be conducted approximately every 3 years.
- 4. Intertidal invertebrates and algae Data are needed to determine the abundance and distribution of intertidal invertebrates and algae. Use of vertical transects on intertidal rocky shores in protected coasts in PWS is anticipated to quantify abundances of dominant epibiotic members of the intertidal community, including mussels, barnacles, rockweed, limpets, and chitons. Size frequencies of mussels and limpets will be recorded and mussel tissue samples collected to examine PAH concentrations. Additional quadrant samples in mixed sand-cobble beaches will also be taken to assess abundance and size frequency distribution of clams, including butter clam, littleneck clam, and others. Continued sampling of previously studied sites to be able to perpetuate time series of information is preferable. If methods are different from historic sampling, then

some rigorous methods contrasts are expected. Frequency of sampling should be justified within the proposal. Results of this monitoring should be disseminated in a user-friendly form to subsistence communities in the area of study.

# **Considerations Applicable to Proposers**

The following are <u>mandatory requirements</u> for potential proposers. Proposals that do not meet each of these criteria will be considered non-responsive to the Invitation and excluded from the review process. Proposers must demonstrate that they have:

- 1. A proposal which is focused within the oil spill-affected area;
- 2. A proposal which responds to the Herring focus area, as described in this Invitation.
- 3. A proposal for a program that complies with the Council's founding documents and related policies and procedures. *See References*.
- 4. An existing administrative structure to manage funds and projects; the proposer may be an existing organization or collaboration among existing entities and individuals.
- 5. A structure to communicate with the Council through a single Team Leader; regardless of the structure of the proposers, they must produce a single, comprehensive proposal.
- 6. A Team Leader who will work with and be responsive to Council's objectives and requirements.
- 7. A Team Leader who will facilitate the most cost-effective and scientifically-supportive stream of funding among the parties and projects involved.
- 8. A program science panel to review potential projects and give guidance and oversight on the direction of the program.
- 9. The ability and commitment to make all data, documents, annual and final reports available electronically to the public.
- 10. A mechanism for public outreach and opportunities for public comment on program activities.

The following are <u>preferred requirements</u> for potential proposers. Proposers that meet these requirements will be rated more highly during the review process. The Council is seeking a Long-Term Monitoring Program that:

- 1. Continues to reassess the program's progress and relevancy and considers newlyavailable technologies.
- 2. Demonstrates an understanding and synthesis of existing scientific literature, research results, and scientific knowledge that includes outcomes of prior Council work and which recognizes the available research infrastructure.
- 3. Demonstrates an effective and balanced use of funds, including establishing appropriate collaborations with other organizations and experts, achieving the most efficient use of funds, and taking advantage of existing infrastructure.
- 4. Provides a detailed plan for local and native community involvement in the program.
- 5. Provides a detailed public outreach plan that describes specific products. These could include the creation and dissemination of simple web-accessible exhibits, newsletters disseminated to spill communities and other data users, real-time data streaming for use in public settings like aquaria and visitor's centers, and submissions to public data consortiums.

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- 6. Establishes realistic and detailed timelines and milestones specific to the individual projects and the overall program.
- 7. Demonstrates a credible, feasible, and detailed administrative structure and scientific implementation of the program, including project team qualifications (education, experience, related work efforts, proposed time commitment, past performance), and availability of facilities and other requirements necessary for project success.
- 1.

The following are <u>mandatory requirements for each fiscal year</u> of the program. The submitted budget for each year shall include the staffing and funds necessary to meet these requirements.

- 1. An annual report must be presented to the Council and will include the following:
  - a. A financial accounting of any Council funding in the past year including a comparison of the requested budget versus the actual budget.
  - b. A summary of the projects funded, including brief annual reports from each.
- 2. A funding request must be presented to the Council each fiscal year and will include the following:
  - a. An administrative budget that details the costs of running the program.
  - b. An executive list and summary of projects proposed for funding and the scientific basis thereof.

# Long-Term Monitoring Program Cycles of Review and Funding

The Herring and Long-Term Monitoring focus areas under this Invitation will be funded as a single program for each focus area (one for Herring, one for Long-Term Monitoring). Proposing entities may submit proposals in more than one focus area, and organizations and individuals may participate in more than one competing proposal within a single focus area.

#### Funding Review of Program: Five-Year Contract, subject to annual Council Approval

These Herring and Long-Term Monitoring programs are administered as multi-year contracts renewable every 5 years for a total of twenty years. Consistent with this, the programs are expected to submit a Five-Year Plan to the Council for approval. In addition, the programs must also submit for Council review annual workplans which are based upon the Five-Year Plan. Below is a draft schedule for review for the Five-Year Plans and annual workplans:

Year 1:	Sept. 2011:	Fund Program, with organizations and individual projects identified
Year 2:	June 2012: Sept. 2012:	Program submits proposed FFY13 workplan for Council review Funding decision made by Council on FFY 2013 workplan
Year 3:	June 2013: Sept. 2013: Winter 2014:	Program submits proposed FFY14 workplan for Council review Funding decision made by Council on FFY14 workplan Workshop with Herring and Long-Term Monitoring individual researchers' presentations and presentations by proposers on cross- disciplinary syntheses. See Scientific Review of Program, below, for details.

Year 4:	June 2014: Sept. 2014:	Program submits proposed FFY15 workplan for Council review Funding decision made by Council on FFY 2015 workplan
Year 5:	May 2015:	Program submits Five-Year Plan for FFY17-22 and workplan for FFY16.
	Sept. 2015:	Funding decision made by Council on FFY16 workplan and review of Five-Year Plan for FFY17-FFY22.
	June 2016:	Program submits proposed FFY17 workplan
	Sept. 2016:	Funding decision made by Council on FFY17 workplan
		(Cycle repeats until approximately 2032)

#### Scientific Review of Program

A Council science panel selected by the State and Federal Administrators will review progress of the Long-Term Monitoring Program's five-year contract in the third year of funding. The selected proposer will be responsible for providing written cross-disciplinary syntheses to the Council's science panel and the Administrators at least three months prior to the review meeting. These syntheses should address fundamental environmental drivers, trends, and status of resources and services in ways that contribute to Council's and public understanding of the effects of EVOS. These may include such topics as a synthesis of retrospective data, climate drivers, lingering oil recovery, and the effects of human interventions.

As outlined above, in the third year of funding, the Council will also fund a workshop at which these cross-disciplinary syntheses will be presented. Individual researchers funded under the five-year contracts will also provide brief presentations. These presentations should include information about the availability of data to user groups and how this information can be or is being used to further Council goals and with respect to program objectives and also its utility beyond the program. As noted above, this workshop will also include parallel presentations by the Herring Program researchers to allow for an even broader ecosystem-based consideration of the ongoing research.

The Council's science panel may provide written recommendations to the Council for any potential changes to the scope of the Program that may be required and a consideration of whether the Program is meeting its objectives. This information will be shared with the Long-Term Monitoring Program Team Leader for discussion and response before any actions are taken by the Council.

## HARBOR PROTECTION AND MARINE RESTORATION

Damage to natural resources occurs not only with an initial oil spill, but also potentially through additional injury to the affected environment. This subsequent insult can result from wellintended but ultimately damaging spill response efforts. In addition, additional pollution from human uses in and around the spill area can further compromise the recovery of the natural resources initially injured by the spill. Thus, the following three components focus Council efforts to mitigate sources of additional pollution in the spill areas and to organize, preserve and pass on information gained in the response to EVOS.

#### a. Storm water, wastewater, and harbor projects

Each harbor, marina, boatyard and vessel in Alaska has the potential to generate some incremental pollution. This type of non-point source pollution, if unmitigated, ultimately affects the water quality in the marine coastal environment. Incremental pollution can stress the health of the ecosystem needed to support recovering resources resulting from the spill. Chronic marine pollution stresses fish and wildlife resources, possibly delaying recovery of resources injured by the oil spill. For example, with regard to the worldwide mortality of seabirds, the effects of chronic marine pollution are believed to be at least as important as those of large-scale spills. In the 1994 Restoration Plan, Council identified reduction of marine pollution as a type of general restoration: removal of a source of stress that may delay natural recovery.

The pollutants that might be generated at a marina and enter a marina basin include nutrients and pathogens (from pet waste and overboard sewage discharge), sediments (from parking lot runoff and shoreline erosion), fish waste (from dockside fish cleaning), petroleum hydrocarbons (from fuel and oil drippings and spills form solvents), toxic metals (from antifoulants and hull and boat maintenance debris), and liquid and solid wastes (from engine and hull maintenance and general marina activities).

The construction of a marina can create a condition of reduced water circulation. Installation of bulkheads and jetties, which are necessary to ensure the safety of vessels, docks, and shoreside structures, can cause water circulation in the basin to be below what it was before the marina's construction. Over time, reduced circulation and increased pollutant generation can increase pollutant concentrations in the water column, sediments, and aquatic organisms.

The fact that a marina is present does not mean that water quality is poor. Many marinas may have fair to excellent water quality. Despite this, their aquatic habitats might not be healthy enough to support a natural diversity of aquatic organisms, and may still have sediments contaminated by pollutants from storm water runoff or by antifoulants leached from ship hulls or piers.

The implementation of effective pollution reduction projects and techniques will be dependent upon the individual harbor and marina. Many coastal communities in the spill area have a limited ability to collect and properly dispose of waste, such as oily bilge water, used engine oil, paints, solvents, and lead-acid batteries. Improper disposal of these wastes in landfills adversely affects the quality of nearby marine waters through runoff and leaching. In some cases, these wastes are discharged directly into marine waters.

The Council has approved the funding of several projects to prepare waste management plans and has contributed to their implementation. These projects resulted in the acquisition of waste oil management equipment and the construction of environmental operating stations for the dropoff of used oil, household hazardous waste and recyclable solid waste in Cordova, Valdez, Chenega Bay, Tatitlek and Whittier, Kodiak and lower Cook Inlet. Best management practices for both storm water and harbors also exist for minimizing potential environmental impacts to the marine environment. Activities may include, but are not limited to best management practices listed in the Alaska Storm Water Guide and Alaska Clean Harbors Guide. See *References*.

The Council seeks to further reduce pollution in the marine environment to contribute to the recovery of injured natural resources and proposed funding this effort with approximately 3% - 13% of the available funding.

#### b. Marine debris removal

Marine debris is an issue in the marine and near-shore environment in Alaska, where it is likely that thousands of tons of marine debris exist within three nautical miles of the Alaska coastline. Marine fish and wildlife become entangled in and ingest debris from foreign and domestic sources that may be a day or decades old and that range from small plastic items to very large fishing nets. Approximately 175 metric tons of debris was collected from Alaska coasts by citizen cleanup projects in 2007. Marine debris removal projects can result in an immediate improvement to the coastal habitat.

Coastal communities are effective in marine debris cleanups due to their intimate knowledge of the locations of debris accumulation. In addition, when communities participate in marine debris cleanups, they often alter the common practices that led to marine debris as their awareness of the effects of the debris on their coastline and the fisheries upon which they depend increases. Marine debris removal reduces marine pollution affecting injured resources and services and, thus, further supports natural restoration.

For the purposes of this invitation, marine debris is defined as any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment located within the area of focus. Because of the ocean currents and weather patterns in this region, a significant amount of debris found is likely to have originated outside of the area. The Council is interested in receiving proposals from an organization or team that will develop and implement a community-based marine debris removal program.

The Council proposes to fund a marine debris removal program with approximately 7% of the available funding.

Activities may include, but are not limited to:

1. Assessment of existing debris in the region for prioritization and planning of specific actions, as well as selection of best practices for accomplishing program goals.

- 2. Detection, assessment, and/or removal of persistent debris, including derelict fishing gear, such as abandoned crab pots, fish nets, and monofilament line, from coastal habitats and removal of debris washed up on shorelines.
- 3. Detection, assessment, and/or removal of debris from marine, estuarine or beach environments resulting from point-in-time events (i.e., vessel groundings, storms, etc.).
- 4. Use of strategies, methods, priorities and plans for the detection, safe removal, and responsible disposal of derelict fishing gear and associated marine debris impacting or expected to impact habitat affected by the spill. Applicable management practices and local or regional protocols may already exist and, where possible, these should be applied. However, the program may also include defining best management practices and local or regional protocols where necessary.
- 5. Prevention, outreach, education and/or volunteer activities. Proposers are encouraged to include education and outreach as a component of removal activities. These activities should include the public and other stakeholders, such as the fishing industry, fishing gear manufacturers, other marine-dependent industries, and the plastic and waste management industries.

#### c. Response, Damage Assessment and Restoration Implications

Damage to natural resources occurs not only with an initial oil spill, but also potentially through spill response efforts. Damage assessment from the 1989 spill has yielded information that can assist in mitigating damage from spill response activities in future spills. Skilled damage assessment also quantifies the extent of injury and allows for the accurate monitoring and measurement of restoration after a spill. Organizing, preserving, and passing on such information will help responders and those conducting future damage assessments. These efforts ensure that restoration efforts are truly effective. Outreach efforts could include a conference or series of papers sharing information to be used by future responders, including natural resource assessment, the long-term costs of high-pressure washing, use of dispersants in the near-shore, sub-arctic environment, and the effects of potential burning scenarios.

The Council proposes to fund this effort with approximately 5% of the available funding.

#### **Considerations** Applicable to Proposers

The Harbor Protection and Marine Restoration focus area contains three subject areas to be funded under this Invitation: "Storm Water, Wastewater, and Harbor Projects," "Marine Debris Removal" and "Response, Damage Assessment and Restoration Implications." These three, separate subject areas will be administered as multi-year contracts with a Council-funded program for each subject area. There is no required length of contract, though the Council has contemplated implementation over a 2-5 year period, as appropriate. Proposing entities may submit proposals in more than one focus area, and organizations and individuals may participate in more than one competing proposal within a single focus area.

The following are <u>mandatory requirements</u> for potential proposers. Proposals that do not meet each of these criteria will be considered non-responsive to the Invitation and excluded from the review process. Proposers must demonstrate that they have:

1. A proposal which is focused within the oil spill-affected area;



- 3. A proposal for a program that complies with the Council's founding documents and related policies and procedures. *See References*.
- 4. An existing administrative structure to manage funds and projects; the proposer may be an existing organization or collaboration among existing entities and individuals.
- 5. A structure to communicate with the Council through a single Team Leader; regardless of the structure of the proposers, they must produce a single, comprehensive proposal.
- 6. A Team Leader who will work with and be responsive to Council's objectives and requirements.
- 7. A Team Leader who will facilitate the most cost-effective and scientifically-supportive stream of funding among the parties and projects involved.
- 8. A program technical panel to review potential projects and give guidance and oversight on the direction of the program.
- 9. The ability and commitment to make all data, documents, annual and final reports available electronically to the public.
- 10. A mechanism for public outreach and opportunities for public comment on program activities.

The following are <u>preferred requirements</u> for potential proposers. Proposers that meet the requirements will be rated more highly during the review process. The Council is seeking a proposal in each of these three subject areas that:

- 1. Implements a reduction and removal program with clearly identified goals (broad in scope) and specific, measurable objectives, including realistic and detailed timelines and milestones.
- 2. Continues to reassess the program's progress and relevancy and considers newly-available technologies.
- 3. Demonstrates an understanding and synthesis of existing technical and scientific literature, research results, and technical and scientific knowledge that includes outcomes of prior Council work and which recognizes the available technical and research infrastructure.
- 4. Demonstrates an effective and balanced use of funds, including establishing appropriate collaborations with other organizations and experts, achieving the most efficient use of funds, and taking optimal advantage of existing infrastructure. This includes collaborations among entities such as public and nonprofit organizations, corporations and businesses, and federal, state, and local government to cooperatively implement the proposed projects.
- 5. Provides a detailed plan for local and native community involvement in the program.
- 6. Provides a detailed public outreach plan that describes specific products. This could include the creation and dissemination of simple web-accessible exhibits, newsletters disseminated to spill communities and other data users, real-time data streaming for use in public settings like aquaria and visitor's centers, and submissions to public data consortiums.
- 7. Demonstrates a credible feasible, and detailed, realistic and detailed administrative structure and technical and scientific implementation of the program, including project team qualifications (education, experience, related work efforts, proposed time

commitment, past performance), and availability of facilities or other requirements necessary for project success.

- 8. For Marine Debris:
  - a. provides a final report with the total amount of debris removed, total areas cleaned or restored, types of debris encountered, and volunteer hours involved;
  - b. presents a written safety plan for all project related activities, including management of volunteers. The safety plan should consider safety at the site during and after project implementation, and potential safety concerns with regard to the current and future use of the site; and
  - c. provides a public outreach plan that can effectively educate the public with the goal of altering debris-creating human practices and habits.

The following are <u>mandatory requirements for each fiscal year</u> of the program. The submitted budget for each year shall include the staffing and funds necessary to meet these requirements.

- 1. An annual report must be presented to the Council that includes the following:
  - a. A financial accounting of any Council funding in the past year including a comparison of the requested budget versus the actual budget.
  - b. A summary of the projects funded, including brief annual reports from each.
- 2. A funding request must be presented to the Council each fiscal year and will include the following:
  - a. An administrative budget that details the cost of running the program.
  - b. An executive list and summary of projects recommended for funding and the technical and scientific basis thereof.

#### **LINGERING OIL**

One of the most surprising revelations from two decades of research and restoration efforts since the 1989 spill is the persistence of subsurface oil in a relatively un-weathered state. This oil, estimated to be around 97.2 metric tons (or 23,000 gallons), is contained in discontinuous patches across beaches that were initially impacted by the spill. The patches cannot be visually identified on the beach surface, but their presence may be a source for continued exposure to oil for sea otters and birds that seek food in sediments where the oil persists. The survey work completed to date indicates that the oil is decreasing at a rate of zero to four percent per year, with only a five percent chance that the rate is as high as four percent. As a result, it may persist for decades.

Passive and subsistence uses were significantly impacted by the spill and this has affected the overall health of the communities in Prince William Sound. The presence of lingering oil has also impacted the public's perception of the spill area, who no longer view it as the pristine environment that was present before the spill occurred. This perception has continued to preclude full recovery for some passive and subsistence uses. It may require additional resources to evaluate, monitor, and redress the impact of lingering oil on these uses in the spill area. An important function of this information gathering would be to pass this information back to the communities and the general public.

In an effort to address the issue of lingering oil, the governments developed a Restoration Plan under the terms of the Reopener provision in the Consent Decree with Exxon, http://www.evostc.state.ak.us/facts/reopener.cfm. Efforts to date include the development of a spatial probability model to identify beach segments with a high likelihood of persistent oil, and investigations of the reasons for the persistence of oil as a means to consider options that may accelerate the oil degradation. Under the Lingering Oil Initiative, the Council envisions completion of current studies to reach a decision point on further efforts for active remediation.

Upon receiving additional information from these current lingering oil studies and the resolution of the Reopener, the Council will evaluate the need for restoration of related services and, thus, no prospective funding amount has been proposed.

Lingering Oil proposals funded under this Invitation may be proposed as single-year projects or multi-year projects or programs. All multi-year projects or program require funding to be reauthorized annually by the Council. There is no required length of contract in this area.

#### **Considerations** Applicable to Proposers

The following are <u>mandatory requirements</u> for potential proposers. Proposals that do not meet each of these criteria will be considered non-responsive to the Invitation and excluded from the review process. Proposers must demonstrate that they have:

- 1. A proposal which demonstrates a clear linkage to injured natural resources;
- 2. A proposal which is focused within the oil spill-affected area.
- 3. A proposal which responds to the Lingering Oil focus area, as described in this Invitation.
- 4. The ability and commitment to make all data, documents, annual and final reports available electronically to the public.
- 5. If the proposal is for a multi-year program:
  - a. A proposal for a program that complies with the Council's founding documents and related policies and procedures. *See References.*
  - b. An existing administrative structure to manage funds and projects; the proposer may be an existing organization or collaboration among existing entities and individuals.
  - c. A structure to communicate with the Council through a single Team Leader; regardless of the structure of the proposers, they must produce a single, comprehensive proposal.
  - d. A Team Leader who will work with and be responsive to Council's objectives and requirements.
  - e. A Team Leader who will facilitate the most cost-effective and scientificallysupportive stream of funding among the parties and projects involved.
  - f. A technical review panel to review potential projects and give guidance and oversight on the direction of the program.

