

August 27, 1999
TibbettsMot

Introduced By: Larry Phillips

Proposed No.: 1999-0482

MOTION NO. 10769

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A MOTION authorizing an interlocal agreement between King County and the City of Issaquah to allow Issaquah to fund the Issaquah/Tibbetts Studies, part of an Ecosystem Restoration Study for the Lake Washington basin being conducted by the U.S. Army Corps of Engineers under sponsorship by King County.

WHEREAS, under Section 216 of the Water Resources Development Act, the U.S. Army Corps of Engineers (hereinafter "Corps") is authorized to undertake General Investigation Ecosystem Restoration Studies to help restore the ecosystems of basins in which current or past activities of the Corps may have contributed to ecological degradation, including the Lake Washington basin; and

WHEREAS, the geographic scope of such studies is the entire basin that has been affected by Corps activities, including areas that may not have been directly affected by such activities; and

WHEREAS, through an agreement with the Corps, King County is the local sponsor of an Ecosystem Restoration Study for the Lake Washington basin, which includes sub-studies that could lead to improvements in the ecological health of Issaquah and Tibbetts Creeks in the Lake Washington basin (hereinafter the "Issaquah/Tibbetts Studies"), and

WHEREAS, the health of Issaquah and Tibbetts Creeks is of great interest to the city of Issaquah, and the City wishes to act as a co-sponsor for the Issaquah/Tibbetts Studies by contributing funding and study management through an agreement with King County; and

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WHEREAS, King County and the Corps welcome the participation of the City of Issaquah as a co-sponsor of the Issaquah/Tibbetts Studies; and

WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, the Parties are each authorized to enter into an agreement for cooperative action;

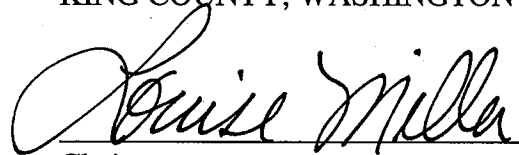
NOW, THEREFORE, BE IT MOVED by the Council of King County:

The County Executive is hereby authorized to enter into an interlocal agreement with the City of Issaquah, in substantially the same form as attached hereto, for cooperatively conducting a feasibility study of habitat restoration and erosion/sediment control projects on Issaquah and Tibbetts Creeks.

NOW, THEREFORE BE IT MOVED by the Council of King County:

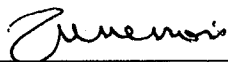
PASSED by a vote of 13 to 0 this 27th day of September, 1999.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON



Chair

ATTEST:



Clerk of the Council

Attachments: Interlocal Agreement between King County and the City of Issaquah

AN INTERLOCAL AGREEMENT BETWEEN
KING COUNTY AND THE CITY OF ISSAQUAH
FOR SPONSORSHIP OF THE ISSAQUAH/TIBBETTS STUDIES
AS PART OF THE LAKE WASHINGTON SHIP CANAL
ECOSYSTEM RESTORATION STUDY

1999.482

107694

1 This Agreement is entered into by and between King County and the City of
2 Issaquah, (hereinafter "the Parties") for the purpose of jointly providing funding and other
3 support for the non-federal share of the part of the Lake Washington Ship Canal
4 Ecosystem Restoration Study that is of particular interest to Issaquah (the
5 Issaquah/Tibbetts Studies). King County is the overall local sponsor of the Ecosystem
6 Restoration Study under a separate agreement with the U.S. Army Corps of Engineers.
7

8 WHEREAS, under Section 216 of the Water Resources Development Act, the
9 U.S. Army Corps of Engineers (hereinafter "Corps") is authorized to undertake General
10 Investigation Ecosystem Restoration Studies to help restore the ecosystems of basins in
11 which current or past activities of the Corps may have contributed to ecological
12 degradation, including the Lake Washington basin; and

13 WHEREAS, the geographic scope of such studies is the entire basin that has been
14 affected by Corps activities, including areas that may not have been directly affected by
15 such activities; and

16 WHEREAS, through an agreement with the Corps, King County is the local
17 sponsor of an Ecosystem Restoration Study for the Lake Washington basin, which
18 includes sub-studies that could lead to improvements in the ecological health of Issaquah
19 and Tibbetts Creeks in the Lake Washington basin (hereinafter the "Issaquah/Tibbetts
20 Studies"), and

21 WHEREAS, the health of Issaquah and Tibbetts Creeks is of great interest to the
22 City of Issaquah, and the City wishes to act as a co-sponsor for the Issaquah/Tibbetts
23 Studies by contributing funding and study management through an agreement with King
24 County, and

25 WHEREAS, King County and the Corps welcome the participation of the City of
26 Issaquah as a co-sponsor of the Issaquah/Tibbetts Studies; and

27 WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, the Parties
28 are each authorized to enter into an agreement for cooperative action;

29 NOW THEREFORE, the Parties agree as follows:
30

31 **I. Purpose of the Agreement**

32 This Agreement provides a means for the Parties to act jointly as co-sponsors for
33 the Issaquah/Tibbetts Studies as part of the larger Lake Washington Ship Canal
34 Ecosystem Restoration Study (hereinafter "ERS") co-sponsored by King County
35 and the Corps. The Parties, along with the Corps, share an interest in restoring the
36 ecological health of Issaquah and Tibbetts Creeks and believe that the Studies will
37 promote that interest.
38

39 **II. Background and Description of Studies**

40 The Lake Washington Basin, located generally in the western third of King
41 County, Washington, covers an area of approximately 700 square miles. The
42 Basin includes Lake Washington, Lake Sammamish, the Cedar River, and
43 numerous other regionally important water bodies and sub-watersheds, including

1 Issaquah and Tibbetts Creeks. While the Lake Washington Basin retains
 2 important natural systems for sustaining public health and fish and wildlife
 3 survival, other parts of the basin have been significantly altered by urban and
 4 suburban development, construction of the Lake Washington Ship canal, and
 5 other activities. The Corps, through its General Investigation Studies program,
 6 sponsors environmental improvement projects in basins with resources that may
 7 have been damaged by past Corps activities.

8
 9 The Issaquah/Tibbetts Studies will be conducted as part of the ERS, co-sponsored
 10 by King County and the Corps. This Agreement provides for King County and
 11 Issaquah to act jointly to co-sponsor, with the Corps, a feasibility study of habitat
 12 restoration and erosion/sediment control projects on Issaquah and Tibbetts
 13 Creeks. Activities to be conducted under the Studies are as described on pages 52-
 14 56 of the ERS Agreement between the Corps and King County, attached to this
 15 Agreement as Exhibit One and incorporated herein (study scope pages not
 16 pertaining to the Issaquah/Tibbetts studies are omitted). The study work will be
 17 conducted primarily by the Corps, with in-kind labor contributions from the co-
 18 sponsors, in the years 1999-2003. Completion of the feasibility study work will
 19 provide the basis for implementation of the projects; project implementation is
 20 subject to future decision-making processes and federal and/or local budget
 21 allocations.

22 23 **III. Issaquah/Tibbetts Studies Management and Agreement Administration**

- 24 **A.** Overall project management and direction for the Issaquah/Tibbetts Studies will
 25 be conducted by an Executive Committee, as provided for in Article IV. of
 26 Exhibit One. The Executive Committee for the Issaquah/Tibbetts Studies will be
 27 composed of the Public Works Director for the City of Issaquah, the
 28 Cedar/Sammamish WRIA Coordinator for King County, and the ERS project
 29 manager for the Corps, or their designees. Technical work and review for the
 30 Studies will be conducted by a Study Management Team composed of
 31 representatives from the Corps, King County, and Issaquah.
- 32 **B.** King County, as represented by the Cedar/Sammamish WRIA Coordinator, will
 33 act as the Administrator of this Agreement and will be responsible for: 1)
 34 necessary coordination with Issaquah to fulfill requirements of this Agreement; 2)
 35 the receipt, accounting and management of funds made available to King County
 36 to contribute to the Studies; 3) monitoring and tracking amounts of in-kind
 37 services to be provided by Issaquah. Issaquah will designate a representative
 38 responsible for coordination with King County on Agreement administration
 39 matters. Any conflict that arises regarding Agreement administration that is not
 40 resolved within fifteen (15) days of the conflict arising shall be referred to the
 41 Manager of the King County Water and Land Resources Division and the Director
 42 of Public Works for the City of Issaquah, who shall resolve the conflict.

