



**OREGON WATER RESOURCE DEPARTMENT
WATER CONSERVATION, REUSE AND STORAGE
GRANT PROGRAM**

RECEIVED

SEP 02 2008

WATER RESOURCES DEPT
SALEM, OREGON**I. Grant Information**Project Name: Water Impoundment Relocation Feasibility Study

Type of Grant Requested: Water Conservation Reuse Above Ground Storage
 Storage Other Than Above-Ground [Including Aquifer Storage and Recovery (ASR)]

Program Funding Dollars Requested: \$ \$14,500Total cost of planning study: \$ \$29,000*Note: Request may not exceed \$500,000***II. Applicant Information**

Applicant Name: <u>Cliff Jensen</u>	Co-Applicant Name:
Organization: <u>City of Rockaway Beach</u>	Organization:
Address: <u>PO Box 276</u> <u>Rockaway Beach, OR 97136</u>	Address:
Phone: <u>(503) 355-2291</u>	Phone:
Fax: <u>(503) 355-8221</u>	Fax:
Email: <u>cliffjensen@rockawaybeachor.us</u>	Email:

Fiscal Officer Name: <u>Sheila Weichal</u>	Principle Contact: <u>Shawn Vincent</u>
Organization: <u>City of Rockaway Beach</u>	Organization: <u>City of Rockaway Beach</u>
Address: <u>PO Box 276</u> <u>Rockaway Beach, OR 97136</u>	Address: <u>PO Box 276</u> <u>Rockaway Beach, OR 97136</u>
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Fax: <u>(503) 355-8221</u>	Fax: <u>503) 355-8221</u>
Email: <u>sheila@rockawaybeachor.us</u>	Email: <u>pwrheachcity@embarqmail.com</u>

Certification:

I certify that this application is a true and accurate representation of the proposed work for a project planning study and that I am authorized to sign as the Applicant or Co-Applicant. By the following signature, the Applicant certifies that they are aware of the requirements of an Oregon Water Resources Department grant and are prepared to implement the project if awarded.

Applicant Signature: Terri MichelDate: 9/2/08Print Name: TERRI MICHELTitle: ADMIN. ASST.**III. Planning Study Summary**

Please give a brief summary of the planning study using no more than 150 words.

This planning study would determine the feasibility of relocating the City's existing in-stream raw water impoundment on Jetty Creek to a side channel location. This study is needed to identify the engineering and financial feasibility of the project, as well as the potential environmental impacts of the project. Key components of the feasibility study include site evaluation, geotechnical investigation, hydrologic analysis, and a biological inventory. These items will provide the foundational information that will be used to: (1) determine the overall engineering feasibility, (2) estimate the project cost (i.e. financial feasibility), and (3) identify mitigation actions for potential environmental impacts of project, including construction (i.e. regulatory and environmental feasibility).



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Applicant Signature: _____ Date: _____

Print Name: _____ Title: _____

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This planning study would determine the feasibility of relocating the City's existing in-stream raw water impoundment on Jetty Creek to a side channel location. This study is needed to identify the engineering and financial feasibility of the project, as well as the potential environmental impacts that may be associated with the project. Key components of the feasibility study will include site evaluation, geotechnical investigation, hydrologic analysis, and a biological inventory. These items will provide the foundational information that will be used to: (1) determine the overall engineering feasibility, (2) estimate budgetary costs of project (i.e. financial feasibility), and (3) identify mitigation actions for potential environmental impacts of project, including construction activities (i.e. regulatory and environmental feasibility).

Section A. Common Criteria

Instructions: Answer all questions in this section by typing the answer below the question. It is anticipated that completed applications will result in additional pages.

1. Describe how the planning study will be performed. Include:
 - a. A description of the planning schedule/timeline, which includes identifying all key tasks. (Section VI provides an opportunity for a “graphical” representation of the schedule.)

The City would like to move forward with this study beginning in early 2009, commencing with site investigation study. This will include a survey and geotechnical investigation of the area. The hydrologic analysis will also begin in early 2009. These two items are expected to be completed in 4 to 6 months. The biological inventory and possible wetland delineations work will begin in early spring 2009 and continue through fall of 2009. Findings from the study are expected to be presented to the City by December 2009.