The following are <u>preferred requirements</u> for potential proposers. Proposers that meet the requirements will be rated more highly during the review process. The Council is seeking Lingering Oil projects that:

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- 1. Are hypothesis-driven and which address the effects of factors such as the functional interrelations of organisms, climate drivers, lingering oil recovery and the effect of human impacts on the affected ecosystems.
- 2. Continue to reassess the project's progress and relevancy, considers newly-available technologies and provides data that are accessible to the public and other potential users.
- 3. Demonstrate an understanding and synthesis of existing technical and scientific literature, research results, and technical and scientific knowledge that includes outcomes of prior Council work and which recognizes the available technical and research infrastructure.
- 4. If the proposal is for a multi-year program, the program:
  - a. Demonstrates an effective and balanced use of funds, including establishing appropriate collaborations with other organizations and experts, achieving the most efficient use of funds, and taking optimal advantage of existing infrastructure. This includes collaborations among entities such as public and nonprofit organizations, corporations and businesses, and federal, state, and local government to cooperatively implement the proposed projects.
  - b. Provides a detailed public outreach plan that describes specific products. This could include the creation and dissemination of simple web-accessible exhibits, newsletters disseminated to spill communities and other data users, real-time data streaming for use in public settings like aquaria and visitor's centers, and submissions to public data consortiums.
  - c. Demonstrates a credible, realistic and detailed administrative structure and technical and scientific implementation of the program, including project team qualifications (education, experience, related work efforts, proposed time commitment, past performance), and availability of facilities or other requirements necessary for project success.
  - d. Provides detailed methodology for meaningful public comment.
  - e. Provides a detailed plan for local and native community involvement in the program.

The following are <u>mandatory requirements for each fiscal year</u>. The submitted budget for each year shall include the staffing and funds necessary to meet these requirements.

- 1. An annual report must be presented to the Council that summarizes the individual project's findings.
- 2. For those proposing a multi-year lingering-oil program or project:
  - a. the annual report must include:
    - i. a financial accounting of the past year including a comparison of the requested budget versus the actual budget; and
    - ii. a summary of the project(s) funded, including a brief annual report from each project(s) funded.
  - c. A funding request must be presented to the Council each fiscal year that includes:
    - i. an administrative budget that details the cost of running the program or project; and
    - ii. For a program, an executive list and summary of projects recommended for funding and the technical and scientific basis thereof.

# **IV. Additional Evaluation of Proposals**

#### A. Policy and Legal Review

To be eligible for funding, proposals must be designed to restore, replace, enhance or acquire the equivalent of natural resources injured as a result of the oil spill or the reduced or lost services provided by these resources. In addition, proposals must be consistent with the policies contained in the 1994 Restoration Plan. Council staff will also review each proposal for responsiveness to this Invitation, completeness and for adherence to the format and instructions contained in this document. A legal and policy review of each proposal submitted pursuant to this Invitation may be conducted by the Alaska Department of Law and the U.S. Department of Justice.

• Proposers should also note that the following activities, in general, will not be considered for use of Council dollars: (1) activities that constitute legally required mitigation for the adverse effects of an activity regulated or otherwise governed by local, state or federal law; (2) activities that are required by a separate consent decree, court order, statute or regulation; and (3) activities that constitute activities of government agencies. *See also*, Memorandum of Agreement and Consent Decree between the United States & the State of Alaska (Aug. 29, 1991).

#### **B.** Council Science Review

Members of the Council's Science Panel, Long-Term Monitoring working group or other science advisors to the Council will review the proposals, meet with the Preferred Proposers during the revision process, and provide recommendations to the Executive Director.

#### C. Public Advisory Committee Review

The Council's Public Advisory Committee, representing a cross-section of interest groups affected by the oil spill, will review the proposals and provide the Council with funding recommendations.

#### **D.** Public Comment and Funding Decision

The Council's Executive Director will use the recommendations of the Council's Public Advisory Committee, Science Panel and Long-Term Monitoring working group, other Council advisors and Council staff to develop a proposer listing for the Council's review. This recommendation will be circulated for public comment as the FY12 Draft Work Plan. The Executive Director and Council staff will be tasked with refining proposals from each of the Preferred Proposers for the Council's final review.

#### **E. Trustee Council Decision**

The Council will take into consideration the recommendations of the Executive Director and the Public Advisory Committee in making its decision as to which proposals will be selected as preferred and which will be selected for funding. Unanimous agreement of all six Council members is required to fund a proposal. Please note that the Council is not legally bound to abide by recommendations, including those of science advisors, the Public Advisory Committee or the Executive Director. It is anticipated that funding decisions for FFY12 will be made at a Trustee Council meeting in the September 2011.





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# V. Instructions for Submitting a Proposal

#### A. What to Submit

Please submit ten (10) paper copies and one electronic copy of the proposal package to:

Executive Director *Exxon Valdez* Oil Spill Trustee Council 441 West 5<sup>th</sup> Avenue, Suite 500 Anchorage, AK 99501-2340 Phone: 907-278-8012 or 1-800-478-7745

Electronic versions of the narrative sections of the proposal must be composed using Microsoft Word 2002 (XP) or lower with figures and tables embedded. The document should be **numerically tabbed** as reflected in the request below:

# Please provide the following information for the organization or each member of the consortium:

#### 1. Information on Consortium or Organization

- a. Years in existence
- b. Current and future sources of funding
- c. Current staff size by area of expertise (e.g science management, administration, IT, etc.)
- d. Audited financial statement covering past three years
- e. Information about facility, including location, ownership, authority to use, size, and resources available
- f. Statement confirming proposal and related activities are consistent with the founding, authorizing documentation of the Proposer's organization.
- g. Number of members of existing science or technical review panel
- h. Number of members of existing public advisory committee or mechanism for public involvement
- i. Name and resume of the Team Leader and any key staff. This should include a summary of the experience of the Team Leader in managing large and complex scientific programs.
- j. Capabilities of existing IT infrastructure to make data and reports publically available.

#### 2. Experience with EVOSTC Program

- a. Amount of funding received from EVOSTC programs currently or in the past and listing of projects funded
- b. A statement that the proposer has read and clearly understands the Council's founding documents and related policies and procedures. Any conflicts between the Council's policies and procedures and the proposer's should be addressed in this tab.

#### 3. Current Focus Areas and Funding Sources

a. Listing of current focus areas and amount of funds released for each area

b. Experience with Invitation area(s) addressed in the proposal. This should include the total amount of funding that has been released for the program area of interest.

# 4. Collaboration/Coordination

- a. Experience working with state, federal, and private entities to complete projects
- b. Experience working with local and tribal communities in the spill area
- c. Outreach plan that details the types of outreach envisioned and the audience for each type.
- 5. Budget Request (If proposer is a consortium, provide ONE budget request for the entire program)
  - a. Provide a five-year request for funding for the administration of the program (please see attached worksheet). The request <u>should</u> include:
    - Indirect costs as a separate line item. (If proposer is consortium, only one indirect rate will be accepted)
    - Costs of all required personnel including administrative, science review, public involvement and outreach, and IT. This request should only be for those directly working with EVOSTC funding.
  - b. The request should <u>not</u> include:
    - Costs of any individual projects or project personnel.
    - Cost for services not specifically requested in this Invitation



# **REFERENCES:**

(to be added -lists examples of Council-funded projects in each topic area)

EVOSTC Founding and other Documents: Are available at the Council's website at: http://www.evostc.state.ak.us/Publications/KeyDocs.cfm

These include:

- Memorandum of Agreement and Consent Decree between the United States & the State of Alaska (Aug. 29, 1991)
- Agreement and Consent Decree between the United States, the State of Alaska, and Exxon Corporation (Sep. 20, 1991)
- Governments' Memorandum in Support of Agreement and Consent Decree (Oct. 8, 1991)
- Exxon Valdez Oil Spill Restoration Plan (Nov. 1994)
- 2010 Status of Injured Resources & Services available at: http://www.evostc.state.ak.us/recovery/status.cfm

Harbor/Wastewater:

The Alaska Storm Water Guide is available for download at http://dec.alaska.gov/water/wnpspc/stormwater/Guidance.html and is intended for use to help contractors and storm water practitioners better manage storm water under the unique conditions encountered in Alaska. The guide addresses some of the unique challenges posed by the diversity of Alaska's geography, geology and climate and makes some generalized recommendations about the design and selection of storm water best management practices in an effort to optimize their effectiveness.

The Alaska Clean Harbors Guidebook is accessible for free download at (http://seagrant.uaf.edu/bookstore/pubs/SG-ED-68.html) from the Alaska Sea Grant Bookstore, University of Alaska Fairbanks. It is intended for Alaska harbormasters and community leaders as a management tool for designing and operating harbors in an environmentally sound way. It includes best management practices and certification checklists to foster creation of an Alaska Clean Harbors certification program (note: the actual certification entity and process is still under development). It increases a focus on spill prevention steps that can be taken by fishing and recreational boaters. Partners in the clean harbors project include the Alaska Department of Environmental Conservation, Alaska Sea Grant College Program, Conoco Phillips Earth Energy Partners Program, Cook Inlet Regional Citizens Advisory Council, and Nuka Research and Planning Group, LLC. The book was originally prepared for the Alaska Department of Environmental Conservation through a grant from the Cook Inlet Regional Citizens Advisory Council. Additional information can be found at the Project website: http://www.nukaresearch.com/projects/cleanharbor/index.shtml.

There are also a number of additional resources for best management practices for storm water and harbors that can be found at EPA, NOAA and other sites as well. Draft Supplemental Restoration Plan (review)

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# DRAFT

July 14, 2010

# Exxon Valdez Oil Spill Restoration Plan Supplement: October 2010

# Introduction

This document is intended to be a supplement to the *Exxon Valdez* Oil Spill Restoration Plan (Plan), prepared by the *Exxon Valdez* Oil Spill Trustee Council (EVOSTC) in November 1994. This supplement is not intended as a comprehensive update to the original document. Instead, this document supplements the original Plan where needed to facilitate and be consistent with the Council's current focus and activities.<sup>1</sup>

The Council, recognizing that the restoration funds remaining from the *Exxon Valdez* settlement continue to diminish, is currently proposing to narrow and refine the scope of the Council's restoration efforts. This effort enables the remaining funds to be expended in an efficient and strategic manner. In addition, this narrowing will enable a more discrete and efficient funding mechanism by which to direct these remaining funds. Specifically, the Council proposes to focus their restoration efforts to five defined restoration categories: herring; lingering oil; long-term monitoring of marine conditions and injured natural resources and services; harbor protection and marine restoration; and habitat acquisition and protection.

The herring, long-term monitoring of marine conditions and injured natural resources and services, and harbor protection and marine restoration focus areas will be managed through a multi-year program that is administrated by an organization or team of individuals or organizations which is approved by the Council through the FY '12 Invitation process. The approved program is responsible for many of the administrative duties of each of their respective focus area (including the processes for annual invitations, scientific and peer review and management of individual projects) and is expected to administrate the projects consistent with the Plan and other Council requirements. The Council will continue to provide oversight through an annual meeting to approve annual funding and review the past year's work and, for herring and long-term monitoring, also through workshops mid-way through those programs' multi-year contracts.

The Council's current proposal is largely consistent with the 1994 Plan. However, there are several areas which require minor revisions and which are thus provided by this supplement. These comments and revisions are organized by reference to the original Plan designations and page numbers.

# Chapter 1

# Past and Estimated Future Uses of Civil Settlement Funds

 $<sup>^{1}</sup>$  The Council may change the plan if the Council determines that the plan is no longer responsive to restoration needs. Plan at pg. 10.

The 1994 Plan noted the Council has "the authority and flexibility to make annual funding decisions" and that estimates or predictive use of funds is just that: estimates. Plan at pg. 5. The Council's current proposal retains this flexibility with the use of annual Council meetings to approve annual spending.

# Implementing the Restoration Plan: The Adaptive Management Cycle

In addition, the Plan notes that its implementation is based upon an adaptive management cycle that includes annual or multi-year work plans. Plan at pg. 8-10. Under the Council's current proposal, the Council may delegate the annual proposal and invitation processes. Plan at pg. 9. Under this current proposal, the Council may review the summaries or recommendations for proposed workplans presented by program. However, the Council may choose not to review each individual project as it has in past years. *Id.* Consistent with this, *Figure 1. The Trustee Council Adaptive Management Cycle* may also be implemented by the program instead of the Council and its staff. *Id.* 

The 1994 Plan notes that each year the results of that year's restoration activities are synthesized, integrated and distributed so that the public will have an up-to-date view of the condition of the injured resources and services and know what has been learned during that year. Plan at pg. 9-10. That synthesis, integration and distribution will continue under the Council's current proposal. However, in past years, these processes have not always been completed within an annual cycle. This will likely remain the practice into the future, with the goal for annual updates remaining but with some cycles extending beyond an annual time period.

# Chapter 2: Missions and Policies

#### **19.** Public Participation

The Council's current proposal limiting their efforts to five focus areas and delegating some administrative functions to outside entities has received with public and EVOSTC Public Advisory Committee (PAC) approval. This streamlining of the Council's activities will allow for more efficient and targeted funding in these areas. As discussed above, the Council will retain supervision of restoration activities through annual meetings to review the past year's work and to approve annual funding.

As a part of this proposed annual cycle, the PAC will also meet annually to review restoration activities and provide recommendations to the Council. With the shift in Council oversight, the PAC's oversight, which parallels the Council's decisions, also shifts. However, the final reports, final data, synthesis and information related to the annual workplans and individual projects contained therein will continue to be made available to the public by the programs. In addition, the programs are expected to not only make this information available but to also seek public comment as well. *See*, Plan at pg. 17.

Investments

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**Spending Scenario:** August 2010: These initial spending amounts are approximate and are based upon 7/31/10 performance reports.

#### Habitat Accounts:

Koniag account: \$43.8 m Not addressed: Obliged until 2022; then funds may revert to EVOSTC if subject parcel is not purchased.

**Unobligated Habitat Account** 

Approximately \$5 million is obliged.

**Research Account** 

Unobligated Research Account		(\$81.6 million)
Research Account	\$96.6 million	
Cordova Center	\$7.2 m	
FY '11 admin budget	\$1.8 m	
Multi-year projects through FFY'13	<u>\$6 m</u>	•
Unbliged Research Total	\$81.6 m	

EVOSTC admin FFY 2012 and 2013 at \$1.5 and \$1.3m/year, respectively

\$2.8 million (\$78.8)

\$25.7 million

EVOSTC admin scenarios:

FFY 2014 - 2032 (20 year programs starting in 2012, one year for closing)At \$1 m/yearAt \$750 k/year\$13.5 million

FFY 2014-2025 (13-year programs starting in 2012) At \$1 m/year (no closing period) At \$750 k/year + \$250 k for closing

Anticipated potential lingering oil studies 2011-2013:

Approx. total available in Research:

<u>\$1-4 million</u> **\$56.8 - 67.8 millio**n

\$13 million

\$10 million

# Womac, Cherri G (EVOSTC)

From: Sent: To:	Womac, Cherri G (EVOSTC) Monday, August 16, 2010 10:26 AM 'Craig O'Connor (Craig.R.O'Connor@noaa.gov)'; 'Craig Tillery (craig.tillery@alaska.gov)'; 'Daniel Sullivan (daniel.sullivan@alaska.gov)'; 'Denby S. Lloyd (denby.lloyd@alaska.gov)'; 'Jim Balsiger (jim.balsiger@noaa.gov)'; 'Kim Elton (kim_elton@ios.doi.gov)'; 'Larry Hartig (larry.hartig@alaska.gov)'; 'Steve Zemke (szemke@fs.fed.us)'; 'Pat Pourchot
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Subject: Attachments:	revised agenda and fund info Draft TC Agenda Aug 26 2010 draft (3).pdf; <mark>Jul 31 2010 EVOS perform measure.pdf;</mark> <mark>Research Fund Study August 2010.ppt</mark> ; Research Fund Spending Scenarios Aug 2010.xlsx

Cherri

Trustees, TC Alternates, Attorneys, Liaisons, and PAC:

Attached please find two documents which outline spending scenarios for the Trustee Council's remaining funds. The Draft Invitation will not be reviewed for final approval until early October. However, it is important for the Council to discuss at the August 26th meeting the intended funding levels so that those monetary figures may be added to the draft Invitation.

The "Research Fund" power point document provides background information on the inherent conditions and limitations on such planning, due to market influences. It also contains two tables which indicate the levels of administrative and non-administrative spending over the twenty-year planning period and the probability of "ruin," or running out of funds before that period ends. The spreadsheet contains combinations of post-FFY 2013 administrative and non-administrative spending.

The documents are also available on the appropriate forums.