43 44 **IV. Responsibilities of the Parties**

- 45 **A.** Issaquah:

- 1 1. Issaquah will pay all costs required of the local sponsor to conduct the
- 2 Issaquah/Tibbetts Studies (referred to in the ERS as the "Issaquah
- 3 Restoration") sub-study, including cash and in-kind contributions, less any
- 4 sponsorship contributions provided by King County as stipulated in
- 5 Agreement provision IV.B.1. below. Costs include a portion of "shared costs"
- 6 for the ERS as defined on Exhibit One page 56 which will be proportional to
- 7 total shared costs for the ERS.
- 8 2. Coordinate with King County on provision of in-kind contributions to the
- 9 study.
- 10 3. Provide a representative to serve on the Executive Committee and Study
- 11 Management Team.
- 12 B. King County:
- 13 1. King County will, at its discretion, provide staff time, services or materials
- 14 toward the required in-kind contribution for the Issaquah/Tibbetts Studies, and
- 15 will coordinate with Issaquah on provision of such contributions.
- 16 2. Provide a representative to serve on the Executive Committee and Study
- 17 Management Team.
- 18 3. Bill Issaquah for Issaquah/Tibbetts Studies costs, as outlined in Agreement
- 19 provision III.A.1., and remit Issaquah's payments to the Corps.
- 20 4. Act as Agreement Administrator as described in Agreement Section II.B.
- 21

22 V. Costs

- 23 A. Total costs for the Issaquah/Tibbetts studies are estimated at \$113,400. Sponsor
- 24 cash and in-kind required contributions are estimated at \$44,500 and \$12,200
- 25 respectively. Actual costs may differ from estimated costs.
- 26 B. Within 90 days of completion of the overall ERS, the Corps will prepare a final
- 27 accounting of all study costs incurred and contributions provided by sponsors.
- 28 Any Issaquah/Tibbetts Studies contributions provided which exceed actual costs
- 29 incurred will be reimbursed to King County by the Corps in accordance with
- 30 Article III.C. of Exhibit One. King County will remit any such reimbursements to
- 31 Issaquah within 30 days of their receipt. Issaquah will make additional study cost
- 32 contributions required as a result of actual costs exceeding estimated costs in
- 33 accordance with Article III. D. of Exhibit One.
- 34

35 VI. Billing and Payment

- 36 A. The Issaquah/Tibbetts Studies will be conducted as part of the overall ERS.
- 37 Estimated study costs are billed and paid in advance on an annual basis in
- 38 accordance with the ERS agreement.
- 39 B. The parties anticipate that as of the execution date of this Agreement the Corps
- 40 will have billed and King County will have paid the estimated costs for study
- 41 work to be conducted in calendar year 1999. Upon Agreement execution King
- 42 County will provide Issaquah with an itemized invoice showing amounts paid to
- 43 the Corps and therefore payable to King County by Issaquah. Issaquah will pay
- 44 the invoice for 1999 estimated costs within 30 days.

- 1 C. For study work to be conducted in calendar years 2000-2003, payment for
- 2 estimated costs will be due to the Corps approximately January 31 of the year in
- 3 which the work is to be conducted, and the Corps will provide notification to King
- 4 County of amounts due the previous October. Upon receiving such notification
- 5 King County will invoice Issaquah for estimated costs due. Issaquah will pay the
- 6 invoices by December 31 of the year prior to the commencement of the following
- 7 year's study work.
- 8 D. The Parties represent that funds for the Issaquah/Tibbetts Studies have been
- 9 appropriated and are available.

10
11 **VII. Effectiveness, Duration, Termination, Amendment, and Assignment**

12 The Parties agree to the following:

- 13 A. This Agreement is effective upon signature by the Parties and will remain in
- 14 effect until December 31, 2010.
- 15 B. This Agreement may be terminated by either Party upon 30 days written notice.
- 16 Study cost payments which Issaquah has provided to King County and which
- 17 King County has remitted to the Corps will not be reimbursed. King County will
- 18 refund to Issaquah any cost shares not yet remitted to the Corps.
- 19 C. This Agreement may be amended, altered, clarified, or extended only by the
- 20 written agreement of the Parties hereto.
- 21 D. This Agreement is not assignable by any Party to this Agreement, either in whole
- 22 or in part.
- 23 E. This Agreement is the complete expression of the terms hereto, and any oral or
- 24 written representations or understandings not incorporated herein are excluded.
- 25 The Parties recognize that time is of the essence in the performance of the
- 26 provisions of this Agreement. Waiver of any default shall not be deemed to be
- 27 waiver of any subsequent default. Waiver or breach of any provision of this
- 28 Agreement shall not be deemed to be a waiver of any other or subsequent breach
- 29 and shall not be construed to be a modification of the terms of the Agreement
- 30 unless stated to be such through written approval by the Parties which shall be
- 31 attached to the original Agreement.

32
33 **VIII. Counterparts**

34 This Agreement may be executed in counterparts.

35
36 **IX. Indemnification and Hold Harmless**

37 The Parties agree to the following:

38 Each Party shall protect, defend, indemnify, and save harmless the other Party, its
39 officers, officials, employees, and agents, while acting within the scope of their
40 employment as such, from any and all costs, claims, judgments, and/or awards of
41 damages, arising out of or in any way resulting from each Party's own negligent
42 acts or omissions. Each Party agrees that its obligations under this subparagraph
43 extend to any claim, demand, and/or cause of action brought by, or on behalf of,
44 any of its employees or agents. For this purpose, each Party, by mutual
45 negotiation, hereby waives, with respect to the other Parties only, any immunity
46 that would otherwise be available against such claims under the Industrial
47 Insurance provisions of Title 51 RCW. In the event that a Party incurs any
48 judgment, award, and/or cost arising therefrom, including attorneys' fees, to

enforce the provisions of this Article, all such fees, expenses, and costs shall be recoverable from the responsible Party to the extent of that Party's culpability.

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Approved as to Form

King County

By: _____
Title: _____

By: _____
Title: _____

Approved as to Form

City of Issaquah

By: _____
Title: _____

By: _____
Title: _____

10769

Exhibit One
Issaquah

AGREEMENT
BETWEEN THE DEPARTMENT OF THE ARMY
AND
KING COUNTY
FOR THE LAKE WASHINGTON
ECOSYSTEM RESTORATION AND FLOOD DAMAGE REDUCTION STUDY

7999.482

THIS AGREEMENT is entered into this _____ day, of _____, 19____, by and between the Department of the Army (hereinafter the "Government"), represented by the District Engineer executing this Agreement, and King County (hereinafter the "Sponsor"),

WITNESSETH, that

WHEREAS, the Congress has authorized the U.S. Army Corps of Engineers to conduct a study of Ecosystem Restoration in the Lake Washington Basin pursuant to Section 216, Public Law 91-611, Review of Completed Projects, River, Harbor, and Flood Control Act of 1970 and

WHEREAS, the U.S. Army Corps of Engineers has conducted a reconnaissance study of ecosystem restoration of the Lake Washington Basin pursuant to this authority, and has determined that further study in the nature of a "Feasibility Phase Study" (hereinafter the "Study") is required to fulfill the intent of the study authority and to assess the extent of the Federal interest in participating in a solution to the identified problem; and

WHEREAS, Section 105 of the Water Resources Development Act of 1986 (Public Law 99-662, as amended) specifies the cost sharing requirements applicable to the Study;

WHEREAS, the Sponsor has the authority and capability to furnish the cooperation hereinafter set forth and is willing to participate in study cost sharing and financing in accordance with the terms of this Agreement; and

WHEREAS, the Sponsor and the Government understand that entering into this Agreement in no way obligates either party to implement a project and that whether the Government supports a project authorization and budgets it for implementation depends upon, among other things, the outcome of the Study and whether the proposed solution is consistent with the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and with the budget priorities of the Administration;

NOW THEREFORE, the parties agree as follows:

ARTICLE I - DEFINITIONS

For the purposes of this Agreement:

A. The term "Study Costs" shall mean all disbursements by the Government pursuant to this Agreement, from Federal appropriations or from funds made available to the Government by the Sponsor, and all negotiated costs of work performed by the Sponsor pursuant to this Agreement.

