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Prioritizing Annual Operations and Maintenance (O&M) General Funding for USACE Dam Projects using the Analytic Hierarchy Process

**A Report Submitted by The George Washington University Institute for Crisis,
Disaster, and Risk Management**

in support of

**Planning and Management Consultants, Limited (PMCL) Task Order # 62:
Assessment and Incorporation of Risk Management Principles into
USACE Civil Works Infrastructure**

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EXECUTIVE SUMMARY

Project Summary

The project summarized in this report had two objectives. The first objective was to develop and test a valid and viable methodology that could be used by the USACE to prioritize Operations and Maintenance (O&M) general funding between civil infrastructure protection and ongoing maintenance funds. Various multi attribute decision modeling and analysis methodologies were studied and a method based on the Analytic Hierarchy Process (AHP) as implemented in the software tool Expert Choice was proposed for use in a USACE case study. The second objective was to demonstrate the prioritization model in a case study. The North West Division (NWD) was chosen as geographical domain for testing this integrated prioritization methodology and nine USACE project sites on the Columbia/Snake River system were selected as the test bed. This case study required the prioritization of several security work packages and hundreds of operations and maintenance work packages. The case study demonstrated that security related O&M work packages may be integrated into the O&M budget using a structured prioritization method.

The AHP based multi-attribute Decision Model constructed for this demonstration project was a four level hierarchy designed to reflect the USACE strategy of managing by business lines. The top Level (Level 1) states the USACE O&M goal, to maintain the design benefits of USACE projects by meeting business line performance objectives within a constrained budget. The second level contained the ends objectives of maintaining the business line benefits at all nine projects. The third level of the model consisted of means objectives, business line specific performance objectives based on the USACE budget EC. The fourth and final layer consists of business line specific attributes against which work packages may be directly evaluated. The population of this model's weights based on the comparison of importance of attributes at each level was a critical part of the project analysis and is described in detail in the report and its appendices.

The nine projects produced 990 priority 1 and 2 work packages that were evaluated during the 2005 budget process. The USACE ABS system was used as a source for data describing these packages. In a final evaluation experiment, 379 work packages from 4 projects were evaluated and prioritized using the AHP model. In spite of strong support from the USACE Institute for Water Resources (IWR) project managers and NWD district and division staffs, the O&M prioritization exercise described in this paper was limited by time and resource constraints and by data availability. In spite of these constraints and problems the test was successful in that it demonstrated:

- a) The ability to structure the O&M budget prioritization process for a river basin system as a business line based decision problem,
- b) The use of decision support tools (Expert Choice, ABS Cube, Excel) to support this process, and
- c) The integration of security related work packages with traditional O&M work packages.

Results and Conclusions

The Expert Choice software tool is a sophisticated decision support tool based on the Analytic Hierarchy Process (AHP) and is designed to help decision makers quantitatively prioritize the alternatives available for any decision. Expert Choice proved to be an excellent tool for developing this

decision structure and for guiding decision makers in the assignments of the weights to each level of decision criteria. This test demonstrated that Expert Choice provides the capability for structuring and weighting decision criteria developed in the Budget Engineering Circular (EC) and other USACE policy documents and that Expert Choice is easily linked to Excel spread sheets for evaluation and analysis purposes.

This test also demonstrated that the security related work packages could be seamlessly introduced into the O&M prioritization process. This was done by recognizing that security work packages contribute to the prevention of catastrophic failure and that they also contribute to all business lines. There were 18 security related work packages included in the 379 work packages evaluated in the test. Thirteen of these packages received a higher relative ranking using the Expert Choice model than they did using the original Divisional priority list. Sensitivity analysis demonstrating the impact of increasing the value of preventing low probability/high consequence events shows that the weight of this criterion raises the relative rating of security related projects.

The prioritization of a large number of disparate work packages was made difficult by two structural issues in the USACE budget process. The first was the wide range in size of the packages to be evaluated. The value of individual work packages ranged from under \$1,000 to \$5,000,000. A second and more difficult issue to deal with is the weak linkage between the work package descriptions and the business line definitions and performance measures.

Two strategic issues must be resolved before an effective O&M prioritization methodology can be implemented. First, the strategic objectives of the USACE should be more directly reflected in the budget process. If the USACE is managing by business lines, it must be possible to evaluate work packages relative to business line performance measures. Secondly, comparison between business lines requires improving the consistency among business lines in the calculation of benefits. The USACE business lines vary significantly on their interpretation of benefit calculation ranging from extensive use of indirect benefits (recreation) to measurement of only immediate, direct benefits (navigation).

Recommendations

The following recommendations are based on the experience and results of this pilot project:

- (1) The USACE O&M budget prioritization process should support the strategic direction and priorities of the Corps. The USACE strategic direction implies a combination of achieving benefits by geographical system (e.g. river basin) and managing by business lines.
- (2) The contribution of business lines to the overall goal of a system or region should be benefit based. The calculation of benefits attributed to business lines should be consistent in both how benefits are assigned values and in the degree to which indirect benefits are considered.
- (3) Performance measures used to compare projects with respect to business lines should be selected based on existing budget EC measures. Although unitary measures were used in this test project, linear combinations of performance measures could be easily constructed.
- (4) Performance measures used to rate work packages should consider both the impact on gradual loss of benefits and catastrophic loss of benefits as demonstrated in the test model.

- (5) Expert Choice can be used to structure a budget prioritization tool consisting of a decision hierarchy and to populate the model with weights at the headquarters (HQ) or Division level. The model developed in this test could serve as a starting point for a USACE wide effort.
- (6) A facilitated executive level workshop to structure and populate an O&M decision model based on the model developed for this project should be conducted at USACE HQ.
- (7) Standards should be set for constructing work packages that ensure there is a minimum size (e.g. \$10,000) and that joint (multi business line) work packages clearly indicate their linkages and relative contribution to business lines.
- (8) If an O&M prioritization model is developed, the development of structure should be performed at the HQ level. The population of the model with weights should be a HQ and Divisional responsibility. The Expert Choice model could then be used to develop a spreadsheet application similar to that developed in this test for rating work packages. This spread sheet should be integrated with the Automated Budget System (ABS) cube or other USACE budget software in such a way that the rating process could be distributed over time and space, eliminating the need for costly travel for group meetings at division headquarters. The actual rating process could best be conducted by Division and District personnel using this spreadsheet application.

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PRIORITIZING ANNUAL OPERATIONS AND MAINTENANCE (O&M) GENERAL FUNDING FOR USACE DAM PROJECTS USING THE ANALYTIC HIERARCHY PROCESS (AHP)

1. Objective

The purpose of this project was to meet the following deliverable requirements from two linked U.S. Army Corps of Engineers (USACE) contracts.

W91278-04-P-0180 17—Task 3

Outline a position paper on viable prioritization methodologies that could be used by USACE to prioritize Operations and Maintenance (O&M) general funding between civil infrastructure protection and ongoing maintenance funds.

DACW72-00-D-001, Task Order 62—Assessment and Incorporation of Risk Management Principles into USACE Civil Works Infrastructure: Task 1

Conduct a review of academic and private sector literature, documents and research on multiple hazard decision making and develop a draft position paper, outline a multi attribute model and methodology based on available software to prioritize O&M general funding between civil infrastructure protection and ongoing maintenance investments.

As part of Task Order 62, in late April 2004, The George Washington University (GWU) completed a review of academic and private sector literature, documents and research on hazard and vulnerability analysis and decision making, relative to the operations and maintenance of dams and associated navigational locks. Particular attention has been paid to methodologies developed or used by USACE. Various multi attribute decision modeling and analysis methodologies were summarized and a method was proposed for use in a USACE case study that focuses on the Columbia—Snake River system in the North West Division (NWD).

The objective of the Planning and Management Consultants Limited (PMCL)/GWU task order was to demonstrate a prioritization methodology that would allow the USACE to integrate the competing critical infrastructure protection (security) requirements and maintenance requirements that must be funded out of the USACE O&M budget. The geographical domain selected for testing this integrated prioritization methodology was determined to be the Columbia—Snake River system. The security and maintenance work packages considered in the case study were those associated with the nine USACE operated Pacific Northwest Coordination Agreement (PNCA) dams, eight of which have navigational locks. This case study required the prioritization of several security work packages and hundreds of operations and maintenance work packages.

- (a) The O&M and security work packages were evaluated by USACE experts using the Analytic Hierarchy Process (AHP) as implemented in the tool Expert Choice. The attributes selected in this model were based on a review of the AHP demonstration project used by USACE Headquarters (HQ) to prioritize maintenance backlogs, review of the USACE budget Engineering Circular (EC), and discussions with USACE HQ and NWD personnel. The AHP ranking produced an interval scale of measures.
- (b) The next step of the methodology was a trade-off analyses relying on the judgment of USACE divisional managers, using a multi attribute utility methodology.

This report:

- Demonstrates that security related O&M work packages may be integrated into the O&M budget using a structured prioritization method;
- Explains in detail, the multi attribute model/methodology demonstrated in this project that is intended to improve the current budgeting process and to help prioritize O&M general funding between civil infrastructure protection and ongoing maintenance investments for the USACE;
- Provides a critique to the current budgeting processes and systems in place within the USACE; and
- Provides recommendations to the USACE managers in order for a more efficient and effective budgeting process.

2. Modeling Process

The model developed and explained here in detail was been revised and updated through site visits to the Portland District of the NWD and several meetings held with relevant USACE representatives from the division, district and HQ levels and from the Institute for Water Resources (IWR).

The first site visit to the NWD in Portland, Oregon (OR) was made on June 17-18, 2004. The intention of this visit was to meet with the officials in the NWD, and define the project scope based on the Columbia River System, (both physical and work package level) as well as to gain insight on how the Critical Infrastructure Security Projects (CISP) and O&M work packages were handled in the prioritization process during the budget resource allocation. This meeting involved representatives from USACE HQ, the USACE IWR as well as representatives from the District and Division levels. The general rules/requirements of the USACE budgeting process, necessary for constructing the AHP model were captured through interviews and briefings. It was observed that during December-January of each year, the NWD provides O&M guidance to its Districts, and the Districts develop work packages of their own, based on historical level of funding, backlogs, and the existence of new projects. Then budget guidance is received from USACE HQ in March, and accordingly the work packages are first prioritized at Project Level, and passed on to the District where they are reprioritized and entered to an Automated Budgeting System (ABS). After the District Level prioritization is done, the same work packages are prioritized at the Division Level and Division priorities are entered into the ABS. Lastly, these work packages are re-prioritized and receive final ranking at the HQ level.

Other decisions that came out of this visit can be summarized as follows:

Performance criteria to evaluate the relative importance of work packages in O&M Expert Choice (EC) Model should include:

- (1) Non business line and multi business line activities (e.g. studies, Environmental Impact Studies, EIS);
- (2) Impact of time delays on criticality;
- (3) Potential for increased costs due to maintenance deferral;
- (4) System wide impacts; and
- (5) Explicit consideration of low probability, high consequence events.

Nine project sites on the Columbia—Snake River system (Dworshak, Lower Granite, Little Goose, Lower Monumental, Ice Harbor, McNary, John Day, The Dalles, and Bonneville) were chosen as the domain for the demonstration of our model. A summary table for the characteristics of these projects is provided below. For more information please refer to Appendix F. The projects included in our study belong to Portland and Walla Walla Districts of the Corps NWD. As can be seen from the table, Dworshak is the only storage type of dam that does not have a navigation function, while all the others have the primary function as providing navigation facilities through their lock systems. McNary and its successor dams have increasing levels of annual discharges, since the Snake River running through the Washington State is merged with the Columbia River and the total discharge passes through McNary first, then John Day, the Dalles, and lastly through Bonneville.

Table 1 - Study Domain – Columbia River System Dams (in the order of upstream to downstream)

Name of dam	Type	Location	average annual discharge (cfs)	storage amount (acre-ft)	power generation capacity (KW)	in service since	uses	nav. Locks
Dworshak	Storage	Clearwater River, Idaho	5,820	2,020,000	400,000	1973	power, recreation, flood control, irrigation, fish & wildlife	N
Lower Granite	Run-of-river	Snake River, WA	49,680	n/a	810,000	1975	power, recreation, navigation, irrigation, fish & wildlife	Y
Little Goose	Run-of-river	Snake River, WA	47,230	n/a	810,000	1970	power, recreation, navigation, fish & wildlife	Y
Lower Mounmental	Run-of-river	Snake River, WA	47,670	n/a	810,000	1969	power, recreation, navigation, irrigation, fish & wildlife	Y
Ice Harbor	Run-of-river	Snake River, WA	47,680	n/a	603,000	1961	power, recreation, navigation, irrigation, fish & wildlife	Y
McNary	Run-of-river	Columbia River, OR/WA	169,800	n/a	980,000	1953	power, recreation, navigation, irrigation, fish & wildlife	Y
John Day	Run-of-river	Columbia River, WA/OR	172,400	n/a	2,160,000	1968	power, recreation, navigation, flood control, irrigation, fish & wildlife	Y
The Dalles	Run-of-river	Columbia River, OR/WA	177,900	n/a	1,780,000	1957	power, recreation, navigation, fish & wildlife	Y
Bonneville	Run-of-river	Columbia River, OR/WA	183,300	n/a	1,050,000	1938	power, recreation, navigation, fish & wildlife	Y

(Source: Columbia River Study, 2001)

As a follow up to the meetings held at the NWD, another meeting was held with the budget specialist at the HQ USACE on June 28, 2004. During the meeting, the project team was briefed on the ABS, obtained the accompanying software (ABS Cube), and the real budget line item database belonging to the nine selected dams’ O&M and security work packages. The ABS Cube and the sample data helped us find answers to the questions we had in mind to develop the model. Essentially, the sample database characteristics helped formulate the foundation of our model. The questions were as follows:

- (1) Typically how many work packages are there in a Fiscal Year (FY) in the Corps Budget for the NWD involving the 9 projects,
- (2) What category/type, size and number of work packages exist in a typical current FY (preferably the last one that the Corps worked on, which was the 2005 data),

- (3) What is the distribution pattern of the work packages across (a) business lines, and (b) 9 projects? Is there a consistent or even distribution pattern?
- (4) How many security work packages are there, and which business lines do these security packages fall under?
- (5) How are security work packages related to business lines?
- (6) Do we need to include both the operations and the maintenance types of work packages in our study?
- (7) What type/category, size projects were ranked high by the HQ? Were there any patterns in prioritizing work packages? (e.g. 'must do' and/or legally required or urgent work categories).
- (8) Were the HQ, Division, and District Prioritization lists identical, or were there any differences in selected priorities?

In response to the above questions, the 2005 O&M Budget Data characteristics were found to be as follows:

- (1) The total number of work packages in the 2005 FY budget for the 9 Projects in the NWD was 3,460. Those work packages with the "Funding Level 3" label were discarded leaving only the "Funding Level 2" data (no Funding Level 1 data existed). This decreased the number of work packages to 990. (See Table 2 and

Table 3 for statistics on the data). There are 159 work packages which were not included in the analysis here. Statistics for those labeled as “Funding Level 3” data are given in **APPENDIX D**.

- (2) The work packages were categorized according to five business lines, and a sixth a category labeled as “joint”. The joint work package category included those work packages that included multiple business lines. A final category, unique to the Columbia-Snake system was the Joint-Hydro category that included those work packages that would be funded jointly by the USACE and the Bonneville Power Administration (BPA).
- (3) The distribution of the number of work packages under each business line had a wide variation. For example, there were a total of only eight work packages under the Hydropower business line four of them being operations and four maintenance type work packages. All of the four maintenance work packages were security work packages that were identified through RAM-D¹ output. Table 2 and Table 3 give the statistics on the category, type and number of work packages. As Figure 1 indicates, the work packages were unevenly distributed among business line categories, where more than one third of the work packages fell under the “joint” category, and another one third fell under environmental protection; and navigation and hydropower had a share of only 9% and 1% of the total work packages respectively.
- (4) The sample data had 57 work categories defined by the USACE. These work categories are grouped under each business line including “joint” activities. They are unevenly distributed, with the highest number of work packages (167) falling under work category code 61610 – Joint costs for maintenance activities excluding dredging. The second highest number of work packages fall under work category code 61511 - Maintenance of recreation facilities, visitor centers, operating equipment, etc. (122). The description and the statistics on the work categories are given in Table 4. Histograms in Figure 2 Figure 3 show the distribution of work packages in terms of their size, in dollars. The size of the work packages show a wide range of variance ranging from less than \$1,000 to \$5 million. (\$1000 work packages include activities such as environmental studies, reports involving a few staff hours, whereas activities in hundred thousands and million dollars involve construction projects requiring a complex set of man and equipment hours, and durations of work extending into months if not years). Figure 2 shows the distribution with respect to dense intervals. It reveals that close to one third of the work packages fall into \$10,000 to \$50,000 range. Figure 3 shows the distribution of work packages consolidated into four intervals: Less than \$10,000; \$10,000 - \$100,000; 100,000-1 million, greater than \$1 million. The majority of work packages fall between \$10,000 and \$100,000 (46%). Only a fraction of the work packages are larger than \$1,000,000.
- (5) 36 security-related work packages were identified, and about a half of these are under the “joint” category. Those packages are highlighted on Table 4.
- (6) Both Operations and Maintenance type of work activities, not just the Maintenance work packages were included in the analysis. The reason is that the Operations activities not only include the costs of hired labor and routine materials for the operation of the system (must do items) but also they include costs to perform studies, surveys, analyses, and hiring security personnel for security issues. Therefore, because not all Operations type packages always get funded, they should be included in the analysis for prioritization.

¹ Risk Assessment Methodology –Dams: dam security risk assessment software originally developed by SANDIA Labs in 2001.

Table 2 – Sample Data Characteristics According to Business Lines vs. O&M (All Projects)

Business Line	Operations	Maintenance	Total # of WPs
Environment	210	138	348
Joint	185	189	374
Recreation	47	128	175
Navigation	25	60	85
Hydropower	4	4	8
Total	471	519	990

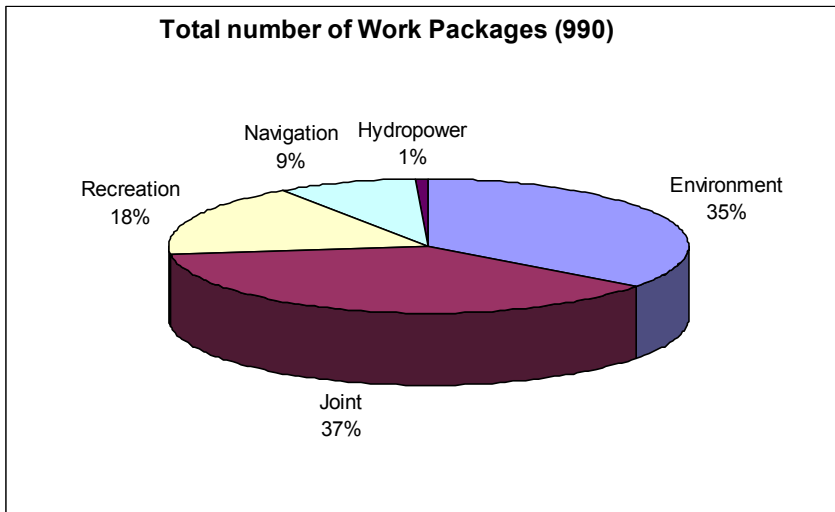


Figure 1 – Distribution of Work Packages According to Business Line Categories

Table 3 - Sample Data Characteristics According to Business Lines, Dam Projects and O&M

BONNEVILLE			
Business Line	Operations	Maintenance	Total # of WPs
Environment	14	8	22
Joint	12	7	19
Recreation	9	9	18
Navigation	3	3	6
Hydropower	2	0	2
Total	40	27	67
DWORKSHAK			
Business Line	Operations	Maintenance	Total # of WPs
Environment	14	25	39
Joint	30	24	54
Recreation	5	26	31
Navigation	0	0	0
Hydropower	0	1	1
Total	49	76	125
ICE HARBOR			
Business Line	Operations	Maintenance	Total # of WPs
Environment	28	20	48
Joint	24	18	42
Recreation	5	19	24
Navigation	4	5	9
Hydropower	0	0	0
Total	61	62	123
JOHN DAY			
Business Line	Operations	Maintenance	Total # of WPs
Environment	21	20	41
Joint	14	13	27
Recreation	4	8	12
Navigation	2	8	10
Hydropower	1	0	1
Total	42	49	91
LITTLE GOOSE			
Business Line	Operations	Maintenance	Total # of WPs
Environment	26	15	41
Joint	23	21	44
Recreation	6	9	15
Navigation	3	6	9
Hydropower	0	1	1
Total	58	52	110
LOWER GRANITE			
Business Line	Operations	Maintenance	Total # of WPs
Environment	22	12	34
Joint	25	23	48
Recreation	4	21	25
Navigation	4	11	15
Hydropower	0	1	1
Total	55	68	123

Table 3 – (cont'd) Sample Data Characteristics According to Business Lines, Dam Projects and O&M

LOWER MONUMENTAL			
Business Line	Operations	Maintenance	Total # of WPs
Environment	30	15	45
Joint	20	24	44
Recreation	5	6	11
Navigation	4	11	15
Hydropower	0	1	1
Total	59	57	116
MCNARY			
Business Line	Operations	Maintenance	Total # of WPs
Environment	29	21	50
Joint	26	43	69
Recreation	5	21	26
Navigation	4	9	13
Hydropower	0	0	0
Total	64	94	158
THE DALLES			
Business Line	Operations	Maintenance	Total # of WPs
Environment	15	13	28
Joint	11	16	27
Recreation	4	9	13
Navigation	1	7	8
Hydropower	1	0	1
Total	32	45	77

Table 4 – Sample Data: Work Category Codes

WCC	Work Category Code Title	Bus. line	O Or M	# Of Wps
60110	Ops Of Locks, Dams, Resvrs, Svc Facs, Equip, Etc. For Navigation	Navigation	O	9
60121	Studies And Surveys For Navigation	Navigation	O	5
60122	Major Rehab Evaluation Reports For Navigation	Navigation	O	3
60131	Instrumentation, Data Collection And Analysis For Navigation	Navigation	O	1
60132	Formal Periodic Inspections And Reports For Navigation	Navigation	O	6
60192	Facility Security Guards, Monitoring Activities For Navigation	Navigation	O	1
60392	Facility Security Guards, Monitoring Activities For Hydropower	Hydropower	O	4
60411	Mgmt Of Natural Resources	Environment	O	41
60412	Mgmt And Curation Of Archeological And Cultural Resources	Environment	O	26
60413	Mgmt Of Wildlife Mitigation Features	Environment	O	22
60414	Fisheries Mgmt - Ops Of Fish Hatcheries	Environment	O	16
60415	Fisheries Mgmt - Fish Hauling Activ And Fish Passage Structures	Environment	O	28
60416	Comprehensive Master Plans	Environment	O	12
60418	Management Of Special Status Species	Environment	O	3
60419	Pest Management	Environment	O	2
60420	Studies, Surveys And Inventories For Environmental Stewardship	Environment	O	21
60441	Water Mgmt Activities For Environ Stewardship - Analysis And Studies	Environment	O	35
60442	Water Mgmt Activities For Environ Stewardship - Ops Of Wtr Ctrl Data Sys	Environment	O	3
60492	Facility Security Guards, Monitoring Activities For Environmental Stewardship	Environment	O	1
60511	Ops/Mgmt Of Rec Areas/Facs, Visit Cntrs, Facs, Equip, Etc. For Recreation	Recreation	O	22