Elise

# Estimated Schedules of Expenses for Varying Levels of Administrative and Unencumbered Research Expense Levels

Scenario: \$750 FFY14 Admin. Cost: \$2500 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	FFY21	FFY22	FFY23	FFY24	FFY25	FFY26	FFY27	FFY28	FFY29	FFY30	FFY31	FFY32	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	907	932	957	984	1,011	1,039	1,067	1,096	1,127	1,158	1,189	1,222	23,234
Cordova Center	2,333	2,333	2,333																		1		7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833																	<del> </del>			2,500
FFY11-13 Projects	2,000	2,000	2,000																				6,000
Total Unencumbered Research Expenses		2,500	2,569	2,639	2,712	2,787	2,863	2,942	3,023	3,106	3,191	3,279	3,369	3,462	3,557	3,655	3,755	3,859	3,965	4,074	4,186	4,301	69,795
Herring (11-21% over 20 yrs. Using 16% here.)		400	411	422	434	446	458	471	484	497	511	525	539	554	569	585	601	617	634	652	670	688	11,167
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		500	514	528	542	557	573	588	605	621	638	656	674	692	711	731	751	772	793	815	837	860	13,959
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		200	206	211																			617
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		175	180								-										$\square$		355
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		125	128								_												253
Currently Unallocated Unencumbered Research Funds		1,100	1,130	1,478	1,736	1,783	1,832	1,883	1,935	1,988	2,042	2,099	2,156	2,216	2,277	2,339	2,404	2,470	2,538	2,607	2,679	2,753	43,444
Total Expenses	6,967	9,167	9,277	3,389	3,483	3,578	3,677	3,778	3,882	3,989	4,098	4,211	4,327	4,446	4,568	4,694	4,823	4,955	5,092	5,232	5,375	5,523	108,528
Scenario: \$750 FFY14 Admin. Cost; \$3000 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	FFY21	FFY22	FFY23	FFY24	FFY25	FFY26	FFY27	FFY28	FFY29	FFY30	FFY31	FFY32	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	907	932	957	984	1,011	1,039	1,067	1,096	1,127	1,158	1,189_	1,222	23,234
Cordova Center	2,333	2,333	2,333											L						<u> </u>		ļ'	7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833																	<u> </u>	<u> </u>	<u>                                     </u>	2,500
FFY11-13 Projects	2,000	2,000	2,000																	<u> </u>	L'		6,000
Total Unencumbered Research Expenses		3,000	3,083	3,167	3,254	3,344	3,436	3,530	3,627	3,727	3,830	3,935	4,043	4,154	4,269	4,386	4,507	4,631	4,758	4,889	5,023	5,161	83,753
Herring (11-21% over 20 yrs. Using 16% here.)		480	493	507	521	535	550	565	580	596	613	630	647	665	683	702	721	741	761	782	804	826	13,401
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		600	617	633	65 <b>1</b>	669	687	706	725	745	766	787	809	831	854	877	901	926	952	978	1,005	1,032	16,751
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		240	247	253																<u> </u>	$\square$		740
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		210	216																	<u> </u>	<u> </u>		426
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)	l	150	154									l								L'	<u> </u>		304
Currently Unallocated Unencumbered Research Funds		1,320	1,356	1,774	2,083	2,140	2,199	2,259	2,322	2,385	2,451	2,518	2,588	2,659	2,732	2,807	2,884	2,964	3,045	3,129	3,215	3,303	52,132
Total Expenses	6,967	9,667	9,790	3,917	4,025	4,136	4,249	4,366	4,486	4,610	4,736	4,867	5,001	5,138	5,279	5,425	5,574	5,727	5,885	6,046	6,213	6,383	122,487
											-	-		-	-								
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	FFY21	FFY22	FFY23	FFY24	FFY25	FFY26	FFY27	FFY28	FFY29	FFY30	FFY31	FFY32	Total
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending Administrative Expenses	FFY11 1,800	FFY12 1,500	FFY13 1,541	FFY14 750	<b>FFY15</b> 771	FFY16 792	FFY17 814	FFY18 836	FFY19 859	FFY20 883	FFY21 907	FFY22 932	FFY23 957	FFY24 984	FFY25 1,011	FFY26 1,039	FFY27 1,067	FFY28 1,096	FFY29 1,127	FFY30 1,158	<b>FFY31</b> 1,189	<b>FFY32</b> 1,222	Total 23,234
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending Administrative Expenses Cordova Center	<b>FFY11</b> 1,800 2,333	FFY12 1,500 2,333	<b>FFY13</b> 1,541 2,333	FFY14 750	<b>FFY15</b> 771	FFY16 792	FFY17 814	FFY18 836	FFY19 859	FFY20 883	FFY21 907	FFY22 932	FFY23 957	FFY24 984	FFY25 1,011	FFY26 1,039	FFY27 1,067	FFY28 1,096	FFY29 1,127	FFY30 1,158	<b>FFY31</b> 1,189	<b>FFY32</b> 1,222	Total 23,234 7,000
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	FFY11 1,800 2,333 833	FFY12 1,500 2,333 833	<b>FFY13</b> 1,541 2,333 833	FFY14 750	FFY15 771	<b>FFY16</b> 792	FFY17 814	FFY18 836	<b>FFY19</b> 859	FFY20 883	<b>FFY21</b> 907	<b>FFY22</b> 932	<b>FFY23</b> 957	FFY24 984	FFY25	FFY26 1,039	FFY27 1,067	FFY28 1,096	FFY29 1,127	FFY30 1,158	<b>FFY31</b> 1,189	FFY32 1,222	Total 23,234 7,000 2,500
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000	FFY13 1,541 2,333 833 2,000	FFY14 750	FFY15 771	FFY16 792	<b>FFY17</b> 814	FFY18 836	<b>FFY19</b> 859	FFY20 883	FFY21 907	<b>FFY22</b> 932	FFY23 957	FFY24 984	FFY25	FFY26 1,039	FFY27 1,067	FFY28 1,096	FFY29 1,127	FFY30 1,158	<b>FFY31</b> 1,189	FFY32 1,222	Total 23,234 7,000 2,500 6,000
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects Total Unencumbered Research Expenses	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 3,500	FFY13 1,541 2,333 833 2,000 3,596	FFY14 750 3,695	FFY15 771 3,797	FFY16 792 3,901	FFY17 814 4,008	FFY18 836 4,119	FFY19 859 4,232	FFY20 883 4,348	FFY21 907 4,468	FFY22 932 4,591	FFY23 957 4,717	FFY24 984 4,847	FFY25 1,011 4,980	FFY26 1,039 5,117	FFY27 1,067 5,258	FFY28 1,096 5,402	FFY29 1,127 5,551	FFY30 1,158 5,703	FFY31 1,189 5,860	FFY32 1,222 6,021	Total 23,234 7,000 2,500 6,000 97,712
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects Total Unencumbered Research Expenses Herring (11-21% over 20 yrs. Using 16% here.)	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 3,500 560	FFY13 1,541 2,333 833 2,000 3,596 575	FFY14 750 3,695 591	FFY15 771 3,797 607	FFY16 792 3,901 624	FFY17 814 4,008 641	FFY18 836 4,119 659	FFY19 859 4,232 677	FFY20 883 4,348 696	FFY21 907 4,468 715	FFY22 932 4,591 735	FFY23 957 4,717 755	FFY24 984 	FFY25 1,011 4,980 797	FFY26 1,039 5,117 819	FFY27 1,067 5,258 841	FFY28 1,096 5,402 864	FFY29 1,127 5,551 888	FFY30 1,158 5,703 913	<b>FFY31</b> 1,189 <b>5,860</b> 938	FFY32 1,222 6,021 963	Total           23,234           7,000           2,500           6,000           97,712           15,634
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects Total Unencumbered Research Expenses Herring (11-21% over 20 yrs. Using 16% here.) Long-Term Monitoring (15-25% over 20yrs. Using 20%.)	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 3,500 560 700	FFY13 1,541 2,333 833 2,000 3,596 575 719	FFY14 750 3,695 591 739	FFY15 771 3,797 607 759	FFY16 792 3,901 624 780	FFY17 814 4,008 641 802	FFY18 836 4,119 659 824	FFY19 859 4,232 677 846	FFY20 883 4,348 696 870	FFY21 907 4,468 715 894	FFY22 932 4,591 735 918	FFY23 957 4,717 755 943	FFY24 984 4,847 775 969	FFY25 1,011 4,980 797 996	FFY26 1,039 5,117 819 1,023	FFY27 1,067 5,258 841 1,052	FFY28 1,096 5,402 864 1,080	FFY29 1,127 5,551 888 1,110	FFY30 1,158 5,703 913 1,141	<b>FFY31</b> 1,189 5,860 938 1,172	FFY32 1,222 6,021 963 1,204	Total           23,234           7,000           2,500           6,000           97,712           15,634           19,542
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects Total Unencumbered Research Expenses Herring (11-21% over 20 yrs. Using 16% here.) Long-Term Monitoring (15-25% over 20yrs. Using 20%.) Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 3,500 560 700 280	FFY13 1,541 2,333 833 2,000 3,596 575 719 288	FFY14 750 3,695 591 739 296	FFY15 771 3,797 607 759	FFY16 792 3,901 624 780	FFY17 814 4,008 641 802	FFY18 836 4,119 659 824	FFY19 859 4,232 677 846	FFY20 883 4,348 696 870	FFY21 907 4,468 715 894	FFY22 932 4,591 735 918	FFY23 957 4,717 755 943	FFY24 984 	FFY25 1,011 4,980 797 996	FFY26 1,039 5,117 819 1,023	FFY27 1,067 5,258 841 1,052	FFY28 1,096 5,402 864 1,080	FFY29 1,127 5,551 888 1,110	FFY30 1,158 5,703 913 1,141	FFY31 1,189 5,860 938 1,172	FFY32 1,222 6,021 963 1,204	Total           23,234           7,000           2,500           6,000           97,712           15,634           19,542           863
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects Total Unencumbered Research Expenses Herring (11-21% over 20 yrs. Using 16% here.) Long-Term Monitoring (15-25% over 20yrs. Using 20%.) Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.) Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 3,500 560 700 280 245	FFY13 1,541 2,333 833 2,000 3,596 575 719 288 252	FFY14 750 3,695 591 739 296	FFY15 771 3,797 607 759	FFY16 792 3,901 624 780	FFY17 814 4,008 641 802	FFY18 836 4,119 659 824	FFY19 859 4,232 677 846	FFY20 883 4,348 696 870	FFY21 907 4,468 715 894	FFY22 932 4,591 735 918	FFY23 957 4,717 755 943	FFY24 984 	FFY25 1,011 4,980 797 996	FFY26 1,039 5,117 819 1,023	FFY27 1,067 5,258 841 1,052	FFY28 1,096 5,402 864 1,080	FFY29 1,127 5,551 888 1,110	FFY30 1,158 5,703 913 1,141	FFY31 1,189 5,860 938 1,172	FFY32 1,222 6,021 963 1,204	Total           23,234           7,000           2,500           6,000           97,712           15,634           19,542           863           497
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects Total Unencumbered Research Expenses Herring (11-21% over 20 yrs. Using 16% here.) Long-Term Monitoring (15-25% over 20yrs. Using 20%.) Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.) Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.) Response (5% over 1-2 yrs. Using 5% over 2 yrs.)	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 <b>3,500</b> 560 700 280 245 175	FFY13 1,541 2,333 833 2,000 <b>3,596</b> 575 719 288 252 180	FFY14 750 3,695 591 739 296	FFY15 771 3,797 607 759	FFY16 792 3,901 624 780	FFY17 814 4,008 641 802	FFY18 836 4,119 659 824	FFY19 859 4,232 677 846	FFY20 883 4,348 696 870	FFY21 907 4,468 715 894	FFY22 932 4,591 735 918	FFY23 957 4,717 755 943	FFY24 984 4,847 775 969	FFY25 1,011 4,980 797 996	FFY26 1,039 5,117 819 1,023	FFY27 1,067 5,258 841 1,052	FFY28 1,096 5,402 864 1,080	FFY29 1,127 5,551 888 1,110	FFY30 1,158 5,703 913 1,141	FFY31 1,189 5,860 938 1,172	FFY32 1,222 6,021 963 1,204	Total           23,234           7,000           2,500           6,000           97,712           15,634           19,542           863           497           355
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 5% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 3,500 560 700 280 245 175 1,540	FFY13 1,541 2,333 833 2,000 3,596 575 719 288 252 180 1,582	FFY14 750 3,695 591 739 296 2,069	FFY15 771 3,797 607 759 2,430	FFY16 792 3,901 624 780 2,497	FFY17 814 4,008 641 802 2,565	FFY18 836 4,119 659 824 2,636	FFY19 859 4,232 677 846 	FFY20 883 4,348 696 870 2,783	FFY21 907 4,468 715 894 2,859	FFY22 932 4,591 735 918 2,938	FFY23 957 4,717 755 943 	FFY24 984 4,847 775 969 3,102	FFY25 1,011 4,980 797 996 3,187	FFY26 1,039 5,117 819 1,023 	FFY27 1,067 5,258 841 1,052 3,365	FFY28 1,096 5,402 864 1,080 3,457	FFY29 1,127 5,551 888 1,110 	FFY30 1,158 5,703 913 1,141 3,650	FFY31 1,189 5,860 938 1,172 3,751	FFY32 1,222 6,021 963 1,204 3,854	Total 23,234 7,000 2,500 6,000 97,712 15,634 19,542 863 497 355 60,821
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 3,300 3,500 560 700 280 245 1,540 10,167	FFY13 1,541 2,333 3,000 3,596 575 719 288 252 180 1,582 10,304	FFY14 750 3,695 591 739 296 2,069 4,445	FFY15 771 3,797 607 759 2,430 4,567	FFY16 792 3,901 624 780 2,497 4,693	FFY17 814 4,008 641 802 2,565 4,822	FFY18 836 4,119 659 824 2,636 4,955	FFY19 859 4,232 677 846 	FFY20 883 4,348 696 870 2,783 5,231	FFY21 907 4,468 715 894 2,859 5,375	FFY22 932 4,591 735 918 2,938 5,523	FFY23 957 4,717 755 943 	FFY24 984 4,847 775 969 3,102 5,830	FFY25 1,011 4,980 797 996 	FFY26 1,039 5,117 819 1,023 3,275 6,156	FFY27 1,067 5,258 841 1,052 3,365 6,325	FFY28 1,096 5,402 864 1,080 3,457 6,499	FFY29 1,127 5,551 888 1,110 3,553 6,677	FFY30 1,158 5,703 913 1,141 3,650 6,861	FFY31 1,189 5,860 938 1,172 3,751 7,050	FFY32 1,222 6,021 963 1,204 3,854 7,244	Total           23,234           7,000           2,500           6,000           97,712           15,634           19,542           863           497           355           60,821           136,446
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 3,300 5,60 700 280 245 1,540 10,167	FFY13 1,541 2,333 3,500 3,596 575 719 288 252 180 1,582 10,304	FFY14 750 3,695 591 739 296 2,069 4,445	FFY15 771 3,797 607 759 2,430 4,567	FFY16 792 3,901 624 780 2,497 4,693	FFY17 814 4,008 641 802 2,565 4,822	FFY18 836 4,119 659 824 2,636 4,955	FFY19 859 4,232 677 846 2,708 5,091	FFY20 883 4,348 696 870 2,783 5,231	FFY21 907 4,468 715 894 2,859 5,375	FFY22 932 4,591 735 918 2,938 5,523	FFY23 957 4,717 755 943 3,019 5,674	FFY24 984 4,847 775 969 3,102 5,830	FFY25 1,011 4,980 797 996 3,187 5,991	FFY26 1,039 5,117 819 1,023 3,275 6,156	FFY27 1,067 5,258 841 1,052 3,365 6,325	FFY28 1,096 5,402 864 1,080 3,457 6,499	FFY29 1,127 5,551 888 1,110 3,553 6,677	FFY30 1,158 5,703 913 1,141 3,650 6,861	FFY31 1,189 5,860 938 1,172 3,751 7,050	FFY32 1,222 6,021 963 1,204 3,854 7,244	Total 23,234 7,000 2,500 6,000 97,712 15,634 19,542 863 497 355 60,821 136,446
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 2,000 3,500 560 700 280 245 1,75 1,540 10,167 FFY12	FFY13 1,541 2,333 2,000 3,596 575 719 288 252 180 1,582 10,304 FFY13	FFY14 750 3,695 591 739 296 2,069 4,445 FFY14	FFY15 771 3,797 607 759 2,430 4,567 FFY15	FFY16 792 3,901 624 780 2,497 4,693 FFY16	FFY17 814 4,008 641 802 2,565 4,822 FFY17	FFY18 836 4,119 659 824 2,636 4,955 FFY18	FFY19 859 4,232 677 846 2,708 5,091 FFY19	FFY20 883 4,348 696 870 2,783 5,231 FFY20	FFY21 907 4,468 715 894 2,859 5,375 FFY21	FFY22 932 4,591 735 918 2,938 5,523 FFY22	FFY23 957 4,717 755 943 3,019 5,674 FFY23	FFY24 984 4,847 775 969 3,102 5,830 FFFY24	FFY25 1,011 4,980 797 996 3,187 5,991 FFY25	FFY26 1,039 5,117 819 1,023 3,275 6,156 FFY26	FFY27 1,067 5,258 841 1,052 3,365 6,325 FFY27	FFY28 1,096 5,402 864 1,080 3,457 6,499 FFY28	FFY29 1,127 5,551 888 1,110 	FFY30 1,158 5,703 913 1,141 3,650 6,861 FFY30	FFY31 1,189 5,860 938 1,172 3,751 7,050 FFY31	FFY32 1,222 6,021 963 1,204 3,854 7,244	Total 23,234 7,000 2,500 6,000 97,712 15,634 19,542 863 497 355 60,821 136,446 <b>Total</b>
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending         Administrative Expenses	FFY11 1,800 2,333 2,000 	FFY12 1,500 2,333 3,500 560 700 280 245 1,75 1,540 10,167 FFY12 1,500	FFY13 1,541 2,333 2,000 3,596 575 719 288 252 180 1,582 10,304 FFY13 1,541	FFY14 750 3,695 591 739 296 2,069 4,445 FFY14 750	FFY15 771 3,797 607 759 2,430 4,567 FFY15 771	FFY16 792 3,901 624 780 2,497 4,693 FFY16 792	FFY17 814 4,008 641 802 2,565 4,822 FFY17 814	FFY18 836 4,119 659 824 	FFY19 859 4,232 677 846 	FFY20 883 4,348 696 870 2,783 5,231 FFY20 883	FFY21 907 4,468 715 894 2,859 5,375 FFY21 907	FFY22 932 4,591 735 918 2,938 5,523 FFY22 932	FFY23 957 4,717 755 943 3,019 5,674 FFY23 957	FFY24 984 4,847 775 969 3,102 5,830 FFY24 984	FFY25 1,011 4,980 797 996 3,187 5,991 FFY25 1,011	FFY26 1,039 5,117 819 1,023 3,275 6,156 FFY26 1,039	FFY27 1,067 5,258 841 1,052 3,365 6,325 FFY27 1,067	FFY28 1,096 5,402 864 1,080 3,457 6,499 FFY28 1,096	FFY29 1,127 5,551 888 1,110  3,553 6,677 FFY29 1,127	FFY30 1,158 5,703 913 1,141 3,650 6,861 FFY30 1,158	FFY31 1,189 5,860 938 1,172 3,751 7,050 FFY31 1,189	FFY32 1,222 6,021 963 1,204 3,854 7,244 FFY32 1,222	Total           23,234           7,000           2,500           6,000           97,712           15,634           19,542           863           497           355           60,821           136,446           Total           23,234
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending         Administrative Expenses         Cordova Center	FFY11 1,800 2,333 2,000 	FFY12 1,500 2,333 833 2,000 3,500 560 700 280 245 1,540 10,167 FFY12 1,500 2,333	FFY13 1,541 2,333 2,000 3,596 575 719 288 252 180 1,582 10,304 FFY13 1,541 2,333	FFY14 750 3,695 591 739 296 2,069 4,445 FFY14 750	FFY15 771 3,797 607 759 2,430 4,567 FFY15 771	FFY16 792 3,901 624 780 2,497 4,693 FFY16 792	FFY17 814 4,008 641 802 2,565 4,822 FFY17 814	FFY18 836 4,119 659 824 2,636 4,955 FFY18 836	FFY19 859 4,232 677 846 2,708 5,091 FFY19 859	FFY20 883 4,348 696 870 2,783 5,231 FFY20 883	FFY21 907 4,468 715 894 2,859 5,375 FFY21 907	FFY22 932 4,591 735 918 2,938 5,523 FFY22 932	FFY23 957 4,717 755 943 3,019 5,674 FFY23 957	FFY24 984 4,847 775 969 3,102 5,830 FFY24 984	FFY25 1,011 4,980 797 996 3,187 5,991 FFY25 1,011	FFY26 1,039 5,117 819 1,023 3,275 6,156 FFY26 1,039	FFY27 1,067 5,258 841 1,052 3,365 6,325 FFY27 1,067	FFY28 1,096 5,402 864 1,080 3,457 6,499 FFY28 1,096	FFY29 1,127 5,551 888 1,110 3,553 6,677 FFY29 1,127	FFY30 1,158 5,703 913 1,141 3,650 6,861 FFY30 1,158	FFY31 1,189 5,860 938 1,172 3,751 7,050 FFY31 1,189	FFY32 1,222 6,021 963 1,204 3,854 7,244 FFY32 1,222	Total 23,234 7,000 2,500 6,000 97,712 15,634 19,542 863 497 355 60,821 136,446 Total 23,234 7,000
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	FFY11 1,800 2,333 2,000 	FFY12 1,500 2,333 3,500 560 700 280 245 1,540 10,167 FFY12 1,500 2,333 833	FFY13 1,541 2,333 2,000 3,596 575 719 288 252 180 1,582 10,304 FFY13 1,541 2,333 833	FFY14 750 3,695 591 739 296 2,069 4,445 FFY14 750	FFY15 771 3,797 607 759 2,430 4,567 FFY15 771	FFY16 792 3,901 624 780 2,497 4,693 FFY16 792	FFY17 814 4,008 641 802 2,565 4,822 FFY17 814	FFY18 836 4,119 659 824 2,636 4,955 FFY18 836	FFY19 859 4,232 677 846 2,708 5,091 FFY19 859	FFY20 883 4,348 696 870 2,783 5,231 FFY20 883	FFY21 907 4,468 715 894 2,859 5,375 FFY21 907	FFY22 932 4,591 735 918 2,938 5,523 FFY22 932	FFY23 957 4,717 755 943 3,019 5,674 FFY23 957	FFY24 984 4,847 775 969 3,102 5,830 FFY24 984	FFY25 1,011 4,980 797 996 3,187 5,991 FFY25 1,011	FFY26 1,039 5,117 819 1,023 3,275 6,156 FFY26 1,039	FFY27 1,067 5,258 841 1,052 3,365 6,325 FFY27 1,067	FFY28 1,096 5,402 864 1,080 3,457 6,499 FFY28 1,096	FFY29 1,127 5,551 888 1,110 3,553 6,677 FFY29 1,127	FFY30 1,158 5,703 913 1,141 3,650 6,861 FFY30 1,158	FFY31 1,189 5,860 938 1,172 3,751 7,050 FFY31 1,189	FFY32 1,222 6,021 963 1,204 3,854 7,244 FFY32 1,222	Total 23,234 7,000 2,500 6,000 97,712 15,634 19,542 863 497 355 60,821 136,446 <b>Total</b> 23,234 7,000 2,500
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects	FFY11 1,800 2,333 2,000 	FFY12 1,500 2,333 833 2,000 3,500 560 700 280 245 1,540 10,167 FFY12 1,500 2,333 833 2,000	FFY13 1,541 2,333 2,000 3,596 575 719 288 252 180 1,582 10,304 FFY13 1,541 2,333 833 2,000	FFY14 750 3,695 591 739 296 2,069 4,445 FFY14 750	FFY15 771 3,797 607 759 2,430 4,567 FFY15 771	FFY16 792 3,901 624 780 2,497 4,693 FFY16 792	FFY17 814 4,008 641 802 2,565 4,822 FFY17 814	FFY18 836 4,119 659 824 2,636 4,955 FFY18 836	FFY19 859 4,232 677 846 2,708 5,091 FFY19 859	FFY20 883 4,348 696 870 2,783 5,231 FFY20 883	FFY21 907 4,468 715 894 2,859 5,375 FFY21 907	FFY22 932 4,591 735 918 2,938 5,523 FFY22 932	FFY23 957 4,717 755 943 3,019 5,674 FFY23 957	FFY24 984 4,847 775 969 3,102 5,830 FFY24 984	FFY25 1,011 4,980 797 996 3,187 5,991 FFY25 1,011	FFY26 1,039 5,117 819 1,023 3,275 6,156 FFY26 1,039	FFY27 1,067 5,258 841 1,052 3,365 6,325 FFY27 1,067	FFY28 1,096 5,402 864 1,080 3,457 6,499 FFY28 1,096	FFY29 1,127 5,551 888 1,110 3,553 6,677 FFY29 1,127	FFY30 1,158 5,703 913 1,141 3,650 6,861 FFY30 1,158	FFY31 1,189 5,860 938 1,172 3,751 7,050 FFY31 1,189	FFY32 1,222 6,021 963 1,204 3,854 7,244 FFY32 1,222	Total 23,234 7,000 2,500 6,000 97,712 15,634 19,542 863 497 355 60,821 136,446 <b>Total</b> 23,234 7,000 2,500 6,000
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 3% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 5% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses	FFY11 1,800 2,333 2,000 5,967 5,967 FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 3,500 560 700 280 245 1,540 10,167 FFY12 1,500 2,333 833 2,000 4,000	FFY13 1,541 2,333 2,000 3,596 575 719 288 252 180 1,582 10,304 FFY13 1,541 2,333 833 2,000 4,110 575 575 575 575 575 575 575 57	FFY14 750 3,695 591 739 296 2,069 4,445 FFY14 750 FFY14 750	FFY15 771 3,797 607 759 2,430 4,567 FFY15 771 4,339	FFY16 792 3,901 624 780 2,497 4,693 FFY16 792 4,458	FFY17 814 4,008 641 802 2,565 4,822 FFY17 814 4,581	FFY18 836 4,119 659 824 2,636 4,955 FFY18 836 FFY18 836	FFY19 859 4,232 677 846 2,708 5,091 FFY19 859 559 4,837	FFY20 883 4,348 696 870 2,783 5,231 FFY20 883 	FFY21 907 4,468 715 894 2,859 5,375 FFY21 907 5,106	FFY22 932 4,591 735 918 2,938 5,523 FFY22 932 5,247	FFY23 957 4,717 755 943 3,019 5,674 FFY23 957 5,391	FFY24 984 4,847 775 969 3,102 5,830 FFY24 984 984 5,539	FFY25 1,011 4,980 797 996 3,187 5,991 FFY25 1,011 5,691	FFY26 1,039 5,117 819 1,023 3,275 6,156 FFY26 1,039 5,848	FFY27 1,067 5,258 841 1,052 3,365 6,325 FFY27 1,067 6,009	FFY28 1,096 5,402 864 1,080 3,457 6,499 FFY28 1,096 	FFY29 1,127 5,551 888 1,110 3,553 6,677 FFY29 1,127 6,344	FFY30 1,158 5,703 913 1,141 3,650 6,861 FFY30 1,158 6,518	FFY31 1,189 5,860 938 1,172 3,751 7,050 FFY31 1,189 6,698	FFY32 1,222 6,021 963 1,204 3,854 7,244 FFY32 1,222	Total 23,234 7,000 2,500 6,000 97,712 15,634 19,542 863 497 355 60,821 136,446 7,000 23,234 7,000 2,500 6,000 111,671
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Ingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Ingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Ingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Ingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Ingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Ingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Vover 20 yrs. Using 16% here.)         Herring (11-21% over 20 yrs. Using 16% here.)	FFY11 1,800 2,333 833 2,000 6,967 FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 560 700 280 245 1,540 10,167 FFY12 1,540 10,167 FFY12 1,533 2,333 2,000 4,000 640 2,333	FFY13 1,541 2,333 3,596 575 719 288 252 180 1,582 10,304 FFY13 1,581 2,333 2,000 4,110 655	FFY14 750 3,695 591 739 296 2,069 4,445 FFY14 750 FFY14 750 4,223 676	FFY15 771 3,797 607 759 2,430 4,567 FFY15 771 4,339 694	FFY16 792 3,901 624 780 2,497 4,693 FFY16 792 4,458 713 2,22	FFY17 814 4,008 641 802 2,565 4,822 FFY17 814 4,581 733	FFY18 836 4,119 659 824 2,636 4,955 FFY18 836 4,707 753 2,637	FFY19 859 4,232 677 846 2,708 5,091 FFY19 859 4,837 774	FFY20 883 4,348 696 870 2,783 5,231 FFY20 883 4,970 795	FFY21 907 4,468 715 894 2,859 5,375 FFY21 907 5,106 817	FFY22 932 4,591 735 918 2,938 5,523 FFY22 932 5,247 839 5,247	FFY23 957 4,717 755 943 3,019 5,674 FFY23 957 5,391 863	FFY24 984 4,847 775 969 3,102 5,830 FFY24 984 5,539 886	FFY25 1,011 4,980 797 996 3,187 5,991 FFY25 1,011 5,691 911	FFY26 1,039 5,117 819 1,023 3,275 6,156 FFY26 1,039 5,848 936	FFY27 1,067 5,258 841 1,052 3,365 6,325 FFY27 1,067 6,009 961	FFY28 1,096 5,402 864 1,080 3,457 6,499 FFY28 1,096 	FFY29 1,127 5,551 888 1,110 3,553 6,677 FFY29 1,127 6,344 1,015	FFY30 1,158 913 1,141 3,650 6,861 FFY30 1,158 6,518 1,043	FFY31 1,189 5,860 938 1,172 3,751 7,050 FFY31 1,189 6,698 1,072	FFY32 1,222 6,021 963 1,204 3,854 7,244 FFY32 1,222 1,222 6,882 1,101	Total 23,234 7,000 2,500 6,000 97,712 15,634 19,542 863 497 355 60,821 136,446 Total 23,234 7,000 2,500 6,000 111,671 17,867 23,232
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects	FFY11 1,800 2,333 833 2,000 6,967 7 FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 560 700 280 245 175 1,540 10,167 FFY12 1,500 2,333 833 2,000 4,000 640 800	FFY13 1,541 2,333 2,000 3,596 575 719 288 252 180 1,582 10,304 FFY13 1,541 2,333 2,000 4,110 658 822 2000	FFY14 750 3,695 591 739 296 2,069 4,445 FFY14 750 FFY14 750 4,223 676 845	FFY15 771 3,797 607 759 2,430 4,567 FFY15 771 4,339 694 868	FFY16 792 3,901 624 780 2,497 4,693 FFY16 792 4,458 713 892	FFY17 814 4,008 641 802 2,565 4,822 FFY17 814 5733 916	FFY18 836 4,119 659 824 2,636 4,955 FFY18 836 	FFY19 859 4,232 677 846 2,708 5,091 FFY19 859 FFY19 859 4,837 774 967	FFY20 883 4,348 696 870 2,783 5,231 7,783 5,231 FFY20 883 4,970 795 994	FFY21 907 4,468 715 894 2,859 5,375 FFY21 907 5,106 817 1,021	FFY22 932 4,591 735 918 2,938 5,523 FFY22 932 5,247 839 1,049	FFY23 957 4,717 755 943 3,019 5,674 FFY23 957 5,391 863 1,078	FFY24 984 4,847 775 969 3,102 5,830 FFY24 984 984 5,539 886 1,108	FFY25 1,011 4,980 797 996 3,187 5,991 FFY25 1,011 5,691 911 1,138	FFY26 1,039 5,117 819 1,023 3,275 6,156 7FY26 1,039 5,848 936 1,170	FFY27 1,067 5,258 841 1,052 3,365 6,325 FFY27 1,067 6,009 961 1,202	FFY28 1,096 5,402 864 1,080 3,457 6,499 FFY28 1,096 	FFY29 1,127 5,551 888 1,110 3,553 6,677 FFY29 1,127 6,344 1,015 1,269	FFY30 1,158 913 1,141 3,650 6,861 FFY30 1,158 6,518 1,043 1,304	FFY31 1,189 938 1,172 3,751 7,050 FFY31 1,189 6,698 1,072 1,340	FFY32 1,222 6,021 963 1,204 3,854 7,244 FFY32 1,222 6,882 1,101 1,376	Total 23,234 7,000 2,500 6,000 97,712 15,634 19,542 863 497 355 60,821 136,446 Total 23,234 7,000 2,500 6,000 111,671 17,867 22,334
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)	FFY11 1,800 2,333 2,000 	FFY12 1,500 2,333 3,500 560 700 280 245 1,540 10,167 FFY12 1,500 2,333 833 2,000 4,000 640 800 320	FFY13 1,541 2,333 2,000 3,596 575 719 288 252 180 1,582 10,304 FFY13 1,541 2,333 833 2,000 4,110 658 822 329 2,55 2,	FFY14 750 3,695 591 739 296 2,069 4,445 FFY14 750 FFY14 750 4,223 676 845 338	FFY15 771 3,797 607 759 2,430 4,567 FFY15 771 	FFY16 792 3,901 624 780 2,497 4,693 FFY16 792 	FFY17 814 4,008 641 802 2,565 4,822 FFY17 814 	FFY18 836 4,119 659 824 2,636 4,955 FFY18 836 	FFY19 859 4,232 677 846 2,708 5,091 FFY19 859 FFY19 859 4,837 774 967	FFY20 883 4,348 696 870 2,783 5,231 FFY20 883 	FFY21 907 4,468 715 894 2,859 5,375 FFY21 907 5,106 817 1,021	FFY22 932 4,591 735 918 2,938 5,523 FFY22 932 932 5,247 839 1,049	FFY23 957 4,717 755 943 3,019 5,674 FFY23 957 5,391 863 1,078	FFY24 984 4,847 775 969 3,102 5,830 FFY24 984 984 5,539 886 1,108	FFY25 1,011 4,980 797 996 3,187 5,991 FFY25 1,011 	FFY26 1,039 5,117 819 1,023 3,275 6,156 7,6,156 1,039 5,848 936 1,170	FFY27 1,067 5,258 841 1,052 3,365 6,325 FFY27 1,067 6,009 961 1,202	FFY28 1,096 5,402 864 1,080 3,457 6,499 FFY28 1,096 FFY28 1,096 6,174 988 1,235	FFY29 1,127 5,551 888 1,110 3,553 6,677 FFY29 1,127 6,344 1,015 1,269	FFY30 1,158 5,703 913 1,141 3,650 6,861 FFY30 1,158 6,518 1,043 1,304	FFY31 1,189 5,860 938 1,172 3,751 7,050 FFY31 1,189 6,698 1,072 1,340	FFY32 1,222 6,021 963 1,204 3,854 7,244 FFY32 1,222 6,882 1,101 1,376	Total 23,234 7,000 2,500 6,000 97,712 15,634 19,542 863 497 355 60,821 136,446 Total 23,234 7,000 2,500 6,000 111,671 17,867 22,334 987 5,55
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         <	FFY11 1,800 2,333 2,000 	FFY12 1,500 2,333 3,500 560 700 280 245 1,75 1,540 10,167 FFY12 1,500 2,333 833 2,000 640 800 320 280	FFY13 1,541 2,333 2,000 3,596 575 719 288 252 180 1,582 10,304 FFY13 1,541 2,333 833 2,000 4,110 658 822 329 288 225 288	FFY14 750 3,695 591 739 296 2,069 4,445 FFY14 750 FFY14 750 4,223 676 845 338	FFY15 771 3,797 607 759 2,430 4,567 FFY15 771 4,339 694 868	FFY16 792 3,901 624 780 2,497 4,693 FFY16 792 4,458 713 892	FFY17 814 4,008 641 802 2,565 4,822 FFY17 814 	FFY18 836 4,119 659 824 2,636 4,955 FFY18 836 	FFY19 859 4,232 677 846 2,708 5,091 FFY19 859 4,837 774 967	FFY20 883 4,348 696 870 2,783 5,231 FFY20 883 	FFY21 907 4,468 715 894 2,859 5,375 FFY21 907 5,106 817 1,021	FFY22 932 4,591 735 918 2,938 5,523 FFY22 932 5,247 839 1,049	FFY23 957 4,717 755 943 3,019 5,674 FFY23 957 5,391 863 1,078	FFY24 984 4,847 775 969 3,102 5,830 FFY24 984 984 5,539 886 1,108	FFY25 1,011 4,980 797 996 3,187 5,991 FFY25 1,011 	FFY26 1,039 5,117 819 1,023 3,275 6,156 FFY26 1,039 5,848 936 1,170	FFY27 1,067 5,258 841 1,052 3,365 6,325 FFY27 1,067 6,009 961 1,202	FFY28 1,096 5,402 864 1,080 3,457 6,499 FFY28 1,096 	FFY29 1,127 5,551 888 1,110 	FFY30 1,158 5,703 913 1,141 3,650 6,861 FFY30 1,158 6,518 1,043 1,304	FFY31 1,189 5,860 938 1,172 3,751 7,050 FFY31 1,189 6,698 1,072 1,340	FFY32 1,222 6,021 963 1,204 	Total           23,234           7,000           2,500           6,000           97,712           15,634           19,542           863           497           355           60,821           136,446           7,000           2,524           6,000           1136,446           7,000           2,500           6,000           111,671           17,867           22,334           987           568
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5	FFY11 1,800 2,333 2,000	FFY12 1,500 2,333 833 2,000 3,500 560 700 280 245 1,75 1,540 10,167 FFY12 1,500 2,333 833 2,000 4,000 640 800 320 280 280 280 280 280 280 280 2	FFY13 1,541 2,333 2,000 3,596 575 719 288 252 180 1,582 10,304 FFY13 1,541 2,333 833 2,000 4,110 658 822 329 288 206 208 200 288 200 200 288 288	FFY14 750 3,695 591 739 296 2,069 4,445 FFY14 750 4,223 676 845 338	FFY15 771 3,797 607 759 2,430 4,567 FFY15 771 4,339 694 868	FFY16 792 3,901 624 780 2,497 4,693 FFY16 792 4,458 713 892	FFY17 814 4,008 641 802 2,565 4,822 FFY17 814 4,581 733 916	FFY18 836 4,119 659 824 	FFY19 859 4,232 677 846 2,708 5,091 FFY19 859 4,837 774 967	FFY20 883 4,348 696 870 2,783 5,231 FFY20 883 4,970 795 994	FFY21 907 4,468 715 894 2,859 5,375 FFY21 907 5,106 817 1,021	FFY22 932 4,591 735 918 2,938 5,523 FFY22 932 5,247 839 1,049	FFY23 957 4,717 755 943 3,019 5,674 FFY23 957 5,391 863 1,078	FFY24 984 4,847 775 969 3,102 5,830 FFY24 984 5,539 886 1,108	FFY25 1,011 4,980 797 996 3,187 5,991 FFY25 1,011 5,691 911 1,138	FFY26 1,039 5,117 819 1,023 3,275 6,156 1,039 5,848 936 1,170	FFY27 1,067 5,258 841 1,052 3,365 6,325 FFY27 1,067 6,009 961 1,202	FFY28 1,096 5,402 864 1,080 3,457 6,499 FFY28 1,096 6,174 988 1,235	FFY29 1,127 5,551 888 1,110 3,553 6,677 FFY29 1,127 6,344 1,015 1,269	FFY30 1,158 5,703 913 1,141 3,650 6,861 FFY30 1,158 6,518 1,043 1,304	FFY31 1,189 5,860 938 1,172 3,751 7,050 FFY31 1,189 6,698 1,072 1,340	FFY32 1,222 6,021 963 1,204 	Total           23,234           7,000           2,500           6,000           97,712           15,634           19,542           863           497           355           60,821           136,446           Total           23,234           7,000           2,500           6,000           111,671           17,867           22,334           987           568           406
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 5% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Marine Debris (7% over 1-2 yrs. Using 5% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)	FFY11 1,800 2,333 833 2,000 6,967 FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 3,500 560 700 280 245 175 1,540 10,167 FFY12 1,500 2,333 833 2,000 4,000 640 800 320 280 220 280 200 1,760 200 200 200 200 200 200 200 2	FFY13 1,541 2,333 2,000 3,596 575 719 288 252 180 1,582 10,304 FFY13 1,541 2,333 833 2,000 4,110 658 822 2288 200 4,110 658 822 228 200 4,110 288 200 1,582 2,000 4,110 658 822 229 288 200 1,582	FFY14 750 3,695 591 739 296 2,069 4,445 750 4,445 FFY14 750 4,223 676 845 338 	FFY15 771 3,797 607 759 2,430 4,567 2,430 4,567 FFY15 771 4,339 694 868 868	FFY16 792 3,901 624 780 2,497 4,693 FFY16 792 4,458 713 892 2,853 892	FFY17 814 4,008 641 802 2,565 4,822 FFY17 814 4,581 733 916 2,932 2,932	FFY18 836 4,119 659 824 2,636 4,955 FFY18 836 4,707 753 941 4,707 753 941	FFY19 859 4,232 677 846 2,708 5,091 7,708 5,091 FFY19 859 4,837 774 967 967 3,095	FFY20 883 4,348 696 870 2,783 5,231 FFY20 883 883 4,970 795 994 994 3,180	FFY21 907 4,468 715 894 2,859 5,375 FFY21 907 5,106 817 1,021 1,021	FFY22 932 4,591 735 918 2,938 5,523 FFY22 932 5,247 839 1,049 1,049	FFY23 957 4,717 755 943 3,019 5,674 FFY23 957 5,391 863 1,078 5,391 863 1,078	FFY24 984 4,847 775 969 3,102 5,830 FFY24 984 5,539 886 1,108 5,539 886 1,108	FFY25 1,011 4,980 797 996 3,187 5,991 FFY25 1,011 5,691 911 1,138 911 1,138	FFY26 1,039 5,117 819 1,023 3,275 6,156 1,039 5,848 936 1,170 5,848 936	FFY27 1,067 5,258 841 1,052 3,365 6,325 FFY27 1,067 6,009 961 1,202 961 1,202	FFY28 1,096 5,402 864 1,080 3,457 6,499 FFY28 1,096 	FFY29 1,127 5,551 888 1,110 3,553 6,677 FFY29 1,127 6,344 1,015 1,269 4,060 7,476	FFY30 1,158 5,703 913 1,141 3,650 6,861 FFY30 1,158 6,518 1,043 1,304 1,304 2,576	FFY31 1,189 5,860 938 1,172 3,751 7,050 FFY31 1,189 6,698 1,072 1,340 1,340 4,286	FFY32 1,222 963 1,204 3,854 7,244 FFY32 1,222 6,882 1,101 1,376 4,404	Total           23,234           7,000           2,500           6,000           97,712           15,634           19,542           863           497           355           60,821           136,446           Total           23,234           7,000           2,500           6,000           111,671           17,867           22,334           987           568           406           69,510