Study Costs shall include, but not be limited to: labor charges; direct costs; overhead expenses; supervision and administration costs; the costs of participation in Study Management and Coordination in accordance with Article IV of this Agreement; the costs of contracts with third parties, including termination or suspension charges; and any termination or suspension costs (ordinarily defined as those costs necessary to terminate ongoing contracts or obligations and to properly safeguard the work already accomplished) associated with this Agreement.

B. The term "estimated Study Costs" shall mean the estimated cost of performing the Study as of the effective date of this Agreement, as specified in Article III.A. of this Agreement.

C. The term "excess Study Costs" shall mean Study Costs that exceed the estimated Study Costs and that do not result from mutual agreement of the parties, a change in Federal law that increases the cost of the Study, or a change in the scope of the Study requested by the Sponsor.

D. The term "study period" shall mean the time period for conducting the Study, commencing with the release to the U.S. Army Corps of Engineers Seattle District of initial Federal feasibility funds following the execution of this Agreement and ending when the Assistant Secretary of the Army (Civil Works) submits the feasibility report to the Office of Management and Budget (OMB) for review for consistency with the policies and programs of the President

E. The term "PSP" shall mean the Project Study Plan, which is attached to this Agreement and which shall not be considered binding on either party and is subject to change by the Government, in consultation with the Sponsor.

F. The term "negotiated costs" shall mean the costs of in-kind services to be provided by the Sponsor in accordance with the PSP.

G. The term "fiscal year" shall mean one fiscal year of the Government. The Government fiscal year begins on October 1 and ends on September 30.

ARTICLE II - OBLIGATIONS OF PARTIES

A. The Government, using funds and in-kind services provided by the Sponsor and funds appropriated by the Congress of the United States, shall expeditiously prosecute and complete the Study, in accordance with the provisions of this Agreement and Federal laws, regulations, and policies.

B. In accordance with this Article and Article III.A., III.B. and III.C. of this Agreement, the Sponsor shall contribute cash and in-kind services equal to fifty (50) percent of Study Costs other than excess Study Costs. The Sponsor may, consistent with applicable law and regulations, contribute up to 25 percent of Study Costs through the provision of in-kind services. The in-kind services to be provided by the Sponsor, the estimated negotiated costs for those services, and the estimated schedule under which those services are to be provided are specified in the PSP. Negotiated costs shall be subject to an audit by the Government to determine reasonableness, allocability, and allowability.

C. The Sponsor shall pay a fifty (50) percent share of excess Study Costs in accordance with Article III.D. of this Agreement.

D. The Sponsor understands that the schedule of work may require the Sponsor to provide cash or in-kind services at a rate that may result in the Sponsor temporarily diverging from the obligations concerning cash and in-kind services specified in paragraph B. of this Article. Such temporary divergences shall be identified in the quarterly reports provided for in Article III.A. of this Agreement and shall not alter the obligations concerning costs and services specified in paragraph B. of this Article or the obligations concerning payment specified in Article III of this Agreement.

E. If, upon the award of any contract or the performance of any in-house work for the Study by the Government or the Sponsor, cumulative financial obligations of the Government and the Sponsor would result in excess Study Costs, the Government and the Sponsor agree to defer award of that and all subsequent contracts, and performance of that and all subsequent in-house work, for the Study until the Government and the Sponsor agree to proceed. Should the Government and the sponsor require time to arrive at a decision, the Agreement will be suspended in accordance with Article X., for a period of not to exceed six months. In the event the Government and the sponsor have not reached an agreement to proceed by the end of their 6 month period, the Agreement may be subject to termination in accordance with Article X.

F. No Federal funds may be used to meet the Sponsor's share of Study Costs unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized by statute.

G. The award and management of any contract with a third party in furtherance of this Agreement which obligates Federal appropriations shall be exclusively within the control of the Government. The award and management of any contract by the Sponsor with a third party in furtherance of this Agreement which obligates funds of the Sponsor and does not obligate Federal appropriations shall be exclusively within the control of the Sponsor, but shall be subject to applicable Federal laws and regulations.

H. The Sponsor shall be responsible for the total cost of developing a response plan for addressing any hazardous substances regulated under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767, (codified at 42 U.S.C. Sections 9601-9675), as amended, existing in, on, or under any lands, easements or rights-of-way that the Government determines to be required for the construction, operation, and maintenance of the project. Such costs shall not be included in total study costs.

ARTICLE III - METHOD OF PAYMENT

A. The Government shall maintain current records of contributions provided by the parties, current projections of Study Costs, current projections of each party's share of Study Costs, and current projections of the amount of Study Costs that will result in excess Study Costs. At least quarterly, the Government shall provide the Sponsor a report setting forth this information. As of the effective date of this Agreement, estimated Study Costs are \$2,198,100 and the Sponsor's share of estimated Study Costs is \$1,099,100. In order to meet the Sponsor's cash payment requirements for its share of estimated Study Costs, the Sponsor must provide a cash contribution currently estimated to be \$649,840. The dollar amounts set forth in this Article are based upon the Government's best estimates, which reflect the scope of the study described in the PSP,

projected costs, price-level changes, and anticipated inflation. Such cost estimates are subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Sponsor.

B. The Sponsor shall provide its cash contribution required under Article II.B. of this Agreement in accordance with the following provisions:

1. For purposes of budget planning, the Government shall notify the Sponsor by 1 September of each year of the estimated funds that will be required from the Sponsor to meet the Sponsor's share of Study Costs for the upcoming fiscal year.

2. No later than 30 calendar days prior to the scheduled date for the Government's issuance of the solicitation for the first contract for the Study or for the Government's anticipated first significant in-house expenditure for the Study, the Government shall notify the Sponsor in writing of the funds the Government determines to be required from the Sponsor to meet its required share of Study Costs for the first fiscal year of the Study. No later than 15 calendar days thereafter, the Sponsor shall provide the Government the full amount of the required funds by delivering a check payable to "FAO, USAED Seattle" to the District Engineer.

3. For the second and subsequent fiscal years of the Study, the Government shall, no later than 60 calendar days prior to the beginning of the fiscal year, notify the Sponsor in writing of the funds the Government determines to be required from the Sponsor to meet its required share of Study Costs for that fiscal year, into account any temporary divergences identified under Article II.C. of this Agreement. No later than 30 calendar days prior to the beginning of the fiscal year, the Sponsor shall make the full amount of the required funds available to the Government through the funding mechanism specified in paragraph B.2. of this Article.

4. The Government shall draw from the funds provided by the Sponsor such sums as the Government deems necessary to cover the Sponsor's share of contractual and in-house fiscal obligations attributable to the Study as they are incurred.

5. In the event the Government determines that the Sponsor must provide additional funds to meet its share of Study Costs, the Government shall so notify the Sponsor in writing. No later than 60 calendar days after receipt of such notice, the Sponsor shall make the full amount of the additional required funds available through the funding mechanism specified in paragraph B.2. of this Article.

C. Within ninety (90) days after the conclusion of the Study Period or termination of this Agreement, the Government shall conduct a final accounting of Study Costs, including disbursements by the Government of Federal funds, cash contributions by the Sponsor, the amount of any excess Study Costs, and credits for the negotiated costs of the Sponsor, and shall furnish the Sponsor with the results of this accounting. Within thirty (30) days thereafter, the Government, subject to the availability of funds, shall reimburse the Sponsor for the excess, if any, of cash contributions and credits given over its required share of Study Costs, other than excess Study Costs, or the Sponsor shall provide the Government any cash contributions required for the Sponsor to meet its required share of Study Costs other than excess Study Costs.