- b. When the planning study could begin.

Jan/Feb 2009

2. Provide a description of the relevant professional qualifications and/or experience of the person(s) that will play key roles in performing the planning study. If the personnel have not been decided upon, include a description of the professional qualifications and/or experience of the person(s) you anticipate will play key roles in performing the planning study.

The City will hire a private consulting firm(s) to perform this study. Due to the complexity and scope of the study, a variety of knowledgeable professionals from a variety of disciplines will need to be involved to complete this work. It is expected that the consulting firm will have, or will hire sub-consultants who have, a team of engineers, geologists, hydrologists, biologists, and botanists who will colaberate on the study. Furthermore, it will be desirable for the lead consultants to have previous experience with similar projects, knowledge of state and federal regulations, and good written and verbal communication skills.

3. What local, state or federal project permitting requirements/issues do you anticipate in order for the planning study to be conducted?

None

4. Are permits/governmental approvals required for the planning study? If yes, indicate whether you have obtained the necessary permits/governmental approval. If you have not obtained the necessary permits/governmental approval, describe the steps you have taken to obtain them.

No

5. Describe your goal (which must be based on evaluating the feasibility of developing a water conservation, reuse or storage project) and how this study helps to achieve the goal.

The existing in-stream impoundment has several problems, which include: (1) high runoff during winter storms create spikes in the raw water turbidity (>40 NTU) that increases the cost of water treatment, (2) high turbidity also leads to sedimentation that has reduced the volume of the impoundment by more than half and requires frequent dredging, (3) periods of low streamflows in summer and reduced impoundment volume create difficulty for the City to meet water demands and maintain minimum in-stream water rights, and (4) the impoundment creates a barrier to fish passage (including Coho salmon).

The goal of the impoundment relocation is to improve the reliability (i.e. quality and quantity) of the City's raw water storage with the additional benefit of improving fish passage on Jetty Creek. The idea is that by having the impoundment off-stream rather than in-stream the City can better manage water diversions to optimize raw water quality in the impoundment and ensure minimum streamflow in Jetty Creek.

This feasibility study is the first step in the design process for the impoundment relocation. This study will determine key criteria, parameters, and limitations that are critical for the design process and will also provide the City with important information that will be needed to obtain future permits from the Army Corps of Engineers, Oregon Department of Fish and Wildlife, Oregon Department of State Lands, Tillamook County and other regulating agencies.

6. Describe the technical aspects of the planning study and why your approaches are appropriate for accomplishing the goal of the planning study.

This feasibility study requires a high level of technical skills in several different professional disciplines. As previously stated, the final report will rely on information provided by engineers, geologists, hydrologists, biologists, and botanist. This work is beyond the City's staffing resources and requires outside expertise. It is anticipated that a private engineering firm will be hired to manage the work and coordinate with the various key personnel. This strategy is believed to have several key benefits to the City: (1) engineering firms have experience leading similar multi-faceted feasibility studies and (2) findings in the report will have a direct impact on the new impoundment design.

7. Describe the level of involvement, interest and/or commitment of different entities associated with the planning study (attach letters of support). Describe how these entities will benefit or be impacted by the planning study.

The Oregon Department of Transportation is in the process of completing \$2.5 million dollar project that consists of installing a bridge over Jetty Creek, reconstructing the streambed channel, and removing the existing culvert. The purpose of this project was to allow fish passage that was blocked by the existing culvert under US101. However, removal of the fish barrier will only allow an addition 700 feet of fish access upstream before the City's impoundment blocks further passage. Relocating the City's impoundment to out of stream would allow fish to travel upstream on Jetty Creek for several miles unimpeded. For this reason, ODWF is likely to be very interested and supportive of the relocating the City's impoundment

Above-Ground Storage

Please answer the following three questions **BEFORE** proceeding:

- Will the project divert greater than 500 acre-feet of surface water annually? Yes No
- Will the project impound surface water on a perennial stream? Yes No
- Will the project divert water from a stream that supports sensitive, threatened or endangered species? Yes No

If you answered "Yes" to any one of these questions, by signature on this application, you are committing to include the following elements in your planning study:

- **Analyses of by-pass, optimum peak, flushing and other ecological flows of the affected stream and the impact of the storage project on those flows;**
- **Comparative analyses of alternative means of supplying water, including but not limited to the costs and benefits of water conservation and efficiency alternatives and the extent to which long-term water supply needs may be met using those alternatives;**
- **Analyses of environmental harm or impacts from the proposed storage project;**
- **Evaluation of the need for and feasibility of using stored water to augment in-stream flows to conserve, maintain and enhance aquatic life, fish life and any other ecological values; and**
- **For a proposed storage project that is for municipal use, analysis of local and regional water demand and the proposed storage project's relationship to existing and planned water supply projects.**

Proceed in answering the following questions:

1. Describe when and to what extent the project associated with the planning study includes provisions for using stored water to augment instream flows to conserve, maintain and enhance aquatic life, fish life or other ecological values.

As part of the final design of the impoundment, specific diversion controls will be included to ensure that only the quantity allowed under the City's water rights is diverted into the new impoundment. Furthermore, during periods of low flow (i.e. summer) the control device will ensure that the minimum instream water right (0.5cfs) is met prior to diverting any water for municipal use.

2. Describe the water supply need(s) that the project associated with the planning study is intended to meet. Applicant should reference supporting documentation that would be available upon request.

The impoundment relocation is intended to improve the adequacy and reliability of the City's raw water source. Currently, the raw water impoundment has been plagued by high winter turbidity spikes. This requires the City's water treatment plant to use more chemicals to remove the sediment as well as requiring more frequent backwashing. Furthermore, sedimentation in the impoundment has reduced raw water storage and makes it difficult for the City to meet water demand and maintain minimum in-stream water rights during low streamflows. This problem will be further compounded in the future when the City's water sources deficiency is expected to be nearly 80,000 gpd (based on current water use and water system). Additional information on the adequacy and reliability of the City's raw water source, water use, and projected source deficiencies is available in the City's draft Water System

Master Plan and Water Management and Conservation Plan, which are available upon request.

3. Explain how the project associated with the planning study will meet the water supply need(s), and indicate what percentage of that need will be met. (For example: If your water supply need is 20,000 acre-feet of additional water and the project will supply 10,000 additional acre-feet, 50% of your need will be met).

The existing impoundment was designed with a storage capacity of 750,000 gallons, however due to sedimentation the capacity is frequently limited to less than half its nominal capacity (approximately 375,000 gallons). The new impoundment would have a designed volume of 1,000,000 gallons thereby providing 250,000 gallons (~0.75 acre-feet) of additional raw water storage compared to the existing design capacity and nearly 625,000 gallons (~2 acre-feet) compared to its silted-in capacity. This will not eliminate the future source deficiency in the system, however, it will provide a buffer for short periods of high water demand when streamflows are low (i.e 4th of July weekend).

4. Present convincing argument that there are no other reasonably achievable alternatives that would be able to meet the water supply need(s). Applicant may reference supporting documentation that would be available upon request.

Although the proposed project to relocate the existing raw water impoundment on Jetty Creek will not greatly increase the City's water supply, it will provide for better quality and management of its surface water supply while also have a beneficial impact on fish passage in the area. These benefits provide a unique opportunity where a project will actually have a positive impact on both the municipal water system and the environment.

5. Provide data and information on the associated project and the project's sources of water supply:
 - a. The location of the associated project. (Include the basin, county, township, range and section.)

The project is located on Jetty Creek which is part of the Nahelem Bay Basin, a sub-basin of the North Coast Basin in Tillamook County (Township 2N, Range 10W, Section 17 NE SE).

- b. The name(s) and river mile(s) of the source water and what they are tributary to, if applicable.

Jetty Creek discharges into the Nahelem Bay, approximately 1,500 feet downstream of the existing impoundment.

- c. Whether the project will be off-channel or on-channel.

The new impoundment will be constructed off-channel, however work will be done in-channel to decommission the existing impoundment.

- d. Water availability to meet project storage. (Typically, the Department evaluates new storage projects using a 50 percent water availability analysis.)