Table 4 – (cont'd) Sample Data: Work Category Codes

WCC	Work Category Code Title	Bus. line	O Or M	# Of Wps
60513	Law Enforcement - Costs And Supr Of Law Enforcement Agreements	Recreation	O	10
60520	Studies And Surveys For Recreation	Recreation	O	8
60550	Real Estate Mgmt For Recreation	Recreation	O	6
60592	Facility Security Guards, Monitoring Activities For Recreation	Recreation	O	1
60610	Joint Costs For Ops Activities	Joint	O	53
60621	Joint Costs For Studies And Surveys	Joint	O	7
60622	Joint Costs For Major Rehab Evaluation Reports	Joint	O	1
60631	Joint Costs For Instrumentation, Data Collection And Analysis	Joint	O	16
60632	Joint Costs For Formal Periodic Inspections And Reports	Joint	O	19
60633	Joint Costs For Dam Safety Assurance Studies	Joint	O	12
60641	Joint Costs For Water Mgmt Activities - Analysis And Studies	Joint	O	33
60642	Joint Costs For Water Mgmt Activities - Ops Of Wtr Ctrl Data Sys	Joint	O	15
60650	Joint Costs For Real Estate Mgmt Activities	Joint	O	10
60660	Joint Costs For Environmental Compliance Mgmt Activities	Joint	O	5
60692	Joint Costs For Facility Security Guards, Monitoring Activities	Joint	O	14
61110	Maint Of Locks, Dams, Resvrs, Srvc Facs, Equip, Etc. For Navigation	Navigation	M	50
61121	Dredging Activities For Navigation	Navigation	M	7
61190	Facility Security Physical Imprvmnts, Mods, Maint And Replace For Navigation	Navigation	M	3
61390	Facility Security Physical Imprvmnts, Mods, Maint, And Replace For Hydropower	Hydropower	M	4
61411	Maint Of Natural Resources Facilities	Environment	M	17
61413	Maint Of Wildlife Mitigation Features	Environment	M	19
61414	Maint Of Fisheries, Fish Haulage Activ And Fish Passage Structures	Environment	M	92
61418	Maintenance For Special Status Species	Environment	M	4
61440	Purchase/Maint Of Water Mgmt Equip For Environ Stewardship	Environment	M	2
61453	Boundary Monumentation And Rectification For Environ Steward	Environment	M	3
61460	Environmental Compliance (Remedial Actions) For Environ Steward	Environment	M	1
61511	Maint Of Rec Facs, Visitor Centers, Operating Equip, Etc.	Recreation	M	122
61512	Maint Of Rec Facs Using Special Recreation Users Fee (Sruf) Funds	Recreation	M	1
61520	Dredging Activities For Recreation	Recreation	M	2
61551	Land Acq And Disposl Mgmt Activ, Settle Claims, And Audits For Recreation	Recreation	M	1
61590	Facility Security Physical Imprvmnts, Mods, Maint, And Replace For Recreation	Recreation	M	2
61610	Joint Costs For Maint Activities Excluding Dredging	Joint	M	167
61640	Joint Costs For Water Mgmt Equip Activities	Joint	M	4
61651	Joint Costs For Land Acq And Disposl Mgmt Activ, Settle Claims, And Audits	Joint	M	4
61660	Joint Costs For Environmental Compliance (Remedial Actions) Activities	Joint	M	8
61690	Joint Costs For Facility Security Physical Imprvmnts, Mods, Maint And Replace	Joint	M	6
		Total		990

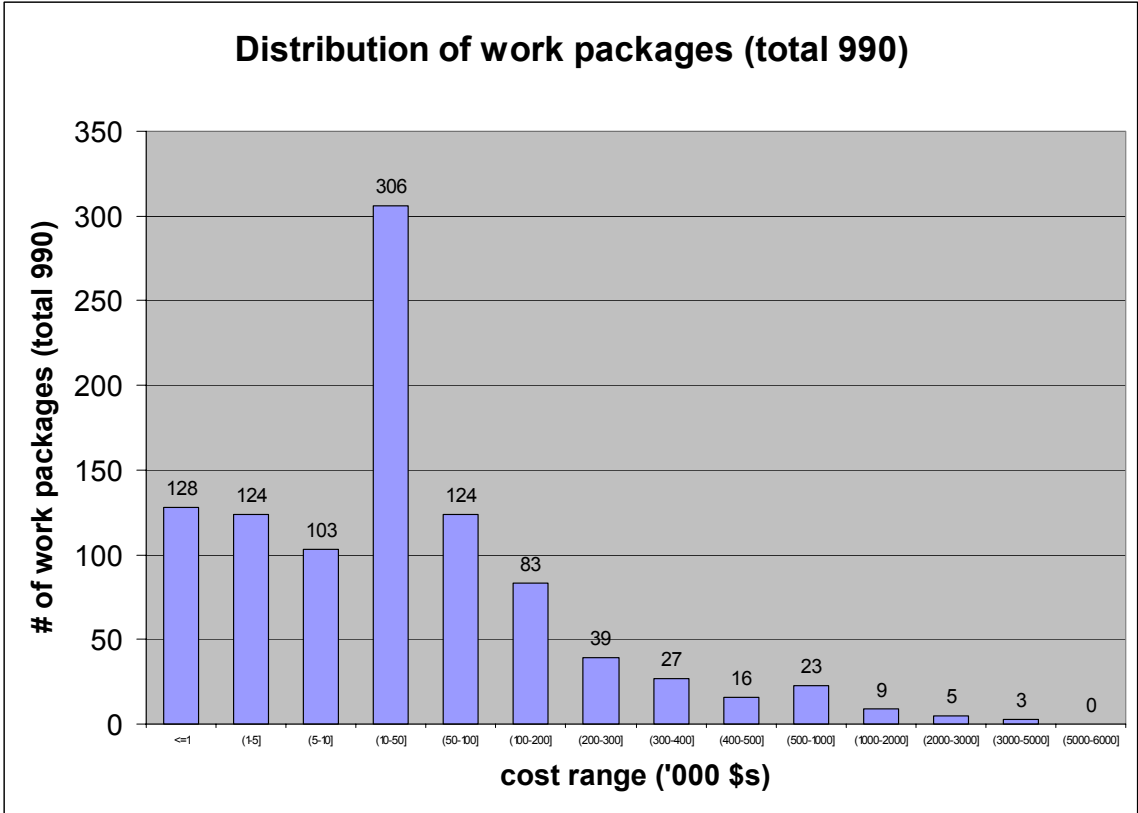


Figure 2 – Distribution of Work Packages in terms of “size” in dollars

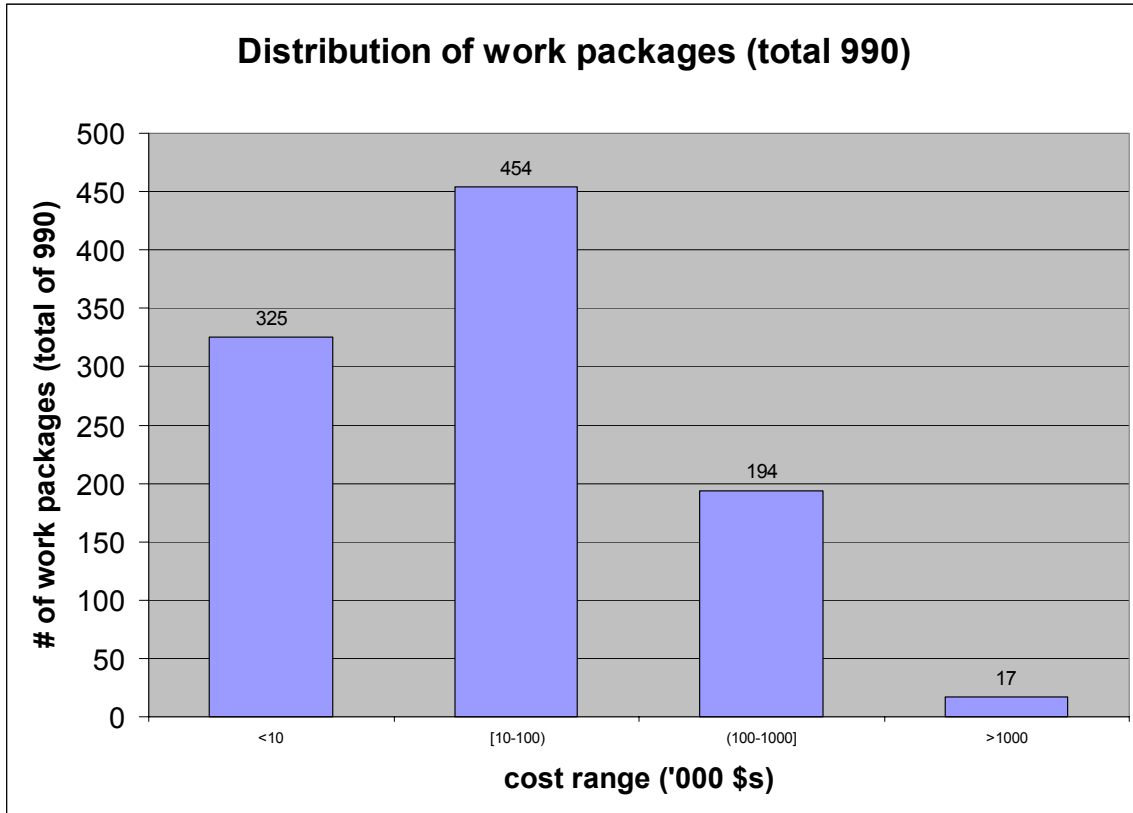


Figure 3 – Distribution of Work Packages in terms of “size” in dollars – (grouped according to 10th order of magnitude: i.e. 1,000 times 10⁰; 10¹; 10²; and 10³.)

After developing an initial draft of the multi attribute decision model (described below) based on the five business lines and 9 projects, a second 2-day visit was made to the NWD on August 23-24, 2004. This trip included site visits to two major projects owned and operated by the USACE (The Dalles and John Day). It helped the GWU team to gather more technical knowledge in order to feed in the proposed model which will be described in detail in the next section. Another purpose of the visit was to explain the draft preliminary prioritization method, and get some feedback through interviews with USACE representatives at the NWD. Essentially, this trip helped the project team gather critical information and opinion on how the budgeting process is handled by the business line managers. Based on interviews with USACE Division staff, critical knowledge and opinions on the problems that contribute to the current handling of the prioritization of O&M work packages and the rationale for the current practice was obtained. The information gathered through this trip was critical in the formulation of the modeling assumptions which are summarized as follows:

- (1) The 2006 O&M budget for the NWD had been developed and evaluated by business lines.
- (2) Work packages were prioritized within business lines at the district and division level by business line for 2006, but by integration across business lines at the Division level for the 2005 budget.
- (3) For the 2006 budget, integration across business lines occurred only at HQ level.
- (4) Each business line had developed its own prioritization system based upon performance metrics specified by the Engineering Circular (EC). Most of these methods involved spread sheets with

multiple metrics (as many as 18), but no method of combining or weighting existed. These methods provide a basis for ranking projects² within business lines, but not for prioritizing individual work packages. Typically one metric was chosen (e.g. tonnage through locks for navigation, availability days for recreation) and projects were ranked by that metric.

- (5) The process used to prioritize work packages within and across individual projects was not well defined. It was a combination of cost benefit, total cost, and acceptance of the initial ranking of the project or district staff. The proposed prioritization approach is a major change for the USACE in that it would move from an unstructured expert based qualitative prioritization line to a structured process that is based on business lines and performance measures.

This visit and the meetings helped the USACE NWD officials understand the GW approach (which the technical details will be described in the next section), and they seemed to have more interest in the GW project, due also to the fact that they had recently gone through a 2006 budget build.

The net result of the visit was that information that provided the basis for prioritizing projects within business lines for our 9 project sample was obtained. The weights for business lines with respect to the objective derived during this visit were reviewed by all interviewees and all concurred that they seemed reasonable. The remaining issue was to determine the applicable performance measures (the leaves of the decision tree) against which the work packages are evaluated.

The basic modeling issue remaining after this visit was that in order to make the work package comparison process feasible (time required, difficulty, clarity) there should be no more than 3 or 4 performance measures for each business line, and the performance measures must all make sense at the work package level. However, the performance measures specified by the USACE Budget EC involved more than 3-4 performance measures and a majority of them did not apply at the work package level (See the section labeled as **Level 4 Assessment** in **APPENDIX A** for more details on performance measures). The resolution of this issue is described below.

The final site visit took place between November 8 through 9, 2004. The objective of this visit to the Portland District was to prioritize a sample of USACE O&M work packages from nine USACE project sites on the Columbia and Snake Rivers, by using the decision model developed by GW University. During the first day, with the help of NWD staff, the relative importance of the five business lines (navigation, hydropower, flood reduction, recreation, and environmental stewardship) were assessed relative to the overall objective of: "Maintaining the design benefits of USACE projects by meeting business line performance objectives within a constrained budget." Within each business line, the nine projects have been ranked and weights assigned based on appropriate business line performance measures.

The second objective was to clarify and to weight the performance measures under each business line against which individual work projects would be scored. For each business line (except for the environment business line) the measures were intended to evaluate the contribution of work packages to: (1) the prevention of catastrophic failure, (2) the prevention of gradual degradation, and (3) cost-effective operations and maintenance.

² Here, the term 'project' refers to a Dam system, with all of its relevant components encompassing the five business lines that are administered by the USACE.

With the participation of several NWD business line managers and Portland and Walla Walla District staff members, two sessions were held for the prioritization process. The first session was held with the Portland staff members. First the prioritization process was explained and once the protocols were clear and understood by all the participants, the actual prioritization process started. It took one whole business day to rate the total of 144 work packages of two projects: Bonneville and The Dalles. The next day, a second session with the Walla Walla District staff members was held and the rating process started with the work packages belonging to Dworshak and Little Goose. The rating process ended when the last one of the 235 work packages was rated. Thus, we were able to achieve a rated list of a total of 379 work packages involving 4 projects (Bonneville, The Dalles, Dworshak, and Little Goose). Due to time limitations, we were able to collect only 379 work packages out of the originally planned 990.

The Multi Attribute Decision Model that was developed by the GWU researchers for the USACE to help in its budget prioritizing process is described in detail in the next section.

3. The Multi-Attribute Decision Model

Model Description

The multi attribute decision model or the AHP model described here maximizes the benefits of the work packages only, costs are introduced as a constraint. In other words, the decision maker will maximize benefits achievable within a defined cost constraint.

The AHP model is composed of the following hierarchic levels based on the USACE business line budgeting structure:

Top Level (Level 1) --Goal: Maintain the design benefits of USACE projects by meeting business line performance objectives within a constrained budget.

Second Level--Ends Objectives: Reflect the end objectives of maintaining the benefits provided within the nine project sample of all USACE business lines:

- (1) Navigation
- (2) Hydropower generation
- (3) Flood Reduction
- (4) Recreation
- (5) Environmental stewardship

Third Level— Means Objectives: Provide the benefits of the five business lines through the operation of several (nine in our case) projects located on the Columbia River System. The operation and maintenance of the projects is the means by which the ends objectives and goal are achieved.

Fourth Level —Attributes defining objectives: These attributes allow the direct comparison of work packages. For an initial cut, three attributes were defined for each business line represented by the projects. The attributes under each business line are selected to be as follows:

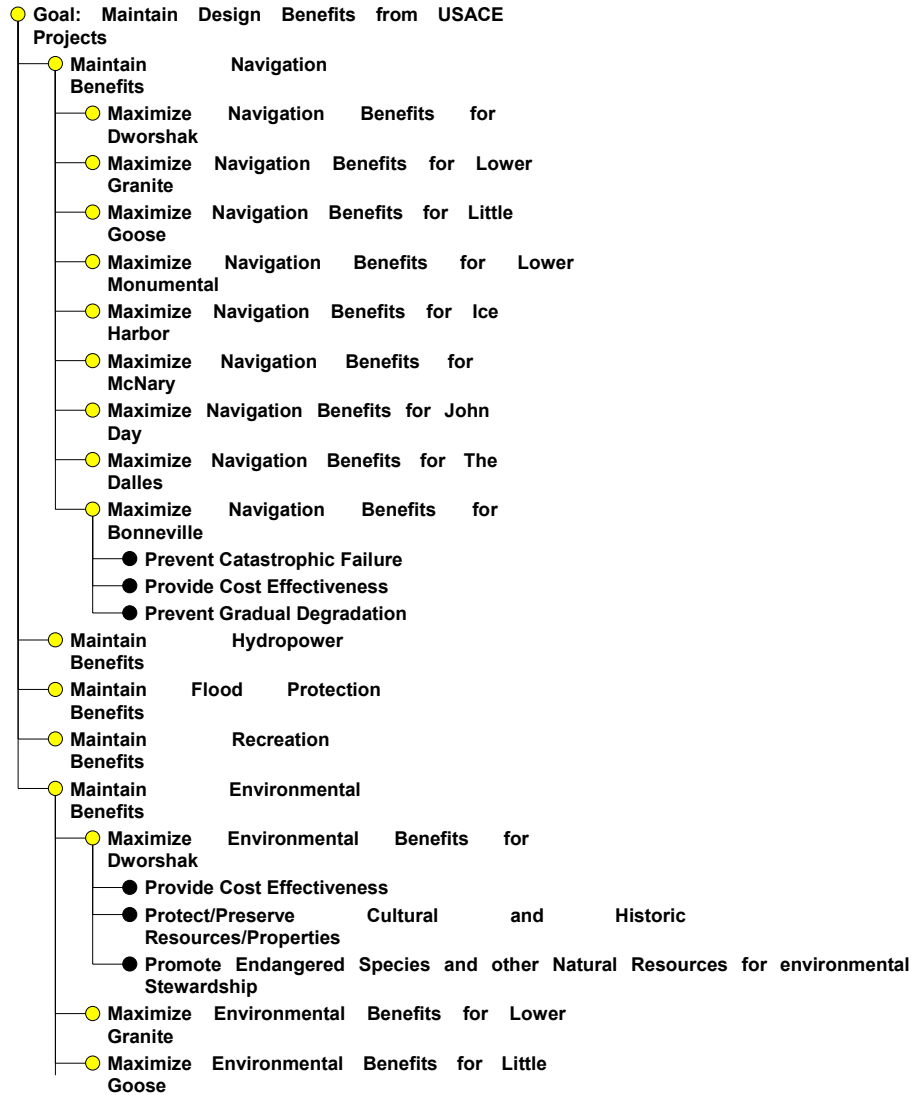
- Navigation:
 - Prevent catastrophic failure,
 - Prevent gradual degradation,
 - Provide cost-effectiveness
- Hydropower generation
 - Prevent catastrophic failure,
 - Prevent gradual degradation of reliable and peak power provision capability
 - Provide cost-effectiveness
- Flood Reduction
 - Prevent catastrophic failure,
 - Prevent gradual degradation,
 - Provide cost-effectiveness
- Recreation
 - Provide safe and healthy recreation environment,
 - Provide sustainable recreation opportunities for future generations,
 - Provide cost-effectiveness
- Environmental stewardship
 - Protect/preserve cultural/historic resources/properties,
 - Promote endangered species and other natural resources for environmental stewardship
 - Provide cost effectiveness

Fifth Level — Individual work packages competing against each other to be on the prioritization list so as to get funded. They may also be treated as “alternatives”.

The following figure shows the tree view of the AHP. As can be seen from the figure, under the Goal, there are five business lines branching out as ends objectives for achieving the goals, and under each business line, the nine USACE owned dam projects are listed as means objectives. Under each dam project, three criteria branch out as attributes that the work packages are to be compared against. Underneath the goal, there are five nodes (Level 2) describing business line, and under each business line there are nine nodes for each dam project totaling 5×9 equals 45 (Level 3 – not shown except for navigation benefits). On the next level down, at Level 4, there are $5 \times 9 \times 3$ equals 135 nodes representing performance metrics for individual work packages to allow direct comparison against them (not shown except for navigation benefits for Bonneville). The lowest level is the 990 work packages (Level 5 – not shown). Note that the tree view was collapsed, i.e. lower levels were hidden from the view for purposes of simplicity and that they are identical for each business line and for each project (the three performance metrics are different for the environmental business line so it is shown).

Model Name: MO5EA1~1

Treeview



SEASCF, The George Washington Universit

Figure 4 – The AHP Model Structure (Tree View)

Populating the Model

Once the model was constructed, it had to be populated with data in order before it could be used to prioritize work packages. The AHP tool Expert Choice allows for the use of both qualitative data (expert judgment) and quantitative data. The detailed data collection and assessment process is described in **APPENDIX A**. However, the process may be summarized as follows:

- (1) The top level assessment is the prioritization of work packages against the overall goal of the model of “maintaining the design benefits of USACE projects.
- (2) The second level assessment, the comparison of the relative importance of the contribution of business lines to the overall goal of the model was obtained through the use of expert judgment. The tool Expert Choice was used by NWD managers to make pair wise comparisons between all business lines resulting in relative importance weights. In principle, if the USACE could calculate the benefits produced by each business line for a river basin, this comparison could be calculated directly from data.
- (3) The third level assessment, the contribution of individual projects to the benefits attributed to each business line within the river basin was calculated using USACE budget EC measures as described in **APPENDIX A**.
- (4) The fourth level assessment was created by a pair wise comparison made by NWD experts for the performance attributes for each business line as described above.

Each of these assessments provided weights or coefficients to each of the leaves of the AHP tree shown in Figure 4. These weights were computed prior to the actual prioritization of work packages. The final or fifth assessment was the actual evaluation of the project work packages against the bottom level performance attributes for each business line as described below. The compound weights shown in Table 5, provide a coefficient representing the value of each of these bottom level leaves relative to its contribution to the overall goal. The compound weights applied as coefficients to the work package ratings are shown in Table 5

Table 5 – Relative Importance Weights for Performance Measures (Level 4 of AHP) – Compound (Global) Weights

Business Line	Dam Name/ Perf. Meas.	Dwors-hak*	Lower Granite	Little Goose*	Lower Monumental	Ice Harbor	Mc Nary	John Day	The Dalles*	Bonneville*
Navig.	Catast. Failure	0.000	0.002	0.003	0.003	0.003	0.006	0.007	0.008	0.008
	Cost Effec.	0.000	0.002	0.003	0.003	0.003	0.006	0.007	0.008	0.008
	Gradual Degr.	0.000	0.002	0.003	0.003	0.003	0.006	0.007	0.008	0.008
Hydropwr	Catast. Fail.	0.035	0.009	0.010	0.007	0.006	0.031	0.030	0.016	0.014
	Cost Effec.	0.035	0.009	0.010	0.007	0.006	0.031	0.030	0.016	0.014
	gradual deg	0.035	0.009	0.010	0.007	0.006	0.031	0.030	0.016	0.014
Flood protection	Catast. Fail.	0.004	0.004	0.004	0.004	0.007	0.014	0.010	0.012	0.011
	Cost Effec.	0.004	0.004	0.004	0.004	0.007	0.014	0.010	0.012	0.011
	gradual deg	0.004	0.004	0.004	0.004	0.007	0.014	0.010	0.012	0.011
Recr.	Cost Effec.	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.007
	Safe & Healthy	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.007
	Future Gen.	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.007
Env.	Cost effec.	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	cult.&hi storical	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
	ESA & nature	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013

As described in Appendix A the work packages were ranked on a 3 level scale for each of three criteria for each business line:

- 1: minimum contribution to the business line relative to the criteria
- 2: moderate contribution to the business line relative to the criteria
- 3: maximum contribution to the business line relative to the criteria
- 0: not applicable to business line

Essentially, the recommended AHP prioritization method separates the process of attempting to weight individual projects and business lines to overall goals from the process of comparing work packages against each other. The coefficient weights are computed prior to the work package prioritization process, making the direct comparison of work packages well defined and consistent.