D. The Sponsor shall provide its cash contribution for excess Study Costs as required under

Article II.C. of this Agreement by delivering a check payable to "FAO, USAED, Seattle" to the District Engineer as follows:

1. After the project that is the subject of this Study has been authorized for construction, no later than the date on which a Project Cooperation Agreement is entered into for the project; or

2. In the event the project that is the subject of this Study is not authorized for construction by a date that is no later than 5 years of the date of the final report of the Chief of Engineers concerning the project, or by a date that is no later than 2 years after the date of the termination of the study, the Sponsor shall pay its share of excess costs on that date (5 years after the date of the Chief of Engineers or 2 year after the date of the termination of the study).

ARTICLE IV - STUDY MANAGEMENT AND COORDINATION

A. To provide for consistent and effective communication, the Sponsor and the Government shall appoint named senior representatives to an Executive Committee. Thereafter, the Executive Committee shall meet regularly until the end of the Study Period.

B. Until the end of the Study Period, the Executive Committee shall generally oversee the Study consistently with the PSP.

C. The Executive Committee may make recommendations that it deems warranted to the District Engineer on matters that it oversees, including suggestions to avoid potential sources of dispute. The Government in good faith shall consider such recommendations. The Government has the discretion to accept, reject, or modify the Executive Committee's recommendations.

D. The Executive Committee shall appoint representatives to serve on a Study Management Team. The Study Management Team shall keep the Executive Committee informed of the progress of the Study and of significant pending issues and actions, and shall prepare periodic reports on the progress of all work items identified in the PSP.

E. The costs of participation in the Executive Committee (including the cost to serve on the Study Management Team) shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

ARTICLE V - DISPUTES

As a condition precedent to a party bringing any suit for breach of this Agreement, that party must first notify the other party in writing of the nature of the purported breach and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to both parties. The parties shall each pay 50 percent of any costs for the services provided by such a third party as such costs are incurred. Such costs shall not be included in Study Costs. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

ARTICLE VI - MAINTENANCE OF RECORDS

A. Within 60 days of the effective date of this Agreement, the Government and the Sponsor shall develop procedures for keeping books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to this Agreement to the extent and in such detail as will properly reflect total Study Costs. These procedures shall incorporate, and apply as appropriate, the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to state and local governments at 32 C.F.R. Section 33.20. The Government and the Sponsor shall maintain such books, records, documents, and other evidence in accordance with these procedures for a minimum of three years after completion of the Study and resolution of all relevant claims arising therefrom. To the extent permitted under applicable Federal laws and regulations, the Government and the Sponsor shall each allow the other to inspect such books, documents, records, and other evidence.

B. In accordance with 31 U.S.C. Section 7503, the Government may conduct audits in addition to any audit that the Sponsor is required to conduct under the Single Audit Act of 1984, 31 U.S.C. Sections 7501-7507. Any such Government audits shall be conducted in accordance with Government Auditing Standards and the cost principles in OMB Circular No. A-87 and other applicable cost principles and regulations. The costs of Government audits shall be included in total Study Costs and shared in accordance with the provisions of this Agreement.

ARTICLE VII - RELATIONSHIP OF PARTIES

The Government and the Sponsor act in independent capacities in the performance of their respective rights and obligations under this Agreement, and neither is to be considered the officer, agent, or employee of the other.

ARTICLE VIII - OFFICIALS NOT TO BENEFIT

No member of or delegate to the Congress, nor any resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom.

ARTICLE IX - FEDERAL AND STATE LAWS

In the exercise of the Sponsor's rights and obligations under this Agreement, the Sponsor agrees to comply with all applicable Federal and State laws and regulations, including Section 601 of Title VI of the Civil Rights Act of 1964 (Public Law 88-352) and Department of Defense Directive 5500.11 issued pursuant thereto and published in 32 C.F.R. Part 195, as well as Army Regulations 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army".

ARTICLE X - TERMINATION OR SUSPENSION

A. This Agreement shall terminate at the conclusion of the Study Period, and neither the Government nor the Sponsor shall have any further obligations hereunder, except as provided in Article III.C.: provided, that prior to such time and upon thirty (30) days written notice, either party may terminate or suspend this Agreement. In addition, the Government shall terminate this Agreement immediately upon any failure of the parties to agree to extend the study under Article

II.E. of this agreement, or upon the failure of the sponsor to fulfill its obligation under Article III. of this Agreement. In the event that either party elects to terminate this Agreement, both parties shall conclude their activities relating to the Study and proceed to a final accounting in accordance with Article III.C. and III.D. of this Agreement. Upon termination of this Agreement, all data and information generated as part of the Study shall be made available to both parties.

B. Any termination of this Agreement shall not relieve the parties of liability for any obligations previously incurred, including the costs of closing out or transferring any existing contracts.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which shall become effective upon the date it is signed by the District Engineer for the U.S. Army Corps of Engineers, Seattle District.

DEPARTMENT OF THE ARMY

KING COUNTY

BY _____
Colonel, Corps of Engineers
District Engineer
Seattle District

BY _____
Pam Bissonnette
Director, Natural Resources
King County

Attachment - Project Study Plan

LAKE WASHINGTON SHIP CANAL SECTION 216

FEASIBILITY PHASE STUDY

PROJECT STUDY PLAN

1.0 STUDY PURPOSE AND SCOPE

The primary purpose of this study is to investigate the feasibility and the extent of federal interest in developing an ecosystem restoration plan for the Lake Washington Basin near Seattle, Washington and to develop a suitable scope of work to conduct a feasibility study. Primary components of the Lake Washington Basin include Lake Washington, Lake Sammamish, the Sammamish River, the Cedar River, Issaquah Creek, the Lake Washington Ship Canal, the Hiram Chittenden Locks, and Shilshole Bay. The existing Lake Washington Ship Canal and Locks is a navigation project which also provides anadromous fish passage between the salt water of Puget Sound and the fresh water of the Lake Washington Basin. The primary areas of study for the feasibility phase are: water conservation (for fish passage) and fish passage facilities at the Locks, improvement of the fish passage facilities at the Issaquah Creek Hatchery water intake dam, and ecosystem restoration within the Lake Washington basin.

This study is part of on-going federal efforts to improve the ecosystem in the Lake Washington Basin. Other restoration projects in the basin include: (1) an 1135 project on the Sammamish River completed in 1995 and consisting of riparian plantings, sloping of river banks, reconnecting of a tributary, and placing large woody debris to enhance in-water habitat; (2) an 1135 project completed in 1998 at Thorton Creek (a tributary to north Lake Washington) consisting of wetland development and salmon rearing area; (3) an 1135 restoration project on Sammamish River completed in 1998 consisting of modifications to a weir at the outlet to Lake Sammamish and restoration of riparian habitat; (4) an 1135 project at Bear Creek (a tributary to the Sammamish River) which will restore meanders and flood plain habitat, scheduled for construction in 2000, and (5) a proposed 1135 project at the Locks which is expected to consist of strobe lights at the large lock intake structure, removable smolt slides, and mechanisms to allow for slow continuous fills of the large locks.

The National Marine Fisheries Service is expected to list Puget Sound Chinook as an threatened species in March 1999. A significant benefit of this study will be to identify limiting factors for Chinook and other salmon species in the basin and propose restoration projects to remedy the problems and facilitate recovery of all salmon species.

The primary studies for the Lake Washington Ecosystem Restoration project will include the evaluation of:

- Structural and operational changes at the Hiram A. Chittenden Locks to improve water management to provide flows for improved out migrating smolt survival and fish attraction and passage
- Juvenile fish transport in the Ship Canal and the identification of habitat requirements
- Adult fish passage at the Hiram A. Chittenden Locks
- Salmonid beach spawning areas in Lakes Washington and Sammamish
- Limiting factors in the Sammamish River system for salmon, including water quality, temperature, and habitat
- The Issaquah Creek Hatchery water intake dam system and fish passage facility to promote adult fish passage
- Cedar River gravel recruitment and movement in relation to salmon spawning requirements
- Potentially degraded ecosystem functions and processes necessary to support critical fish and wildlife habitat at the mouths of major Lake Washington tributaries, along the Cedar and Sammamish Rivers, Issaquah Creek, the Ship Canal, and Shilshole Bay.