Summer streamflows typically are sufficient to allow the City to withdraw a minimum of 1 cfs, which allows the required 0.5 cfs in-stream (total streamflow > 1.5cfs). The 1 cfs is equivalent to 646,315 gpd, or approximately 65% of the new impoundment capacity.

- e. Proposed purposes and uses of stored water.

The water from the impoundment will be use to provide municipal drinking water to the City of Rockaway Beach's water system.

- f. Environmental flow needs and water quality requirements of supply source water bodies. *There is an in-stream water right on Jetty Creek (WR Certificate 59625). The required in-stream flows for this right are as follows:*

<i>Time Period</i>	<i>Minimum Flow (CFS)</i>
<i>Oct 1 - Oct 15</i>	<i>2.0</i>
<i>October 16 – March 31</i>	<i>5.0</i>
<i>April 1 – September 30</i>	<i>0.5</i>

- 6. Provide a review of the local, state, and/or federal permitting requirements and issues posed by the implementation of the project associated with the planning study.

Removal-Fill Permit from Oregon Depart of State Lands (Joint Permit with US Army Corps of Enginners)

Water Qualtiy Certification from Oregon Department of Environmental Quality

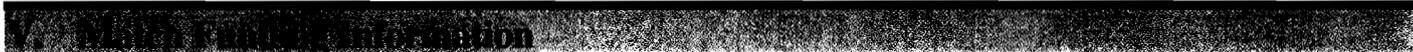
Fish Passage Requirements from Oregon Department of Fish and Wildlife (ODFW)

In-Water Timing Guidelines from ODFW

Habitat Mitiagtion Recommendations from ODFW

Archeological Reivew from Oregon Parks and Recreation Department

Condition Use Permit from Tillamook County



Applicants must demonstrate a minimum dollar-for-dollar match based on the total funding request. The match may include a) secured resources, b) previously expended resources, and/or c) pending resources. For secured funding, you must attach a letter of support from the match funding source that specially mentions the dollar amount shown in the "Amount/Dollar Value" column. For pending resources, documentation showing a request for the matching funds must accompany the application. For resources that have been previously expended, the expenditure must have occurred on or after July 1, 2005. Resources expended prior to July 1, 2005 are not eligible for match purposes.

The Type of matching funds may include:	The Status of matching funds may include:
<ul style="list-style-type: none"> • The value of in-kind labor, equipment rental and materials essential to the planning study provided by the applicant or partner*. 	<ul style="list-style-type: none"> • Secured funding commitments from other sources.
<ul style="list-style-type: none"> • Cash is direct expenditures made in support of the planning study by the applicant. 	<ul style="list-style-type: none"> • Associated and documented expenditures for the planning study from non-program sources incurred on or after July 1, 2005.
	<ul style="list-style-type: none"> • Pending commitments of funding from other sources. In such instances, Department funding will not be released prior to securing a commitment of the funds from other sources. Pending commitments of the funding must be secured within 12 months from the date of the award.

*"Partner" means a non-governmental or governmental person or entity that has committed funding, expertise, materials, labor, or other assistance to a proposed planning study. OAR 690-600-0010.

Match Funding Source (if in-kind, briefly describe the nature of the contribution)	Type (✓ One)	Status (✓ One)	Amount/ Dollar Value	Date Match Funds Available (Month/Year)
Water System Development Charge	<input checked="" type="checkbox"/> cash <input type="checkbox"/> in kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending	\$14,500	January 08
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		