# Estimated Schedules of Expenses for Varying Levels of Administrative and Unencumbered Research Expense Levels

Administrate Equances       1.00       1.00       1.00       1.01       1.00 <t< th=""></t<>
Conditional Center         2,333         2,331         2,333         2,333         2,333         2,333         2,333         2,333         2,333         2,331         2,331         2,331         2,331         2,331         2,331         2,331         2,331         2,331         2,331         2,331         2,331         2,331         2,331         2,331
Phill 31 guering (03 Sude (5 4.4 MAL Using 52.5 mm over 3 yr.)       933       934       933       934       933       934       933       934       933       934       933       934       933       934       933       933       934       933       934 <th< td=""></th<>
TY113-13 rotests       2,000
Understand       4.500       4.524       4.525       4.526       5.546       5.546       5.546       5.546       5.546       5.546       5.746       5.236       5.746       5.236       5.746       5.236       5.746       5.236       5.746       5.236       5.746       5.236       5.746       5.236       5.746       5.236       5.746
rerners       122       Vision       145       147       142
ong-Term Monitoring (15-25% over 20yn. Using 20%)       900       925       900       925       900       925       900       1,001       1,015       1,112       1,124       1,246       1,216       1,216       1,236       1,316       3,385       1,427       1,607       1,507       1,510
Stormware (3-13% likely over 3-yrs.)       360       370       380       370       380       570       580       570
Watcher Debrits (7% over 2 yrs.)       315       324       Image: Control of the properties of the properimeter of the properimon of the properties of the properties of t
Seepone (S) over 1-2 yrs. Juling 5% over 2 yrs.)         ZZS         231         Z         Z         S
Jumment Jalles 2,044       J,651       3,124       3,204       3,208       3,309       4,092       4,211       4,326       4,445       4,568       4,995       7,199         Ical Expenses       6,967       11,167       11,332       5,601       6,191       6,300       6,778       6,814       7,022       7,215       7,414       7,818       7,827       8,042       8,283       8,994       8,924       8,283       8,994       1,822       4,955       7,819         Icandinistrative Expenses       1,500       1,501       1,514       7,700       771       9,841       1,010       1,001       1,514       1,222       1,223       2,323         Cordox Center       2,333       2,333       2,333       2,333       2,323       2,333       2,572       5,864       6,946       6,222       6,358       6,526       7,800      <
Oral Expenses         6,967         11,167         11,332         5,652         5,680         5,957         6,131         6,430         6,451         6,651         6,841         7,022         7,215         7,414         7,622         8,02         8,242         8,941         8,724         8,964         164,364           Scenario: \$750 FP14 Admin. Cost; \$2000 Initial Spending         FP11         FP12         FP13         FP12         FP13         FP12         FP12 </td
Senario: \$750 FY14 Admin. Cost; \$5000 Initial Spending FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY17 FY28 FY23 FY24 FY23 FY24 FY25 FY26 FY27 FY28 FY28 FY29 FY20 FY21 Ling 5 FY26 FY21 Ling 5 FY26 FY21 Ling 5 FY26 FY27 FY28 FY28 FY29 FY28 FY28 FY28 FY29 FY28 FY28 FY29 FY28 FY28 FY28 FY28 FY28 FY28 FY28 FY28
Scanario: \$250 FY14 Admin. Cost; \$2500 Initial Spending       FY12       FY12       FY12       FY23       FY24       FY25       FY26       FY27       FY28
Administrative Expenses       1,800       1,501       2,331       2,333       2,334       2,
Cordox Center         2,333         2,000         2,000         2,000         2,000         2,000         2,000         2,000         2,000         2,000         2,000         2,000         2,000         2,000         2,000         2,000         2,000         2,000         2,001         1,014         1,134         1,134         1,134         1,134         1,134         1,134         1,134         1,134         1,134         1,134         1,134         1,134         1,134         1,134         1,134         1,314         1,314         1,314         1,314         1,314         1,314         1,314         1,314         1,314         1,314
FY11:13 lingering OI Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)       833       834       834       833 <t< td=""></t<>
FY11-13 Projects       2,000       2,000       2,000       5,000       5,726       7,110       7,100       1,200       1,200       1,203       1,207       1,017       1,008       1,135       1,177       1,209       1,242       1,277       1,312       1,348       1,325       1,423       1,426       1,503       1,504       1,504       1,70       2,203         torim notify (5,0000 2 yrs.)       1,000       1,028       1,005       1,014       1,217       1,209       1,242       1,277       1,312       1,348       1,325       1,462       1,503       1,504       1,233         torim notify (5,0000 2 yrs.)       1,016       11,422       1,505       3,615
Total Unencumbered Research Expenses       5,000       5,138       5,279       5,424       5,573       5,726       5,884       6,046       6,212       6,383       6,558       6,739       6,924       7,114       7,130       7,511       7,718       7,930       8,148       8,372       8,602       139,589         Herring (11-21% over 20 yrs. Using 10% here.)       1,000       1,002       1,005       1,115       1,145       1,177       1,029       1,078       1,084       1,383       1,470       1,202       1,235       1,260       1,304       1,340       1,376       2,338         ong-Term Monitoring (15-25% over 20 yrs. Using 20% over 3 yrs.)       400       411       422       -       -       -       -       -       -       -       -       1,233       1,432       1,423       1,424       1,568       6,508       6,907       6,907       1,431       1,312       1,348       1,313       1,4170       1,020       1,242       1,277       1,312       1,348       1,312       1,344       1,567       6,567       6,907       6,907       6,907       6,908       6,907       6,908       6,907       6,908       6,907       6,908       6,907       6,908       6,907       6,908
Herring (11-21% over 20 yrs. Using 16% here.)       800       822       845       868       892       916       941       967       994       1,021       1,049       1,08       1,18       1,170       1,202       1,235       1,269       1,304       1,376       22,334         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)       4000       411       422       1       1,145       1,177       1,209       1,242       1,277       1,312       1,348       1,375       1,626       1,637       1,772       27,918         varine Debits (7% over 1-2 yrs. Using 3% over 3yrs.)       400       411       422       1       1,145       1,177       1,209       1,242       1,243       1,368       1,423       1,452       1,566       1,670       1,671       1,203       1,245       1,223       1,364       1,365       1,670       1,671       1,203       1,245       1,227       1,312       1,348       1,370       1,205       1,670       1,627       1,223       1,366       3,766       3,869       3,976       4,085       4,137       4,313       4,431       4,553       4,678       4,807       4,939       5,075       5,215       5,358       5,505       5,618       5,376       5,696
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)       1,000       1,028       1,056       1,055       1,115       1,145       1,177       1,209       1,242       1,277       1,312       1,348       1,385       1,423       1,462       1,502       1,544       1,586       1,630       1,674       1,720       27,918         Stormwater (3-13% likely over 1-2 yrs. Using 3% over 2 yrs.)       350       360       -
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)       400       411       422
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)       350       360       Image: Construction of the c
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)       250       257       v
Currently Unallocated Unencumbered Research Funds       2,200       2,261       2,956       3,471       3,567       3,665       3,760       3,976       4,085       4,197       4,313       4,431       4,553       4,678       4,807       4,939       5,075       5,215       5,358       <
Total Expenses       6,967       11,867       11,867       11,867       11,845       6,029       6,195       6,365       6,540       6,720       7,094       7,290       7,490       7,696       7,908       8,125       8,349       8,578       8,814       9,056       9,305       9,361       9,824       178,323         Scenario: \$1000 FFY14 Admin. Cost; \$2500 Initial Spending       FFY11       FFY12       FFY13       FFY14       FFY15       FFY15       FFY16       FFY17       FFY19       FFY20       FFY21       FFY26       FFY26       FFY26       FFY26       FFY23       1,462       1,500       1,541       1,000       1,028       1,056       1,085       1,115       <
Scenario: \$1000 FY14 Admin. Cost; \$2500 Initial Spending       FFY1       FFY12       FFY14       FFY13       FFY14       FFY15       FFY16       FFY17       FFY18       FFY21       FFY23       FFY24       FFY25       FFY26       FFY26       FFY27       FFY20       FFY30       FFY31       FFY32       Total         Administrative Expenses       1,800       1,500       1,541       1,000       1,028       1,056       1,015       1,115       1,115       1,117       1,209       1,242       1,277       1,312       1,348       1,432       1,462       1,500       1,544       1,586       1,630       29,364         Cordova Center       2,333       2,333       2,333       2,333       0       0       0       0       0       0       0       0       0       7,000       7,000         FY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)       833       833       833       0
Scenario: \$1000 FP14 Admin. Cost; \$2500 Initial Spending       FFY1       FFY12       FFY13       FFY14       FFY15       FFY15       FFY16       FFY17       FFY18       FFY27       FFY23       FFY26       FFY26       FFY27       FFY28       FFY29       FFY30       FFY31       FFY31       FFY32       FFY31       FFY26       FFY26       FFY26       FFY26       FFY27       FFY30       FFY30       FFY31       FFY31       FFY32       FFY31       FFY33       FFY31       FFY33
Administrative Expenses       1,800       1,500       1,541       1,000       1,028       1,056       1,115       1,115       1,177       1,209       1,242       1,277       1,318       1,388       1,423       1,420       1,502       1,540       1,580       1,630       29,364         Cordova Center       2,333       2,335       2,41       4,10       4,10       2,500       <
Cordoxa Center       2,333       3,135       3,135       3,143       3,279       3,469       3,462       3,557       3,655       3,755       3,859       3,965       4,074       4,186       4,010       6,000         Cotal Unencumbered Research Expenses       Q       Q       Q       Q       Q       2,250       3,106       3,116       3,
FY11-13 lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)       833       833       833       6
FY11-13 Projects       2,000
Total Unencumbered Research Expenses       2,500       2,569       2,639       2,712       2,787       2,863       2,942       3,023       3,101       3,279       3,369       3,462       3,557       3,655       3,755       3,859       4,074       4,186       4,301       69,795         terring (11-21% over 20 yrs. Using 16% here.)       400       411       422       434       446       458       471       484       497       511       525       539       554       560       610       617       634       652       670       688       11,167
Herring (11-21% over 20 yrs. Using 16% here.)       400       411       422       434       446       458       471       484       497       511       525       539       554       569       585       601       617       634       652       670       688       11,167
ong-lerm Monitoring (15-25% over 20yrs. Using 20%.) [500 514 528 542 557 573 588 605 621 638 656 674 692 711 731 751 772 793 815 837 860 13,959
stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.) 200 206 211 617
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)     175     180     355
Alesponse (5% over 1-2 yrs.)         125         128         253
Currently Unallocated Unencumbered Research Funds       1,100       1,130       1,478       1,783       1,832       1,883       1,988       2,042       2,099       2,156       2,217       2,339       2,404       2,470       2,538       2,607       2,679       2,753       43,444
iotal Expenses 6,967 9,167 9,277 3,639 3,739 3,842 3,948 4,057 4,168 4,283 4,400 4,522 4,646 4,774 4,905 5,040 5,178 5,321 5,467 5,617 5,772 5,931 114,659
Scenario: \$1000 FFY14 Admin. Cost; \$3000 Initial Spending FFY12 FFY12 FFY12 FFY13 FFY14 FFY15 FFY15 FFY16 FFY17 FFY18 FFY19 FFY20 FFY21 FFY23 FFY24 FFY25 FFY26 FFY27 FFY28 FFY29 FFY20 FFY31 FFY31 FFY32 Total
Administrative expenses 1,800 1,500 1,541 1,000 1,028 1,056 1,065 1,115 1,116 1,11/ 1,209 1,242 1,21/ 1,512 1,348 1,385 1,425 1,462 1,502 1,544 1,586 1,630 29,364 Cordova Center 2,333 2,333 2,333 2,333 2,333 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Administrative expenses       1,800       1,900       1,941       1,000       1,028       1,026       1,115       1,117       1,209       1,242       1,217       1,348       1,345       1,423       1,402       1,502       1,544       1,586       1,630       29,364         Cordova Center       2,333       2,333       2,333       2,333       0
Administrative expenses       1,800       1,900       1,941       1,000       1,028       1,026       1,115       1,117       1,209       1,242       1,217       1,348       1,345       1,423       1,402       1,502       1,544       1,586       1,630       29,364         Cordova Center       2,333       2,333       2,333       2,333       2,333       2       2       2       2       2       2       2       7,000         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)       833       833       833       2 <td< td=""></td<>
Numministrative expenses       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,100       1,100       1,110       1,110       1,210       1,242       1,512       1,548       1,423       1,420       1,502       1
Number of the space       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,100       1,000       1,110       1,110       1,210       1,221       1,512       1,548       1,423       1,420       1,502<
Number of the system       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,100       1,000       1,100       1,000       1,110       1,110       1,210       1,212       1,540       1,540       1,502
Number of a basis       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,100       1,000       1,100       1,000       1,100       1,000       1,100       1,000       1,110       1,110       1,210       1,242       1,217       1,512       1,548       1,423       1,420       1,502
Autoministrative expenses       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,100       1,000       1,100       1,000       1,100       1,000       1,100       1,000       1,100       1,000       1,110       1,110       1,210       1,242       1,217       1,512       1,548       1,425 <th1,255< th="">       1,500       <th1,< td=""></th1,<></th1,255<>
Autoministrative expenses       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,000       1,100       1,000       1,100       1,000       1,100       1,000       1,100       1,000       1,100       1,000       1,100       1,000       1,100       1,000       1,110       1,110       1,210       1,242       1,242       1,240       1,423 <th1,423< th="">       1,423       <th1,< td=""></th1,<></th1,423<>
Additional data we capalises       1,600       1,600       1,028       1,026       1,050       1,050       1,115       1,145       1,177       1,209       1,242       1,217       1,312       1,385       1,462       1,462       1,630       29,364         Cordova Center       2,333       3,433       3,436       3,436       3,527       3,727       3,830       3,935       4,043       4,156       4,269       4,366       4,637       4,631       4,758       4,889       5,023       5,161       8,3753         1erring (11-21% over 20 yrs. Using 16% here.)       3,000

# Estimated Schedules of Expenses for Varying Levels of Administrative and Unencumbered Research Expense Levels

.