2.0 STUDY AUTHORITY

This study is being conducted under the authority of Section 216, Public Law 91-6111, Review of Completed Projects, River, Harbor and Flood Control Act of 1970. The Secretary of the Army, acting through the Chief of Engineers, is authorized to review the operation of completed projects which were constructed by the Corps of Engineers in the interest of navigation, flood control, water supply, and related purposes, when found advisable due to the significantly changed physical or economic conditions. Findings are to be reported to Congress with recommendations on the advisability of modifying the structures or their operation, and for improving the quality of the environment in the overall public interest

The Conference Report to PL 101-54, the Energy and Water Development Appropriations Act of the 101st Congress, 2nd Session, of the House of Representatives, provided \$279,000 for a Section 216 evaluation of the Lake Washington Ship Canal, Washington, for water conservation. A reconnaissance study was initialed in March 1991 under this authority at the request of the City of Seattle. The objective of the study was to determine if there was a federal interest in pursuing further studies to investigate water conservation at the Hiram A. Chittenden Locks. Water management measures could be implemented in order to increase withdrawals from the Cedar River, a major tributary to Lake Washington for municipal and industrial water supply. The study was deferred in 1992 because of questions concerning Cedar River instream flow negotiations between Seattle (the local sponsor at the time) and state resource agencies.

In 1994, the City of Seattle requested reactivation of the study with support from King County, the City of Issaquah, and the State of Washington as potential new sponsors. In fiscal year 1997, \$190,000 was provided to complete a 905(b) Analysis and Project Study Plan. The local sponsors' interest in the reactivated study is water management at the Locks for fish passage and habitat enhancement, as well as other ecosystem restoration opportunities in the entire basin. These goals complement the City of Seattle Public Utility's ongoing development of a Habitat Conservation Plan (under the Endangered Species Act) for their water supply facility on the Cedar River and the need for the County and local interests to meet potential requirements for a future listing of Puget Sound Chinook as an endangered species.

3.0 DESCRIPTION OF STUDY AREA

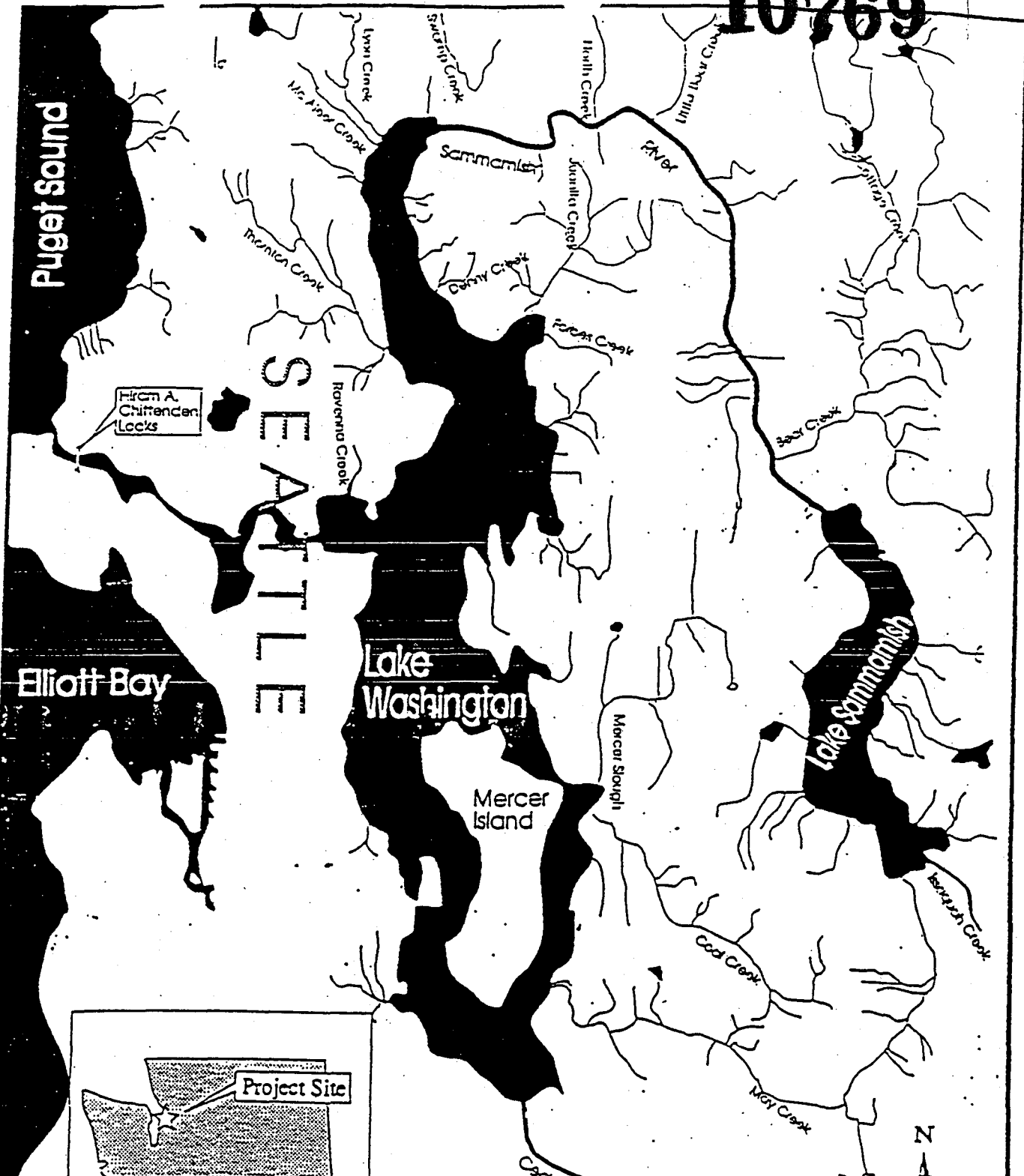
The project is located in northwest Washington State along the west slope of the Cascade Mountain range in King County and includes the cities of Seattle, Bellevue, Redmond, Renton, and Issaquah. The Lake Washington Ship Canal project encompasses the Hiram A. Chittenden Locks and associated lakes of Lake Washington and Lake Union. The hydraulic effects of the Locks include the Lake Washington basin, Lake Sammamish basin, and the Sammamish River and their tributaries. These systems were significantly altered when the Locks were constructed, reducing lake elevations, changing flooding patterns, and altering tributary gradients. The Lake Washington hydrologic basin drains 706 square miles and is comprised of three major sub-basins: the Cedar (188 square miles), the Sammamish (240 square miles), and the Lake Washington (181 square miles).

The Cedar River sub-basin is composed of the Cedar River and its tributaries. The Cedar River flows into the southern end of Lake Washington. This river was diverted into Lake Washington in approximately 1914, concurrently with the construction of the Ship Canal and Locks and the lowering of Lake Washington by 9 feet. Chester Morris Dam and lake are located on the upper Cedar River. This dam is owned and operated by Seattle Public Utilities (SPU) and provides electrical power, incidental flood control and municipal and industrial water supply (diverted at the Landsburg Diversion facility located at river mile 21). SPU is responsible for providing minimum in-stream flows in the Cedar. Inflows into Lake Washington are partially influenced by the SPU water supply diversion facility located at Landsburg on the upper Cedar River.

The Sammamish sub-basin is composed of Lake Sammamish which has a surface area of 4,900 acres and approximately 15 miles of shoreline, tributaries to Lake Sammamish (primarily Issaquah Creek), and the Sammamish River (and its tributaries) which connects Lakes Sammamish and Washington. The Lake Washington sub-basin is composed of Lake Washington and its tributaries (not including the Cedar or Sammamish Rivers), the Ship Canal and the Locks. The Ship Canal and Locks are located within the City of Seattle.