4. Results and Findings

After several meetings and exercise sessions held with USACE representatives involving Headquarters budget personnel, specialists from IWR, Staff from USACE NWD, Portland and Walla Walla Districts, a total of 379 work packages for FY2005 from four dam projects (2 from Portland District, 2 from Walla Walla) Dworshak, Little Goose, The Dalles and Bonneville were rated against the performance criteria described previously. The work packages were assigned 0, 1, 2, or 3 in the relevance/importance scale for each of the three performance criteria under each business category (See the previous section and Appendix A for modeling and assessment process).

The actual work package comparison was performed using Excel spreadsheets to collect the comparison data rather than the Expert Choice ratings comparison. Expert choice provides a capability to rate or compare a relatively large number of alternatives, then to export the results from an Excel Spread sheet back into Expert Choice. The method chosen however was to export the compound weights described above from Expert Choice to Excel and to perform the prioritization calculations and sensitivity analysis in Excel. This method has two advantages. The first was that the calculations in this pilot study could be performed more easily in Excel than in Expert Choice and Excel provided the capability for a wider range of sensitivity analysis cases. The second advantage is that the spread sheet prioritization calculations could be incorporated into existing USACE budget tools such as ABS cube.

The final work package prioritization score was obtained by multiplying the work package rating by appropriate coefficients (See Table 5) and a relative importance for each work package relative to the goal was obtained. This data was then sorted in a descending order (See **APPENDIX B** for the prioritized base case list of work packages for the 4 dam projects). At the top of the list is a work package involving the physical security improvement of Dworshak's hydropower generation units. It is a relatively low cost work package (\$70,000) but since Dworshak's hydropower generation business function has the higher importance coefficient, it is not unusual that this item gets the highest rating and it has twice as high as the next most important work package (monitoring activities for hydropower generation units of The Dalles)³.

Other observations may be made relative to the base case results included in **APPENDIX B**:

- (1) The security related O&M work packages for the project sites ranked higher in the GW model than they had in the District and Division priorities. This was due to the fact that raters scored these work packages as making a contribution in preventing both catastrophic failure and gradual degradation of project benefits.
- (2) Because the rating system gives credit to those work packages that contribute toward the prevention of catastrophic failure, dam safety studies and similar work packages that traditionally are ranked low scored relatively high.
- (3) The weights assigned to business lines were critical in determining the overall priority of a work package. In the GW model, the recreation business line was given the least weight with other

³ Note that work packages of only 4 out of 9 dams (Bonneville, Dworshak, The Dalles, and Little Goose) were evaluated. For example although the hydropower generation function of John Day has the second highest coefficient in Table 7, those work packages do not appear in the prioritization list since they were not assessed.

business lines weighted 3 to 9.5 times more important. The hydropower business line received 9.5 times the weight of the recreation business line.

- (4) Joint work packages scored relatively well, since they received credit for contributing to all business lines, including the more highly valued hydropower and flood reduction.

4.1. Sensitivity Analysis

The base case described above is a function of the modeling assumptions and the ratings assigned to individual projects. The methodology used in this project allows for the testing of modeling assumptions through sensitivity analysis. A large number of combinations of scenarios is possible by varying the importance weights in each level; however we only look at the most obvious and important ones. Four scenarios were generated by changing the independent variables in each of the four levels in the AHP model to demonstrate the power and applicability of sensitivity analysis. These scenarios were produced based on the discussions held with USACE staff during the assessment sessions at the Portland District of the NWD. For each scenario, the AHP model was re-run and a new priority list was obtained reflecting the changed importance levels/criteria. The following scenarios were generated:

Case 0 - No change

Case 1 - Sensitivity on Level 2: increase the importance rating of the overall recreation function from .050 to .200; leave the rating for environment as is; decrease the importance ratings of Navigation, Hydropower Generation, and Flood control functions by taking .050 away from each. (Refer to Table 10 on page 32.)

Case 2 - Sensitivity on Level 3: Change project weights on Hydropower business line, using GNP only (Use Table 12 on page 36 instead of using the composite scale as shown in Table 14 on page 37).

Case 3 - Sensitivity on Level 4: For Navigation, Hydropower, and Flood Control functions change weight on 'gradual degradation' to 0, and change weight on catastrophic failure to .666 (refer to Table 16 on page 42).

Case 4 - Sensitivity on Level 4: For Navigation, Hydropower, and Flood Control functions change the weight on 'gradual degradation' to .666, and change the weight on catastrophic failure to 0. (refer to Table 16 on page 42).

Resulting priority lists for the assessed work packages for the four dam projects are given in **APPENDIX C**.

In Case 1, when the importance of the recreation function is increased nearly four times, then obviously the work packages under the recreation function move significantly upward on the prioritization list. For example, initially five recreation-related work packages of Bonneville are listed as the 85th through 89th row when the recreation function took only 0.051 shares out of 1. Then as in Case 1, when the importance of recreation was increased fourfold, the same work packages appeared on the 2nd through 6th line (after the RAM-D work package of Dworshak) followed by all the remaining recreation work packages.

Case 2 is related only with the hydropower generation function of dam projects, everything else staying as constant. When only the generation capacities were taken into account (not the criticality of their loss), the prioritization of the relevant work packages gets significantly affected. A comparison between Table 12 on page 36 and Table 14 on page 37 tells us the change. According to the criteria in Table 13 on page 36, Dworshak is the most important in terms of both its GNP capacity and the significance of its potential hydropower generation capacity loss (0.221), followed by The Dalles (0.100), Bonneville (0.091), and Little Goose (0.061). However, when the only criterion becomes the GNP capacity, the importance scale changes as follows: The Dalles (0.189), Bonneville (0.115), Little Goose (0.086), and lastly Dworshak (0.042). Thus, with this case Dworshak's importance in terms of its hydropower business function decreases by 5 times, and all the others gain more importance. The only work package related to the hydropower function of Dworshak that was the top priority package drops down to line 65. Thus the only hydropower work package belonging to The Dalles goes up by 1 and becomes the first priority item. The hydropower work packages of Bonneville stay in more or less the same priority. Note that there not that many work packages related to the hydropower business line in the FY2005 budget and the ones that are in the budget are only the physical security related work packages.

Case 3 is related with the performance measure attributes for the work packages that belong to business lines: navigation, hydropower generation and flood control. In this case the importance weights on the three attributes/ performance measures are changed from being equal to the effect of gradual degradation being equal to zero and the weight of catastrophic failure increased twice as it was (The values in Table 16 on page 42 and Table 17 on page 43 become as shown in Table 6 and Table 7 below). Note that the flood control related work packages in FY2005 package are represented under the "joint" category. Thus, when the data is regenerated with the shifting importance of performance metrics on Level 4, the first 8 lines on the priority list remain the same, next the joint work packages related to Dworshak go higher up on the prioritization hierarchy list since these packages are related to dam safety.

Table 6 – Case 3: Relative Importance Weights for Performance Measures (Level 4 of AHP) – Raw Weights

Business Line	Dam Name/ Perf. Meas.	Dwors-hak	Lower Granite	Little Goose	Lower Monumental	Ice Harbor	Mc Nary	John Day	The Dalles	Bonneville
Navig.	Catast. Failure	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666
	Cost Effec.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	Gradual Degr.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hydropwr	Catast. Fail.	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666
	Cost Effec.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	gradual deg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Flood protection	Catast. Fail.	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666
	Cost Effec.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	gradual deg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Recr.	Cost Effec.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	Safe & Healthy	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	Future Gen.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
Env.	cost effec.	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058
	cult.&hi storical	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110
	ESA & nature	0.832	0.832	0.832	0.832	0.832	0.832	0.832	0.832	0.832

Table 7 – Case 3: Relative Importance Weights for Performance Measures (Level 4 of AHP) – Compound Weights

Business Line	Dam Name/ Perf. Meas.	Dwors-hak*	Lower Granite	Little Goose*	Lower Monumental	Ice Harbor	Mc Nary	John Day	The Dalles*	Bonneville*
Navig.	Catast. Failure	0.000	0.003	0.005	0.006	0.007	0.012	0.014	0.015	0.016
	Cost Effec.	0.000	0.002	0.003	0.003	0.003	0.006	0.007	0.008	0.008
	Gradual Degr.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hydropwr	Catast. Fail.	0.070	0.019	0.019	0.013	0.012	0.063	0.061	0.032	0.029
	Cost Effec.	0.035	0.009	0.010	0.007	0.006	0.031	0.030	0.016	0.014
	gradual deg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Flood protection	Catast. Fail.	0.008	0.009	0.008	0.009	0.015	0.028	0.020	0.023	0.021
	Cost Effec.	0.004	0.004	0.004	0.004	0.007	0.014	0.010	0.012	0.011
	gradual deg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Recr.	Cost Effec.	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.007
	Safe & Healthy	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.007
	Future Gen.	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.007
Env.	cost effec.	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	cult.&hi storiical	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
	ESA & nature	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013

Case 4 deals with the opposite situation regarding Case 3. In Case 4 the gradual degradation is assumed as twice as important than the base case and possibility of catastrophic failure is completely out of the picture. Thus, the priority shifts as shown in tables below:

Table 8 – Case 4: Relative Importance Weights for Performance Measures (Level 4 of AHP) – Raw Weights

Business Line	Dam Name/ Perf. Meas.	Dwors-hak	Lower Granite	Little Goose	Lower Monumental	Ice Harbor	Mc Nary	John Day	The Dalles	Bonneville
Navig.	Catast. Failure	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cost Effec.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	Gradual Degr.	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666
Hydropwr	Catast. Fail.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cost Effec.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	gradual deg	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666
Flood protection	Catast. Fail.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cost Effec.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	gradual deg	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666
Recr.	Cost Effec.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	Safe & Healthy	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	Future Gen.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
Env.	cost effec.	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058
	cult.&hi storical	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110
	ESA & nature	0.832	0.832	0.832	0.832	0.832	0.832	0.832	0.832	0.832

Table 9 – Case 4: Relative Importance Weights for Performance Measures (Level 4 of AHP) – Compound Weights

Business Line	Dam Name/ Perf. Meas.	Dwors-hak*	Lower Granite	Little Goose*	Lower Monumental	Ice Harbor	Mc Nary	John Day	The Dalles*	Bonneville*
Navig.	Catast. Failure	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cost Effec.	0.000	0.002	0.003	0.003	0.003	0.006	0.007	0.008	0.008
	Gradual Degr.	0.000	0.003	0.005	0.006	0.007	0.012	0.014	0.015	0.016
Hydropwr	Catast. Fail.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cost Effec.	0.035	0.009	0.010	0.007	0.006	0.031	0.030	0.016	0.014
	gradual deg	0.070	0.019	0.019	0.013	0.012	0.063	0.061	0.032	0.029
Flood protection	Catast. Fail.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cost Effec.	0.004	0.004	0.004	0.004	0.007	0.014	0.010	0.012	0.011
	gradual deg	0.008	0.009	0.008	0.009	0.015	0.028	0.020	0.023	0.021
Recr.	Cost Effec.	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.007
	Safe & Healthy	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.007
	Future Gen.	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.007
Env.	cost effec.	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	cult.&hi stori cal	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
	ESA & nature	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013

5. Conclusions

The objective of this project was to develop and demonstrate a viable process that could be used by the USACE to prioritize Operations and Maintenance (O&M) work packages in a way that seamlessly integrated the addition of security related critical infrastructure protection work packages with tradition business line related work packages. A test domain containing nine project sites (see Table 1) in the Columbia Snake River system was chosen for the demonstration project. The modeling methodology initially chosen was the decision support software Expert Choice supported by spread sheet applications obtained from the USACE (the ABS cube) and developed by the project team (Excel worksheets). The following conclusions are presented in three groups:

- (1) An evaluation of the Expert Choice software as a tool for USACE O&M prioritization;
- (2) A summary of issues and problems with the current USACE O&M work package characterization and prioritization process noted by the project team; and
- (3) A critique of the methodology used by the project team in the USACE NWD test.

5.1. Expert Choice as a prioritization tool

The Expert Choice software tool is a sophisticated decision support tool based on the Analytic Hierarchy Process (AHP) and is designed to help decision makers quantitatively prioritize the alternatives available for any decision. Using Expert Choice, decision makers can structure their decision criteria and use all available quantitative and qualitative measures to evaluate alternatives. Where data is available (e.g. cost) values for each alternative may be directly entered and Expert Choice will calculate the appropriate ratios. Where data is not available, expert judgment is captured by enabling qualitative comparisons of alternatives on the basis of importance, preference, or likelihood. The basic method of comparison used by Expert Choice is pair wise comparison, where each alternative is compared to all other alternatives. Pair wise comparison is cumbersome and extremely time consuming when evaluating large numbers of alternatives. However, Expert Choice provides an ability to directly assign ratings enabling the direct comparison of up to 1000 alternatives.

The five level AHP model used in the demonstration project is described in section 3. The USACE strategic direction to manage by business lines is reflected in the model's structure in that the first level of evaluation is the comparison of the relative importance of each business line with respect to the goal of maintaining the design level of project benefits. The pair wise comparison of the business lines with respect to their relative importance within the Columbia—Snake River test bed was a critical task in the project and one that generated a significant amount of discussion among the NWD participants. The next level of evaluation was the comparison of the relative importance of the individual projects with respect to each of the five business lines. The model was structured to enable the participants to use existing business line performance measures prescribed by the Budget EC as the basis for comparison of projects with respect to each business line. As shown in the sensitivity analysis discussion in section 4 above, the weights resulting from the top two comparisons drive the model's results.

Expert Choice proved to be an excellent tool for developing this decision structure and for guiding decision makers in the assignments of the weights to each level of decision criteria. Through its visual display of the decision hierarchy, Expert Choice provides feedback on the results of comparisons made.

Two sets of weights are displayed: local weights show the weight of a factor within its level (e.g. the relative contribution of Bonneville to Navigation) and global weights show the overall contribution to the goal (e.g. the relative contribution of Bonneville Navigation to the total benefits of the system). This test demonstrated that Expert Choice provides the capability for structuring and weighting decision criteria developed in the Budget EC and other USACE policy documents.

This test also demonstrated that the security related work packages could be seamlessly introduced into the O&M prioritization process. This was done by recognizing that security work packages contribute to the prevention of catastrophic failure and that they also contribute to all business lines. As described above, performance attributes describing both the contribution to prevention of catastrophic failure and the contribution to prevention of gradual degradation provided the basis for comparison of work packages at the lowest level of the Expert Choice model. This structure ensured that both security and other catastrophic prevention activities such as dam safety were realistically evaluated. This demonstration of the model's ability to integrate projects that contribute to the prevention of low probability/high consequence events achieved one of the major objectives of the test. There were 18 security related work packages included in the 379 work packages evaluated in the test. Thirteen of these packages received a higher relative ranking using the Expert Choice model than they did using the original Divisional priority list. Sensitivity analysis (case 3 in section 4) demonstrating the impact of increasing the value of preventing low probability/high consequence events shows that the weight of this criteria, raise the relative rating of security related projects. In summary, using the Expert Choice decision tool not only provides a result, but documents what factors determined that result and enables sensitivity analysis to be performed on those factors.

Expert Choice was clearly an excellent tool for structuring the O&M decision problem and for collaboratively determining the appropriate weights for the decision hierarchy. The tool proved, however, to be very cumbersome when used to evaluate the large number of alternatives (990 priority one and two O&M work packages from nine NWD projects). In order to evaluate this many alternatives, the Expert Choice ratings application must be used. Expert Choice contains an interface that allows ratings to be directly entered in a spread sheet, and then transferred into the Expert Choice model. This spreadsheet interface was complex and slow and produced, in some cases, erroneous results that were difficult to trace and resolve. Once the data is transferred, Expert Choice calculates and displays the results and provides a sensitivity analysis tool. The Expert Choice sensitivity analysis tool is restricted to examination of the impact of changing the top level weights in the model (in this case, the relative importance of business lines).

The evaluation and prioritization of the alternatives can be done in the spread sheet simply by transferring the global weights from Expert Choice to the Excel spread sheet instead of transferring the very large worksheet from Excel to Expert Choice. The results described in section 4 were obtained using this hybrid methodology. The Excel spread sheet is a more robust tool for scenario based sensitivity analysis. The scenarios used for sensitivity analysis described in section 4 were performed in Excel and could not be developed using Expert Choice.

5.2. Issues with the USACE O&M Budgeting Process

The prioritization of a large number of disparate work packages is a difficult task, but it is made more difficult by some of the internal USACE process, procedures, and conventions. As shown in

Table 3, the value of individual work packages ranged from under \$1,000 to \$5,000,000. Regardless of the methodology used, it is very difficult to compare entities that differ in size by three orders of magnitude. Participants in the exercise could not compare the 128 packages under \$1,000 (13% of the total) to any of the 40 projects that were \$500,000 or more.

A more difficult issue to deal with is the weak linkage between the work package descriptions and the business line definitions and performance measures. This was particularly troublesome when dealing with the 374 (38% of the total) that were identified as joint work packages. The USACE system requires that a work package contributing to more than one business line be identified as joint. However, the relative contribution to individual business lines is not part of the work package description leading to two arbitrary methods for prioritization.

The method used in this test was to assume that the work package contributed equally to each of the four business lines. This method leads to obvious errors for work packages that contribute significantly to one business line and marginally to others. The method used in the NWD 2006 budget process was to assign the work package to the predominant business line for the host project. This led to identical work packages being assigned to different business lines at different projects (e.g. to hydropower at Bonneville, navigation at Ice Harbor) and in general, making it very difficult to rate the work packages.

A third issue unique to the NWD is that the Columbia—Snake River basin projects produce many work packages for joint hydropower projects funded primarily by the Bonneville Power Administration. The significant leveraging of USACE funds (up to 90% BPA funding) is not explicitly indicated in the work package ABS description. As a result, it is unclear to what degree this leveraging is accounted for in the prioritization of USACE O&M projects.

Two strategic issues must be resolved before a rational O&M prioritization methodology can be implemented. First, the strategic objectives of the Corps should be reflected in the budget process. Is it the USACE objective to manage the O&M budget by business lines at the national level; to manage by business lines within defined river basin or other physical systems; or at the project level? This strategic decision must be made before decision models can be designed. In the USACE 2006 budget process, trade offs between business lines were not made until the HQ review of division submissions. This implies that business lines have the same relative priority across divisions and river basin systems, clearly a false assumption. The Expert Choice model in this test assumes that the weights assigned to business lines have meaning only at the system level defined in this case by the river basin. The contribution of each project to the attainment of business line benefits is also best calculated at the system or river basin level. This method, however, begs the question of how to consolidate priority lists generated across a set of river basin systems. USACE budget documents do not provide guidance and criteria that could be used to compare systems. Systems could, however, be compared by the net benefit accrued by the USACE projects in that system. This leads to three other problems: (1) what benefits should be included? (2) how should benefits be measured, and (3) how should the uncertainty in the estimation of these benefits be treated? In the NWD project, there was significant discussion and disagreement on how a project's benefits should be calculated for the purposes of O&M prioritization. Should only direct benefits be used? Should indirect benefits such as local economic activity be included? If so, how should these benefits be calculated? Do design benefits have priority over benefits that exist only because the project was built for other reasons? The USACE business lines vary significantly on their interpretation of benefit calculation ranging from extensive use of indirect benefits (recreation) to measurement of only immediate, direct benefits (navigation).

5.3. Constraints and Problems encountered in the NWD O&M prioritization test

In spite of strong support from the USACE IWR project managers and NWD district and division staffs, the O&M prioritization exercise described in this paper was limited by time and resource constraints and by data availability. As in all prototype or beta tests, design problems and omissions that could not be corrected in real time limited the scope of activity. In spite of the constraints and problems, however, the test was sufficiently robust to meet the project objectives.

Time constraints led to two significant implementation decisions. First, although the model was designed to evaluate work packages from 9 projects and the decision hierarchy was populated with weights for all five business lines and all 9 projects with respect to each business line, work packages from only 4 projects were fully rated (379 out of 990 work packages). Secondly, a limited rating scale (0, 1, 2, 3) for the performance measures was used in the interest of minimizing the staff time required for the test. This compressed the scores and limited the ability of the model to precisely identify the very best and very worst projects.

Modeling limitations affected the accuracy and consistency of the output of the test. Incomplete collection of performance data limited the ability to perform business line specific comparison of projects. In particular, we did not obtain recreational data (Recreational Unit Days Available) that could be used to compare projects with respect to the recreation business line. Performance measures used for other business lines (navigation, hydropower) were subsets of the measures specified by the USACE budget EC. Finally, the work package rating process was inconsistent due to two correctable implementation issues. First, the rating scale was not clearly defined in operational terms resulting in different mean ratings by different groups. (e.g. one group defined average as a score of 2, the other group defined average as something between 1 and 2). Second, the participants found it difficult to assign consistent ratings to similar packages since no convenient method was provided to track prior ratings other than scrolling back in the Excel spread sheet. As a result similar work packages received different ratings in spite of the rater's intent to be consistent.

In spite of these constraints and problems the test was successful in that it demonstrated:

- (1) The ability to structure the O&M budget prioritization process for a river basin system as a business line based decision problem,
- (2) The use of decision support tools (Expert Choice and Excel) to support this process, and
- (3) The integration of security related work packages with traditional O&M work packages.

6. Recommendations

The following recommendations are based on the experience and results of this pilot project:

- (1) The USACE O&M budget prioritization process should support the strategic direction and priorities of the corps. The USACE strategic direction implies a combination of achieving benefits by geographical system (e.g. river basin) and managing by business lines.
- (2) The contribution of business lines to the overall goal of a system or region should be benefit based. The calculation of benefits attributed to business lines should be consistent in both how benefits are assigned values and in the degree to which indirect benefits are considered.
- (3) Performance measures used to compare projects with respect to business lines should be selected based on existing budget EC measures. Although unitary measures were used in this test project, linear combinations of performance measures could be easily constructed.
- (4) Performance measures used to rate work packages should consider both the impact on gradual loss of benefits and catastrophic loss of benefits as demonstrated in the test model.
- (5) Expert Choice can be used to structure a budget prioritization tool consisting of a decision hierarchy and to populate the model with weights at the HQ or Division level. The model developed in this test could serve as a starting point for a USACE wide effort.
- (6) A facilitated executive level workshop to structure and populate an O&M decision model based on the model developed for this project should be conducted at USACE HQ.
- (7) Standards should be set for constructing work packages that ensure there is a minimum size (e.g. \$10,000) and that joint (multi business line) work packages clearly indicate their linkages and relative contribution to business lines.
- (8) If a O&M prioritization model is developed, the development of structure should be performed at the HQ level. The population of the model with weights should be a HQ and Divisional responsibility. The Expert Choice model could then be used to develop a spread sheet application similar to that developed in this test for rating of work packages. This spread sheet should be integrated with the ABS cube or other USACE budget software in such a way that the rating process could be distributed over time and space, eliminating the need for costly travel for group meetings at division headquarters. The actual rating process could best be conducted by Division and District personnel using this spread sheet application.