	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	FFY21	FFY22	FFY23	FFY24	FFY25	FFY26	FFY27	FFY28	FFY29	FFY30	FFY31	FFY32	Total
Administrative Expenses	1,800	1,500	1,541	1,000	1,028	1,056	1,085	1,115	1,145	1,177	1,209	1,242	1,277	1,312	1,348	1,385	1,423	1,462	1,502	1,544	1,586	1,630	29,364
Cordova Center	2,333	2,333	2,333																				7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833					_															2,500
FFY11-13 Projects	2,000	2,000	2,000																				6,000
Total Unencumbered Research Expenses		3,500	3,596	3,695	3,797	3,901	4,008	4,119	4,232	4,348	4,468	4,591	4,717	4,847	4,980	5,117	5,258	5,402	5,551	5,703	5,860	6,021	97,712
Herring (11-21% over 20 yrs. Using 16% here.)		560	575	591	607	624	641	659	677	696	715	735	755	775	797	819	841	864	888	913	938	963	15,634
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		700	719	739	759	780	802	824	846	870	894	918	943	969	996	1,023	1,052	1,080	1,110	1,141	1,172	1,204	19,542
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		280	288	296																			863
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		245	252																				497
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		175	180																				355
Currently Unallocated Unencumbered Research Funds		1,540	1,582	2,069	2,430	2,497	2,565	2,636	2,708	2,783	2,859	2,938	3,019	3,102	3,187	3,275	3,365	3,457	3,553	3,650	3,751	3,854	60,821
Total Expenses	6,967	10,167	10,304	4,695	4,824	4,957	5,093	5,233	5,377	5,525	5,677	5,833	5,994	6,158	6,328	6,502	6,681	6,864	7,053	7,247	7,446	7,651	142,577
Scenario: \$1000 FFY14 Admin. Cost; \$4000 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	FFY21	FFY22	FFY23	FFY24	FFY25	FFY26	FFY27	FFY28	FFY29	FFY30	FFY31	FFY32	Total
Administrative Expenses	1,800	1,500	1,541	1,000	1,028	1,056	1,085	1,115	1,145	1,177	1,209	1,242	1,277	1,312	1,348	1,385	1,423	1,462	1,502	1,544	1,586	1,630	29,364
Cordova Center	2,333	2,333	2,333																				7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833																				2,500
FFY11-13 Projects	2,000	2,000	2,000																				6,000
Total Unencumbered Research Expenses		4,000	4,110	4,223	4,339	4,458	4,581	4,707	4,837	4,970	5,106	5,247	5,391	5,539	5,691	5,848	6,009	6,174	6,344	6,518	6,698	6,882	111,671
Herring (11-21% over 20 yrs. Using 16% here.)		640	658	676	694	713	733	753	774	795	817	839	863	886	911	936	961	988	1,015	1,043	1,072	1,101	17,867
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		800	822	845	868	892	916	941	967	994	1,021	1,049	1,078	1,108	1,138	1,170	1,202	1,235	1,269	1,304	1,340	1,376	22,334
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		320	329	338																			987
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		280	288																				568
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		200	206																				406
Currently Unallocated Unencumbered Research Funds		1,760	1,808	2,365	2,777	2,853	2,932	3,013	3,095	3,180	3,268	3,358	3,450	3,545	3,643	3,743	3,846	3,951	4,060	4,172	4,286	4,404	69,510
Total Expenses	6,967	10,667	10,818	5,223	5,367	5,514	5,666	5,822	5,982	6,146	6,315	6,489	6,667	6,851	7,039	7,233	7,432	7,636	7,846	8,062	8,283	8,511	156,536
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	FFY21	FFY22	FFY23	FFY24	FFY25	FFY26	FFY27	FFY28	FFY29	FFY30	FFY31	FFY32	Total
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending Administrative Expenses	FFY11 1,800	FFY12 1,500	<b>FFY13</b> 1,541	FFY14 1,000	FFY15 1,028	FFY16 1,056	FFY17 1,085	FFY18 1,115	FFY19 1,145	<b>FFY20</b> 1,177	FFY21 1,209	FFY22 1,242	FFY23 1,277	FFY24 1,312	FFY25 1,348	FFY26 1,385	<b>FFY27</b> 1,423	FFY28	FFY29 1,502	<b>FFY30</b> 1,544	<b>FFY31</b> 1,586	FFY32 1,630	<b>Total</b> 29,364
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending Administrative Expenses Cordova Center	FFY11 1,800 2,333	FFY12 1,500 2,333	FFY13 1,541 2,333	FFY14 1,000	FFY15 1,028	FFY16 1,056	FFY17 1,085	FFY18 1,115	FFY19 1,145	FFY20 1,177	FFY21 1,209	FFY22 1,242	FFY23 1,277	FFY24 1,312	FFY25 1,348	FFY26 1,385	FFY27 1,423	FFY28 1,462	FFY29 1,502	FFY30 1,544	FFY31 1,586	FFY32 1,630	Total 29,364 7,000
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	FFY11 1,800 2,333 833	FFY12 1,500 2,333 833	FFY13 1,541 2,333 833	FFY14 1,000	FFY15 1,028	FFY16 1,056	FFY17 1,085	FFY18 1,115	FFY19 1,145	FFY20 1,177	<b>FFY21</b> 1,209	FFY22 1,242	FFY23 1,277	FFY24 1,312	FFY25 1,348	FFY26 1,385	<b>FFY27</b> 1,423	<b>FFY28</b> 1,462	FFY29 1,502	FFY30 1,544	FFY31 1,586	FFY32 1,630	Total           29,364           7,000           2,500
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000	FFY13 1,541 2,333 833 2,000	FFY14 1,000	FFY15 1,028	FFY16 1,056	FFY17 1,085	<b>FFY18</b> 1,115	FFY19 1,145	FFY20 1,177	FFY21 1,209	<b>FFY22</b> 1,242	FFY23 1,277	FFY24 1,312	FFY25 1,348	FFY26 1,385	FFY27 1,423	FFY28 1,462	FFY29 1,502	FFY30 1,544	FFY31 1,586	FFY32 1,630	Total           29,364           7,000           2,500           6,000
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects Total Unencumbered Research Expenses	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 4,500	FFY13 1,541 2,333 833 2,000 4,624	FFY14 1,000 4,751	FFY15 1,028 4,882	FFY16 1,056 5,016	FFY17 1,085 5,154	FFY18 1,115 5,295	FFY19 1,145 5,441	FFY20 1,177 5,591	FFY21 1,209 5,744	FFY22 1,242 5,902	FFY23 1,277 6,065	FFY24 1,312 6,232	FFY25 1,348 6,403	FFY26 1,385 6,579	FFY27 1,423 6,760	FFY28 1,462 6,946	FFY29 1,502 7,137	FFY30 1,544 7,333	FFY31 1,586 7,535	FFY32 1,630 7,742	Total           29,364           7,000           2,500           6,000           125,630
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects Total Unencumbered Research Expenses Herring (11-21% over 20 yrs. Using 16% here.)	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 4,500 720	FFY13 1,541 2,333 833 2,000 4,624 740	FFY14 1,000 4,751 760	FFY15 1,028 4,882 781	FFY16 1,056 5,016 803	FFY17 1,085 5,154 825	FFY18 1,115 5,295 847	FFY19 1,145 5,441 871	FFY20 1,177 5,591 895	<b>FFY21</b> 1,209 <b>5,744</b> 919	FFY22 1,242 5,902 944	FFY23 1,277 6,065 970	<b>FFY24</b> 1,312 <b>6,232</b> 997	FFY25 1,348 6,403 1,024	FFY26 1,385 	FFY27 1,423 6,760 1,082	FFY28 1,462 6,946 1,111	FFY29 1,502 7,137 1,142	FFY30 1,544 7,333 1,173	FFY31 1,586 7,535 1,206	FFY32 1,630 7,742 1,239	Total           29,364           7,000           2,500           6,000           125,630           20,101
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects Total Unencumbered Research Expenses Herring (11-21% over 20 yrs. Using 16% here.) Long-Term Monitoring (15-25% over 20yrs. Using 20%.)	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 4,500 720 900	FFY13 1,541 2,333 833 2,000 4,624 740 925	FFY14 1,000 4,751 760 950	FFY15 1,028 4,882 781 976	FFY16 1,056 5,016 803 1,003	FFY17 1,085 5,154 825 1,031	FFY18 1,115 5,295 847 1,059	FFY19 1,145 5,441 871 1,088	FFY20 1,177 5,591 895 1,118	<b>FFY21</b> 1,209 <b>5,744</b> 919 1,149	FFY22 1,242 5,902 944 1,180	FFY23 1,277 6,065 970 1,213	FFY24 1,312 6,232 997 1,246	FFY25 1,348 6,403 1,024 1,281	FFY26 1,385 6,579 1,053 1,316	FFY27 1,423 6,760 1,082 1,352	FFY28 1,462 6,946 1,111 1,389	FFY29 1,502 7,137 1,142 1,427	FFY30 1,544 7,333 1,173 1,467	FFY31 1,586 7,535 1,206 1,507	FFY32 1,630 7,742 1,239 1,548	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects Total Unencumbered Research Expenses Herring (11-21% over 20 yrs. Using 16% here.) Long-Term Monitoring (15-25% over 20yrs. Using 20%.) Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 4,500 720 900 360	FFY13 1,541 2,333 833 2,000 4,624 740 925 370	FFY14 1,000 4,751 760 950 380	FFY15 1,028 4,882 781 976	FFY16 1,056 5,016 803 1,003	FFY17 1,085 5,154 825 1,031	<b>FFY18</b> 1,115 <b>5,295</b> 847 1,059	FFY19 1,145 5,441 871 1,088	FFY20 1,177 5,591 895 1,118	FFY21 1,209 5,744 919 1,149	FFY22 1,242 5,902 944 1,180	FFY23 1,277 6,065 970 1,213	FFY24 1,312 6,232 997 1,246	FFY25 1,348 6,403 1,024 1,281	FFY26 1,385 6,579 1,053 1,316	FFY27 1,423 6,760 1,082 1,352	FFY28 1,462 6,946 1,111 1,389	FFY29 1,502 7,137 1,142 1,427	FFY30 1,544 7,333 1,173 1,467	FFY31 1,586 7,535 1,206 1,507	FFY32 1,630 7,742 1,239 1,548	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending Administrative Expenses Cordova Center FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.) FFY11-13 Projects Total Unencumbered Research Expenses Herring (11-21% over 20 yrs. Using 16% here.) Long-Term Monitoring (15-25% over 20yrs. Using 20%.) Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.) Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 4,500 720 900 360 315	FFY13 1,541 2,333 2,000 4,624 740 925 370 324	FFY14 1,000 4,751 760 950 380	FFY15 1,028 4,882 781 976	FFY16 1,056 5,016 803 1,003	FFY17 1,085 5,154 825 1,031	<b>FFY18</b> 1,115 <b>5,295</b> <b>847</b> 1,059	FFY19 1,145 5,441 871 1,088	FFY20 1,177 5,591 895 1,118	<b>FFY21</b> 1,209 <b>5,744</b> 919 1,149	FFY22 1,242 5,902 944 1,180	FFY23 1,277 6,065 970 1,213	FFY24 1,312 6,232 997 1,246	FFY25 1,348 6,403 1,024 1,281	FFY26 1,385 6,579 1,053 1,316	<b>FFY27</b> 1,423 <b>6,760</b> 1,082 1,352	FFY28 1,462 6,946 1,111 1,389	FFY29 1,502 7,137 1,142 1,427	FFY30 1,544 7,333 1,173 1,467	FFY31 1,586 7,535 1,206 1,507	FFY32 1,630 7,742 1,239 1,548	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 2,000 4,500 720 900 360 315 225	FFY13 1,541 2,333 2,000 4,624 740 925 370 324 231	FFY14 1,000 4,751 760 950 380	FFY15 1,028 4,882 781 976	FFY16 1,056 5,016 803 1,003	FFY17 1,085 5,154 825 1,031	FFY18 1,115 5,295 847 1,059	FFY19 1,145 5,441 871 1,088	FFY20 1,177 5,591 895 1,118	FFY21 1,209 5,744 919 1,149	FFY22 1,242 5,902 944 1,180	FFY23 1,277 6,065 970 1,213	FFY24 1,312 6,232 997 1,246	FFY25 1,348 6,403 1,024 1,281	FFY26 1,385 6,579 1,053 1,316	FFY27 1,423 6,760 1,082 1,352	FFY28 1,462 6,946 1,111 1,389	FFY29 1,502 7,137 1,142 1,427	FFY30 1,544 7,333 1,173 1,467	FFY31 1,586 7,535 1,206 1,507	FFY32 1,630 7,742 1,239 1,548	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 7% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds	FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 4,500 720 900 360 315 225 1,980	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 324 231 2,034	FFY14 1,000 4,751 760 950 380 2,661	FFY15 1,028 4,882 781 976 3,124	FFY16 1,056 5,016 803 1,003 3,210	FFY17 1,085 5,154 825 1,031 3,298	FFY18 1,115 5,295 847 1,059 3,389	FFY19 1,145 5,441 871 1,088 3,482	FFY20 1,177 5,591 895 1,118 3,578	<b>FFY21</b> 1,209 <b>5,744</b> 919 1,149 3,676	FFY22 1,242 5,902 944 1,180 3,778	FFY23 1,277 6,065 970 1,213 3,881	FFY24 1,312 6,232 997 1,246 3,988	FFY25 1,348 6,403 1,024 1,281 4,098	FFY26 1,385 6,579 1,053 1,316 4,211	<b>FFY27</b> 1,423 <b>6,760</b> 1,082 1,352 4,326	<b>FFY28</b> 1,462 <b>6,946</b> 1,111 1,389 4,445	<b>FFY29</b> 1,502 <b>7,137</b> 1,142 1,427 4,568	FFY30 1,544 7,333 1,173 1,467 4,693	FFY31 1,586 7,535 1,206 1,507 4,822	FFY32 1,630 7,742 1,239 1,548 4,955	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456           78,199
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 12 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 833 2,000 4,500 720 900 360 315 225 1,980 11,167	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 324 231 2,034 11,332	FFY14 1,000 4,751 760 950 380 2,661 5,751	FFY15 1,028 4,882 781 976 3,124 5,909	FFY16 1,056 5,016 803 1,003 3,210 6,072	FFY17 1,085 5,154 825 1,031 	FFY18 1,115 5,295 847 1,059 3,389 6,410	FFY19 1,145 5,441 871 1,088 	FFY20 1,177 5,591 895 1,118 3,578 6,767	FFY21 1,209 5,744 919 1,149 3,676 6,954	FFY22 1,242 5,902 944 1,180 3,778 7,145	FFY23 1,277 6,065 970 1,213 3,881 7,341	FFY24 1,312 6,232 997 1,246 3,988 7,543	FFY25 1,348 6,403 1,024 1,281 4,098 7,751	FFY26 1,385 6,579 1,053 1,316 4,211 7,964	<b>FFY27</b> 1,423 <b>6,760</b> 1,082 1,352 4,326 <b>8,183</b>	FFY28 1,462 6,946 1,111 1,389 4,445 8,408	FFY29 1,502 7,137 1,142 1,427 4,568 8,639	FFY30 1,544 7,333 1,173 1,467 4,693 8,877	FFY31 1,586 7,535 1,206 1,507 4,822 9,121	FFY32 1,630 7,742 1,239 1,548 4,955 9,371	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456           78,199           170,494
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 833 2,000 4,500 720 900 360 315 225 1,980 11,167	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 320 2370 324 231 2,034 11,332	FFY14 1,000 4,751 760 950 380 2,661 5,751	FFY15 1,028 4,882 781 976 3,124 5,909	FFY16 1,056 5,016 803 1,003 3,210 6,072	FFY17 1,085 5,154 825 1,031 3,298 6,239	FFY18 1,115 5,295 847 1,059 3,389 6,410	FFY19 1,145 5,441 871 1,088 	FFY20 1,177 5,591 895 1,118 3,578 6,767	FFY21 1,209 5,744 919 1,149 3,676 6,954	FFY22 1,242 5,902 944 1,180 3,778 7,145	FFY23 1,277 6,065 970 1,213 3,881 7,341	FFY24 1,312 6,232 997 1,246 3,988 7,543	FFY25 1,348 6,403 1,024 1,281 4,098 7,751	FFY26 1,385 6,579 1,053 1,316 4,211 7,964	FFY27 1,423 6,760 1,082 1,352 4,326 8,183	FFY28 1,462 6,946 1,111 1,389 4,445 8,408	FFY29 1,502 7,137 1,142 1,427 4,568 8,639	FFY30 1,544 7,333 1,173 1,467 4,693 8,877	FFY31 1,586 7,535 1,206 1,507 4,822 9,121	FFY32 1,630 7,742 1,239 1,548 4,955 9,371	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456           78,199           170,494
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$1000 FFY14 Admin. Cost; \$5000 Initial Spending	FFY11 1,800 2,333 833 2,000    6,967 FFY11	FFY12 1,500 2,333 833 2,000 4,500 720 900 360 315 225 1,980 11,167 FFY12	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 324 2,034 2,034 11,332 FFY13	FFY14 1,000 4,751 760 950 380 2,661 5,751 FFY14	FFY15 1,028 4,882 781 976 3,124 5,909 FFY15	FFY16 1,056 5,016 803 1,003 3,210 6,072 FFY16	FFY17 1,085 5,154 825 1,031 3,298 6,239 FFY17	FFY18 1,115 5,295 847 1,059 3,389 6,410 FFY18	FFY19 1,145 5,441 871 1,088 3,482 6,586 FFY19	FFY20 1,177 5,591 895 1,118 3,578 6,767 FFY20	FFY21 1,209 5,744 919 1,149 3,676 6,954 FFY21	FFY22 1,242 5,902 944 1,180 3,778 7,145 FFY22	FFY23 1,277 6,065 970 1,213 3,881 7,341 FFY23	FFY24 1,312 6,232 997 1,246 3,988 7,543 FFY24	FFY25 1,348 6,403 1,024 1,281 4,098 7,751 FFY25	FFY26 1,385 6,579 1,053 1,316 4,211 7,964 FFY26	FFY27 1,423 6,760 1,082 1,352 4,326 8,183 FFY27	FFY28 1,462 6,946 1,111 1,389 4,445 8,408 FFY28	FFY29 1,502 7,137 1,142 1,427 4,568 8,639 FFY29	FFY30 1,544 7,333 1,173 1,467 4,693 8,877 FFY30	FFY31 1,586 7,535 1,206 1,507 4,822 9,121 FFY31	FFY32 1,630 7,742 1,239 1,548 4,955 9,371 FFY32	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456           78,199           170,494
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 7% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$1000 FFY14 Admin. Cost; \$5000 Initial Spending         Administrative Expenses	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 833 2,000 4,500 720 900 360 315 225 1,980 11,980 11,980 FFY12 1,500	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 324 231 2,034 11,332 FFY13 1,541	FFY14 1,000 4,751 760 950 380 2,661 5,751 FFY14 1,000	FFY15 1,028 4,882 781 976 3,124 5,909 FFY15 1,028	FFY16 1,056 5,016 803 1,003 3,210 6,072 FFY16 1,056	FFY17 1,085 5,154 825 1,031 3,298 6,239 FFY17 1,085	FFY18 1,115 5,295 847 1,059 3,389 6,410 FFY18 1,115	FFY19 1,145 5,441 871 1,088 3,482 6,586 FFY19 1,145	FFY20 1,177 5,591 895 1,118 3,578 6,767 FFY20 1,177	FFY21 1,209 5,744 919 1,149 3,676 6,954 FFY21 1,209	FFY22 1,242 5,902 944 1,180 3,778 7,145 FFY22 1,242	FFY23 1,277 6,065 970 1,213 3,881 7,341 FFY23 1,277	FFY24 1,312 6,232 997 1,246 3,988 7,543 FFY24 1,312	FFY25 1,348 6,403 1,024 1,281 4,098 7,751 FFY25 1,348	FFY26 1,385 6,579 1,053 1,316 4,211 7,964 FFY26 1,385	FFY27 1,423 6,760 1,082 1,352 4,326 8,183 FFY27 1,423	FFY28 1,462 6,946 1,111 1,389 4,445 8,408 FFY28 1,462	FFY29 1,502 7,137 1,142 1,427 4,568 8,639 FFY29 1,502	FFY30 1,544 7,333 1,173 1,467 4,693 8,877 FFY30 1,544	FFY31 1,586 7,535 1,206 1,507 4,822 9,121 FFY31 1,586	FFY32 1,630 7,742 1,239 1,548 4,955 9,371 FFY32 1,630	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456           78,199           170,494           Total           29,364
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Ingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$1000 FFY14 Admin. Cost; \$5000 Initial Spending         Administrative Expenses         Cordova Center	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 833 2,000 4,500 720 900 360 315 225 1,980 11,167 FFY12 1,500 2,333	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 324 2,034 11,332 FFY13 1,541 2,333	FFY14 1,000 4,751 760 950 380 2,661 5,751 FFY14 1,000	FFY15 1,028 4,882 781 976 3,124 5,909 FFY15 1,028	FFY16 1,056 5,016 803 1,003 3,210 6,072 FFY16 1,056	FFY17 1,085 5,154 825 1,031 3,298 6,239 FFY17 1,085	FFY18 1,115 5,295 847 1,059 3,389 6,410 FFY18 1,115	FFY19 1,145 5,441 871 1,088 3,482 6,586 FFY19 1,145	FFY20 1,177 5,591 895 1,118 3,578 6,767 FFY20 1,177	FFY21 1,209 5,744 919 1,149 3,676 6,954 FFY21 1,209	FFY22 1,242 5,902 944 1,180 3,778 7,145 FFY22 1,242	FFY23 1,277 6,065 970 1,213 3,881 7,341 FFY23 1,277	FFY24 1,312 6,232 997 1,246 3,988 7,543 FFY24 1,312	FFY25 1,348 6,403 1,024 1,281 4,098 7,751 FFY25 1,348	FFY26 1,385 6,579 1,053 1,316 4,211 7,964 FFY26 1,385	FFY27 1,423 6,760 1,082 1,352 4,326 8,183 FFY27 1,423	FFY28 1,462 6,946 1,111 1,389 4,445 8,408 FFY28 1,462	FFY29 1,502 7,137 1,142 1,427 4,568 8,639 FFY29 1,502	FFY30 1,544 7,333 1,173 1,467 4,693 8,877 FFY30 1,544	FFY31 1,586 7,535 1,206 1,507 4,822 9,121 FFY31 1,586	FFY32 1,630 7,742 1,239 1,548 4,955 9,371 FFY32 1,630	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456           78,199           170,494           Total           29,364           7,000