The Lake Washington basin is unique for being a major salmon producing area located in an urban setting. For example, approximately 60-70% of the entire Lake Washington

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Basin is in either an urban, suburban or rural residential area. The Lake Washington sub-basin is nearly 100% surrounded by residential and commercial development. Approximately 50% of the Cedar and Sammamish sub-basins are also in developed areas. Location of significant portions of these waters in highly developed areas has significantly increased surface water runoff during precipitation events and reduced groundwater input to streams during dry periods. Pollutants, sediment, and a changed hydrologic regime have all contributed to detrimentally affect all anadromous salmon in the basin to the point where Lake Washington runs of wild Coho and Sockeye salmon as well as Steelhead have declined dramatically over the last 15 years. The National Marine Fisheries Service (NMFS) has recently proposed Lake Washington runs of Chinook salmon (part of Puget Sound stocks) for listing as a threatened species.

In addition to the general impacts of development, the Corps has had significant effects on the Lake Washington system. The construction of the Locks in 1914 dropped the lake levels of Lake Washington and Lake Sammamish by 8 to 9 feet and significantly changed flooding patterns. This destroyed significant acres of wetlands and shoreline spawning areas, and modified the gradients of tributaries, including the Sammamish and Cedar Rivers. In the 1960s the Corps, at the request of King County, straightened and steepened the Sammamish River to provide for flood control.

4.0 RECONNAISSANCE STUDY

In 1992, the City of Seattle and Corps initiated a reconnaissance study. This study was discontinued because of unresolved minimum in-stream flow issues for the Cedar River. The study was reinitiated in 1997 at the request of the City of Seattle and King County and others, and addressed two significant problems in the Lake Washington Basin: (1) inadequate water quantities to meet economic and environmental concerns, and (2) degraded ecosystem functions and processes necessary to support critical fish and wildlife habitat throughout the basin. The reconnaissance study phase was funded with \$190,000 and accomplished the following:

- Identified problems, opportunities, and potential solutions
- Estimated the time and cost of the tasks required for a feasibility study
- Achieved consensus among local and supporting sponsors on projects to be considered and the studies required
- Established consensus with local sponsors on in-kind contributions

Corps Headquarters approved the Lake Washington Ship Canal Reconnaissance Report in July, 1998. This established a federal interest and initiation of a feasibility scope and cost sharing document. The primary areas of study concern in the feasibility study are water conservation, fish passage facilities at the Locks, and ecosystem restoration in the Lake Washington basin.

5.0 FEASIBILITY STUDY DESCRIPTION

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All water resource studies undertaken by the Corps of Engineers are conducted in two phases—a reconnaissance phase and a feasibility phase. The two-phase study procedure is designed to encourage non-Federal participation throughout the study process and to increase the certainty that planned projects will be implemented.

The purposes of the feasibility phase are:

- To conduct detailed engineering, economic, environmental and cultural investigations to support plan formulation and evaluation.
- To evaluate alternatives based on incremental benefits (environmental outputs) and costs.
- To identify the recommended plan.
- To comply with National Environmental Policy Act (NEPA) and all other relevant laws and regulations including the Endangered Species Act (ESA) and Clean Water Act (CWA)
- To estimate costs and benefits and perform an incremental cost and benefit analysis to a level of detail suitable for feasibility level analysis.
- To determine the appropriate construction cost-sharing arrangements and obtain non-Federal support, as necessary.
- To prepare appropriate documentation for Federal project authorization.
- To recommend favorable projects for authorization and construction, if appropriate.

The work shall generally be performed in accordance with established criteria and guidance, including the following:

- ER 1105-2-100, "Guidance for Conducting Civil Works Planning Studies", U.S. Army Corps of Engineers, December 28, 1990, as revised.
- EC 1105-2-210, "Ecosystem Restoration in the Civil Works Program" U.S. Army Corps of Engineers, June 1, 1995.
- ER 1110-2-1150, "Engineering and Design for Civil Works Projects", U.S. Army Corps of Engineers.
- ER 405-1-12, "Real Estate Handbook", U.S. Army Corps of Engineers.
- ER 5-7-1 (FR), "Project Management", U.S. Army Corps of Engineers.
- "Economic and Environmental Principle and Guidelines for Water and Related Land Resources Implementation Studies", U.S. Water Resources Council, March 10, 1983.

- ER 1110-2-1302, "Civil Works Cost Engineering", March 31, 1994.
- EM 1110-2-1413, "Hydrologic Analysis of Interior Areas", U.S. Army Corps of Engineers, 1987.
- EM 1110-2-1419, "Hydrologic Engineering Requirements for Flood Damage Reduction Studies", U.S. Army Corps of Engineers, 1995.
- EM 1110-2-1416, "River Hydraulics", U.S. Army Corps of Engineers, 1993.
- EM 1110-2-301, "Guidelines for Landscaping Planting at Floodwalls, Levees, and Embankment Dams", U.S. Army Corps of Engineers, 1993.

EM 1110-2-1418, "Channel Stability Assessment for Flood Control Project", U.S. Army Corps of Engineers, 1994. A summary of projects being considered for further investigation under the Lake Washington Restoration Study, alternative solutions, and the sponsor responsible for the non-federal share of study costs is presented in Table 1.

TABLE 1
SUMMARY OF PROJECTS

Project	Alternative Solutions	Sponsor Responsible For Cost
1. Water Conservation at Locks	Structural: Modification of saltwater drain Operational: Change in water management operations to include salt water drain operation, lockage changes, changes in lake elevations	Seattle Public Utilities
2. Fish Passage Improvements at Locks	Structural changes to the fish ladder, smolt slides	King County
3. Ship Canal and Estuary Restoration	Develop salmon habitat sites	King County
4. Lake Washington Beach Spawning	Improve beach spawning areas for salmon	King County
5. Lake Washington Restoration	Improve habitats at the mouths of major tributaries	King County
6. Cedar River Gravel Movement	Potential to enhance and protect gravel sources and retention in the Cedar River	King County
7. Cedar River Restoration	Develop salmon habitat sites	King County
8. Sammamish River Restoration	Develop salmon habitat sites,	King County

	establish limiting factors for salmon in the river basin	
9. Lake Sammamish Beach Spawning	Improve beach spawning areas for salmon	King County
10. Issaquah Creek Erosion	Reduce bank erosion, provide rearing habitat for salmon	King County
11. Issaquah Creek Restoration	Develop salmon habitat sites	City of Issaquah
12. Issaquah Hatchery Intake Modification	Structural modifications to the water intake dam to improve upstream salmon passage	Washington State Fish and Wildlife

As part of the reconnaissance study, potential alternatives were identified for further study. Subsequent meetings with the study sponsors and resource agencies and the Muckleshoot Indian Tribe have narrowed the field of alternatives to be evaluated and necessary studies associated with these alternatives have been identified. Several of the remaining alternatives have design and costs developed to the 10% level through previous Corps or other agency studies. The feasibility study scope of work includes the costs to evaluate all alternatives at the 10% level of design. In addition, the feasibility study scope of work includes the cost to design a "proxy" selected alternative(s) to a 35% design level. If the actual selected alternative(s) has a higher design cost than the proxy selected alternative assumed in the initial scope of work, the Federal Cost Sharing Agreement (FCSA) and scope of work may need to be revised in the future. The FCSA will be reevaluated at least on an annual basis to incorporate results of the scientific studies that are an early phase of the feasibility study and to insure that the scope of work is still relevant.

The Lake Washington Restoration Study provides a compelling opportunity to coordinate numerous projects which mutually benefit the entire Lake Washington watershed ecosystem for both fish and wildlife. Projects that will improve the ecosystem throughout the basin and assist in the successful passage of juvenile and adult salmon through the bottleneck at the Locks are expected to be implemented if incrementally justified.