7. References

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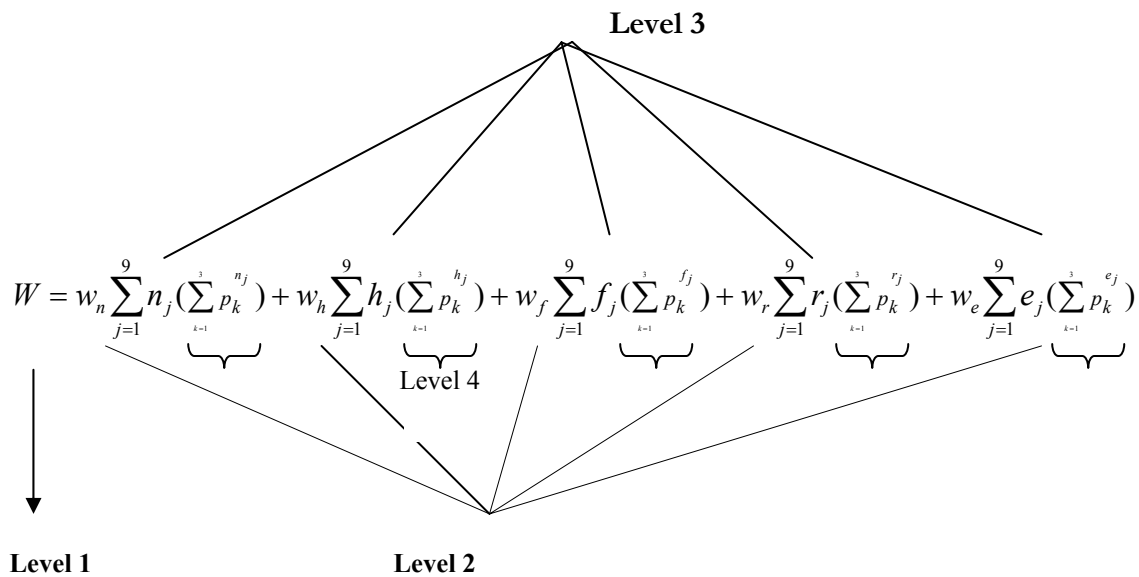
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8. APPENDICES

8.1. APPENDIX A: POPULATING THE AHP MODEL

8.1.1. Level 1 Assessment

Level 1 is the main goal of the proposed model, stated as: “Maintain the design benefits of USACE projects by meeting business line performance objectives within a constrained budget.” Level 1 assessment is done at the very end of the analysis by synthesizing the weights obtained from bottom level to the top where the output is a prioritization list of work packages within a list of O&M work packages to be funded within the specified FY of a USACE Division. According to the multi attribute decision technique that forms the basis for this model, this tree (see Figure 4) involves a nested hierarchy of criteria. Beginning from Level 2 to bottom, the objective is to assign relative weights to each node within each level based on their relative importance, ideally using pair wise comparisons. The relative weights in each level should add up to one. The following equation shows how the weights should be distributed relative to the hierarchy they belong to. ‘W’ is the overall weight and should be equal to 1.



Equation 1

where

W = overall weight of the goal and should be equal to 1.

w_n = weight⁴ of navigation business line (or business function)

w_h = weight of hydropower generation business line

w_f = weight of flood reduction business line

w_r = weight of recreation business line

⁴ In this equation and in the AHP model presented here, weight represents “importance”.

w_e = weight of environment business line

n_j = weight of j th dam project in terms of its navigation function (as compared to the other 8 dam projects)

h_j = weight of j th dam project in terms of its hydropower generation function

f_j = weight of j th dam project in terms of its flood protection function

r_j = weight of j th dam project in terms of its recreation function

e_j = weight of j th dam project in terms of its environment function

p_k = weight of performance measure (or criteria) k

$p_k^{n_j}$ = weight of performance measure (or criteria) k for the navigation function of j th dam project

$p_k^{h_j}$ = weight of performance measure (or criteria) k for the hydropower generation function of j th dam project

$p_k^{f_j}$ = weight of performance measure (or criteria) k for the flood protection function of j th dam project

$p_k^{r_j}$ = weight of performance measure (or criteria) k for the recreation function of j th dam project

$p_k^{e_j}$ = weight of performance measure (or criteria) k for the environment function of j th dam project

8.1.2. Level 2 Assessment

The relative weight assessment starts top down with Level 2 attributes (End Objectives) which are the five business lines. During a one half-day session, which was part of our trip to the NWD (refer to section 2 for the August 23-24, 2004 GWU visit), we collected the relative importance weights for this level. There were no specific criteria in assessing the relative weights but an implicit criterion was assumed by the experts based on the USACE missions. The comparison was made on relative importance of services delivered within the business line in the system. The following are the results:

Table 10 – Relative Weights obtained for five USACE Business Lines

Business Line	Relative Weight
Navigation	0.117
Hydropower generation	0.477
Flood Reduction	0.212
Recreation	0.050
Environmental stewardship	0.143
Total	1.000

Note that the relative weights of the business lines should add up to 1. The following equation shows the mathematical representation.

$$w_n + w_h + w_f + w_r + w_e = 1$$

Equation 2

where

w_n = weight of navigation business line (or business function)

w_h = weight of hydropower generation business line

w_f = weight of flood reduction business line

w_r = weight of recreation business line

w_e = weight of environment business line

8.1.3. Level 3 Assessment

Level 3 involves nine dam/lock and dam projects under each business line. To obtain the relative importance of each of the nine dam projects as compared against each business line, performance criteria of the USACE have been utilized. There is usually more than one performance criteria for each business line used by the USACE. Our main reference in identifying the performance criteria was the current EC Budget 06 Document⁵. It should be noted that we selected these measures for demonstration purposes, and that the model can be used to develop more complex metrics based on linear combinations of multiple performance measures.

8.1.3.1. Navigation

We have located three criteria for assessing the relative importance of each dam project in terms of their navigation function as follows:

- (1) Tonnage of commodity transported
- (2) Commercial tonnage transported
- (3) Economic value of commodity transported

The Annex 5 of the EC Budget document stresses that the Corps is “directing funds primarily to those harbors and waterways that provide the highest return from commercial navigation.” Based on this statement, the best approach for ranking each of the nine projects would be based on a metric that captures the value or tonnage of the commercial commodity transported through the navigation gate and lock system of each dam under consideration. However, we were unable to locate any reliable data on the commercial nature of the transportation; instead we have found 1999 figures as the latest reliable data on the total tonnage of commodity transported (commercial or non-commercial) through a USACE website⁶. The following table shows the amount of tonnage transported per year with the relative weights obtained for each dam project:

⁵ EC 11-2-187, expires March 2005, Army Programs, Corps of Engineers Civil Works Direct Program, Program Development Guidance, Fiscal Year 2006. 360 pp.

⁶ ftp://ftp.crrel.usace.army.mil/pub/outgoing/SPECIAL/iwr/ndc/lpms/dbf/comm/Comm_99.zip

Table 11 – Tonnage of Commodity Transported for nine USACE NWD Dam Projects

DAM Project	TONNAGE⁷	RELATIVE WEIGHT⁸
DWORSHAK ⁹	0	0
LOWER GRANITE	1,987,253	0.042
LITTLE GOOSE	3,127,538	0.065
LOWER MONUMENTAL	3,495,982	0.073
ICE HARBOR	4,067,370	0.085
MCNARY	7,604,466	0.159
JOHN DAY	8,600,616	0.180
THE DALLES	9,271,751	0.194
BONNEVILLE	9,678,824	0.202
Total		1.000

The weights should add up to 1. The following equation shows this principle mathematically.

$$\sum_{j=1}^9 n_j = 1$$

Equation 3

where

n_j = relative importance weight of j th dam project in terms of its navigation function (as compared to the other 8 dam projects)

The relative weights have been obtained by dividing the tons transported within a year by the total sum of tons of commodity transported through all locks in all dams. The following equation describes how the weights are obtained:

$$n_j = \frac{T_j}{\sum_{j=1}^k T_j}$$

Equation 4

where:

T_j = Annual tonnage of commodity transported through navigation locks of dam j

⁷ USACE Navigation Data Center Lock Statistics 1999 (the information is provided for the first day of each month for 1999. Data for 12 months is added to shape the statistic)

⁸ Ratio to the sum of tonnage of all locks

⁹ Dworshak does not have navigation locks.

k = total number of dams (9 in this case)

8.1.3.2. Hydropower Generation

The following performance criteria were identified that would possibly help rank the relative importance of USACE operated dams in term of hydropower generation function:

- (1) Peak Seasonal Availability
- (2) Deviations from planned production capacity due to unexpected disruptions
- (3) Revenue gained per KW hour generated
- (4) Potential revenue per additional KW hour generated
- (5) Average Mega Watt (MW) generation
- (6) Potential Economic Loss if the project's power generation function is not available

The business line goal for hydropower generation is defined as “provide reliable power” in the budget EC.

For our purposes, we selected criteria (5) and (6) since they appear to be most relevant. Not only are the power generation capacities of the dam projects important but the economic losses in the event that the generation capacity is lost is also important while making “risk-based” prioritization decisions for O&M activities. In the absence of other criteria to determine the relative importance of criteria (5) and (6), we have given equal weights to each and the equation to describe the relative importance of a given dam project becomes:

$$h_j = w \frac{GNP_j}{\sum_{j=1}^k GNP_j} + (1 - w) \frac{PL_j}{\sum_{j=1}^k PL_j}$$

Equation 5

where:

h_j = relative importance of dam j in terms of hydropower generation function

GNP_j = generator nameplate capacity¹⁰ of dam j in Mega Watts

PL_j = Potential loss if hydropower generator unit (?) not available in dollars per year

k = number of hydropower generating dams (9 in this case)

w = relative importance of GNP against PL (assumed as 0.5)

¹⁰ The full-load continuous rating of a generator, prime mover or other electrical equipment under specified conditions as designated by the manufacturer.

Table 12 shows the data obtained for GNP and relative weight ($\frac{GNP_j}{\sum_{j=1}^k GNP_j}$) obtained for nine dams:

Table 12 - GNP Capacity and Relative Weights for Nine Projects

DAM	GNP [Mw] ¹¹	RELATIVE WEIGHT*
DWORSHAK	400.0	0.042
LOWER GRANITE	810.0	0.086
LITTLE GOOSE	810.0	0.086
LOWER MONUMENTAL	810.0	0.086
ICE HARBOR	603.0	0.064
MCNARY	980.0	0.104
JOHN DAY	2,160.0	0.229
THE DALLES	1,779.8	0.189
BONNEVILLE ¹²	1,084.9	0.115
TOTAL	9,437.7	1.000

Table 13 shows the data obtained for potential economic losses if power generation units within a dam were not available due to some predetermined scenario¹³ and relative weight ($\frac{PL_j}{\sum_{j=1}^k PL_j}$) obtained for nine dams:

Table 13 - Potential Loss and Relative Weights for Nine Projects

DAM	P. LOSS [\$ /year]	RELATIVE WEIGHT*
DWORSHAK	\$105,487,920	0.046
LOWER GRANITE	\$137,339,280	0.060
LITTLE GOOSE	\$122,611,968	0.054
LOWER MONUMENTAL	\$126,774,720	0.056
ICE HARBOR	\$100,284,480	0.044
MCNARY	\$366,606,000	0.161
JOHN DAY	\$667,774,800	0.293
THE DALLES	\$377,485,920	0.166
BONNEVILLE ¹⁴	\$274,836,240	0.121
TOTAL	\$2,279,201,328	1.000

In Table 14, pooled relative weights using equation 2 of the nine dams are given:

¹¹ Source: <http://www.cbr.washington.edu/crisp/hydro/>

¹² Total of two power houses

¹³ source: excel printout provided by USACE NWD

¹⁴ Total of two power houses

Table 14 - Pooled Weights from GNP and PL criteria

DAM	RELATIVE WEIGHT
DWORSHAK	0.221
LOWER GRANITE	0.059
LITTLE GOOSE	0.061
LOWER MONUMENTAL	0.042
ICE HARBOR	0.037
MCNARY	0.197
JOHN DAY	0.191
THE DALLES	0.100
BONNEVILLE	0.091
TOTAL	1.000

As shown in Equation 6, the relative weights should add up to 1:

$$\sum_{j=1}^9 h_j = 1$$

Equation 6

8.1.3.3. Flood and Coastal Storm Damage Reduction (F&CSDR)

The following performance criteria to rank dam projects in terms of their flood damage reduction function have been derived mainly from the USACE Program Development Guidance 2006 document:

- (1) Number of people at risk in 100 yr floodplain
- (2) Number of people at risk in 500 yr floodplain
- (3) Average annual total damage (in US dollars)
- (4) Percent of time project is available to operate as designed
- (5) Percent of required inspections request will accomplish?
- (6) Consequence of not meeting requirement

The most relevant and the only available data are on Criteria (3) in this case. Therefore, we have based our ranking criteria on the proportion of average annual damages in dollar figures for each given dam project. The following table shows the average annual damages and the relative weights obtained by using equation 3:

Table 15 - Average Annual F & CSD and Relative Weights for Nine Projects

DAM	TOTAL POTENTIAL LOSS [\$]¹⁵	RELATIVE WEIGHT*
DWORSHAK	\$156,000,000	0.055
LOWER GRANITE	\$179,000,000	0.063
LITTLE GOOSE	\$168,000,000	0.059
LOWER MONUMENTAL	\$179,000,000	0.063
ICE HARBOR	\$297,000,000	0.104
MCNARY	\$577,000,000	0.202
JOHN DAY	\$400,800,000	0.140
THE DALLES	\$475,000,000	0.166
BONNEVILLE ¹⁶	\$425,000,000	0.149
TOTAL	\$2,856,800,000	1.000

The following equation represents the fact that the sum of relative weights should be 1:

$$\sum_{j=1}^9 f_j = 1$$

Equation 7

$$f_j = \frac{PFL_j}{\sum_{j=1}^k PFL_j}$$

Equation 8

where

f_j = relative importance weight of j th dam project in terms of its flood protection function

PFL_j = Total dollar value of losses due to loss of dam j

k = total number of dams (9 in this case)

¹⁵ Source: excel spreadsheet obtained from USACE NWD

¹⁶ Total of two power houses

8.1.3.4. Recreation

The following performance criteria for USACE’s Recreation Business Line are used to rank the nine dams:

- (1) Recreation Unit Day Availability (RUDA)
- (2) Recreation Facility Condition Index
- (3) Recreation National Economic Development

The primary metric is RUDA.

$$\sum_{j=1}^9 r_j = 1$$

Equation 9

where

r_j = weight of *j*th dam project in terms of its recreation function

8.1.3.5. Environmental Stewardship

According to USACE’s program development guidance document for 2006, the business line goal for environmental stewardship is to “repair past environmental degradation and prevent future environmental losses. Manage natural resources to assure a healthy and sustainable condition.” Currently, we have assumed equal weights for each of the nine dam projects in terms of providing the environmental stewardship function. However, the point system developed/adapted by the Corps can be adapted if the data is available.

$$\sum_{j=1}^9 e_j = 1$$

Equation 10

where

e_j = weight of *j*th dam project in terms of its environment function

8.1.4. Level 4 Assessment

A decision has been made to keep the Level 4 attributes as similar as possible for each business line, and keep them simple and as few in number as possible while allowing it to measure a performance that the alternative work packages should be compared against. We decided to allow three attributes to measure

against under each business line. The reason is that given the large number of work packages to compare against, the amount of time spent in individual comparisons should be reasonable.

Since the navigation and flood protection lines involve a physical structure, we attempt to rank the work package in terms of its importance for preventing gradual degradation as well as the catastrophic failure of the system. The third measure strictly addresses the cost effectiveness of the work package, meaning that it should not be too costly to implement to overshadow the benefits it is supposed to produce. Attributes against which the work packages will be rated:

- Navigation
 - Prevent catastrophic failure,
 - Prevent gradual degradation,
 - Provide cost-effectiveness
- Hydropower generation
 - Prevent catastrophic failure,
 - Prevent gradual degradation of reliable and peak power provision capability
 - Provide cost-effectiveness
- Flood Reduction
 - Prevent catastrophic failure,
 - Prevent gradual degradation,
 - Provide cost-effectiveness

$$\sum_{k=1}^3 p_k^{n_j} = 1$$

Equation 11

$$\sum_{k=1}^3 p_k^{h_j} = 1$$

Equation 12

$$\sum_{k=1}^3 p_k^{f_j} = 1$$

Equation 13

where

$p_k^{n_j}$ = weight of performance measure (or criteria) k for the navigation function of j th dam project

$p_k^{h_j}$ = weight of performance measure (or criteria) k for the hydropower generation function of j th dam project

$p_k^{f_j}$ = weight of performance measure (or criteria) k for the flood protection function of j th dam project

For both recreation and environmental stewardship business lines, we captured the sustainability for future generations, public health, and cost-effectiveness, and added the provision of safety criteria for recreation only. The environmental stewardship ranking criteria involves the provisions regarding Endangered Species Act as well as the protection of historical and cultural resources and properties.

Attributes against which the work packages will be rated:

- Recreation
 - Provide a safe and healthy recreation environment,
 - Provide sustainable recreation opportunities for future generations,
 - provide cost-effectiveness
- Environmental stewardship
 - Protect/preserve cultural/historic resources/properties,
 - Promote endangered species and other natural resources for a sustainable and healthy environment
 - Provide cost effectiveness

$$\sum_{k=1}^3 p_k^{r_j} = 1$$

Equation 14

$$\sum_{k=1}^3 p_k^{e_j} = 1$$

Equation 15

where

$p_k^{r_j}$ = relative importance weight of performance measure (or criteria) k for the recreation function of j th dam project

$p_k^{e_j}$ = relative importance weight of performance measure (or criteria) k for the environment function of j th dam project

In the absence of better data and for demonstration purposes, Level 4 weights for the performance measures were assumed to be equal except for the environmental stewardship function. The following table summarizes raw relative importance weights for Level 4 as collected through the assumptions stated above:

Table 16 – Relative Importance Weights for Performance Measures (Level 4 of AHP) – Raw (Local) Weights

Business Line	Dam Name/ Perf. Meas.	Dwors-hak	Lower Granite	Little Goose	Lower Monumental	Ice Harbor	Mc Nary	John Day	The Dalles	Bonneville
Navig.	Catast. Failure	0.000	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	Cost Effec.	0.000	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	Gradual Degr.	0.000	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
Hydropwr	Catast. Fail.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	Cost Effec.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	gradual deg	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
Flood protection	Catast. Fail.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	Cost Effec.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	gradual deg	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
Recr.	Cost Effec.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	Safe & Healthy	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
	Future Gen.	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
Env.	cost effec.	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058
	cult.&hi storical	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110
	ESA & nature	0.832	0.832	0.832	0.832	0.832	0.832	0.832	0.832	0.832

The following table was obtained for the Level 4 weights by multiplying the above figures by their corresponding Level 3 and Level 2 weights. Refer to Table 10 for Level 2 weights (business lines) and for Level 3 multipliers, refer to Table 11 for navigation function, Table 14 for hydropower generation, and Table 15 for flood protection function.

Table 17 – Relative Importance Weights for Performance Measures (Level 4 of AHP) – Compound (Global) Weights

Business Line	Dam Name/ Perf. Meas.	Dwors-hak*	Lower Granite	Little Goose*	Lower Monumental	Ice Harbor	Mc Nary	John Day	The Dalles*	Bonneville*
Navig.	Catast. Failure	0.000	0.002	0.003	0.003	0.003	0.006	0.007	0.008	0.008
	Cost Effec.	0.000	0.002	0.003	0.003	0.003	0.006	0.007	0.008	0.008
	Gradual Degr.	0.000	0.002	0.003	0.003	0.003	0.006	0.007	0.008	0.008
Hydropwr	Catast. Fail.	0.035	0.009	0.010	0.007	0.006	0.031	0.030	0.016	0.014
	Cost Effec.	0.035	0.009	0.010	0.007	0.006	0.031	0.030	0.016	0.014
	gradual deg	0.035	0.009	0.010	0.007	0.006	0.031	0.030	0.016	0.014
Flood protection	Catast. Fail.	0.004	0.004	0.004	0.004	0.007	0.014	0.010	0.012	0.011
	Cost Effec.	0.004	0.004	0.004	0.004	0.007	0.014	0.010	0.012	0.011
	gradual deg	0.004	0.004	0.004	0.004	0.007	0.014	0.010	0.012	0.011
Recr.	Cost Effec.	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.007
	Safe & Healthy	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.007
	Future Gen.	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.007
Env.	cost effec.	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	cult.&hi storical	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
	ESA & nature	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013

8.1.5. Level 5 Assessment

Level 5 constitutes the so called “alternatives”, i.e. individual work packages that compete against one another to get the funding in the planned year. To do that, these work packages are compared against the performance criteria that belong to the project site and the business line that they fall under. In a typical FY budget the total number of work packages may reach up to thousands as was the case for the FY2005 sample data. Thus, pair wise comparison of these work packages may not be feasible time wise¹⁷.