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$1000 FFY14 Admin. Cost; \$5000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 833 2,000 4,500 900 360 315 225 1,980 11,167 FFY12 1,500 2,333 833	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 324 2,034 11,332 FFY13 1,541 2,333 833	FFY14 1,000 4,751 760 950 380 2,661 5,751 FFY14 1,000	FFY15 1,028 4,882 781 976 3,124 5,909 FFY15 1,028	FFY16 1,056 5,016 803 1,003 3,210 6,072 FFY16 1,056	FFY17 1,085 5,154 825 1,031 3,298 6,239 FFY17 1,085	FFY18 1,115 5,295 847 1,059 3,389 6,410 FFY18 1,115	FFY19 1,145 5,441 871 1,088 3,482 6,586 FFY19 1,145	FFY20 1,177 5,591 895 1,118 3,578 6,767 FFY20 1,177	FFY21 1,209 5,744 919 1,149 3,676 6,954 FFY21 1,209	FFY22 1,242 5,902 944 1,180 3,778 7,145 FFY22 1,242	FFY23 1,277 6,065 970 1,213 3,881 7,341 FFY23 1,277	FFY24 1,312 6,232 997 1,246 3,988 7,543 FFY24 1,312	FFY25 1,348 6,403 1,024 1,281 4,098 7,751 FFY25 1,348	FFY26 1,385 6,579 1,053 1,316 4,211 7,964 FFY26 1,385	FFY27 1,423 6,760 1,082 1,352 4,326 8,183 FFY27 1,423	FFY28 1,462 6,946 1,111 1,389 4,445 8,408 FFY28 1,462	FFY29 1,502 7,137 1,142 1,427 4,568 8,639 FFY29 1,502	FFY30 1,544 7,333 1,173 1,467 4,693 8,877 FFY30 1,544	FFY31 1,586 7,535 1,206 1,507 4,822 9,121 FFY31 1,586	FFY32 1,630 7,742 1,239 1,548 4,955 9,371 FFY32 1,630	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456           78,199           170,494           Total           29,364           7,000           2,500
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$1000 FFY14 Admin. Cost; \$5000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 833 2,000 4,500 900 360 315 225 1,980 11,167 FFY12 1,500 2,333 833 2,000	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 324 2,311 2,034 11,332 FFY13 1,541 2,333 833 2,000	FFY14 1,000 4,751 760 950 380 2,661 5,751 FFY14 1,000	FFY15 1,028 4,882 781 976 3,124 5,909 FFY15 1,028	FFY16 1,056 5,016 803 1,003 3,210 6,072 FFY16 1,056	FFY17 1,085 5,154 825 1,031 3,298 6,239 FFY17 1,085	FFY18 1,115 5,295 847 1,059 3,389 6,410 FFY18 1,115	FFY19 1,145 5,441 871 1,088 3,482 6,586 FFY19 1,145	FFY20 1,177 5,591 895 1,118 3,578 6,767 FFY20 1,177	FFY21 1,209 5,744 919 1,149 3,676 6,954 FFY21 1,209	FFY22 1,242 5,902 944 1,180 3,778 7,145 FFY22 1,242	FFY23 1,277 6,065 970 1,213 3,881 7,341 FFY23 1,277	FFY24 1,312 6,232 997 1,246 3,988 7,543 FFY24 1,312	FFY25 1,348 6,403 1,024 1,281 4,098 7,751 FFY25 1,348	FFY26 1,385 6,579 1,053 1,316 4,211 7,964 FFY26 1,385	FFY27 1,423 6,760 1,082 1,352 4,326 8,183 FFY27 1,423	FFY28 1,462 6,946 1,111 1,389 4,445 8,408 FFY28 1,462	FFY29 1,502 7,137 1,142 1,427 4,568 8,639 FFY29 1,502	FFY30 1,544 7,333 1,173 1,467 4,693 8,877 FFY30 1,544	FFY31 1,586 7,535 1,206 1,507 4,822 9,121 FFY31 1,586	FFY32 1,630 7,742 1,239 1,548 4,955 9,371 FFY32 1,630	Total           29,364           7,000           2,500           6,000           125,530           20,101           25,126           1,110           639           456           78,199           170,494           Total           29,364           7,000           2,500           6,000
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$1000 FFY14 Admin. Cost; \$5000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	FFY11 1,800 2,333 833 2,000 2,000 2,000 5,967 5,	FFY12 1,500 2,333 833 2,000 4,500 720 900 360 360 315 225 1,980 11,167 FFY12 1,500 2,333 833 2,000 5,000	FFY13 1,541 2,333 333 2,000 4,624 740 925 370 324 231 2,034 11,332 FFY13 1,541 2,333 1,541 2,333 833 2,000 5,138	FFY14 1,000 4,751 760 950 380 2,661 5,751 FFY14 1,000 5,279	FFY15 1,028 4,882 781 976 3,124 5,909 FFY15 1,028 5,424	FFY16 1,056 5,016 803 1,003 3,210 6,072 FFY16 1,056 5,573	FFY17 1,085 5,154 825 1,031 3,298 6,239 6,239 FFY17 1,085 5,726	FFY18 1,115 5,295 847 1,059 3,389 6,410 FFY18 1,115 	FFY19 1,145 5,441 871 1,088 3,482 6,586 FFY19 1,145 	FFY20 1,177 5,591 895 1,118 3,578 6,767 FFY20 1,177 	FFY21 1,209 5,744 919 1,149 3,676 6,954 FFY21 1,209 6,383	FFY22 1,242 5,902 944 1,180 3,778 7,145 FFY22 1,242 6,558	FFY23 1,277 6,065 970 1,213 3,881 7,341 FFY23 1,277 6,739	FFY24 1,312 6,232 997 1,246 3,988 7,543 FFY24 1,312 6,924	FFY25 1,348 6,403 1,024 1,281 4,098 7,751 FFY25 1,348 7,114	FFY26 1,385 6,579 1,053 1,316 4,211 7,964 FFY26 1,385 7,310	FFY27 1,423 6,760 1,082 1,352 4,326 8,183 FFY27 1,423 	FFY28 1,462 6,946 1,111 1,389 4,445 8,408 FFY28 1,462 7,718	FFY29 1,502 7,137 1,142 1,427 4,568 8,639 FFY29 1,502 7,930	FFY30 1,544 7,333 1,173 1,467 4,693 8,877 FFY30 1,544 8,148	FFY31 1,586 7,535 1,206 1,507 4,822 9,121 FFY31 1,586 	FFY32 1,630 7,742 1,239 1,548 4,955 9,371 FFY32 1,630 	Total           29,364           7,000           2,500           5,000           125,630           20,101           25,126           1,110           639           456           78,199           170,494           Total           29,364           7,000           2,500           6,000           139,589
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$1000 FFY14 Admin. Cost; \$5000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         Fry11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         Fry11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         Frynt-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 833 2,000 720 900 360 315 1,980 11,167 FFY12 1,500 2,333 833 2,000 800	FFY13 1,541 2,333 2,000 4,624 740 925 370 324 231 2,034 11,332 FFY13 1,541 2,333 833 2,000 5,138 822	FFY14 1,000 4,751 760 950 380 2,661 5,751 FFY14 1,000 	FFY15 1,028 4,882 781 976 3,124 5,909 FFY15 1,028 5,424 868	FFY16 1,056 803 1,003 3,210 6,072 FFY16 1,056 5,573 892	FFY17 1,085 5,154 825 1,031 3,298 6,239 6,239 FFY17 1,085 5,726 916	FFY18 1,115 5,295 847 1,059 3,389 6,410 FFY18 1,115 5,884 941	FFY19 1,145 5,441 871 1,088 3,482 6,586 FFY19 1,145 6,046 967	FFY20 1,177 5,591 895 1,118 3,578 6,767 FFY20 1,177 6,212 994	FFY21 1,209 5,744 919 1,149 3,676 6,954 FFY21 1,209 6,383 1,021	FFY22 1,242 5,902 944 1,180 3,778 7,145 FFY22 1,242 6,558 1,049	FFY23 1,277 6,065 970 1,213 3,881 7,341 FFY23 1,277 6,739 1,078	FFY24 1,312 6,232 997 1,246 3,988 7,543 FFY24 1,312 6,924 1,108	FFY25 1,348 6,403 1,024 1,281 4,098 7,751 FFY25 1,348 7,114 1,138	FFY26 1,385 6,579 1,053 1,316 4,211 7,964 FFY26 1,385 7,310 1,170	FFY27 1,423 6,760 1,082 1,352 4,326 8,183 FFY27 1,423 7,511 1,202	FFY28 1,462 6,946 1,111 1,389 4,445 8,408 FFY28 1,462 7,718 1,235	FFY29 1,502 7,137 1,142 1,427 4,568 8,639 FFY29 1,502 7,930 1,269	FFY30 1,544 7,333 1,173 1,467 4,693 8,877 FFY30 1,544 8,148 1,304	FFY31 1,586 7,535 1,206 1,507 4,822 9,121 FFY31 1,586 8,372 1,340	FFY32 1,630 7,742 1,239 1,548 4,955 9,371 FFY32 1,630 	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456           78,199           170,494           Total           29,364           7,000           25,500           6,000           139,589           22,334
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$1000 FFY14 Admin. Cost; \$5000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Ungering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Vojects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)	FFY11 1,800 2,333 833 2,000       	FFY12 1,500 2,333 833 2,000 720 900 360 315 1,980 11,167 FFY12 1,500 2,333 833 2,000 5,000 800 1,000	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 324 2,314 1,322 FFY13 1,541 2,333 833 2,000 5,138 822 1,028	FFY14 1,000 4,751 760 950 380 2,661 5,751 FFY14 1,000 5,279 845 1,056	FFY15 1,028 4,882 781 976 3,124 5,909 FFY15 1,028 5,424 868 1,085	FFY16 1,056 803 1,003 3,210 6,072 FFY16 1,056 5,573 892 1,115	FFY17 1,085 5,154 825 1,031 3,298 6,239 6,239 FFY17 1,085 5,726 916 1,145	FFY18 1,115 5,295 847 1,059 6,410 FFY18 1,115 5,884 941 1,177	FFY19 1,145 5,441 871 1,088 3,482 6,586 FFY19 1,145 6,046 967 1,209	FFY20 1,177 5,591 895 1,118 3,578 6,767 FFY20 1,177 6,212 994 1,242	FFY21 1,209 5,744 919 1,149 3,676 6,954 FFY21 1,209 6,383 1,021 1,277	FFY22 1,242 5,902 944 1,180 3,778 7,145 FFY22 1,242 6,558 1,049 1,312	FFY23 1,277 6,065 970 1,213 3,881 7,341 FFY23 1,277 6,739 1,078 1,348	FFY24 1,312 6,232 997 1,246 3,988 7,543 FFY24 1,312 6,924 1,108 1,385	FFY25 1,348 6,403 1,024 1,281 4,098 7,751 FFY25 1,348 7,114 1,138 1,423	FFY26 1,385 6,579 1,053 1,316 4,211 7,964 FFY26 1,385 7,310 1,170 1,462	FFY27 1,423 6,760 1,082 1,352 4,326 8,183 FFY27 1,423 7,511 1,202 1,502	FFY28 1,462 6,946 1,111 1,389 4,445 8,408 FFY28 1,462 7,718 1,235 1,544	FFY29 1,502 7,137 1,142 1,427 4,568 8,639 FFY29 1,502 7,930 1,269 1,586	FFY30 1,544 7,333 1,173 1,467 4,693 8,877 FFY30 1,544 8,148 1,304 1,630	FFY31 1,586 7,535 1,206 1,507 4,822 9,121 FFY31 1,586 8,372 1,340 1,674	FFY32 1,630 7,742 1,239 1,548 4,955 9,371 FFY32 1,630 	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456           78,199           170,494           Total           29,364           7,000           2,500           6,000           139,589           22,334           27,918
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$1000 FFY14 Admin. Cost; \$5000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 833 2,000 720 900 360 315 225 1,980 11,167 FFY12 1,500 2,333 833 2,000 5,000 800 1,000 400	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 324 231 2,034 11,332 FFY13 1,541 2,333 833 2,000 5,138 822 1,028 411	FFY14 1,000 4,751 760 950 380 2,661 5,751 FFY14 1,000 5,279 845 1,056 422	FFY15 1,028 4,882 781 976 3,124 5,909 FFY15 1,028 5,424 868 1,085	FFY16 1,056 803 1,003 3,210 6,072 FFY16 1,056 5,573 892 1,115	FFY17 1,085 5,154 825 1,031 3,298 6,239 6,239 6,239 6,239 5,726 916 1,145	FFY18 1,115 5,295 847 1,059 3,389 6,410 FFY18 1,115 5,884 941 1,177	FFY19 1,145 5,441 871 1,088 3,482 6,586 FFY19 1,145 6,046 967 1,209	FFY20 1,177 5,591 895 1,118 3,578 6,767 FFY20 1,177 6,212 994 1,242	FFY21 1,209 5,744 919 1,149 3,676 6,954 FFY21 1,209 6,383 1,021 1,227	FFY22 1,242 944 1,180 3,778 7,145 FFY22 1,242 6,558 1,049 1,312	FFY23 1,277 6,065 970 1,213 3,881 7,341 FFY23 1,277 6,739 1,078 1,348	FFY24 1,312 6,232 997 1,246 3,988 7,543 FFY24 1,312 6,924 1,108 1,385	FFY25 1,348 6,403 1,024 1,281 4,098 7,751 FFY25 1,348 7,114 1,138 1,423	FFY26 1,385 6,579 1,053 1,316 4,211 7,964 FFY26 1,385 7,310 1,170 1,462	FFY27 1,423 6,760 1,082 1,352 4,326 8,183 FFY27 1,423 7,511 1,202 1,502	FFY28 1,462 6,946 1,111 1,389 4,445 8,408 FFY28 1,462 7,718 1,235 1,544	FFY29 1,502 7,137 1,142 1,427 4,568 8,639 FFY29 1,502 7,930 1,269 1,586	FFY30 1,544 7,333 1,173 1,467 4,693 8,877 FFY30 1,544 8,148 1,304 1,630	FFY31 1,586 7,535 1,206 1,507 4,822 9,121 FFY31 1,586 8,372 1,340 1,674	FFY32 1,630 7,742 1,239 1,548 4,955 9,371 FFY32 1,630 8,602 1,376 1,720	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456           78,199           170,494           Total           29,364           7,000           2,500           6,000           139,589           22,334           27,918           1,233
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 7% over 2 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$1000 FFY14 Admin. Cost; \$5000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Ungering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 833 2,000 720 900 360 315 225 1,980 11,167 FFY12 1,500 2,333 833 2,000 5,000 800 1,000 400 350	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 324 231 2,034 11,332 FFY13 1,541 2,333 833 2,000 5,138 822 1,028 411 360	FFY14 1,000 4,751 760 950 380 2,661 5,751 FFY14 1,000 5,279 845 1,056 422	FFY15 1,028 4,882 781 976 3,124 5,909 FFY15 1,028 5,424 868 1,085	FFY16 1,056 803 1,003 3,210 6,072 FFY16 1,056 5,573 892 1,115	FFY17 1,085 5,154 825 1,031 3,298 6,239 6,239 6,239 FFY17 1,085 5,726 916 1,145	FFY18 1,115 5,295 847 1,059 3,389 6,410 FFY18 1,115 5,884 941 1,177	FFY19 1,145 5,441 871 1,088 3,482 6,586 FFY19 1,145 6,046 967 1,209	FFY20 1,177 5,591 895 1,118 3,578 6,767 FFY20 1,177 6,212 994 1,242	FFY21 1,209 5,744 919 1,149 3,676 6,954 FFY21 1,209 6,383 1,021 1,277	FFY22 1,242 5,902 944 1,180 3,778 7,145 FFY22 1,242 1,242 1,242 6,558 1,049 1,312	FFY23 1,277 6,065 970 1,213 3,881 7,341 FFY23 1,277 6,739 1,078 1,348	FFY24 1,312 6,232 997 1,246 3,988 7,543 FFY24 1,312 6,924 1,108 1,385	FFY25 1,348 6,403 1,024 1,281 4,098 7,751 FFY25 1,348 7,114 1,138 1,423	FFY26 1,385 6,579 1,053 1,316 4,211 7,964 FFY26 1,385 7,310 1,170 1,462	FFY27 1,423 6,760 1,082 1,352 4,326 8,183 FFY27 1,423 7,511 1,202 1,502	FFY28 1,462 6,946 1,111 1,389 4,445 8,408 FFY28 1,462 7,718 1,235 1,544	FFY29 1,502 7,137 1,142 1,427 4,568 8,639 FFY29 1,502 7,930 1,269 1,586	FFY30 1,544 7,333 1,173 1,467 4,693 8,877 FFY30 1,544 1,544 1,304 1,630	FFY31 1,586 7,535 1,206 1,507 4,822 9,121 FFY31 1,586 8,372 1,340 1,674	FFY32 1,630 7,742 1,239 1,548 4,955 9,371 FFY32 1,630 8,602 1,376 1,720	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456           78,199           170,494           Total           29,364           7,000           2,500           6,000           139,589           22,334           27,918           1,233           710
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 7% over 2 yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$1000 FFY14 Admin. Cost; \$5000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)	FFY11 1,800 2,333 833 2,000 	FFY12 1,500 2,333 833 2,000 4,500 900 360 315 225 1,980 11,167 FFY12 1,500 2,333 833 2,000 5,000 800 1,000 400 400 250	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 324 231 2,034 11,332 FFY13 1,541 2,333 833 2,000 5,138 822 1,028 411 360 257	FFY14 1,000 4,751 760 950 380 2,661 5,751 FFY14 1,000 5,279 845 1,056 422	FFY15 1,028 4,882 781 976 3,124 5,909 FFY15 1,028 5,424 868 1,085	FFY16 1,056 803 1,003 3,210 6,072 FFY16 1,056 5,573 892 1,115	FFY17 1,085 5,154 825 1,031 3,298 6,239 6,239 6,239 FFY17 1,085 5,726 916 1,145	FFY18 1,115 5,295 847 1,059 3,389 6,410 FFY18 1,115 5,884 941 1,177	FFY19 1,145 5,441 871 1,088 3,482 6,586 FFY19 1,145 6,046 967 1,209	FFY20 1,177 5,591 895 1,118 3,578 6,767 FFY20 1,177 6,212 994 1,242	FFY21 1,209 5,744 919 1,149 3,676 6,954 FFY21 1,209 6,383 1,021 1,277	FFY22 1,242 5,902 944 1,180 3,778 7,145 FFY22 1,242 1,242 1,242 1,242	FFY23 1,277 6,065 970 1,213 3,881 7,341 FFY23 1,277 6,739 1,078 1,348	FFY24 1,312 6,232 997 1,246 3,988 7,543 FFY24 1,312 6,924 1,108 1,385	FFY25 1,348 6,403 1,024 1,281 4,098 7,751 FFY25 1,348 7,114 1,138 1,423	FFY26 1,385 6,579 1,053 1,316 4,211 7,964 FFY26 1,385 7,310 1,170 1,170	FFY27 1,423 6,760 1,082 1,352 4,326 8,183 FFY27 1,423 7,511 1,202 1,502	FFY28 1,462 6,946 1,111 1,389 4,445 8,408 FFY28 1,462 7,718 1,235 1,544	FFY29 1,502 7,137 1,142 1,427 4,568 8,639 FFY29 1,502 7,930 1,269 1,586	FFY30 1,544 7,333 1,173 1,467 4,693 8,877 FFY30 1,544 1,544 1,630	FFY31 1,586 7,535 1,206 1,507 4,822 9,121 1,586 1,586 8,372 1,340 1,674	FFY32 1,630 7,742 1,239 1,548 4,955 9,371 FFY32 1,630 8,602 1,376 1,720	Total           29,364           7,000           2,500           6,000           125,630           20,101           25,126           1,110           639           456           78,199           170,494           Total           29,364           7,000           2,500           6,000           139,589           22,334           27,918           1,233           710
Scenario: \$1000 FFY14 Admin. Cost; \$4500 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)         Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 5% over 2 yrs.)         Currently Unallocated Unencumbered Research Funds         Total Expenses         Scenario: \$1000 FFY14 Admin. Cost; \$5000 Initial Spending         Administrative Expenses         Cordova Center         FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)         FFY11-13 Projects         Total Unencumbered Research Expenses         Herring (11-21% over 20 yrs. Using 16% here.)         Long-Term Monitoring (15-25% over 20yrs. Using 20%.)         Stormwater (3-13% likely over 1-3 yr. Using 8% over 3 yrs.)         Marine Debris (7% over 1-3 yr. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 7% over 2 yrs.)         Response (5% over 1-2 yrs. Using 7% over 2 yrs.)         Response (	FFY11 1,800 2,333 833 2,000  6,967  FFY11 1,800 2,333 833 2,000	FFY12 1,500 2,333 833 2,000 4,500 720 900 360 315 225 1,980 11,167 FFY12 1,500 2,333 2,000 5,000 800 1,000 400 350 2250 2,200	FFY13 1,541 2,333 833 2,000 4,624 740 925 370 324 231 2,034 11,332 FFY13 1,541 2,333 833 2,000 5,138 822 1,028 411 360 257 2,261	FFY14 1,000 950 380 2,661 5,751 FFY14 1,000 5,279 845 1,056 422 2,956	FFY15 1,028 4,882 781 976 3,124 5,909 FFY15 1,028 5,424 868 1,085 	FFY16 1,056 803 1,003 3,210 6,072 FFY16 1,056 5,573 892 1,115 	FFY17 1,085 5,154 825 1,031 3,298 6,239 6,239 FFY17 1,085 5,726 916 1,145 3,665	FFY18 1,115 5,295 847 1,059 3,389 6,410 FFY18 1,115 5,884 941 1,177 3,766	FFY19 1,145 5,441 871 1,088 3,482 6,586 FFY19 1,145 6,046 967 1,209 3,869	FFY20 1,177 5,591 895 1,118 3,578 6,767 FFY20 1,177 6,212 994 1,242 3,976	FFY21 1,209 5,744 919 1,149 3,676 6,954 FFY21 1,209 6,383 1,021 1,277 4,085	FFY22 1,242 944 1,180 3,778 7,145 FFY22 1,242 6,558 1,049 1,312 4,197	FFY23 1,277 6,065 970 1,213 3,881 7,341 FFY23 1,277 6,739 1,078 1,348 4,313	FFY24 1,312 997 1,246 3,988 7,543 FFY24 1,312 6,924 1,108 1,385 4,431	FFY25 1,348 6,403 1,024 1,281 4,098 7,751 FFY25 1,348 7,114 1,138 1,423 4,553	FFY26 1,385 6,579 1,053 1,316 4,211 7,964 FFY26 1,385 7,310 1,170 1,462 4,678	FFY27 1,423 6,760 1,082 1,352 4,326 8,183 FFY27 1,423 7,511 1,202 1,502 4,807	FFY28 1,462 6,946 1,111 1,389 4,445 8,408 FFY28 1,462 7,718 1,235 1,544 	FFY29 1,502 7,137 1,142 1,427 4,568 8,639 FFY29 1,502 7,930 1,269 1,586 5,075	FFY30 1,544 7,333 1,173 1,467 4,693 8,877 FFY30 1,544 1,544 1,630 1,5215	FFY31 1,586 7,535 1,206 1,507 4,822 9,121 FFY31 1,586 8,372 1,340 1,674 5,358	FFY32 1,630 7,742 1,239 1,548 4,955 9,371 FFY32 1,630 	Total           29,364           7,000           2,500           5,000           125,126           1,110           639           456           78,199           170,494           Total           29,364           7,000           2,500           6,000           139,589           22,334           27,918           1,233           710           507           86,887