6.0 LOCAL SPONSORSHIP AND STUDY PARTNERS

There are two local non-federal umbrella sponsors, the City of Seattle Public Utilities and King County. Two Feasibility Cost Sharing Agreements will be signed - specific to the jurisdictional area of each sponsor. These two local sponsors will act as an umbrella sponsors for several supporting sponsors. The supporting sponsors include:

- City of Issaquah
- State Department of Fish and Wildlife
- Lake Washington and Lake Sammamish Forums

The two local umbrella sponsors will each sign their cost sharing agreements with Seattle District Army Corps of Engineers and coordinate all monetary transactions with the Corps while inter-local agreements between the local umbrella sponsors and supporting sponsors will define local/supporting sponsor responsibilities. Sponsor contribution for the Feasibility Phase is 50% of associated costs. An overall 25% of study costs can be provided as in-kind services performed by local and/or supporting sponsors. In-kind services will be performed in accordance with the schedules, narrative descriptions and budgets included in this Project Study Plan. Acceptance of the in-kind service products will be the responsibility of the U.S. Army Corps of Engineers Seattle District. Executive Committees will be formed for each FCSA, with representatives from the Corps of Engineers, Seattle Public Utilities, King County, the City of Issaquah, and the Washington State Department of Fish and Wildlife.

The Lake Washington Basin Restoration Study costs \$4,192,300 for 4 1/2 years of feasibility. Under the Seattle FCSA, the total study costs are \$1,994,200. In-kind is \$294,660, and the local sponsor will provide \$702,465 cash. Under the King County FCSA, the total study costs are \$2,198,100. In-kind is \$449,320, and the local sponsor will provide \$649,840. In-kind for the Seattle FCSA is 15%; for the King County FCSA 20%.

7.0 STUDY SCHEDULE AND MILESTONES

The Seattle District is responsible for keeping the milestone schedule shown in Table 2. The start date for this schedule and all subsequent dates are contingent upon execution of the Feasibility Cost Sharing Agreement (FCSA) in May 1999. Attachment 1 is a detailed study schedule Gantt Chart.

TABLE 2
MILESTONE SCHEDULE

Milestone	Activity
May 1999	Execute Feasibility Cost Sharing Agreement
June 1999	Receive Federal Funds/Begin Feasibility Study
June 1999	Initiate Technical Studies
May 2002	Fisheries Studies Completed
May 2002	Technical Work Completed
Feb. 2003	Draft Report Completed
June 2003	Feasibility Review Conference
Sept. 2003	Approve Record of Decision and Start Plans and Specification

8.0 SCOPE OF WORK

The technical work to be performed consists of a feasibility study level according to the scope of task activities and budget identified below. The goal of the feasibility study is to develop a set of ecosystem restoration projects to provide benefits primarily for salmon in the Lake Washington Basin. This work includes the conducting and evaluation of technical studies, the design of restoration sites, and the analysis of structural and operational changes at the Hiram A. Chittenden Locks.

The majority of the projects under consideration for the feasibility study require at least one year of data gathering, which is often seasonally limited based on either salmon or vegetation life cycles, or river conditions. Based on our findings, alternatives will be developed and compared for benefits, costs, and environmental and socio-economic impacts. An incremental analysis of alternatives will be conducted to insure the type and scale of project selected is appropriate. The feasibility phase will produce a draft and final feasibility report and environmental impact statement. Both documents will have full technical review by local sponsors, resource agencies and groups, consultants, and Corps staff as appropriate. The environmental review process will insure public participation.

The feasibility study scope of work has been broken down by project/study area as well as by discipline at the request of the local sponsors to facilitate the preparation of Memorandums of Agreement and funding. Costs have been rounded in the Word Document Scope of Work. In-kind work is shown in bold in the Scope of Work, along with grand totals for Technical Offices with several costs under one study. Enclosure 1 is a summary table of overall Federal, non-Federal, and in-kind costs by fiscal year by FCSA. A summary table of study costs by geographical area/project and discipline is included as enclosure 2. A detailed study scope of work, broken down by the umbrella sponsor, project, and discipline is included as enclosure 3. The costs in the scope of work include District overhead. Supervision and administration costs are included in "Shared Costs". SR&A, preparation of the draft and final feasibility report and environmental impact statement, technical review, coordination of the Fish and Wildlife Coordination Report, and some general plan formulation/coordination is included in "Shared Costs" which have been distributed proportionately between the various study projects. This was necessary to fairly spread these costs between a number of study sponsors who are funding specific studies. An overall study contingency of 10% was added to the study budget to accommodate unforeseen requirements. This has been added in the scope of work by project. There are minor discrepancies between the Word Document Scope of Work and the Summary Tables because of rounding, minor changes in hourly rates, etc. The FCSA costs are based on the Summary Tables.

For accounting and administrative purposes tasks, including in-kind services, will be organized under the Civil Works Breakdown Structure for entry into the Project Management Information System (PROMIS).

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Table 3 - Summary of Costs by Fiscal Year

	1999	2000	2001	2002	2003
Seattle FCSA					
COE	\$116,905	\$418,755	\$302,560	\$112,450	\$46,455
In-Kind	\$64,650	\$168,500	\$32,350	\$15,340	\$13,820
Sponsor	\$52,255	\$250,255	\$270,210	\$97,110	\$32,635
Total	\$233,810	\$837,510	\$605,120	\$224,900	\$92,910
King County FCSA					
COE	\$263,375	\$448,953	\$286,813	\$43,023	\$56,910
In-Kind	\$185,250	\$118,305	\$105,105	\$20,285	\$20,285
Sponsor	\$78,125	\$330,648	\$181,708	\$22,738	\$36,625
Total	\$526,750	\$897,905	\$573,625	\$86,047	\$113,820
Total Project Costs	\$760,600	\$1,735,400	\$1,178,700	\$310,900	\$206,700

Issaquah Creek Restoration

Discipline and Associated Studies	Total Costs	Total Issaquah In-Kind Costs		FY 1999		FY 2000		FY 2001	
				Total	In-Kind	Total	In-Kind	Total	In-Kind
Environmental Restoration Site Surveys and Designs Cultural Resources	\$10,000 \$500			\$10,000		\$500			
Total Environmental	\$10,500			\$10,000		\$500			
Hydrology and Hydraulics	\$27,800			\$4,170		\$23,630			
Soils									
Tibbetts Creek Erickson Site	\$1,000 \$500								
Total Soils	\$1,500					\$1,500			
Civil									
Tibbetts Creek Erickson Site	\$2,000 \$2,500								
Total Civil	\$4,500					\$4,500			
Economics	\$5,000								
Surveying	\$12,800			\$12,800					
Cost Estimate	\$1,500					\$1,500			
Real Estate	\$12,000		\$6,000	\$7,200	\$3,600	\$4,800	\$2,400		
Study Management	\$23,000		\$5,000	\$5,750	\$1,250	\$6,750	\$1,250	\$5,750	\$1,250
Shared Costs	\$19,500			\$5,100		\$5,100			
Subtotal	\$118,100		\$11,000	\$45,020	\$4,850	\$52,280	\$3,650	\$5,750	\$1,250
Contingency (10%)	\$11,800		\$1,100	\$4,500	\$500	\$5,200	\$400	\$600	\$100
TOTAL	\$129,900		\$12,100	\$49,520	\$5,350	\$57,480	\$4,050	\$6,350	\$1,350

COST SUMMARY TABLE

Total Project Cost	\$129,900
50% Total Project Cost = Sponsor Cost = Corps Cost	\$64,950
Total In-Kind Cost	\$12,100
Sponsor Cost Minus Total In-Kind Cost	\$52,850

Issaquah Restoration (Lead Agency: Corps/King County. Supporting Sponsor: City of Issaquah)

Erickson Site

Problem Statement The City of Issaquah has purchased a piece of undeveloped land upstream of the city for park and environmental restoration purposes. There is presently a berm next to the river which is to protect a nearby county road. It is proposed that the berm be breached or removed to allow the river to meander more significantly. The site would provide fish habitat, wetland habitat, and flood storage. A new levee would be constructed to protect the road.