Thus, a decision was made that unlike the upper levels 2, 3, and 4, Level 5 assessment will be based upon a rating system. For this, we use a ranking procedure for each work package. Accordingly, each

¹⁷ For example, for the McNary project, under the Environmental stewardship business line, in the FY2005 budget there were 50 work packages. Note that for each criteria, the number of pair wise comparisons need to be made equal 1225 as the equation $n! / [(n-r)! r!]$ indicates¹⁷. Therefore, if 30 seconds is spent for each comparison, it takes roughly a total of 20 hours for the rating process.

work package gets a rating for each of the three relevant corresponding performance criteria (shown above) using the following scale:

0 : Not applicable

1: minimum contribution to the business line (or line) relative to the criteria

2: moderate contribution to the business line relative to the criteria

3: maximum contribution to the business line relative to the criteria

8.2. APPENDIX B – PRIORITY LIST(BASELINE RESULTS)

Rank	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
1	DWORSHYD-FACILITY SECURITY PHYSICAL IMPRVMTS, MODS, MAINT, AND REPLACE FOR HYDROPOWER	0.24573	70	61390	MAINTENANCE	CPSP/RAM-D DWORSHAK
2	THE DHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.12707	400	60392	OPERATIONS	FACILITY SECURITY -- GUARDS, MONITORING
3	BONNEHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.11564	133	60392	OPERATIONS	SECURITY GUARD CONTRACT
4	BONNEHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.11564	1000	60392	OPERATIONS	FACILITY SECURITY GUARDS, MONITORING
5	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07900	25	61610	MAINTENANCE	JHYD- REPLACE RESOURCE OFFICE HVAC
6	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.07900	8	60610	OPERATIONS	JHYD-(SMC) ULTRASONIC FLOW TRANSDUCERS FOR PENSTOCKS
7	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.07900	11	60610	OPERATIONS	JHYD - (SMC) NEW GEARBOX FOR TAILRACE CRANE
8	BONNEJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.07276	200	60692	OPERATIONS	SECURITY GUARD CONTRACT
9	BONNEJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.07276	58	60692	OPERATIONS	OPERATION OF RAM-D SECURITY IMPROVEMENTS
10	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06705	1921	61610	MAINTENANCE	JHYD-REHAB/REPAIR PROJECT SEWAGE SYSTEM
11	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06436	62	61610	MAINTENANCE	JHYD- INSTRUMENTATION MAINT/RPR
12	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.06436	162	60610	OPERATIONS	JHYD- UPDATE EMERGENCY NOTIFICATION PLAN
13	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.06436	25	60610	OPERATIONS	SMC- REPLACE SEALS ON BULKHEADS, GATES, AND VALVES
14	BONNEFAC-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR NAVIGATION	0.06296	30	60192	OPERATIONS	SECURITY GUARD CONTRACT
15	BONNEFAC-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06296	4800	61110	MAINTENANCE	CENTRALIZE OPERATION OF NAVIGATION LOCK
16	BONNEJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.06184	31	60632	OPERATIONS	JHYD--INSPECT HYDRAULIC STEEL STRUCTURES
17	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06145	25	61610	MAINTENANCE	JHYD-UPGRADE ELEVATOR CONTROLS
18	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06047	46	61110	MAINTENANCE	REPAIR NAVLOCK UPSTREAM GATE
19	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06047	269	61110	MAINTENANCE	RECOVER NAVLOCK BUILDING ROOF
20	BONNEJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.05987	23	60631	OPERATIONS	JHYD-EVALUATIONS & DATA GATHERING
21	THE DJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.05869	17	60632	OPERATIONS	JHYD-HSS GATE INSPECTION
22	THE DJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.05869	13	60650	OPERATIONS	JHYD--MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
23	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.05709	700	61660	MAINTENANCE	JHYD-HTW CORRECTIVE ACTION-CLEANUP OF BRADFORD ISLAND
24	THE DJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.05623	1	60632	OPERATIONS	JHYD--PERIODIC INSPECTIONS - BRIDGES
25	THE DJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.05605	2	60633	OPERATIONS	JHYD-HYDROLOGIC CAPACITY INITIAL EVALUATION
26	THE DJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.05598	200	60692	OPERATIONS	OPERATION OF RAM-D SECURITY IMPROVEMENTS
27	THE DJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.05598	400	60692	OPERATIONS	SECURITY GUARD CONTRACT
28	THE DJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05598	356	61610	MAINTENANCE	CAPJ--REPLACE SPILLWAY GATE BRAKE THRUSTERS & LININGS
29	THE DJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05598	174	60610	OPERATIONS	JHYD--OPERATION OF JOINT ACTIVITIES
30	THE DJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.05598	186	60641	OPERATIONS	JHYD--WATER CONTROL & WATER QUALITY ACTIVITIES
31	THE DJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.05598	66	60642	OPERATIONS	JHYD--COLLECTION OF WATER CONTROL DATA
32	THE DJOI-JOINT COSTS FOR WATER MGMT EQUIP ACTIVITIES	0.05598	2	61640	MAINTENANCE	JHYD-NWD WATER MGMT EQUIPMENT MAINTENANCE
33	BONNEFAC-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.05509	517	61110	MAINTENANCE	SCHEDULED MAINTENANCE OF NAVIGATION LOCKS

Rank	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
34	BONNEAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.05509	615	60110	OPERATIONS	OPERATION OF LOCKS 24 HRS/DAY, 7 DAYS/WEEK B1
35	BONNEAV-INSTRUMENTATION, DATA COLLECTION AND ANALYSIS FOR NAVIGATION	0.05509	14	60131	OPERATIONS	SURVEY MONITORING - NAVLOCK
36	DWORSJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.05461	4	60633	OPERATIONS	JHYD - REEVALUATE PROBABLE MAXIMUM FLOOD
37	DWORSJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.05461	9	60633	OPERATIONS	JHYD-LOW LEVEL OUTLET EMERGENCY CLOSURE GATES EVAL
38	DWORSJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.05461	100	60692	OPERATIONS	JHYD- SECURITY GUARDS
39	DWORSJOI-JOINT COSTS FOR FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT AND REPLACE	0.05461	1430	61690	MAINTENANCE	CPSP/RAM-D DWORSHAK
40	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.05461	8	60632	OPERATIONS	JHYD-FORMAL PERIODIC INSPECTIONS AND RPTS.
41	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.05461	1	60632	OPERATIONS	JHYD-SPILLWAY STILLING BASIN SOUNDINGS
42	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.05461	3	60632	OPERATIONS	JHYD- HYDR STEEL STRUCT INSP, REGULATING OUTLET INSP
43	DWORSJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.05461	10	60631	OPERATIONS	JHYD- EVALUATION OF INSTRUMENTATION DATA
44	DWORSJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.05461	1	60631	OPERATIONS	JHYD- INSTRUMENTATION MINOR MAINT
45	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	16	61610	MAINTENANCE	JHYD- MISC. SMALL CAP PURCHASES (SMC)
46	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	101	61610	MAINTENANCE	JHYD- MEASURE SPILLWAY GATE FRICTION COEFFICIENT
47	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	5	61610	MAINTENANCE	JHYD - REPLACE SNOWFLOW
48	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	6	61610	MAINTENANCE	JHYD-CORRECT SEISMIC DEFICIENCIES
49	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	11	61610	MAINTENANCE	SMC- AUTOMATE DAM INSTRUMENTATION
50	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	1	61610	MAINTENANCE	JHYD-REPAIR & UPDATE AUTOMATED INSTRUMENTATION
51	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	2	61610	MAINTENANCE	JHYD-FOREBAY TEMPERATURE DATA LOGGER
52	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	8	61610	MAINTENANCE	JHYD - DWA DAM MONOLITH JOINT DRAIN WATERSTOP REPAIR
53	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	11	61610	MAINTENANCE	JHYD-ROUT ANNUAL MAINT OF DAM, SPILLWAY GATES, BLDGS, ET
54	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05461	1	60610	OPERATIONS	JHYD- DAM SAFETY TRAINING
55	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05461	1	60610	OPERATIONS	JHYD - PROJECT PAVING
56	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05461	18	60610	OPERATIONS	JHYD - PURCHASE MAN-LIFT
57	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05461	5	60610	OPERATIONS	JHYD-CORRECT SEISMIC DEFICIENCIES
58	BONNEREC-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR RECREATION	0.05435	34	60592	OPERATIONS	SECURITY GUARD CONTRACT
59	BONNEJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.05391	26	60633	OPERATIONS	JHYD-STILLING BASIN EROSION MONITORING AND EVALUATION
60	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.05391	14	60660	OPERATIONS	JHYD-PERFORM ENVIRONMENTAL COMPL ASSESSMENT,REPORTS
61	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.05391	56	60660	OPERATIONS	JHYD-ENVIRONMENTAL COMPLIANCE ACTIVITIES-ADD'L NEEDS
62	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05391	748	61610	MAINTENANCE	JHYD-MAINTENANCE OF JOINT ACTIVITIES
63	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05391	90	61610	MAINTENANCE	CAPJ REPLACE SPILLWAY ELEVATORS
64	BONNEJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05391	21	60610	OPERATIONS	JHYD-OPERATION OF JOINT ACTIVITIES
65	BONNEJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05391	488	60610	OPERATIONS	JHYD-ACCOMPLISH PREVENTIVE MAINTENANCE BACKLOG
66	BONNEJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.05391	22	60650	OPERATIONS	JHYD-MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
67	BONNEJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.05391	142	60641	OPERATIONS	JHYD-WATER CONTROL & WATER QUALITY ACTIVITIES
68	BONNEJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.05391	59	60642	OPERATIONS	JHYD-COLLECTION OF WATER CONTROL DATA

Rank	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
69	BONNEJOI-JOINT COSTS FOR WATER MGMT EQUIP ACTIVITIES	0.05391	2	61640	MAINTENANCE	JHYD - NWD WATER MGMT EQUIPMENT MAINTENANCE
70	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.05291	412	61110	MAINTENANCE	SCHEDULED MAINTENANCE OF NAVIGATION LOCKS
71	THE DNAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.05291	389	60110	OPERATIONS	OPERATION OF LOCKS 24 HRS/DAY, 7 DAYS/WEEK
72	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05267	25	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
73	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05267	5	60610	OPERATIONS	JHYD- RADIO REPLACEMENT (HANDHELDS/BASE STATIONS)
74	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05260	20	61610	MAINTENANCE	JHYD--REPAIR RAILROAD TRACKS
75	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05260	201	61610	MAINTENANCE	CAPJ--REPLACE PROJECT & MARINE RADIO SYSTEM
76	THE DOJO-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.04895	31	61660	MAINTENANCE	JHYD-UPGRADE EXISTING HAZARDOUS MATERIALS STORAGE AREA
77	THE DOJO-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.04895	13	60660	OPERATIONS	JHYD-PERFORM ENVIRONMENTAL COMPL ASSESSMENT, REPORTS
78	THE DOJO-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.04895	7	60631	OPERATIONS	JHYD--EVALUATIONS & DATA GATHERING
79	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	232	61610	MAINTENANCE	JHYD--MAINTENANCE OF JOINT ACTIVITIES
80	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	24	61610	MAINTENANCE	JHYD--REFURBISH 23 SPILLWAY GATES E&D
81	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	247	61610	MAINTENANCE	CAPJ--RECOVER SERVICE BUILDING ROOF
82	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	200	61610	MAINTENANCE	JHYD-PERFORM BACKLOG SPILLWAY MAINTENANCE
83	LITLHYD-FACILITY SECURITY PHYSICAL IMPRVMTS, MODS, MAINT, AND REPLACE FOR HYDROPOWER	0.04845	185	61390	MAINTENANCE	CPSR/AM-D LITTLE GOOSE
84	BONNEREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.04755	7	60513	OPERATIONS	JHYD-LAW ENFORCEMENT SERVICES
85	BONNEREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.04755	29	60513	OPERATIONS	JHYD-LAW ENFORCEMENT SVCS - ADD'L NEEDS
86	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04755	106	61511	MAINTENANCE	JHYD-MAINTENANCE OF RECREATION FACILITIES- ADD'L NEEDS
87	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.04755	73	60511	OPERATIONS	JHYD-OPERATION OF REGIONAL VISITOR CENTER
88	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.04755	260	60511	OPERATIONS	JHYD - LEWIS & CLARK BICENTENNIAL MANAGEMENT PLAN
89	BONNEAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04722	261	61110	MAINTENANCE	STABILIZE ORIGINAL NAVIGATION LOCK NORTH WALL
90	BONNEENV-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR ENVIRONMENTAL STEWARDSHIP	0.04670	41	60492	OPERATIONS	SECURITY GUARD CONTRACT
91	BONNEENV-MANAGEMENT OF SPECIAL STATUS SPECIES	0.04670	2	60418	OPERATIONS	JHYD-ESA-CONSULTATION AND COORDINATION
92	DWORSENV-MGMT OF NATURAL RESOURCES	0.04670	4	60411	OPERATIONS	TIMBER SALE SUPPORT,REVIEW FORESTRY & RANGE MGMT
93	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04666	103	61610	MAINTENANCE	JHYD-REPAIR AND REPAINT SPILLWAY GATES
94	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04666	223	61610	MAINTENANCE	CAPJ-REPLACE SPILLWAY POWER DISTRIBUTION EQUIP PH1
95	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	13	60415	OPERATIONS	JHYD- TRAP & TRANSPORT PROGRAM
96	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	34	60415	OPERATIONS	JHYD- BIOP- ADDITIONAL FISH COUNTING
97	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	24	60415	OPERATIONS	JHYD- ROUT OPER OF ADULT FISH PASSAGE FACS
98	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	1	60415	OPERATIONS	JHYD- ROUT OPER OF JUVENILE PASSAGE FACS
99	LITLLENV-FISHERIES MGMT - OPS OF FISH HATCHERIES	0.04587	8	60414	OPERATIONS	JHYD- BIOP- IMPROVED DEBRIS HANDLING
100	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	9	61414	MAINTENANCE	JHYD-ROUT MAINT ADULT FISHWAY FACS
101	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	2	61414	MAINTENANCE	JHYD- BIOP- ESBS OVERHAUL
102	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	10	61414	MAINTENANCE	JHYD-REPLACE SEWAGE & WATER LINES TO JFF
103	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	13	61414	MAINTENANCE	JHYD-RECON FISH WTR ATTRACT PUMP TURBINE WICKET GATES

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104	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	15	61414	MAINTENANCE	JHYD- ROUT ANNUAL MAINT OF FISHWAY FACS, ETC
105	LITLLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.04587	2	61413	MAINTENANCE	JHYD- KELLBERG WELL REPAIR
106	LITLLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.04587	1	61413	MAINTENANCE	JHYD- ROUTINE MAINT OF WILDLIFE
107	LITLLENV-MGMT OF NATURAL RESOURCES	0.04587	5	60411	OPERATIONS	JHYD-ENVIRONMENTAL COMPLIANCE FOR NATURAL RESOURCES
108	THE DJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04557	104	61610	MAINTENANCE	JHYD-REPAIR PROJECT ACCESS ROADS
109	THE DJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04557	42	61610	MAINTENANCE	JHYD--REPLACE PROJECT PAGER SYSTEM
110	THE DJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04557	11	61610	MAINTENANCE	CAPJ - UPGRADE SECURITY SYSTEM
111	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	26	61110	MAINTENANCE	PERFORM BACKLOG NAVLOCK MAINTENANCE
112	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	770	61110	MAINTENANCE	INSTALL GDACS MONITORING OF NAVLOCK
113	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	86	61110	MAINTENANCE	REPLACE DOWNSTREAM NAVLOCK GATE PINTLE BEARINGS-E&D
114	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	365	60415	OPERATIONS	JHYD-OPERATION OF FISH PASSAGE FACILITIES
115	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	164	60415	OPERATIONS	JHYD-FISH HAULING & COUNTING ACTIVITIES BY NWW
116	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	48	60415	OPERATIONS	JHYD-ESA IMPLEMENT BIOP-NEW FISH COUNT/TRANSPORT RQMTS
117	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	235	61414	MAINTENANCE	JHYD-MAINTENANCE OF FISH PASSAGE FACILITIES
118	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	42	61414	MAINTENANCE	JHYD-ESA-DEVELOP & IMPLEMENT PREVENTIVE MAINT FOR FISH
119	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	155	61414	MAINTENANCE	JHYD-ESA-REMOVE OBSTRUCTIONS FROM TURBINE ENVIRONMENT
120	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	52	61414	MAINTENANCE	JHYD-ESA-PURCHASE SPARE PARTS FOR AUXILIARY WATER SYS
121	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	1	60420	OPERATIONS	JHYD -- ESA ADD'L BIOP BULL TROUT MONITORING AND SURVEYS
122	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	38	60420	OPERATIONS	JHYD -- ESA BULL TROUT MONITORING
123	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	24	60420	OPERATIONS	JHYD-ESA-ANADROMOUS FISH EVALUATION PROGRAM
124	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	3	60441	OPERATIONS	JHYD-ESA-TOTAL MAXIMUM DAILY LOADS MONITORING PROGRAM
125	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	10	60650	OPERATIONS	JHYD-MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
126	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	18	60441	OPERATIONS	JHYD-ESA HYD EVAL ADULT BYPASS SYSTEM
127	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - OPS OF WTR CTRL DATA SYS	0.04495	26	60442	OPERATIONS	JHYD-ESA-TOTAL DISSOLVED GAS FIXED MONITORING PROGRAM
128	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	15	60411	OPERATIONS	JHYD- ENVIRONMENTAL COMPLIANCE FOR NATURAL RESOURCES
129	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	44	60411	OPERATIONS	JHYD- RESERVOIR SURVEY - FISH AND HABITAT
130	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	71	60411	OPERATIONS	JHYD - SITE INVENTORY, BIRDS AND BATS
131	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	3	60411	OPERATIONS	JHYD- BIOP ACTION 139 DWORSHAK GAS ABATEMENT STUDY
132	DWORSENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	49	60413	OPERATIONS	JHYD-OPER OF WILDLIFE MITIGATION
133	DWORSENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	18	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
134	DWORSENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	36	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
135	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 198 REGIONAL DATABASE
136	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 133 SYSTEM TDG MODELING
137	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	18	60441	OPERATIONS	JHYD-BIOP ACTION APPENDIX B - SYSTEM TEMPERATURE STUDY

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138	LITTLNV-MGMT OF NATURAL RESOURCES	0.04495	3	60411	OPERATIONS	JHYD- ROUTINE OPERATIONS OF NATURAL RESOURCES
139	LITTLNV-MGMT OF NATURAL RESOURCES	0.04495	1	60411	OPERATIONS	JHYD- RESERVOIR SURVEY - FISH AND HABITAT
140	LITTLNV-MGMT OF NATURAL RESOURCES	0.04495	1	60411	OPERATIONS	JHYD - SITE INVENTORY, BIRDS AND BATS
141	LITTLNV-MGMT OF NATURAL RESOURCES	0.04495	5	60411	OPERATIONS	JHYD - RESERVOIR LANDS, VEGETATION SURVEY
142	LITTLNV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	18	60413	OPERATIONS	JHYD-LEVEL II WILDLIFE INVENTORIES
143	LITTLNV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	28	60413	OPERATIONS	JHYD-GIS MAPPING
144	LITTLNV-PURCHASE/MAINT OF WATER MGMT EQUIP FOR ENVIRON STEWARDSHIP	0.04495	2	61440	MAINTENANCE	JHYD- BIOP ACTION 131 REDUNDANT TOTAL DISSOLVED GAS MONI
145	LITTLNV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	19	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
146	LITTLNV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	18	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
147	LITTLNV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 198 REGIONAL DATABASE
148	LITTLNV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	4	60441	OPERATIONS	JHYD- BIOP ACTION 132 REVIEW TOTAL DISSOLVED GAS MONITOR
149	LITTLNV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 133 SYSTEM TDG MODELING
150	LITTLNV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	7	60441	OPERATIONS	JHYD- BIOP ACTION 143 TEMPERATURE MODELING PLAN (LOWER S
151	LITTLNV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	7	60441	OPERATIONS	JHYD-BIOP ACTION APPENDIX B - SYSTEM TEMPERATURE STUDY
152	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	183	60415	OPERATIONS	JHYD- OPERATION OF FISH PASSAGE FACILITIES
153	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	29	60415	OPERATIONS	JHYD--FISH HAULING & COUNTING ACTIVITIES BY NWW
154	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	111	60415	OPERATIONS	JHYD-ESA IMPLEMENT NEW FISH COUNT/TRANSP REQMTS
155	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	1	60415	OPERATIONS	JHYD--ESA INCIDENTAL TAKE ACTIVITIES
156	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	167	61414	MAINTENANCE	JHYD--MAINTENANCE OF FISH PASSAGE FACILITIES
157	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	14	61414	MAINTENANCE	JHYD-ESA SPARE PARTS FOR AWS
158	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD--ESA REMOVE OBSTRUCTIONS FROM TURBINE ENVIRONMENT
159	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD-ESA DEVELOP/IMPLEMENT FISH FAC PREVENTIVE MAINT PRO
160	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD--REPLACE DIFFUSION WATER GRATINGS-N FISHLADDER
161	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	3	61414	MAINTENANCE	JHYD-PROCURE & INSTALL DIFFUSION VALVES
162	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	29	61414	MAINTENANCE	CAPJ-EVALUATE & REHAB FISH COUNTING STATION
163	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	72	61414	MAINTENANCE	JHYD-REHAB N. FISHLADDER & AWS
164	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	358	61414	MAINTENANCE	JHYD-ESA-AUTOMATE AUXILIARY WATER SYSTEM
165	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD-ESA-REPLACE COUNT STATION CROWDER/WINDOW BRUSH
166	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	42	61414	MAINTENANCE	JHYD-ESA-REFURBISH WEIR GUIDES
167	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	240	61414	MAINTENANCE	JHYD--REPAIR FISH LADDER STRUCTURE ROOF
168	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	CAPJ-INSTALL GDACS CONTROL OF FISHWAYS
169	THE DENV-MANAGEMENT OF SPECIAL STATUS SPECIES	0.04495	6	60418	OPERATIONS	JHYD-ESA-CONSULTATION AND COORDINATION
170	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	88	60420	OPERATIONS	JHYD-ESA-ANADROMOUS FISH EVALUATION PROGRAM
171	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	3	60420	OPERATIONS	JHYD-ESA BULL TROUT MONITORING

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172	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	25	60420	OPERATIONS	JHYD-ADDITIONAL BI-OP BULL TROUT MONITORING STDY & SURV
173	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	44	60441	OPERATIONS	JHYD-ESA HYDRAULIC EVAL ADULT BYPASS SYSTEM
174	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	19	60441	OPERATIONS	JHYD-TOTAL MAXIMUM DAILY LOADS MONITORING PROGRAM
175	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - OPS OF WTR CTRL DATA SYS	0.04495	30	60442	OPERATIONS	JHYD-ESA-TOTAL DISSOLVED GAS FIXED MONITORING PROGRAM
176	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04487	25	61610	MAINTENANCE	JHYD- REPLACE LOG BOOMS
177	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.04300	8	61660	MAINTENANCE	JHYD-ENVIRONMENTAL COMPLIANCE W/FED.STATE,LOCAL REGS
178	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04300	4	61610	MAINTENANCE	JHYD-REPLACE SEALS ON BULKHEADS,GATES, & VALVES
179	DWORSJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.04300	11	60650	OPERATIONS	JHYD- COMPLIANCE INSPECTIONS, OUTGRANT ACTIONS
180	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04192	42	61610	MAINTENANCE	JHYD-REPLACE WESTRICK CONFERENCE CENTER ROOF
181	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.04172	5	61660	MAINTENANCE	JHYD- REMOVE DAM UST
182	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.04172	5	60660	OPERATIONS	JHYD- CYCLE III EXTERNAL ERGO ASSESSMENTS
183	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04167	64	61610	MAINTENANCE	JHYD--UPGRADE BATTERY STORAGE AREA
184	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	46	60641	OPERATIONS	JHYD- NWD RESERVOIR CONTROL CENTER
185	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	23	60641	OPERATIONS	JHYD- NWD WATER MANAGEMENT MOVE TO NEW BUILDING
186	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	2	60641	OPERATIONS	JHYD-WTR CONTROL COORDINATION & WTR QUALITY ANALYSIS
187	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	7	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
188	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	5	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
189	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.04100	28	60642	OPERATIONS	JHYD- DISSOLVED GAS DATA COLLECTION
190	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.04100	8	60642	OPERATIONS	JHYD-COLLECT WTR QUALITY DATA & COLLECT STREAMGAGE, ETC
191	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04076	22	61511	MAINTENANCE	CAPJ-REHAB HAMILTON ISL REC AREA BOAT RAMP BN2
192	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04076	31	61511	MAINTENANCE	CAPJ-REHAB WASH SHORE VISITOR CENTER - PH2
193	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04076	392	61511	MAINTENANCE	CAPJ-REHAB BRAD. ISL. VISITOR CTR.ROOF BN1
194	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	3	61610	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
195	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	21	61610	MAINTENANCE	JHYD-REPAIR 1603 GALLERY WATER INTRUSION
196	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	50	61610	MAINTENANCE	JHYD-ROAD MAINT GRANDAD CREEK TO BREAKFAST CREEK RD
197	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	35	61610	MAINTENANCE	JHYD-REPAIR ASPHALT ROADWAYS
198	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	11	61610	MAINTENANCE	JHYD - FOUNDATION DRAIN CLEANING
199	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	49	61610	MAINTENANCE	JHYD - S. DAM SECURITY FENCING/CAMERA
200	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	49	61610	MAINTENANCE	SMC- 350 TON BRIDGE CRANES (2)- REHAB
201	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03512	7	60610	OPERATIONS	JHYD- FIRE MONITORING/PROTECTION FOR DAM &POWERHOUSE
202	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03512	17	60610	OPERATIONS	JHYD- ROUNT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
203	DWORSJOI-JOINT COSTS FOR STUDIES AND SURVEYS	0.03512	1	60621	OPERATIONS	JHYD- ENERGY PROD RPTS, FLOOD DAMAGES REPORTS