# Estimated Schedules of Expenses for Varying Levels of Administrative

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Scenario: \$750 FFY14 Admin. Cost; \$2500 Initial Spending and Unencu	1.HA41.1	EH+12	Genten 13	<b>GANE</b>	ाइङ्गानुदा	V FI 16	FFY17	FFY18	FFY19	FFY20	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	10,545
Cordova Center	2,333	2,333	2,333								7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833								2,500
FFY11-13 Projects	2,000	2,000	2,000								6,000
Total Unencumbered Research Expenses		2,500	2,569	2,639	2,712	2,787	2,863	2,942	3,023	3,106	25,141
Herring (11-21% over 20 yrs. Using 16% here.)		400	411	422	434	446	458	471	484	497	4,022
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		500	514	528	542	557	573	588	605	621	5,028
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		200	206	211							617
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		175	180								355
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		125	128								253
Currently Unallocated Unencumbered Research Funds		1,100	1,130	1,478	1,736	1,783	1,832	1,883	1,935	1,988	14,865
Total Expenses	6,967	9,167	9,277	3,389	3,483	3,578	3,677	3,778	3,882	3,989	51,185
Scenario: \$750 FFY14 Admin. Cost; \$3000 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	10,545
Cordova Center	2,333	2,333	2,333								7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833								2,500
FFY11-13 Projects	2,000	2,000	2,000								6,000
Total Unencumbered Research Expenses		3,000	3,083	3,167	3,254	3,344	3,436	3,530	3,627	3,727	30,169
Herring (11-21% over 20 yrs. Using 16% here.)		480	493	507	521	535	550	565	580	596	4,827
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		600	617	633	651	669	687	706	725	745	6,034
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		240	247	253							740
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		210	216								426
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		150	154								304
Currently Unallocated Unencumbered Research Funds		1,320	1,356	1,774	2,083	2,140	2,199	2,259	2,322	2,385	17,838
Total Expenses	6,967	9,667	9,790	3,917	4,025	4,136	4,249	4,366	4,486	4,610	56,213
				-							
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	10,545
Cordova Center	2,333	2,333	2,333								7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833								2,500
FFY11-13 Projects	2,000	2,000	2,000								6,000
Total Unencumbered Research Expenses		3,500	3,596	3,695	3,797	3,901	4,008	4,119	4,232	4,348	35,197
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Herring (11-21% over 20 yrs. Using 16% here.) and Unencu	<del>imper</del>	edges	earch	Exper	ise <sub>0</sub> te	vels <sub>4</sub>	641	659	677	696	5,631
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		700	719	739	759	780	802	824	846	870	7,039
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		280	288	296							863
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		245	252								497
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		175	180								355
Currently Unallocated Unencumbered Research Funds		1,540	1,582	2,069	2,430	2,497	2,565	2,636	2,708	2,783	20,811
Total Expenses	6,967	10,167	10,304	4,445	4,567	4,693	4,822	4,955	5,091	5,231	61,242
Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	10,545
Cordova Center	2,333	2,333	2,333				_				7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833								2,500
FFY11-13 Projects	2,000	2,000	2,000								6,000
Total Unencumbered Research Expenses		4,000	4,110	4,223	4,339	4,458	4,581	4,707	4,837	4,970	40,225
Herring (11-21% over 20 yrs. Using 16% here.)		640	658	676	694	713	733	753	774	795	6,436
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		800	822	845	868	892	916	941	967	994	8,045
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		320	329	338							987
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		280	288								568
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		200	206								406
Currently Unallocated Unencumbered Research Funds		1,760	1,808	2,365	2,777	2,853	2,932	3,013	3,095	3,180	23,784
Total Expenses	6,967	10,667	10,818	4,973	5,110	5,250	5,395	5,543	5,695	5,852	66,270
					*						
Scenario: \$750 FFY14 Admin. Cost; \$4500 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	10,545
Cordova Center	2,333	2,333	2,333								7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833								2,500
FFY11-13 Projects	2,000	2,000	2,000								6,000
Total Unencumbered Research Expenses		4,500	4,624	4,751	4,882	5,016	5,154	5,295	5,441	5,591	45,253
Herring (11-21% over 20 yrs. Using 16% here.)		720	740	760	781	803	825	847	871	895	7,240
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		900	925	950	976	1,003	1,031	1,059	1,088	1,118	9,051
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		360	370	380							1,110
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		315	324								639
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		225	231								456
Currently Unallocated Unencumbered Research Funds		1,980	2,034	2,661	3,124	3,210	3,298	3,389	3,482	3,578	26,757