Proposed Studies Hydrology and hydraulics would need to evaluate the flood storage potential of the site, and the needs for a new berm. Civil and environmental resources would design a new berm, determine site features, and determine the least expensive way to remove the existing berm meander the river. Surveys of the site would be required. There would be a benefits analysis and an economic justification study.

Tibbets Creek and Culvert

Problem Statement Tibbets Creek has been altered by mining and urban development. The project considered for the General Investigation study is in an area which has been mined for coal. The disruption of the creek for the mining process has removed spawning and rearing habitat, and the erosion of mine tailings damages downstream areas. Other areas of Tibbets are being restored by either private parties or the City of Issaquah. The completion of all of the projects will greatly increase Tibbets ability to provide for salmon habitat. A culvert downstream of the Bianca Mine now serves as a partial block to salmon migration. This culvert would likely be removed as part of the General Investigation study.

Proposed Studies The most effective means of removing mining debris from the creek and floodplain will be evaluated. The addition of riparian vegetation and LWD to the project site will also be examined. The culvert will be removed, allowing free movement of fish through this area. The road previously requiring the culvert is no longer used. Adequate surveys have been done for these sites. A benefit analysis and economic analysis will be required.

Costs by Discipline

ENVIRONMENTAL

Restoration Site Surveys and Designs – Includes baseline habitat survey at each site, plus biologist labor for design work, benefit calculation, etc.

Environmental Coordinator	16	\$500/day	\$ 8,000
Biologist Labor	4	\$500/day	\$ 2,000
TOTAL			\$10,000

Cultural Resources Conduct literature search and visual field survey of potential restoration sites. \$500

HYDROLOGY AND HYDRAULICS

Tibbetts Creek: Project has two elements. Upstream near the city limits, there is an old coal mine tailings heap in the channel valley which constricts flow and is believed to deleteriously contribute to sediment deposition in undesirable locations downstream. The stream also flows through a culvert in the area of the heap, which becomes partially blocked with debris during high flow events. King County has proposed a preferred alternative in their Alternative Analysis Report (Alternative 2) for this element of the Tibbetts Creek restoration, it is assumed for the purposes of this estimate that that preferred alternative will be pursued and restorative design can proceed with a minimum of additional field work and analyses. Hydraulic support for this element is assumed limited to the determination of restored channel plan and section dimensions, hydraulic properties such as flow depth and mean velocity through the restored reach, and stable channel and toe design based on tractive force and incipient motion criterion and COE bank protection design formulae. It is assumed that existing hydrologic information (low and peak flow data) is available for this element and that existing channel geometry (profile and section) will be obtained in the field by the hydraulic engineer by the method of profile leveling.

Field Work (leveling and site eval.)	1	\$600/day	\$600
Other Hydraulic Analyses and Design	3	\$600/day	1,800
Stability/Transport and Bank Design	3	\$600/day	1,800
Technical Review	1	\$720/day	720
Reporting, closure, meetings	3	\$600/day	1,800
Contract Administration (incl. 2 below)	2	\$525/day	1,050
TOTAL			\$7,770

The second element concerns a perched culvert at the Newport Way crossing. Apparently the culvert needs to be replaced, set at the existing channel invert, and made suitable for fish passage. Appropriate fish passage and other design criterion need to be provided to HH section in order to specify a suitable replacement culvert. Additionally, it is assumed that appropriate peak and low flow values exist and/or will be made available to for culvert design. Hydraulic analyses will be limited to sizing of a suitable culvert and evaluating suitability for fish passage, outlet velocities and scour potential. One day of field work anticipated to obtain existing culvert and channel geometry.

Field Work	1	\$600/day	\$600
Culvert Analyses and Design	4	\$600/day	2,400
Other Hydraulic Analyses	1	\$600/day	600
Technical Review	1	\$720/day	720
Reporting, closure, meetings	2	\$600/day	1,200
Contract Administration included above			
TOTAL			\$5,520

The third Tibbetts Creek element involves the potential restoration of Tibbetts Creek at it's mouth on Lake Sammamish. Assumes hydraulic issues can be satisfactorily

addressed at the site by section averaged, steady, uniform flow methods. Includes one day in field evaluating tributary mouths and gathering representative cross-sectional data. Assumes flood hazard evaluations and detailed sediment transport analyses are not required.

Issaquah Creek, Erickson site restoration An overbank area of approximately 10 acres which is somewhat isolated from overbank flows due to a berm on the right bank of the creek. Berm removal and setback is anticipated, and requires steady-state (assuming overbank storage gained is small in comparison to typical flood volumes) characterization of existing and with-project flood water surface profiles, delineation of at-site with-project floodplain and overbank flood depths and velocities in order to support design of setback berm. Assumes that existing cross sectional data will be obtained by COE survey section for backwater modeling analyses, and that that data will be incorporated within an existing HEC-RAS model to be supplied by the sponsor. Hydrologic analyses will not be conducted for this project, but engineers will use verified discharge-frequency and depth-duration curves for Issaquah Creek from either COE HH section (1987 vintage) or from other sources.

Coordination	2	\$600/day	\$1,200
Field work	1	\$600/day	600
Hydrologic Review	2	\$600/day	1,200
Hydraulic Modeling (HEC-RAS)	7	\$600/day	4,200
Other Hydraulic Analysis	3	\$600/day	1,800
Technical Review	2	\$720/day	1,440
Reporting and closure	5	\$600/day	3,000
Contract Administration	2	\$525/day	1,050
TOTAL			\$14,490

SOILS/CIVIL

Soils/Civil Work. Determine suitability of site for restoration, determine degree of contamination. Evaluate slope stability, design methods to reduce erosion, stabilize slopes. Design restoration features, including bank protection, removal of spoils, revegetation, and LWD.

Tibbetts Creek	5	\$550/manday	\$2,750
Erickson Site	6	\$550/manday	\$3,300
TOTAL			\$6,000

ECONOMICS

Economic Evaluation. Provide benefit analysis of restoration sites, including incremental evaluation. Consider NED and ER tradeoffs. Provide text for report, assist with financial plan and PCA.

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	8	\$600/manday	\$4,800
Clerical	.5	\$300/manday	\$ 150
TOTAL			\$5,000

SURVEYING

Surveying. Assume adequate survey exists for Tibbetts Creek site. Survey Elliot site, develop 2 foot contour interval maps, provide 6 x--sections.

LANDSURV	40 crew hours @ \$275/hr	\$11,000
PHOTOMAP	24 man hours @ \$75/hr	\$1,800
TOTAL		\$12,800

COST ESTIMATING

Cost Estimating. Provide cost estimates for construction, maintenance and monitoring of restoration sites. Provide MCASES and text for feasibility report.

	2.5	\$600/manday	\$1,500
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REAL ESTATE

Real Estate Coordination. Provide rights of entry, preliminary real estate drawings, gross appraisals, and cost estimate for real estate for restoration sites. Coordinate with DNR. Assist in preparation of the draft PCA.

Realty specialist, attorney	7	\$600/manday	\$4,200
CADD, Reprographics	2	\$500/manday	\$1,000
Clerical	2.5	\$300/manday	\$ 750
Issaquah	.12	\$500/manday	\$6,000
TOTAL			\$12,000

STUDY.MANAGMENT

Study Management. Provide general study management for restoration sites, including preparing work requests, managing study budget, coordinating the study team, coordinating with study sponsors and pertinent agencies and groups, and public involvement. Provide guidance on plan formulation, alternative selection.

Study Manager	26	\$600/day	\$15,600
Program Manager	3	\$500/day	\$1,500
Clerical	3	\$300/day	\$ 900
Issaquah	10	\$500/day	\$ 5,000
TOTAL			\$23,000

SHARED COSTS

10769

Shared Costs. There are a number of costs that apply proportionately to all the projects being evaluated under the Lake Washington General Investigation Study. These include costs for technical review, feasibility report preparation, preparation of the environmental impact statement, general plan formulation, Fish and Wildlife Report coordination, preparation of a monitoring plan, and supervision and administration costs for each discipline. These costs have been lumped as one cost item per project type.

32

\$600/manday

\$19,500