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204	BONNEREC-FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT, AND REPLACE FOR RECREATION	0.03397	31	61590	MAINTENANCE	ENCLOSE PH1 VISITOR GALLERY FOR SECURITY
205	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	516	61511	MAINTENANCE	SCAPJOI - PURCHASE/INSTALL CONCRETE VAULT TOILETS
206	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	284	61511	MAINTENANCE	CAPJ REPLACE ELEVATORS-BRADFORD IS VISITOR CTR
207	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	515	61511	MAINTENANCE	JHYD-UPGRADE BRAD ISL VISITOR CTR RESTROOM BN1
208	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	24	61511	MAINTENANCE	JHYD-MAINTENANCE OF RECREATION FACILITIES & VISITOR CTR
209	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.03397	15	60511	OPERATIONS	JHYD-MANAGEMENT OF RECREATION AREAS & FACILITIES
210	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.03397	50	60511	OPERATIONS	JHYD-MANAGEMENT OF REC AREAS - ADD'L ROUTINE NEEDS
211	BONNEENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	60	60412	OPERATIONS	JHYD-CULTURAL RESOURCES TO MEET NATIVE AMERICAN AGREE
212	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03349	12	61413	MAINTENANCE	JHYD-IMPROVE RD CONDITIONS-GRANDAD WILDLIFE MITIGATION AREA
213	THE DENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	22	60412	OPERATIONS	JHYD-CULTURAL RESOURCES TO MEET NATIVE AMERICAN AGREE
214	THE DENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	100	60412	OPERATIONS	JHYD--CONTR LAW ENFORCEMENT- CULTURAL AREAS
215	LITTLENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	7	60412	OPERATIONS	JHYD- FEDERAL COLUMBIA R. POWER SYSTEM - CUL RES
216	LITTLENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	22	60412	OPERATIONS	MGMT OF CULTURAL RESOURCES
217	LITTLENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	1	60412	OPERATIONS	JHYD - CULTURAL RESOURCE PROGRAM COMPLIANCE
218	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	39	61414	MAINTENANCE	JHYD-EVAL/REHAB FISH COUNTING STATION
219	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	13	61414	MAINTENANCE	JHYD-ANNUAL FISHWAY OVERHAUL
220	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	100	61414	MAINTENANCE	JHYD-MAINTENANCE OF SUBMERGED TRAVELING FISH SCREENS
221	BONNEENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	10	61411	MAINTENANCE	JHYD-MAINTENANCE OF NATURAL RESOURCE FACILITIES
222	BONNEENV-MGMT OF NATURAL RESOURCES	0.03175	33	60411	OPERATIONS	JHYD-NATURAL RESOURCES MANAGEMENT
223	DWORSENV-BOUNDARY MONUMENTATION AND RECTIFICATION FOR ENVIRON STEWARD	0.03175	7	61453	MAINTENANCE	JHYD-PROJECT BOUNDARY MONUMENTATION
224	DWORSENV-ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) FOR ENVIRON STEWARD	0.03175	6	61460	MAINTENANCE	JHYD- EXTERNAL ENVIRONMENTAL REVIEWS
225	DWORSENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.03175	79	60415	OPERATIONS	JHYD- MANAGEMENT OF RESIDENT FISHERIES
226	DWORSENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.03175	5	60415	OPERATIONS	JHYD- TRAP & TRANSPORT PROGRAM
227	DWORSENV-FISHERIES MGMT - OPS OF FISH HATCHERIES	0.03175	247	60414	OPERATIONS	JHYD- HATCHERY- ROUTINE OPER BY U.S.FISH & WILDLIFE SERVI
228	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	217	61414	MAINTENANCE	JHYD- ROUTINE MAINT ASSISTANCE TO NAT'L HATCHERY
229	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	62	61414	MAINTENANCE	JHYD- EMERGENCY GENERATORS - DNFH
230	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	123	61414	MAINTENANCE	JHYD-SYSTEM III MEDIA CHANGE
231	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	12	61414	MAINTENANCE	JHYD- REROOF OTHER BUILDINGS - DNFH
232	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	280	61414	MAINTENANCE	CAPF - HATCHERY NURSERY BLDG ROOF REPAIR
233	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	18	61414	MAINTENANCE	JHYD- FISH CROWDER - DNFH
234	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	41	61414	MAINTENANCE	JHYD- HATCHERY- CONVERT SYS 2 & 3 BURROWS PONDS TO RACEWA

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235	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	17	61414	MAINTENANCE	JHYD- HATCHERY-ROUTINE MAINT BY U.S.FISH &WILDLIFE SERV
236	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.03175	17	60441	OPERATIONS	JHYD- BIOP ACTION 143 TEMPERATURE MODELING PLAN (LOWER S
237	LITLLENV-BOUNDARY MONUMENTATION AND RECTIFICATION FOR ENVIRON STEWARD	0.03175	9	61453	MAINTENANCE	JHYD-SURVEY & MONUMENT CORPS BOUNDARY LINES
238	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	4	61414	MAINTENANCE	JHYD- BIOP- DEVELOP PREVENTATIVE MAINTENANCE PROGRAM
239	LITLLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	10	61411	MAINTENANCE	JHYD-REPLACE CATTLE WATERING CORRIDORS WITH WELLS
240	LITLLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	16	61411	MAINTENANCE	JHYD-PHRAGMITES CONTROL
241	LITLLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	1	61411	MAINTENANCE	JHYD-SHORELINE STABILIZATION
242	LITLLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	1	61411	MAINTENANCE	REHAB WORK BOAT
243	LITLLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03175	1	61413	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
244	LITLLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.03175	3	60413	OPERATIONS	JHYD - NATURAL RESOURCE SPECIALIST POSITION
245	THE DENV-MGMT OF NATURAL RESOURCES	0.03175	35	60411	OPERATIONS	JHYD-NATURAL RESOURCES MANAGEMENT
246	THE DENV-PEST MANAGEMENT	0.03175	13	60419	OPERATIONS	JHYD-NOXIOUS WEEDS, BIRDS, AND RODENT CONTROL
247	DWORSENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03083	7	61411	MAINTENANCE	JHYD- ROUNT ANNUAL MAINTENANCE OF NATURAL RESOURCES
248	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03083	5	61413	MAINTENANCE	MAINT OF WILDLIFE MITIGATION
249	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	32	60412	OPERATIONS	JHYD- FEDERAL COLUMBIA R. POWER SYSTEM-CUL RES
250	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	75	60412	OPERATIONS	MGMT OF CULTURAL RESOURCES
251	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	22	60412	OPERATIONS	JHYD - CULTURAL RESOURCE PROGRAM COMPLIANCE
252	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	3	60412	OPERATIONS	JHYD- ADD'L CULTURAL RESOURCES PROTECTION
253	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	48	60412	OPERATIONS	JHYD - MGMT OF CULTURAL RESOURCES
254	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	9	60412	OPERATIONS	JHYD- NEPA - SUPPLEMENT PROJECT EIS
255	DWORSENV-COMPREHENSIVE MASTER PLANS	0.03000	280	60416	OPERATIONS	JHYD-MASTER PLAN REVIEW
256	DWORSENV-MGMT OF NATURAL RESOURCES	0.03000	169	60411	OPERATIONS	JHYD- ROUTINE OPERATIONS - NATURAL RESOURCES
257	LITLLOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02960	10	61610	MAINTENANCE	RE-PAVE EARTHFILL/SUBSTATION ROAD AT LITTLE GOOSE DAM
258	LITLLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.02908	1	60413	OPERATIONS	JHYD- OPRE OF WILDLIFE MITIGATION
259	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.02717	9	60511	OPERATIONS	JHYD-OPERATION OF REGIONAL VISITOR CENTER-ADD'L NEEDS
260	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.02717	57	60511	OPERATIONS	JHYD-PROVIDE INCREASED VISITOR ASSISTANCE FOR LEW & CLRK
261	LITLLOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.02642	2	60650	OPERATIONS	JHYD- COMPLIANCE INSPECTIONS, OUTGRANT ACTIONS
262	LITLLOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02632	17	61610	MAINTENANCE	JHYD - SECURITY MODIFICATIONS
263	LITLLOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.02581	2	60633	OPERATIONS	JHYD-GEOLOGICAL & SEISMOLOGICAL REEVALUATION
264	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02448	84	61610	MAINTENANCE	INSTALL GDACS CONTROL OF SPILLWAY
265	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02448	19	61610	MAINTENANCE	SCAPJOI - PURCHASE PATROL BOAT & TRAILER
266	LITLLOI-JOINT COSTS FOR OPS ACTIVITIES	0.02325	2	60610	OPERATIONS	JHYD- CONTINUOUS SAMPLER FOR POTABLE WATER
267	LITLLOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02304	2	61610	MAINTENANCE	JHYD- REPAIR SPILLWAY GATES

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268	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02304	19	61610	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
269	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02304	1	61610	MAINTENANCE	JHYD- REPAIR SPILLWAY WATERSTOP ON GATE 1
270	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02304	21	61610	MAINTENANCE	JHYD- BUILD WELDING AND CARPENTER SHOP
271	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02268	131	61110	MAINTENANCE	REMODEL NAVLOCK STANDS
272	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02147	7	61610	MAINTENANCE	JHYD-CORRECT SIESMIC DEFICIENCIES
273	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.02099	2	60610	OPERATIONS	JHYD-TIME AND COST STANDARD
274	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02026	103	61110	MAINTENANCE	NAVIGATION LOCK WATER-STOPS REPAIR
275	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02026	575	61110	MAINTENANCE	REPLACE NAVIGATION LOCK SEAL HEATERS
276	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02026	500	61110	MAINTENANCE	ROUT ANNUAL MAINT OF LOCKS & ASSOCIATED EQUIP
277	LITTLJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.01990	40	60692	OPERATIONS	JHYD- SECURITY GUARDS
278	LITTLJOI-JOINT COSTS FOR FACILITY SECURITY PHYSICAL IMPRVMTS, MODS, MAINT AND REPLACE	0.01977	2180	61690	MAINTENANCE	CPSP/RAM-D LITTLE GOOSE
279	LITTLJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.01977	1	60632	OPERATIONS	JHYD-SPILLWAY ROLLER BASIN SOUNDINGS
280	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01977	2	61610	MAINTENANCE	JHYD-SMALL CAP JOINT IMPROVEMENTS (SMC)
281	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01977	23	61610	MAINTENANCE	JHYD- ROUT ANNUAL MAINT ON DAM,SPILLWAY GATES,BLDGS,ETC
282	LITTLJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.01875	1	60632	OPERATIONS	JHYD- HYDRAULIC STREEL STRUCTURES INSPECTION
283	LITTLJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.01875	3	60631	OPERATIONS	JHYD-EVALUATION OF INSTRUMENTATION DATA
284	LITTLJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.01875	1	60631	OPERATIONS	JHYD- INSTRUMENTATION MONITORING/READING
285	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01875	1	61610	MAINTENANCE	JHYD - SPILLWAY 1 WATERSTOP REPAIR
286	LITTLJOI-JOINT COSTS FOR STUDIES AND SURVEYS	0.01875	1	60621	OPERATIONS	JHYD- ENERGY PROD RPTS, FLOOD DAMAGES REPORTS
287	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01783	225	61511	MAINTENANCE	INSTALL FISHING PIER
288	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01783	107	61511	MAINTENANCE	REPLACE COURTESY DOCKS
289	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01783	45	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
290	DWORSREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.01783	789	60511	OPERATIONS	ROUTINE OPER OF RECREATION AREAS
291	DWORSREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.01783	423	60511	OPERATIONS	ROUTINE OPER OF RECREATION AREAS
292	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01773	259	61110	MAINTENANCE	LOCK CULVERT REPAIR
293	LITTLNAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01773	282	60110	OPERATIONS	ROUTINE OPERATION OF LOCKS
294	LITTLNAV-STUDIES AND SURVEYS FOR NAVIGATION	0.01773	55	60121	OPERATIONS	NAVIGATION CONDITION SURVEYS
295	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01768	9	61610	MAINTENANCE	JHYD- INSTRUMENTATION MAINT/RPR
296	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01659	2	60641	OPERATIONS	JHYD- NWD RESERVOIR CONTROL CENTER
297	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01659	1	60641	OPERATIONS	JHYD-WATER CONTROL COORDINATION & WTR QUALITY ANALYSIS
298	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01659	3	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
299	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.01659	4	60642	OPERATIONS	JHYD- DISSOLVED GAS DATA COLLECTION
300	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.01659	4	60642	OPERATIONS	JHYD- COLLECT WTR QUALITY DATA & COLLECT STREAMGAGE, ETC
301	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01606	2	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
302	DWORSENV-COMPREHENSIVE MASTER PLANS	0.01587	12	60416	OPERATIONS	JHYD- PROJECT MASTER PLANNING
303	DWORSENV-COMPREHENSIVE MASTER PLANS	0.01587	25	60416	OPERATIONS	JHYD-MASTER PLAN UPDATE
304	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.01587	9	61413	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
305	LITTLENV-COMPREHENSIVE MASTER PLANS	0.01587	1	60416	OPERATIONS	JHYD-MASTER PLAN REVIEW
306	LITTLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.01587	2	60413	OPERATIONS	JHYD-FORESTRY AND VEGETATION CONSULTATION

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307	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01571	74	61610	MAINTENANCE	JHYD-DEBRIS REMOVAL
308	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01571	98	61610	MAINTENANCE	CAPF- REPAIR SPILLWAY GATE SEAL HEATERS
309	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01571	13	61610	MAINTENANCE	JHYD-ROUTINE MAINT. OF DAM, SPILLWAY, INTAKE & OUTLET
310	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01571	10	61610	MAINTENANCE	JHYD - POWERHOUSE ELEVATOR MODERNIZATION
311	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01571	49	60610	OPERATIONS	JHYD-EXTERNAL ERGO INSPECTION
312	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01571	1	60610	OPERATIONS	JHYD - EMERGENCY ACTION PLAN REVISION
313	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01571	1	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
314	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01571	10	60610	OPERATIONS	JHYD- UPDATE EMERGENCY NOTIFICATION PLAN
315	LITTLNAV-FACILITY SECURITY PHYSICAL IMPRVMTS, MODS, MAINT AND REPLACE FOR NAVIGATION	0.01519	68	61190	MAINTENANCE	CPSR/AM-D LITTLE GOOSE
316	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01515	16	61610	MAINTENANCE	JHYD- SEEPAGE CONTROL AND MONITORING
317	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01488	21	60641	OPERATIONS	JHYD- NWD WATER MANAGEMENT MOVE TO NEW BUILDING
318	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01418	8	61610	MAINTENANCE	JHYD-REPLACE/UPDATE SECURITY & EMERGENCY NOTIFICATION SY
319	LITTLJOI-JOINT COSTS FOR LAND ACQ AND DISPOSAL MGMT ACTIV, SETTLE CLAIMS, AND AUDITS	0.01341	1	61651	MAINTENANCE	JHYD- LAND DISPOSAL
320	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01321	40	61610	MAINTENANCE	JHYD-FIRE MONITORING/PROTECTION FOR DAM & PH
321	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01321	11	61610	MAINTENANCE	JHYD- SEEPAGE CONTROL AND MONITORING
322	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01321	21	60610	OPERATIONS	JHYD- DAM SAFETY TRAINING
323	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01321	4	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
324	DWORSREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.01274	58	60513	OPERATIONS	LAW ENFORCEMENT-CLEARWATER COUNTY
325	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01274	45	61511	MAINTENANCE	IMPROVE DISPERSED AREA SANITARY FACILITIES
326	DWORSREC-REAL ESTATE MGMT FOR RECREATION	0.01274	72	60550	OPERATIONS	COMPL INSP, OUTGRANTS FOR RECREATION
327	LITTLNAV-FORMAL PERIODIC INSPECTIONS AND REPORTS FOR NAVIGATION	0.01266	5	60132	OPERATIONS	NAV LOCK HYDR STEEL STRUCT INSP
328	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01266	41	61110	MAINTENANCE	REPAIR WATERSTOPS IN NAVIGATION LOCK
329	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	213	61511	MAINTENANCE	REPAIR DENT REC SITE ELECTRICALSYSTEM
330	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	258	61511	MAINTENANCE	BIG EDDY PLAYGROUND
331	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	154	61511	MAINTENANCE	PURCHASE BOAT TRAILER
332	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	121	61511	MAINTENANCE	BEACH SAFETY IMPROVEMENTS
333	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	250	61511	MAINTENANCE	IMPROVE BOAT ACCESS TO THE VISITOR CENTER
334	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	585	61511	MAINTENANCE	JHYD-IMPROVE RD CONDITIONS-GRANDAD WILDLIFE MITIGATION AREA
335	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	70	61511	MAINTENANCE	REPAIR BOAT RAMP - BRUCE'S EDDY
336	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	62	61511	MAINTENANCE	REPLACE RANGER PATROL BOAT
337	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	23	61511	MAINTENANCE	LEWIS AND CLARK BICENTENNIAL
338	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	195	61511	MAINTENANCE	LOW WATER ACCESS PARKING
339	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	55	61511	MAINTENANCE	IMPROVE 1603 GALLERY LIGHTING & INTERPRETIVE SIGNS
340	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	54	61511	MAINTENANCE	REPAIR 1603 GALLERY AND VISITOR CENTER WINDOW SEALS
341	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	480	61511	MAINTENANCE	REPLACE REMOTE SANITARY FACILITIES
342	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	98	61511	MAINTENANCE	UPDATE PROJECT MULTIMEDIA EQUIPMENT
343	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	250	61511	MAINTENANCE	REPLCMNT OF DISPLAYS IN VISITOR CENTER

Rank	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
344	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	51	61511	MAINTENANCE	ACCESSIBLE TOILET FACILITIES
345	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	42	61511	MAINTENANCE	EXTEND BOAT RAMPS
346	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	83	61511	MAINTENANCE	CANYON CREEK CAMPSITE REPAIR
347	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	42	61511	MAINTENANCE	REHABILITATE PARKING LOT ENTRANCE
348	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	52	61511	MAINTENANCE	DENT ACRES - IMPROVE CAMPGROUND ACCESS
349	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	14	61511	MAINTENANCE	INTERACTIVE CURRENT ISSUES INTERPRETIVE DISPLAY
350	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	58	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
351	DWORSREC-STUDIES AND SURVEYS FOR RECREATION	0.00764	55	60520	OPERATIONS	DISTRICT VISITOR SURVEY (VERS)
352	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00272	75	61511	MAINTENANCE	REHABILITATE BOAT RAMPS
353	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00272	354	60511	OPERATIONS	REPLACE FENCE AT ILLIA DUNES
354	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00272	76	60511	OPERATIONS	ROUT OPER OF RECREATION AREAS
355	LITTLREC-DREDGING ACTIVITIES FOR RECREATION	0.00238	41	61520	MAINTENANCE	DREDGE BOAT BASINS AT ILLIA AND WILLOW LANDINGS
356	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00238	25	61511	MAINTENANCE	REPLACE HVAC SYSTEM IN FISH VISITOR BUILDING
357	THE DREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.00238	32	60513	OPERATIONS	LAW ENFORCEMENT CT - RECREATION AREAS
358	THE DREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00238	369	60511	OPERATIONS	MANAGEMENT OF RECREATION AREAS & VISITOR CTR
359	THE DREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00238	36	60511	OPERATIONS	LEWIS & CLARK BICENTENNIAL MANAGEMENT PLAN
360	THE DREC-STUDIES AND SURVEYS FOR RECREATION	0.00238	80	60520	OPERATIONS	RECREATION USE SURVEYS
361	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	85	61511	MAINTENANCE	MAINTENANCE OF RECREATION FACILITIES & VISITOR CTR
362	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	200	61511	MAINTENANCE	REPAIR BOAT RAMP FACILITIES AT CELILO PARK
363	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	185	61511	MAINTENANCE	PRINT BROCHURES
364	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	95	61511	MAINTENANCE	REPAIR VISITORS CENTER ROOFS
365	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	32	61511	MAINTENANCE	CONSTRUCT PLAY STRUCTURE AT CELILO PARK
366	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	210	61511	MAINTENANCE	L&C - NORTH SHORE/RESTROOM/BOAT L/TRAIL/SIGNS REHAB
367	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	70	61511	MAINTENANCE	REPLACE 2 RESTROOMS AT CELILO PARK
368	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	172	61511	MAINTENANCE	MAINTENANCE OF SEUFERT VISITOR CENTER
369	LITTLREC-REAL ESTATE MGMT FOR RECREATION	0.00170	21	60550	OPERATIONS	COMPL INSPS,OUTGRANTS,REAL PROP RECONCIL FOR RECREATION
370	LITTLREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.00170	26	60513	OPERATIONS	LAW ENFORCEMENT
371	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00136	70	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
372	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00136	250	61511	MAINTENANCE	EXPAND DAY AREA-N. SHORE & CELILO PK-E&D
373	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	70	61511	MAINTENANCE	LEWIS AND CLARK BICENTENNIAL
374	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	62	61511	MAINTENANCE	REPLACE VAULT TOILET AT ILLIA DUNES REC AREA
375	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	80	61511	MAINTENANCE	INSTALL FISHING ACCESS PLATFORM
376	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	65	61511	MAINTENANCE	REPLACE ILLIA LANDING BREAKWATER STYLE DOCK
377	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	160	61511	MAINTENANCE	RE-PAVE ROAD ABOVE LITTLE GOOSE DAM
378	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00102	26	60511	OPERATIONS	ROUT OPER OF RECREATION AREAS
379	LITTLREC-STUDIES AND SURVEYS FOR RECREATION	0.00102	15	60520	OPERATIONS	DISTRICT VISITOR SURVEY (VERS)