and Uner	ncumber	ed Res	earch	Exper	sele	vels		6 424	<b>C</b> 000	6 472	74 200
	0,967	<u>~ 11,167 · </u>	91,5 <u>5</u> 2	-2,2015.	· 5,652	* <del>3,8</del> 08	5,967	6,131	6,300	6,473	/1,298
Scenario: \$750 FFY14 Admin. Cost; \$5000 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	10,545
Cordova Center	2,333	2,333	2,333								7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833								2,500
FFY11-13 Projects	2,000	2,000	2,000								6,000
Total Unencumbered Research Expenses		5,000	5,138	5,279	5,424	5,573	5,726	5,884	6,046	6,212	50,281
Herring (11-21% over 20 yrs. Using 16% here.)		800	822	845	868	892	916	941	967	994	8,045
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		1,000	1,028	1,056	1,085	1,115	1,145	1,177	1,209	1,242	10,056
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		400	411	422							1,233
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		350	360						_		710
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		250	257				_				507
Currently Unallocated Unencumbered Research Funds		2,200	2,261	2,956	3,471	3,567	3,665	3,766	3,869	3,976	29,730
Total Expenses	6,967	11,667	11,845	6,029	6,195	6,365	6,540	6,720	6,905	7,094	76,326

and Unencymbered Research Expense Levels

Scenario: \$750 FFY14 Admin. Cost; \$2500 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	FFY21	FFY22	FFY23	FFY24	FFY25	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	907	932	957	984	1,011	15,335
Cordova Center	2,333	2,333	2,333													7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833													2,500
FFY11-13 Projects	2,000	2,000	2,000													6,000
Total Unencumbered Research Expenses		2,500	2,569	2,639	2,712	2,787	2,863	2,942	3,023	3,106	3,191	3,27 <del>9</del>	3,369	3,462	3,557	41,999
Herring (11-21% over 20 yrs. Using 16% here.)		400	411	422	434	446	458	471	484	497	511	525	539	554	569	6,720
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		500	514	528	542	557	573	588	605	621	638	656	674	692	711	8,400
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		200	206	211												617
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		175	180													355
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		125	128													253
Currently Unallocated Unencumbered Research Funds		1,100	1,130	1,478	1,736	1,783	1,832	1,883	1,935	1,988	2,042	2,099	2,156	2,216	2,277	25,655
Total Expenses	6,967	9,167	9,277	3,389	3,483	3,578	3,677	3,778	3,882	3,989	4,098	4,211	4,327	4,446	4,568	72,835
Scenario: \$750 FFY14 Admin. Cost; \$3000 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	FFY21	FFY22	FFY23	FFY24	FFY25	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	907	932	957	984	1,011	15,335
Cordova Center	2,333	2,333	2,333	1					1					1		7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833					1								2,500
FFY11-13 Projects	2,000	2,000	2,000													6,000
Total Unencumbered Research Expenses	1	3,000	3,083	3,167	3,254	3,344	3,436	3,530	3,627	3,727	3,830	3,935	4,043	4,154	4,269	50,399
Herring (11-21% over 20 yrs. Using 16% here.)		480	493	507	521	535	550	565	580	596	613	630	647	665	683	8,064
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		600	617	633	651	669	687	706	725	745	766	787	809	831	854	10,080
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		240	247	253											Γ	740
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		210	216		1		1	1								426
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		150	154										1			304
Currently Unallocated Unencumbered Research Funds		1,320	1,356	1,774	2,083	2,140	2,199	2,259	2,322	2,385	2,451	2,518	2,588	2,659	2,732	30,786
Total Expenses	6,967	9,667	9,790	3,917	4,025	4,136	4,249	4,366	4,486	4,610	4,736	4,867	5,001	5,138	5,279	81,235
Scenario: \$750 FFY14 Admin. Cost; \$3500 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	FFY21	FFY22	FFY23	FFY24	FFY25	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	907	932	957	984	1,011	15,335
Cordova Center	2,333	2,333	2,333													7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833										1			2,500
FFY11-13 Projects	2,000	2,000	2,000											1		6,000
Total Unencumbered Research Expenses	1	3,500	3,596	3,695	3,797	3,901	4,008	4,119	4,232	4,348	4,468	4,591	4,717	4,847	4,980	58,799
Herring (11-21% over 20 yrs. Using 16% here.)		560	575	591	607	624	641	659	677	696	715	735	755	775	797	9,408
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		700	719	739	759	780	802	824	846	870	894	918	943	969	996	11,760
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		280	288	296											1	863
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		245	252	1	1	1		1		1		<u> </u>	1	1		497
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		175	180		1		1		1					1	1	355
Currently Unallocated Unencumbered Research Funds		1,540	1,582	2,069	2,430	2,497	2,565	2,636	2,708	2,783	2,859	2,938	3,019	3,102	3,187	35,917

	and U	nencu	mber	<u>ed Res</u>	search	Exper	<u>ise Lev</u>	vels								
Total Expenses	6,967	10,167	10,304	4,445	4,567	4,693	4,822	4,955	5,091	5,231	5,375	5,523	5,674	5,830	5,991	89,635
Scenario: \$750 FFY14 Admin. Cost; \$4000 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	FFY21	FFY22	FFY23	FFY24	FFY25	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	907	932	957	984	1,011	15,335
Cordova Center	2,333	2,333	2,333													7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833				_				÷					2,500
FFY11-13 Projects	2,000	2,000	2,000													6,000
Total Unencumbered Research Expenses		4,000	4,110	4,223	4,339	4,458	4,581	4,707	4,837	4,970	5,106	5,247	5,391	5,539	5,691	67,199
Herring (11-21% over 20 yrs. Using 16% here.)		640	658	676	694	713	733	753	774	795	817	839	863	886	911	10,752
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		800	822	845	868	892	916	941	967	994	1,021	1,049	1,078	1,108	1,138	13,440
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		320	329	338												987
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		280	288													568
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		200	206													406
Currently Unallocated Unencumbered Research Funds		1,760	1,808	2,365	2,777	2,853	2,932	3,013	3,095	3,180	3,268	3,358	3,450	3,545	3,643	41,048
Total Expenses	6,967	10,667	10,818	4,973	5,110	5,250	5,395	5,543	5,695	5,852	6,013	6,178	6,348	6,523	6,702	98,034
			• •••				· · · · ·									
Scenario: \$750 FFY14 Admin. Cost; \$4500 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	FFY21	FFY22	FFY23	FFY24	FFY25	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	907	932	957	984	1,011	15,335
Cordova Center	2,333	2,333	2,333				1		1							7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833						[							2,500
FFY11-13 Projects	2,000	2,000	2,000				1	1			1				-	6,000
Total Unencumbered Research Expenses		4,500	4,624	4,751	4,882	5,016	5,154	5,295	5,441	5,591	5,744	5,902	6,065	6,232	6,403	75,599
Herring (11-21% over 20 yrs. Using 16% here.)		720	740	760	781	803	825	847	871	895	919	944	970	997	1,024	12,096
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		900	925	950	976	1,003	1,031	1,059	1,088	1,118	1,149	1,180	1,213	1,246	1,281	15,120
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		360	370	380												1,110
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		315	324													639
Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		225	231										1			456
Currently Unallocated Unencumbered Research Funds		1,980	2,034	2,661	3,124	3,210	3,298	3,389	3,482	3,578	3,676	3,778	3,881	3,988	4,098	46,179
Total Expenses	6,967	11,167	11,332	5,501	5,652	5,808	5,967	6,131	6,300	6,473	6,651	6,834	7,022	7,215	7,414	106,434
Scenario: \$750 FFY14 Admin. Cost; \$5000 Initial Spending	FFY11	FFY12	FFY13	FFY14	FFY15	FFY16	FFY17	FFY18	FFY19	FFY20	FFY21	FFY22	FFY23	FFY24	FFY25	Total
Administrative Expenses	1,800	1,500	1,541	750	771	792	814	836	859	883	907	932	957	984	1,011	15,335
Cordova Center	2,333	2,333	2,333			1										7,000
FFY11-13 Lingering Oil Studies (\$1-4MM. Using \$2.5mm over 3 yrs.)	833	833	833			1		T					[			2,500
FFY11-13 Projects	2,000	2,000	2,000		1											6,000
Total Unencumbered Research Expenses		5,000	5,138	5,279	5,424	5,573	5,726	5,884	6,046	6,212	6,383	6,558	6,739	6,924	7,114	83,999
Herring (11-21% over 20 yrs. Using 16% here.)		800	822	845	868	892	916	941	967	994	1,021	1,049	1,078	1,108	1,138	13,440
Long-Term Monitoring (15-25% over 20yrs. Using 20%.)		1,000	1,028	1,056	1,085	1,115	1,145	1,177	1,209	1,242	1,277	1,312	1,348	1,385	1,423	16,800
Stormwater (3-13% likely over 1-3 yr. Using 8% over 3yrs.)		400	411	422				1	1	1	1			T		1,233
Marine Debris (7% over 1-2 yrs. Using 7% over 2 yrs.)		350	360					1	1		1	1		1		710

and Unencymbered Research Expense Levels

Response (5% over 1-2 yrs. Using 5% over 2 yrs.)		250	257													507
Currently Unallocated Unencumbered Research Funds		2,200	2,261	2,956	3,471	3,567	3,665	3,766	3,869	3,976	4,085	4,197	4,313	4,431	4,553	51,310
Total Expenses	6,967	11,667	11,845	6,029	6,195	6,365	6,540	6,720	6,905	7,094	7,290	7,490	7,696	7,908	8,125	114,834

FFY14 = \$750,000 (through FFY25)	Terminal Market Value							
Initial NonAdmin Expense (\$000)	Prob Ruin	25th %	50th %	75th %				
4,500	3.5%	44,254	81,518	128,898				
5,000	6.8%	32,536	68,991	115,239				

# Exxon Valdez Oil Spill Trustee Council

# **Research Fund Spending**

Bob Mitchell August 2010



## Overview

- If the intent is to spend down the Research Fund through the end of FFY32, how much can the fund spend each year?
- The Fund balance as of August 5, 2010 was approximately \$98 million. The Fund is expected to fund up to \$17 million in awards over the next three years. For purposes of analysis, \$17 million was set aside to fund short-term commitments and the remaining balance was invested at the existing asset allocation until the end of FFY27. Between FFY28 and FFY32, the fund is assumed to be invested entirely in bonds.
- The annual administrative expense is projected to be \$1.8 million for FFY11, \$1.5 million for FFY12 and \$1.541 million for FFY13. Two scenarios were explored beginning FFY14: \$750,000 and \$1 million, with subsequent annual expenses growing at Callan's assumed inflation rate of 2.75%/year.
- A simulation model was built to evaluate various levels of annual spending for unencumbered research programs, for each of the two administrative expense scenarios listed above. Each level of spending commences in FFY12, and grows each year at Callan's assumed inflation rate of 2.75%/year through FFY32.
- The model measured the probability of running out of funds prior to the end of FFY32 ("probability of ruin") and measured the 25<sup>th</sup>, 50<sup>th</sup> and 75<sup>th</sup> percentile ranges of the terminal market value at the end of FFY32.

## Expense Scenario 1: Admin. Expenses Fall to \$750k in FFY14



FFY14 = \$750,000		Termiı	nal Market	t Value
Initial NonAdmin Expense (\$000)	<b>Prob</b> Ruin	25th %	50th %	75th %
2,500	1.3%	102,703	178,190	285,171
3,000	3.6%	78,465	150,948	254,032
3,500	7.8%	54,250	123,825	222,763
4,000	14.2%	30,043	96,756	191,453
4,500	22.8%	5,677	69,607	160,355
5,000	32.9%	(18,651)	42,807	129,642

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## Expense Scenario 2: Admin. Expenses Fall to \$1mm in FFY14



FFY14 = \$1 million		Termi	nal Market	t Value
Initial NonAdmin Expense (\$000)	<b>Prob Ruin</b>	25th %	50th %	75th %
2,500	2.1%	92,582	167,088	272,709
3,000	5.1%	68,349	139,769	241,591
3,500	10.3%	44,282	112,813	210,222
4,000	17.6%	19,910	85,668	179,124
4,500	26.8%	(4,499)	58,723	148,083
5,000	37.3%	(28,832)	31,842	117,349

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## **Model Limitations**

- The model may underestimate the actual downside risk for several reasons.
- Asset class returns are assumed to be normally distributed, with relatively few extreme returns. Equity returns have historically experienced large negative and positive returns more frequently than is assumed in the distribution incorporated in the model.
- Asset class correlations tend to vary over time. In particular, the diversification benefits normally associated with incorporating multiple asset classes tend to wane during times of market stress. The model assumes constant correlation relationships between asset classes.
- The model assumes there is no relationship between returns from quarter to quarter. The market may experience periods of strong or weak asset class performance that persist over time, and this is not captured in the model.
- Inflation is assumed to be constant at 2.75%. Variations in inflation levels over time are not reflected in the model.



#### **State of Alaska**

RATES OF RETURN - Total Periods Ending July 31, 2010



EVOS Investment Report								
	EMV	Month	QTR	1 YEAR	3 YEARS	5 YEARS	ITD	Incept Date
AY02 - EVOS RESEARCH INVESTMENT	96,684	5.68	-2.49	12.61	-1.08	3.17	3.66	11-01-00
EVOSINFI - EVOS INVESTMENT FUND INDEX		5.76	-3.14	11.32	-1.51	3.01	3.25	
AY02FI - EVOS BROAD MARKET FIXED INCOM	28,714	1.15	3.70	9.68	7.33	5.95	6.45	11-01-00
XSL - BC AGGREGATE		1.07	3.52	8.91	7.63	5.96	6.36	
AY02IEP - EVOS SOA INT'L EQUITY POOL	23,342	9.15	-2.56	9.92	-6.00	3.77	3.11	11-01-00
XCB - MSCI EAFE (NET)		9.48	-4.08	6.26	-10.28	2.10	2.23	
AY02MM - EVOS MONEY MARKET FUND	0	0.05	0.07	0.92	2.02	3.15	2.90	11-01-00
X11 - 91 DAY T-BILL		0.02	0.05	0.16	1.44	2.72	2.56	
AY02R3K - EVOS RUSSELL 3000 INDEX	44,627	6.96	-7.16	14.79	-6.29	0.12	0.07	11-01-00
XF3 - RUSSELL 3000		6.94	-7.17	14.82	-6.34	0.05	-0.19	
AY2H - EVOS HABITAT INVESTMENT FUND	30 748	5 70	-2 47	12.67	-1 31	3.02	6 16	11-01-02
EVOSINFI - EVOS INVESTMENT FUND INDEX	00,140	5.76	-3.14	11.32	-1.51	3.01	6.28	11-01-02
AY2HFI - EVOS SOA2H BROAD MARKET FIXE	8,919	1.13	3.69	9.67	7.20	5.81	5.54	11-01-02
XSL - BC AGGREGATE		1.07	3.52	8.91	7.63	5.96	5.41	
AY2HIEP - EVOS SOA2H INTL EQUITY POOL	7,496	9.15	-2.56	9.95	-5.99	3.78	8.38	11-01-02
XCB - MSCI EAFE (NET)		9.48	-4.08	6.26	-10.28	2.10	8.66	

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#### State of Alaska

RATES OF RETURN - Total Periods Ending July 31, 2010



EVOS Investment Report									
	EMV	Month	QTR	1 YEAR	3 YEARS	5 YEARS	ITD	Incept Date	
AY2HMM - EVOS SOA2H MONEY MARKET FU	0	0.05	0.10	0.93	1.82	2.63	2.23	03-01-03	
X11 - 91 DAY T-BILL		0.02	0.05	0.16	1.44	2.72	2.35		
AY2HR3K - EVOS SOA2H RUSSELL 3000 INDE	14,333	6.96	-7.16	14.80	-6.02	0.29	5.78	11-01-02	
XF3 - RUSSELL 3000		6.94	-7.17	14.82	-6.34	0.05	5.66		
AY2J - EVOS KONIAG INVESTMENT FUND	43,826	5.69	-2.48	12.46	-1.44	2.95	6.10	11-01-02	
EVOSINFI - EVOS INVESTMENT FUND INDEX		5.76	-3.14	11.32	-1.51	3.01	6.28		
AY2JFI - EVOS SOA2J BROAD MARKET FIXED	12,895	1.14	3.70	9.67	7.29	5.87	5.57	11-01-02	
XSL - BC AGGREGATE		1.07	3.52	8.91	7.63	5.96	5.41		
AY2JIEP - EVOS SOA2J INTL EQUITY POOL	10,727	9.14	-2.57	9.90	-6.01	3.76	8.37	11-01-02	
XCB - MSCI EAFE (NET)		9.48	-4.08	6.26	-10.28	2.10	8.66		
AY2JMM - EVOS SOA2J MONEY MARKET FUN	0	0.08	0.13	0.90	2.21	3.44	3.02	12-01-03	
X11 - 91 DAY T-BILL		0.02	0.05	0.16	1.44	2.72	2.49		
AY2JR3K - EVOS SOA2H RUSSELL 3000 INDE	20,204	6.96	-7.16	14.79	-6.17	0.19	5.75	11-01-02	
XF3 - RUSSELL 3000		6.94	-7.17	14.82	-6.34	0.05	5.66		

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#### State of Alaska

RATES OF RETURN - Total Periods Ending July 31, 2010



EVOS Investment Report									
	EMV	Month	QTR	1 YEAR	3 YEARS	5 YEARS	ITD	Incept Date	
AY00A43 - EVOS BROAD MARKET FIXED INCO	50,529	1.14	3.70	9.68	7.30	5.91	6.45	11-01-00	
XSL - BC AGGREGATE		1.07	3.52	8.91	7.63	5.96	6.36		
AY00A45 - EVOS SOA INT'L EQUITY POOL	41,565	9.15	-2.56	9.92	-6.71	3.30	3.22	11-01-00	
XCB - MSCI EAFE (NET)		9.48	-4.08	6.26	-10.28	2.10	2.23		
AY00A42 - EVOS SHORT TERM POOL	0	0.05	0.09	0.86	2.38	3.37	3.01	11-01-00	
X11 - 91 DAY T-BILL		0.02	0.05	0.16	1.44	2.72	2.56		
AY00A46 - EVOS RUSSELL 3000 INDEX	79,163	6.96	-7.16	14.79	-6.21	0.16	0.34	11-01-00	
XF3 - RUSSELL 3000		6.94	-7.17	14.82	-6.34	0.05	-0.19		