SPECIAL FUND
RESOURCES AND REQUIREMENTS

WATER SYSTEMS DEVELOPMENT CHARGE
FUND 490

CITY OF ROCKAWAY BEACH

HISTORICAL DATA				ADAPTED BUDGET THIS YEAR 2007-2008	GL Acct #	DESCRIPTION RESOURCES AND REQUIREMENTS RESOURCES	BUDGET FOR NEXT YEAR 2008-2009				
ACT UAL	1st PRECEDING YEAR 06-07	2nd PRECEDING YEAR 05-06	PROPOSED BY BUDGET OFFICER				APPROVED BY BUDGET COMMITTEE	APPROVED BY GOVERNING BODY			
1											
2											
3	324,613	411,350	171,010			BEGINNING FUND BALANCE: *CASH ON HAND(CASH BASIS), OR * WORKING CAPITAL (ACCRUAL BASIS)					
4	128,708	363,227	619,283			Bal Fwd - Reimbursement	420,267	420,267	420,267	420,267	420,267
5	21,209	51,741	1,000			Bal Fwd - Improvement	3,476	3,476	3,476	3,476	3,476
6						EARNINGS FROM TEMPORARY INVESTMENTS	100	100	100	100	100
7											
8	203,100	117,270	16,560			Reimbursement Fees	16,560	16,560	16,560	16,560	16,560
9	249,367	322,636	177,750			Improvement Fees	177,750	177,750	177,750	177,750	177,750
10	926,995	1,266,224	985,583			TOTAL RESOURCES	618,153	618,153	618,153	618,153	618,153
11											
12											
13	926,995	1,266,224	985,583			TOTAL RESOURCES	618,153	618,153	618,153	618,153	618,153
14						REQUIREMENTS					
15											
16	24,815	79,060	797,013			Contract Materials - Improvement	177,000	177,000	177,000	177,000	177,000
17	102,448	55,008	157,570			Contract Materials - Reimbursement	400,000	400,000	400,000	400,000	400,000
18											
19	127,263	134,068	954,583			Total Capital Outlay	577,000	577,000	577,000	577,000	577,000
20						Transfers Out To:					
21	30,000	30,000	30,000			Water Revenue Bond (reimb)	30,000	30,000	30,000	30,000	30,000
22											
23											
24											
25	30,000	30,000	30,000			Total Transfers Out	30,000	30,000	30,000	30,000	30,000
26											
27	408,782	464,826	500			Unap Bal - Reimbursement	6,877	6,877	6,877	6,877	6,877
28	360,950	637,330	500			Unag Bal - Improvement	4,276	4,276	4,276	4,276	4,276
29											
30	769,732	1,102,156	1,000			UNAPPROPRIATED FUND BALANCE	11,153	11,153	11,153	11,153	11,153
31	926,995	1,266,224	985,583			TOTAL REQUIREMENTS	618,153	618,153	618,153	618,153	618,153

LB-10 Water SDC

VI. Project Planning Study Schedule

Estimated Project Duration: January 1, 2009 to December 31, 2009

Place an "X" in the appropriate column to indicate when each element (key task) of the project will take place.

Project Planning Study Element (Key Tasks)	2009				2010				2011 & Beyond
	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	
<i>Site Survey</i>	X								
<i>Geotechnical Investigation</i>	X	X							
<i>Hydrologic Analysis</i>	X	X							
<i>Biological Inventory</i>		X	X						
<i>Report Preparation</i>		X	X	X					
<i>Findings Presented to City</i>				X					

VI. Project Planning Study Budget

Section A

Please provide an estimated line item budget for the project planning study. An example would include: labor, materials, equipment, contractual services and administrative costs.

Line Items <i>Note: Administrative costs may not exceed 10% of the total funding requested by the Department.</i>	Unit Number (e.g. # of hours)	Unit Cost (e.g. hourly rate)	In-Kind Match	Cash Match Funds	OWRD Grant Funds	Total Cost
Site Survey	1 LS	\$2,500.00		\$1,250	\$1,250	\$2,500
Geotechnical Investigation	1 LS	\$10,000.00		\$5,000	\$5,000	\$10,000
Hydrologic Analysis	1 LS	\$5,000.00		\$2,500	\$2,500	\$2,500
Biological Inventory	1 LS	\$5,000.00		\$2,500	\$2,500	\$2,500
Final Report	1 LS	\$5,000.00		\$2,500	\$2,500	\$2,500
Administrative Costs	1 LS	\$1,500.00		\$750	\$750	\$750
Total for Section A				\$14,500	\$14,500	\$29,000
Percentage for Section A				50%	50	100%

Section B

If Grant amount requested is \$50,000 or greater, you **MUST** complete Section B. Elements (key tasks) in Section B should be the same as the elements (key tasks) in Section VI (Project Planning Study Schedule).

Project Planning Study Element (Key Tasks)	In-Kind Match	Cash Match Funds	OWRD Grant Funds	Total Cost
Total for Section B				

Totals in Section B must match the totals in Section A