8.3. APPENDIX C – SENSITIVITY ANALYSIS RESULTS

8.3.1. Case 1

Rank	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
1	DWORSHYD-FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT, AND REPLACE FOR HYDROPOWER	0.21997	70	61390	MAINTENANCE	CPSP/RAM-D DWORSHAK
2	BONNEREC-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR RECREATION	0.21312	34	60592	OPERATIONS	SECURITY GUARD CONTRACT
3	BONNEREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.18648	7	60513	OPERATIONS	JHYD-LAW ENFORCEMENT SERVICES
4	BONNEREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.18648	29	60513	OPERATIONS	JHYD-LAW ENFORCEMENT SVCS - ADD'L NEEDS
5	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.18648	106	61511	MAINTENANCE	JHYD-MAINTENANCE OF RECREATION FACILITIES- ADD'L NEEDS
6	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.18648	73	60511	OPERATIONS	JHYD-OPERATION OF REGIONAL VISITOR CENTER
7	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.18648	260	60511	OPERATIONS	JHYD - LEWIS & CLARK BICENTENNIAL MANAGEMENT PLAN
8	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.15984	22	61511	MAINTENANCE	CAPJ-REHAB HAMILTON ISL REC AREA BOAT RAMP BN2
9	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.15984	31	61511	MAINTENANCE	CAPJ-REHAB WASH SHORE VISITOR CENTER - PH2
10	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.15984	392	61511	MAINTENANCE	CAPJ-REHAB BRAD. ISL. VISITOR CTR.ROOF BN1
11	BONNEREC-FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT, AND REPLACE FOR RECREATION	0.13320	31	61590	MAINTENANCE	ENCLOSE PH1 VISITOR GALLERY FOR SECURITY
12	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.13320	516	61511	MAINTENANCE	SCAPJOI - PURCHASE/INSTALL CONCRETE VAULT TOILETS
13	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.13320	284	61511	MAINTENANCE	CAPJ REPLACE ELEVATORS- BRADFORD IS VISITOR CTR
14	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.13320	515	61511	MAINTENANCE	JHYD-UPGRADE BRAD ISL VISITOR CTR RESTROOM BN1
15	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.13320	24	61511	MAINTENANCE	JHYD-MAINTENANCE OF RECREATION FACILITIES & VISITOR CTR
16	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.13320	15	60511	OPERATIONS	JHYD-MANAGEMENT OF RECREATION AREAS & FACILITIES
17	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.13320	50	60511	OPERATIONS	JHYD-MANAGEMENT OF REC AREAS - ADD'L ROUTINE NEEDS
18	THE DHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.11375	400	60392	OPERATIONS	FACILITY SECURITY -- GUARDS, MONITORING
19	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.10656	9	60511	OPERATIONS	JHYD-OPERATION OF REGIONAL VISITOR CENTER- ADD'L NEEDS
20	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.10656	57	60511	OPERATIONS	JHYD-PROVIDE INCREASED VISITOR ASSISTANCE FOR LEW & CLRK
21	BONNEHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.10352	133	60392	OPERATIONS	SECURITY GUARD CONTRACT
22	BONNEHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.10352	1000	60392	OPERATIONS	FACILITY SECURITY GUARDS, MONITORING
23	BONNEJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.09274	200	60692	OPERATIONS	SECURITY GUARD CONTRACT
24	BONNEJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.09274	58	60692	OPERATIONS	OPERATION OF RAM-D SECURITY IMPROVEMENTS
25	BONNEJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.07932	31	60632	OPERATIONS	JHYD--INSPECT HYDRAULIC STEEL STRUCTURES
26	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07909	1921	61610	MAINTENANCE	JHYD-REHAB/REPAIR PROJECT SEWAGE SYSTEM
27	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07653	25	61610	MAINTENANCE	JHYD- REPLACE RESOURCE OFFICE HVAC
28	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.07653	8	60610	OPERATIONS	JHYD-(SMC) ULTRASONIC FLOW TRANSDUCERS FOR PENSTOCKS
29	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.07653	11	60610	OPERATIONS	JHYD - (SMC) NEW GEARBOX FOR TAILRACE CRANE
30	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIATION ACTIONS) ACTIVITIES	0.07207	700	61660	MAINTENANCE	JHYD-HTW CORRECTIVE ACTION-CLEANUP OF BRADFORD ISLAND
31	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.06993	225	61511	MAINTENANCE	INSTALL FISHING PIER
32	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.06993	107	61511	MAINTENANCE	REPLACE COURTESY DOCKS
33	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.06993	45	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
34	DWORSREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.06993	789	60511	OPERATIONS	ROUTINE OPER OF RECREATION AREAS
35	DWORSREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.06993	423	60511	OPERATIONS	ROUTINE OPER OF RECREATION AREAS

R a n k	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
36	BONNEJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.06890	26	60633	OPERATIONS	JHYD-STILLING BASIN EROSION MONITORING AND EVALUATION
37	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.06890	14	60660	OPERATIONS	JHYD-PERFORM ENVIRONMENTAL COMPL ASSESSMENT REPORTS
38	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.06890	56	60660	OPERATIONS	JHYD-ENVIRONMENTAL COMPLIANCE ACTIVITIES- ADD'L NEEDS
39	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06890	748	61610	MAINTENANCE	JHYD-MAINTENANCE OF JOINT ACTIVITIES
40	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06890	90	61610	MAINTENANCE	CAPJ REPLACE SPILLWAY ELEVATORS
41	BONNEJOI-JOINT COSTS FOR OPS ACTIVITIES	0.06890	21	60610	OPERATIONS	JHYD-OPERATION OF JOINT ACTIVITIES
42	BONNEJOI-JOINT COSTS FOR OPS ACTIVITIES	0.06890	488	60610	OPERATIONS	JHYD-ACCOMPLISH PREVENTIVE MAINTENANCE BACKLOG
43	BONNEJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.06890	22	60650	OPERATIONS	JHYD-MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
44	BONNEJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.06890	142	60641	OPERATIONS	JHYD-WATER CONTROL & WATER QUALITY ACTIVITIES
45	BONNEJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.06890	59	60642	OPERATIONS	JHYD-COLLECTION OF WATER CONTROL DATA
46	BONNEJOI-JOINT COSTS FOR WATER MGMT EQUIP ACTIVITIES	0.06890	2	61640	MAINTENANCE	JHYD - NWD WATER MGMT EQUIPMENT MAINTENANCE
47	BONNEJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.06495	23	60631	OPERATIONS	JHYD-EVALUATIONS & DATA GATHERING
48	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06305	62	61610	MAINTENANCE	JHYD- INSTRUMENTATION MAINT/RPR
49	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.06305	162	60610	OPERATIONS	JHYD- UPDATE EMERGENCY NOTIFICATION PLAN
50	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.06305	25	60610	OPERATIONS	SMC- REPLACE SEALS ON BULKHEADS, GATES, AND VALVES
51	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06082	25	61610	MAINTENANCE	JHYD-UPGRADE ELEVATOR CONTROLS
52	DWORSJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.05445	4	60633	OPERATIONS	JHYD - REEVALUATE PROBABLE MAXIMUM FLOOD
53	DWORSJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.05445	9	60633	OPERATIONS	JHYD-LOW LEVEL OUTLET EMERGENCY CLOSURE GATES EVAL
54	DWORSJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.05445	100	60692	OPERATIONS	JHYD- SECURITY GUARDS
55	DWORSJOI-JOINT COSTS FOR FACILITY SECURITY PHYSICAL IMPRVMTS, MODS, MAINT AND REPLACE	0.05445	1430	61690	MAINTENANCE	CPSP/RAM-D DWORSHAK
56	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.05445	8	60632	OPERATIONS	JHYD-FORMAL PERIODIC INSPECTIONS AND RPTS.
57	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.05445	1	60632	OPERATIONS	JHYD-SPILLWAY STILLING BASIN SOUNDINGS
58	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.05445	3	60632	OPERATIONS	JHYD- HYDR STEEL STRUCT INSP, REGULATING OUTLET INSP
59	DWORSJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.05445	10	60631	OPERATIONS	JHYD- EVALUATION OF INSTRUMENTATION DATA
60	DWORSJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.05445	1	60631	OPERATIONS	JHYD- INSTRUMENTATION MINOR MAINT
61	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05445	16	61610	MAINTENANCE	JHYD- MISC. SMALL CAP PURCHASES (SMC)
62	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05445	101	61610	MAINTENANCE	JHYD- MEASURE SPILLWAY GATE FRICTION COEFFICIENT
63	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05445	5	61610	MAINTENANCE	JHYD - REPLACE SNOWFLOW
64	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05445	6	61610	MAINTENANCE	JHYD-CORRECT SEISMIC DEFICIENCIES
65	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05445	1	61610	MAINTENANCE	JHYD-REPAIR & UPDATE AUTOMATED INSTRUMENTATION
66	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05445	8	61610	MAINTENANCE	JHYD - DWA DAM MONOLITH JOINT DRAIN WATERSTOP REPAIR
67	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05445	1	60610	OPERATIONS	JHYD- DAM SAFETY TRAINING
68	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05445	1	60610	OPERATIONS	JHYD - PROJECT PAVING
69	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05445	18	60610	OPERATIONS	JHYD - PURCHASE MAN-LIFT
70	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05445	5	60610	OPERATIONS	JHYD-CORRECT SEISMIC DEFICIENCIES
71	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05445	11	61610	MAINTENANCE	SMC- AUTOMATE DAM INSTRUMENTATION
72	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05445	2	61610	MAINTENANCE	JHYD-FOREBAY TEMPERATURE DATA LOGGER
73	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05445	11	61610	MAINTENANCE	JHYD-ROUT ANNUAL MAINT OF DAM, SPILLWAY GATES, BLDGS, ET

R a n k	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
74	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05297	25	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
75	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05297	5	60610	OPERATIONS	JHYD- RADIO REPLACEMENT (HANDHELDS/BASE STATIONS)
76	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04995	45	61511	MAINTENANCE	IMPROVE DISPERSED AREA SANITARY FACILITIES
77	DWORSREC-REAL ESTATE MGMT FOR RECREATION	0.04995	72	60550	OPERATIONS	COMPL INSP, OUTGRANTS FOR RECREATION
78	DWORSREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.04995	58	60513	OPERATIONS	LAW ENFORCEMENT-CLEARWATER COUNTY
79	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04974	103	61610	MAINTENANCE	JHYD-REPAIR AND REPAINT SPILLWAY GATES
80	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04974	223	61610	MAINTENANCE	CAPJ-REPLACE SPILLWAY POWER DISTRIBUTION EQUIP PH1
81	THE DJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.04936	17	60632	OPERATIONS	JHYD-HSS GATE INSPECTION
82	THE DJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.04936	13	60650	OPERATIONS	JHYD-MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
83	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.04885	8	61660	MAINTENANCE	JHYD-ENVIRONMENTAL COMPLIANCE W/FED,STATE,LOCAL REGS
84	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04885	4	61610	MAINTENANCE	JHYD-REPLACE SEALS ON BULKHEADS,GATES, & VALVES
85	DWORSJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.04885	11	60650	OPERATIONS	JHYD- COMPLIANCE INSPECTIONS, OUTGRANT ACTIONS
86	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04871	46	60641	OPERATIONS	JHYD- NWD RESERVOIR CONTROL CENTER
87	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04871	23	60641	OPERATIONS	JHYD- NWD WATER MANAGEMENT MOVE TO NEW BUILDING
88	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04871	2	60641	OPERATIONS	JHYD-WTR CONTROL COORDINATION & WTR QUALITY ANALYSIS
89	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04871	7	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
90	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04871	5	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
91	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.04871	28	60642	OPERATIONS	JHYD- DISSOLVED GAS DATA COLLECTION
92	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.04871	8	60642	OPERATIONS	JHYD-COLLECT WTR QUALITY DATA & COLLECT STREAMGAGE, ETC
93	THE DJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.04690	1	60632	OPERATIONS	JHYD-PERIODIC INSPECTIONS - BRIDGES
94	THE DJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.04672	2	60633	OPERATIONS	JHYD-HYDROLOGIC CAPACITY INITIAL EVALUATION
95	BONNEENV-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR ENVIRONMENTAL STEWARDSHIP	0.04670	41	60492	OPERATIONS	SECURITY GUARD CONTRACT
96	BONNEENV-MANAGEMENT OF SPECIAL STATUS SPECIES	0.04670	2	60418	OPERATIONS	JHYD-ESA-CONSULTATION AND COORDINATION
97	DWORSENV-MGMT OF NATURAL RESOURCES	0.04670	4	60411	OPERATIONS	TIMBER SALE SUPPORT,REVIEW FORESTRY & RANGE MGMT
98	THE DJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.04645	200	60692	OPERATIONS	OPERATION OF RAM-D SECURITY IMPROVEMENTS
99	THE DJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.04645	400	60692	OPERATIONS	SECURITY GUARD CONTRACT
100	THE DJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04645	356	61610	MAINTENANCE	CAPJ-REPLACE SPILLWAY GATE BRAKE THRUSTERS & LININGS
101	THE DJOI-JOINT COSTS FOR OPS ACTIVITIES	0.04645	174	60610	OPERATIONS	JHYD-OPERATION OF JOINT ACTIVITIES
102	THE DJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04645	186	60641	OPERATIONS	JHYD-WATER CONTROL & WATER QUALITY ACTIVITIES
103	THE DJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.04645	66	60642	OPERATIONS	JHYD-COLLECTION OF WATER CONTROL DATA
104	THE DJOI-JOINT COSTS FOR WATER MGMT EQUIP ACTIVITIES	0.04645	2	61640	MAINTENANCE	JHYD-NWD WATER MGMT EQUIPMENT MAINTENANCE
105	LITTLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	13	60415	OPERATIONS	JHYD- TRAP & TRANSPORT PROGRAM
106	LITTLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	34	60415	OPERATIONS	JHYD- BIOP- ADDITIONAL FISH COUNTING
107	LITTLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	24	60415	OPERATIONS	JHYD- ROUT OPER OF ADULT FISH PASSAGE FACS
108	LITTLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	1	60415	OPERATIONS	JHYD- ROUT OPER OF JUVENILE PASSAGE FACS
109	LITTLENV-FISHERIES MGMT - OPS OF FISH HATCHERIES	0.04587	8	60414	OPERATIONS	JHYD- BIOP- IMPROVED DEBRIS HANDLING
110	LITTLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	9	61414	MAINTENANCE	JHYD-ROUT MAINT ADULT FISHWAY FACS
111	LITTLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	2	61414	MAINTENANCE	JHYD- BIOP- ESBS OVERHAUL

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112	LITTLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	10	61414	MAINTENANCE	JHYD-REPLACE SEWAGE & WATER LINES TO JFF
113	LITTLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	13	61414	MAINTENANCE	JHYD-RECON FISH WTR ATTRACT PUMP TURBINE WICKET GATES
114	LITTLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	15	61414	MAINTENANCE	JHYD- ROUT ANNUAL MAINT OF FISHWAY FACS, ETC
115	LITTLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.04587	2	61413	MAINTENANCE	JHYD- KELLBERG WELL REPAIR
116	LITTLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.04587	1	61413	MAINTENANCE	JHYD- ROUTINE MAINT OF WILDLIFE
117	LITTLENV-MGMT OF NATURAL RESOURCES	0.04587	5	60411	OPERATIONS	JHYD-ENVIRONMENTAL COMPLIANCE FOR NATURAL RESOURCES
118	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04585	25	61610	MAINTENANCE	JHYD- REPLACE LOG BOOMS
119	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	365	60415	OPERATIONS	JHYD-OPERATION OF FISH PASSAGE FACILITIES
120	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	164	60415	OPERATIONS	JHYD-FISH HAULING & COUNTING ACTIVITIES BY NWW
121	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	48	60415	OPERATIONS	JHYD-ESA IMPLEMENT BIOP-NEW FISH COUNT/TRANSPORT RQMTS
122	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	235	61414	MAINTENANCE	JHYD-MAINTENANCE OF FISH PASSAGE FACILITIES
123	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	42	61414	MAINTENANCE	JHYD-ESA-DEVELOP & IMPLEMENT PREVENTIVE MAINT FOR FISH
124	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	155	61414	MAINTENANCE	JHYD-ESA-REMOVE OBSTRUCTIONS FROM TURBINE ENVIRONMENT
125	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	52	61414	MAINTENANCE	JHYD-ESA-PURCHASE SPARE PARTS FOR AUXILIARY WATER SYS
126	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	1	60420	OPERATIONS	JHYD -- ESA ADD'L BIOP BULL TROUT MONITORING AND SURVEYS
127	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	38	60420	OPERATIONS	JHYD -- ESA BULL TROUT MONITORING
128	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	24	60420	OPERATIONS	JHYD-ESA-ANADROMOUS FISH EVALUATION PROGRAM
129	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	3	60441	OPERATIONS	JHYD-ESA-TOTAL MAXIMUM DAILY LOADS MONITORING PROGRAM
130	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	10	60650	OPERATIONS	JHYD-MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
131	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	18	60441	OPERATIONS	JHYD-ESA HYD EVAL ADULT BYPASS SYSTEM
132	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - OPS OF WTR CTRL DATA SYS	0.04495	26	60442	OPERATIONS	JHYD-ESA-TOTAL DISSOLVED GAS FIXED MONITORING PROGRAM
133	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	15	60411	OPERATIONS	JHYD- ENVIRONMENTAL COMPLIANCE FOR NATURAL RESOURCES
134	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	44	60411	OPERATIONS	JHYD- RESERVOIR SURVEY - FISH AND HABITAT
135	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	71	60411	OPERATIONS	JHYD - SITE INVENTORY, BIRDS AND BATS
136	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	3	60411	OPERATIONS	JHYD- BIOP ACTION 139 DWORSHAK GAS ABATEMENT STUDY
137	DWORSENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	49	60413	OPERATIONS	JHYD-OPER OF WILDLIFE MITIGATION
138	DWORSENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	18	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
139	DWORSENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	36	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
140	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 198 REGIONAL DATABASE
141	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 133 SYSTEM TDG MODELING
142	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	18	60441	OPERATIONS	JHYD-BIOP ACTION APPENDIX B - SYSTEM TEMPERATURE STUDY
143	LITTLENV-MGMT OF NATURAL RESOURCES	0.04495	3	60411	OPERATIONS	JHYD- ROUTINE OPERATIONS OF NATURAL RESOURCES
144	LITTLENV-MGMT OF NATURAL RESOURCES	0.04495	1	60411	OPERATIONS	JHYD- RESERVOIR SURVEY - FISH AND HABITAT
145	LITTLENV-MGMT OF NATURAL RESOURCES	0.04495	1	60411	OPERATIONS	JHYD - SITE INVENTORY, BIRDS AND BATS
146	LITTLENV-MGMT OF NATURAL RESOURCES	0.04495	5	60411	OPERATIONS	JHYD - RESERVOIR LANDS, VEGETATION SURVEY
147	LITTLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	18	60413	OPERATIONS	JHYD-LEVEL II WILDLIFE INVENTORIES
148	LITTLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	28	60413	OPERATIONS	JHYD-GIS MAPPING

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149	LITTLENV-PURCHASE/MAINT OF WATER MGMT EQUIP FOR ENVIRON STEWARDSHIP	0.04495	2	61440	MAINTENANCE	JHYD- BIOP ACTION 131 REDUNDANT TOTAL DISSOLVED GAS MONI
150	LITTLENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	19	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
151	LITTLENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	18	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
152	LITTLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 198 REGIONAL DATABASE
153	LITTLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	4	60441	OPERATIONS	JHYD- BIOP ACTION 132 REVIEW TOTAL DISSOLVED GAS MONITOR
154	LITTLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 133 SYSTEM TDG MODELING
155	LITTLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	7	60441	OPERATIONS	JHYD- BIOP ACTION 143 TEMPERATURE MODELING PLAN (LOWER S
156	LITTLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	7	60441	OPERATIONS	JHYD-BIOP ACTION APPENDIX B - SYSTEM TEMPERATURE STUDY
157	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	183	60415	OPERATIONS	JHYD--OPERATION OF FISH PASSAGE FACILITIES
158	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	29	60415	OPERATIONS	JHYD--FISH HAULING & COUNTING ACTIVITIES BY NWW
159	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	111	60415	OPERATIONS	JHYD-ESA IMPLEMENT NEW FISH COUNT/TRANSP REQMTS
160	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	1	60415	OPERATIONS	JHYD--ESA INCIDENTAL TAKE ACTIVITIES
161	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	167	61414	MAINTENANCE	JHYD--MAINTENANCE OF FISH PASSAGE FACILITIES
162	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	14	61414	MAINTENANCE	JHYD-ESA SPARE PARTS FOR AWS
163	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD--ESA REMOVE OBSTRUCTIONS FROM TURBINE ENVIRONMENT
164	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD-ESA DEVELOP/IMPLEMENT FISH FAC PREVENTIVE MAINT PRO
165	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD--REPLACE DIFFUSION WATER GRATINGS-N FISHLADDER
166	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	3	61414	MAINTENANCE	JHYD-PROCURE & INSTALL DIFFUSION VALVES
167	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	29	61414	MAINTENANCE	CAPJ-EVALUATE & REHAB FISH COUNTING STATION
168	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	72	61414	MAINTENANCE	JHYD-REHAB N. FISHLADDER & AWS
169	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	358	61414	MAINTENANCE	JHYD-ESA-AUTOMATE AUXILIARY WATER SYSTEM
170	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD-ESA-REPLACE COUNT STATION CROWDER/WINDOW BRUSH
171	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	42	61414	MAINTENANCE	JHYD-ESA-REFURBISH WEIR GUIDES
172	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	240	61414	MAINTENANCE	JHYD--REPAIR FISH LADDER STRUCTURE ROOF
173	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	CAPJ-INSTALL GDACS CONTROL OF FISHWAYS
174	THE DENV-MANAGEMENT OF SPECIAL STATUS SPECIES	0.04495	6	60418	OPERATIONS	JHYD-ESA-CONSULTATION AND COORDINATION
175	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	88	60420	OPERATIONS	JHYD-ESA-ANADROMOUS FISH EVALUATION PROGRAM
176	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	3	60420	OPERATIONS	JHYD-ESA BULL TROUT MONITORING
177	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	25	60420	OPERATIONS	JHYD-ADDITIONAL BI-OP BULL TROUT MONITORING STDY & SURV
178	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	44	60441	OPERATIONS	JHYD-ESA HYDRAULIC EVAL ADULT BYPASS SYSTEM
179	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	19	60441	OPERATIONS	JHYD-TOTAL MAXIMUM DAILY LOADS MONITORING PROGRAM
180	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - OPS OF WTR CTRL DATA SYS	0.04495	30	60442	OPERATIONS	JHYD-ESA-TOTAL DISSOLVED GAS FIXED MONITORING PROGRAM
181	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.04386	5	61660	MAINTENANCE	JHYD- REMOVE DAM UST
182	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.04386	5	60660	OPERATIONS	JHYD- CYCLE III EXTERNAL ERGO ASSESSMENTS
183	LITTLHYD-FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT, AND REPLACE FOR HYDROPOWER	0.04337	185	61390	MAINTENANCE	CPSP/RAM-D LITTLE GOOSE
184	THE DJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04248	20	61610	MAINTENANCE	JHYD--REPAIR RAILROAD TRACKS
185	THE DJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04248	201	61610	MAINTENANCE	CAPJ--REPLACE PROJECT & MARINE RADIO SYSTEM

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186	THE DOJO-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.04095	31	61660	MAINTENANCE	JHYD-UPGRADE EXISTING HAZARDOUS MATERIALS STORAGE AREA
187	THE DOJO-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.04095	13	60660	OPERATIONS	JHYD-PERFORM ENVIRONMENTAL COMPL ASSESSMENT, REPORTS
188	THE DOJO-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.04095	7	60631	OPERATIONS	JHYD--EVALUATIONS & DATA GATHERING
189	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04095	232	61610	MAINTENANCE	JHYD--MAINTENANCE OF JOINT ACTIVITIES
190	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04095	24	61610	MAINTENANCE	JHYD--REFURBISH 23 SPILLWAY GATES E&D
191	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04095	247	61610	MAINTENANCE	CAPJ--RECOVER SERVICE BUILDING ROOF
192	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04095	200	61610	MAINTENANCE	JHYD-PERFORM BACKLOG SPILLWAY MAINTENANCE
193	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03725	3	61610	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
194	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03725	21	61610	MAINTENANCE	JHYD-REPAIR 1603 GALLERY WATER INTRUSION
195	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03725	50	61610	MAINTENANCE	JHYD-ROAD MAINT GRANDAD CREEK TO BREAKFAST CREEK RD
196	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03725	35	61610	MAINTENANCE	JHYD-REPAIR ASPHALT ROADWAYS
197	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03725	11	61610	MAINTENANCE	JHYD - FOUNDATION DRAIN CLEANING
198	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03725	49	61610	MAINTENANCE	JHYD- S. DAM SECURITY FENCING/CAMERA
199	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03725	49	61610	MAINTENANCE	SMC- 350 TON BRIDGE CRANES (2)- REHAB
200	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03725	7	60610	OPERATIONS	JHYD- FIRE MONITORING/PROTECTION FOR DAM &POWERHOUSE
201	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03725	17	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
202	DWORSJOI-JOINT COSTS FOR STUDIES AND SURVEYS	0.03725	1	60621	OPERATIONS	JHYD- ENERGY PROD RPTS, FLOOD DAMAGES REPORTS
203	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03698	104	61610	MAINTENANCE	JHYD-REPAIR PROJECT ACCESS ROADS
204	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03698	42	61610	MAINTENANCE	JHYD--REPLACE PROJECT PAGER SYSTEM
205	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03698	11	61610	MAINTENANCE	CAPJ - UPGRADE SECURITY SYSTEM
206	BONNEENV-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR NAVIGATION	0.03605	30	60192	OPERATIONS	SECURITY GUARD CONTRACT
207	BONNEENV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.03605	4800	61110	MAINTENANCE	CENTRALIZE OPERATION OF NAVIGATION LOCK
208	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03545	42	61610	MAINTENANCE	JHYD-REPLACE WESTRICK CONFERENCE CENTER ROOF
209	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03500	64	61610	MAINTENANCE	JHYD--UPGRADE BATTERY STORAGE AREA
210	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.03463	46	61110	MAINTENANCE	REPAIR NAVLOCK UPSTREAM GATE
211	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.03463	269	61110	MAINTENANCE	RECOVER NAVLOCK BUILDING ROOF
212	BONNEENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	60	60412	OPERATIONS	JHYD-CULTURAL RESOURCES TO MEET NATIVE AMERICAN AGREE
213	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03349	12	61413	MAINTENANCE	JHYD-IMPROVE RD CONDITIONS-GRANDAD WILDLIFE MITIGATION AREA
214	THE DENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	22	60412	OPERATIONS	JHYD-CULTURAL RESOURCES TO MEET NATIVE AMERICAN AGREE
215	THE DENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	100	60412	OPERATIONS	JHYD--CONTR LAW ENFORCEMENT- CULTURAL AREAS
216	LITLLEENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	7	60412	OPERATIONS	JHYD- FEDERAL COLUMBIA R. POWER SYSTEM - CUL RES
217	LITLLEENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	22	60412	OPERATIONS	MGMT OF CULTURAL RESOURCES
218	LITLLEENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	1	60412	OPERATIONS	JHYD - CULTURAL RESOURCE PROGRAM COMPLIANCE
219	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	39	61414	MAINTENANCE	JHYD-EVAL/REHAB FISH COUNTING STATION
220	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	13	61414	MAINTENANCE	JHYD-ANNUAL FISHWAY OVERHAUL
221	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	100	61414	MAINTENANCE	JHYD-MAINTENANCE OF SUBMERGED TRAVELING FISH SCREENS
222	BONNEENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	10	61411	MAINTENANCE	JHYD-MAINTENANCE OF NATURAL RESOURCE FACILITIES
223	BONNEENV-MGMT OF NATURAL RESOURCES	0.03175	33	60411	OPERATIONS	JHYD-NATURAL RESOURCES MANAGEMENT

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224	DWORSENV-BOUNDARY MONUMENTATION AND RECTIFICATION FOR ENVIRON STEWARD	0.03175	7	61453	MAINTENANCE	JHYD-PROJECT BOUNDARY MONUMENTATION
225	DWORSENV-ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) FOR ENVIRON STEWARD	0.03175	6	61460	MAINTENANCE	JHYD- EXTERNAL ENVIRONMENTAL REVIEWS
226	DWORSENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.03175	79	60415	OPERATIONS	JHYD- MANAGEMENT OF RESIDENT FISHERIES
227	DWORSENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.03175	5	60415	OPERATIONS	JHYD- TRAP & TRANSPORT PROGRAM
228	DWORSENV-FISHERIES MGMT - OPS OF FISH HATCHERIES	0.03175	247	60414	OPERATIONS	JHYD- HATCHERY-ROUTINE OPER BY U.S.FISH & WILDLIFE SERV/
229	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	217	61414	MAINTENANCE	JHYD- ROUTINE MAINT ASSISTANCE TO NAT'L HATCHERY
230	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	62	61414	MAINTENANCE	JHYD- EMERGENCY GENERATORS - DNFH
231	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	123	61414	MAINTENANCE	JHYD-SYSTEM III MEDIA CHANGE
232	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	12	61414	MAINTENANCE	JHYD- REROOF OTHER BUILDINGS - DNFH
233	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	280	61414	MAINTENANCE	CAPF - HATCHERY NURSERY BLDG ROOF REPAIR
234	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	18	61414	MAINTENANCE	JHYD- FISH CROWDER - DNFH
235	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	41	61414	MAINTENANCE	JHYD- HATCHERY-CONVERT SYS 2 & 3 BURROWS PONDS TO RACEWA
236	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	17	61414	MAINTENANCE	JHYD- HATCHERY- ROUTINE MAINT BY U.S.FISH & WILDLIFE SERV
237	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.03175	17	60441	OPERATIONS	JHYD- BIOP ACTION 143 TEMPERATURE MODELING PLAN (LOWER S
238	LITTLENV-BOUNDARY MONUMENTATION AND RECTIFICATION FOR ENVIRON STEWARD	0.03175	9	61453	MAINTENANCE	JHYD-SURVEY & MONUMENT CORPS BOUNDARY LINES
239	LITTLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	4	61414	MAINTENANCE	JHYD- BIOP- DEVELOP PREVENTATIVE MAINTENANCE PROGRAM
240	LITTLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	10	61411	MAINTENANCE	JHYD-REPLACE CATTLE WATERING CORRIDORS WITH WELLS
241	LITTLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	16	61411	MAINTENANCE	JHYD-PHRAGMITES CONTROL
242	LITTLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	1	61411	MAINTENANCE	JHYD-SHORELINE STABILIZATION
243	LITTLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	1	61411	MAINTENANCE	REHAB WORK BOAT
244	LITTLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03175	1	61413	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
245	LITTLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.03175	3	60413	OPERATIONS	JHYD - NATURAL RESOURCE SPECIALIST POSITION
246	THE DENV-MGMT OF NATURAL RESOURCES	0.03175	35	60411	OPERATIONS	JHYD--NATURAL RESOURCES MANAGEMENT
247	THE DENV-PEST MANAGEMENT	0.03175	13	60419	OPERATIONS	JHYD--NOXIOUS WEEDS, BIRDS, AND RODENT CONTROL
248	BONNENAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.03155	517	61110	MAINTENANCE	SCHEDULED MAINTENANCE OF NAVIGATION LOCKS
249	BONNENAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.03155	615	60110	OPERATIONS	OPERATION OF LOCKS 24 HRS/DAY, 7 DAYS/WEEK B1
250	BONNENAV-INSTRUMENTATION, DATA COLLECTION AND ANALYSIS FOR NAVIGATION	0.03155	14	60131	OPERATIONS	SURVEY MONITORING - NAVLOCK
251	DWORSENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03083	7	61411	MAINTENANCE	JHYD- ROUNT ANNUAL MAINTENANCE OF NATURAL RESOURCES
252	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03083	5	61413	MAINTENANCE	MAINT OF WILDLIFE MITIGATION
253	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	32	60412	OPERATIONS	JHYD- FEDERAL COLUMBIA R. POWER SYSTEM-CUL RES
254	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	75	60412	OPERATIONS	MGMT OF CULTURAL RESOURCES
255	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	22	60412	OPERATIONS	JHYD - CULTURAL RESOURCE PROGRAM COMPLIANCE
256	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	3	60412	OPERATIONS	JHYD- ADD'L CULTURAL RESOURCES PROTECTION
257	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	48	60412	OPERATIONS	JHYD - MGMT OF CULTURAL RESOURCES
258	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	9	60412	OPERATIONS	JHYD- NEPA - SUPPLEMENT PROJECT EIS
259	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.03030	412	61110	MAINTENANCE	SCHEDULED MAINTENANCE OF NAVIGATION LOCKS
260	THE DNAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.03030	389	60110	OPERATIONS	OPERATION OF LOCKS 24 HRS/DAY, 7 DAYS/WEEK
261	DWORSENV-COMPREHENSIVE MASTER PLANS	0.03000	280	60416	OPERATIONS	JHYD-MASTER PLAN REVIEW
262	DWORSENV-MGMT OF NATURAL RESOURCES	0.03000	169	60411	OPERATIONS	JHYD- ROUTINE OPERATIONS - NATURAL RESOURCES

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263	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	213	61511	MAINTENANCE	REPAIR DENT REC SITE ELECTRICALSYSTEM
264	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	258	61511	MAINTENANCE	BIG EDDY PLAYGROUND
265	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	154	61511	MAINTENANCE	PURCHASE BOAT TRAILER
266	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	121	61511	MAINTENANCE	BEACH SAFETY IMPROVEMENTS
267	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	250	61511	MAINTENANCE	IMPROVE BOAT ACCESS TO THE VISITOR CENTER
268	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	585	61511	MAINTENANCE	JHYD-IMPROVE RD CONDITIONS-GRANDAD WILDLIFE MITIGATION AREA
269	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	70	61511	MAINTENANCE	REPAIR BOAT RAMP - BRUCE'S EDDY
270	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	62	61511	MAINTENANCE	REPLACE RANGER PATROL BOAT
271	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	23	61511	MAINTENANCE	LEWIS AND CLARK BICENTENNIAL
272	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	195	61511	MAINTENANCE	LOW WATER ACCESS PARKING
273	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	55	61511	MAINTENANCE	IMPROVE 1603 GALLERY LIGHTING & INTERPRETIVE SIGNS
274	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	54	61511	MAINTENANCE	REPAIR 1603 GALLERY AND VISITOR CENTER WINDOW SEALS
275	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	480	61511	MAINTENANCE	REPLACE REMOTE SANITARY FACILITIES
276	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	98	61511	MAINTENANCE	UPDATE PROJECT MULTIMEDIA EQUIPMENT
277	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	250	61511	MAINTENANCE	REPLCMNT OF DISPLAYS IN VISITOR CENTER
278	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	51	61511	MAINTENANCE	ACCESSIBLE TOILET FACILITIES
279	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	42	61511	MAINTENANCE	EXTEND BOAT RAMPS
280	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	83	61511	MAINTENANCE	CANYON CREEK CAMPSITE REPAIR
281	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	42	61511	MAINTENANCE	REHABILITATE PARKING LOT ENTRANCE
282	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	52	61511	MAINTENANCE	DENT ACRES - IMPROVE CAMPGROUND ACCESS
283	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	14	61511	MAINTENANCE	INTERACTIVE CURRENT ISSUES INTERPRETIVE DISPLAY
284	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.02997	58	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
285	DWORSREC-STUDIES AND SURVEYS FOR RECREATION	0.02997	55	60520	OPERATIONS	DISTRICT VISITOR SURVEY (VERS)
286	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02908	1	60413	OPERATIONS	JHYD- OPRE OF WILDLIFE MITIGATION
287	BONNENAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02704	261	61110	MAINTENANCE	STABILIZE ORIGINAL NAVIGATION LOCK NORTH WALL
288	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02597	26	61110	MAINTENANCE	PERFORM BACKLOG NAVLOCK MAINTENANCE
289	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02597	770	61110	MAINTENANCE	INSTALL GDACS MONITORING OF NAVLOCK
290	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02597	86	61110	MAINTENANCE	REPLACE DOWNSTREAM NAVLOCK GATE PINTLE BEARINGS-E&D
291	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02526	10	61610	MAINTENANCE	RE-PAVE EARTHFILL/SUBSTATION ROAD AT LITTLE GOOSE DAM
292	LITTLJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.02392	2	60650	OPERATIONS	JHYD- COMPLIANCE INSPECTIONS, OUTGRANT ACTIONS
293	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02260	17	61610	MAINTENANCE	JHYD - SECURITY MODIFICATIONS
294	LITTLJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.02231	2	60633	OPERATIONS	JHYD-GEOLOGICAL & SEISMOLOGICAL REEVALUATION
295	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.02074	2	60610	OPERATIONS	JHYD- CONTINUOUS SAMPLER FOR POTABLE WATER
296	THE DJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02048	84	61610	MAINTENANCE	INSTALL GDACS CONTROL OF SPILLWAY
297	THE DJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02048	19	61610	MAINTENANCE	SCAPJOI - PURCHASE PATROL BOAT & TRAILER
298	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01994	19	61610	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
299	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01994	2	61610	MAINTENANCE	JHYD- REPAIR SPILLWAY GATES
300	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01994	1	61610	MAINTENANCE	JHYD- REPAIR SPILLWAY WATERSTOP ON GATE 1
301	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01994	21	61610	MAINTENANCE	JHYD- BUILD WELDING AND CARPENTER SHOP

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302	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01919	7	61610	MAINTENANCE	JHYD-CORRECT SIESMIC DEFICIENCIES
303	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01915	2	60610	OPERATIONS	JHYD-TIME AND COST STANDARD
304	LITTLJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.01781	40	60692	OPERATIONS	JHYD- SECURITY GUARDS
305	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01728	23	61610	MAINTENANCE	JHYD- ROUT ANNUAL MAINT ON DAM, SPILLWAY GATES, BLDGS, ETC
306	LITTLJOI-JOINT COSTS FOR FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT AND REPLACE	0.01728	2180	61690	MAINTENANCE	CPSP/RAM-D LITTLE GOOSE
307	LITTLJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.01728	1	60632	OPERATIONS	JHYD-SPILLWAY ROLLER BASIN SOUNDINGS
308	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01728	2	61610	MAINTENANCE	JHYD-SMALL CAP JOINT IMPROVEMENTS (SMC)
309	LITTLJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.01670	1	60632	OPERATIONS	JHYD- HYDRAULIC STREEL STRUCTURES INSPECTION
310	LITTLJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.01670	3	60631	OPERATIONS	JHYD-EVALUATION OF INSTRUMENTATION DATA
311	LITTLJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.01670	1	60631	OPERATIONS	JHYD- INSTRUMENTATION MONITORING/READING
312	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01670	1	61610	MAINTENANCE	JHYD - SPILLWAY 1 WATERSTOP REPAIR
313	LITTLJOI-JOINT COSTS FOR STUDIES AND SURVEYS	0.01670	1	60621	OPERATIONS	JHYD- ENERGY PROD RPTS, FLOOD DAMAGES REPORTS
314	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01593	2	60641	OPERATIONS	JHYD- NWD RESERVOIR CONTROL CENTER
315	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01593	1	60641	OPERATIONS	JHYD-WATER CONTROL COORDINATION & WTR QUALITY ANALYSIS
316	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01593	3	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
317	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.01593	4	60642	OPERATIONS	JHYD- DISSOLVED GAS DATA COLLECTION
318	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.01593	4	60642	OPERATIONS	JHYD- COLLECT WTR QUALITY DATA & COLLECT STREAMGAGE, ETC
319	DWORSENV-COMPREHENSIVE MASTER PLANS	0.01587	12	60416	OPERATIONS	JHYD- PROJECT MASTER PLANNING
320	DWORSENV-COMPREHENSIVE MASTER PLANS	0.01587	25	60416	OPERATIONS	JHYD-MASTER PLAN UPDATE
321	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.01587	9	61413	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
322	LITTLVENV-COMPREHENSIVE MASTER PLANS	0.01587	1	60416	OPERATIONS	JHYD-MASTER PLAN REVIEW
323	LITTLVENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.01587	2	60413	OPERATIONS	JHYD-FORESTRY AND VEGETATION CONSULTATION
324	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01540	2	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES, INTAKE&OUTLET WRK
325	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01514	9	61610	MAINTENANCE	JHYD- INSTRUMENTATION MAINT/RPR
326	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01387	74	61610	MAINTENANCE	JHYD-DEBRIS REMOVAL
327	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01387	98	61610	MAINTENANCE	CAPP- REPAIR SPILLWAY GATE SEAL HEATERS
328	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01387	13	61610	MAINTENANCE	JHYD-ROUTINE MAINT. OF DAM, SPILLWAY, INTAKE & OUTLET
329	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01387	10	61610	MAINTENANCE	JHYD - POWERHOUSE ELEVATOR MODERNIZATION
330	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01387	49	60610	OPERATIONS	JHYD-EXTERNAL ERGO INSPECTION
331	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01387	1	60610	OPERATIONS	JHYD - EMERGENCY ACTION PLAN REVISION
332	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01387	1	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES, INTAKE&OUTLET WRK
333	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01387	10	60610	OPERATIONS	JHYD- UPDATE EMERGENCY NOTIFICATION PLAN
334	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01369	16	61610	MAINTENANCE	JHYD- SEEPAGE CONTROL AND MONITORING
335	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01323	21	60641	OPERATIONS	JHYD- NWD WATER MANAGEMENT MOVE TO NEW BUILDING
336	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01313	8	61610	MAINTENANCE	JHYD-REPLACE/UPDATE SECURITY & EMERGENCY NOTIFICATION SY
337	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACs, EQUIP, ETC. FOR NAVIGATION	0.01299	131	61110	MAINTENANCE	REMODEL NAVLOCK STANDS
338	LITTLJOI-JOINT COSTS FOR LAND ACQ AND DISPOSAL MGMT ACTIV, SETTLE CLAIMS, AND AUDITS	0.01276	1	61651	MAINTENANCE	JHYD- LAND DISPOSAL
339	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01196	40	61610	MAINTENANCE	JHYD-FIRE MONITORING/PROTECTION FOR DAM & PH
340	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01196	11	61610	MAINTENANCE	JHYD- SEEPAGE CONTROL AND MONITORING

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341	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01196	21	60610	OPERATIONS	JHYD- DAM SAFETY TRAINING
342	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01196	4	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
343	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01160	103	61110	MAINTENANCE	NAVIGATION LOCK WATER-STOPS REPAIR
344	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01160	575	61110	MAINTENANCE	REPLACE NAVIGATION LOCK SEAL HEATERS
345	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01160	500	61110	MAINTENANCE	ROUT ANNUAL MAINT OF LOCKS & ASSOCIATED EQUIP
346	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01066	75	61511	MAINTENANCE	REHABILITATE BOAT RAMPS
347	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.01066	354	60511	OPERATIONS	REPLACE FENCE AT ILLIA DUNES
348	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.01066	76	60511	OPERATIONS	ROUT OPER OF RECREATION AREAS
349	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01015	259	61110	MAINTENANCE	LOCK CULVERT REPAIR
350	LITTLNAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01015	282	60110	OPERATIONS	ROUTINE OPERATION OF LOCKS
351	LITTLNAV-STUDIES AND SURVEYS FOR NAVIGATION	0.01015	55	60121	OPERATIONS	NAVIGATION CONDITION SURVEYS
352	LITTLREC-DREDGING ACTIVITIES FOR RECREATION	0.00932	41	61520	MAINTENANCE	DREDGE BOAT BASINS AT ILLIA AND WILLOW LANDINGS
353	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00932	25	61511	MAINTENANCE	REPLACE HVAC SYSTEM IN FISH VISITOR BUILDING
354	THE DREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.00932	32	60513	OPERATIONS	LAW ENFORCEMENT CT - RECREATION AREAS
355	THE DREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00932	369	60511	OPERATIONS	MANAGEMENT OF RECREATION AREAS & VISITOR CTR
356	THE DREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00932	36	60511	OPERATIONS	LEWIS & CLARK BICENTENNIAL MANAGEMENT PLAN
357	THE DREC-STUDIES AND SURVEYS FOR RECREATION	0.00932	80	60520	OPERATIONS	RECREATION USE SURVEYS
358	LITTLNAV-FACILITY SECURITY PHYSICAL IMPRVMTNS, MODS, MAINT AND REPLACE FOR NAVIGATION	0.00870	68	61190	MAINTENANCE	CPSP/RAM-D LITTLE GOOSE
359	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00799	85	61511	MAINTENANCE	MAINTENANCE OF RECREATION FACILITIES & VISITOR CTR
360	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00799	200	61511	MAINTENANCE	REPAIR BOAT RAMP FACILITIES AT CELIO PARK
361	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00799	185	61511	MAINTENANCE	PRINT BROCHURES
362	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00799	95	61511	MAINTENANCE	REPAIR VISITORS CENTER ROOFS
363	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00799	32	61511	MAINTENANCE	CONSTRUCT PLAY STRUCTURE AT CELILO PARK
364	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00799	210	61511	MAINTENANCE	L&C - NORTH SHORE/RESTROOM/BOAT L/TRAIL/SIGNS REHAB
365	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00799	70	61511	MAINTENANCE	REPLACE 2 RESTROOMS AT CELILO PARK
366	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00799	172	61511	MAINTENANCE	MAINTENANCE OF SEUFERT VISITOR CENTER
367	LITTLNAV-FORMAL PERIODIC INSPECTIONS AND REPORTS FOR NAVIGATION	0.00725	5	60132	OPERATIONS	NAV LOCK HYDR STEEL STRUCT INSP
368	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.00725	41	61110	MAINTENANCE	REPAIR WATERSTOPS IN NAVIGATION LOCK
369	LITTLREC-REAL ESTATE MGMT FOR RECREATION	0.00666	21	60550	OPERATIONS	COMPL INSPS, OUTGRANTS, REAL PROP RECONCIL FOR RECREATION
370	LITTLREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.00666	26	60513	OPERATIONS	LAW ENFORCEMENT
371	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00533	70	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
372	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00533	250	61511	MAINTENANCE	EXPAND DAY AREA-N. SHORE & CELILO PK-E&D
373	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00400	70	61511	MAINTENANCE	LEWIS AND CLARK BICENTENNIAL
374	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00400	62	61511	MAINTENANCE	REPLACE VAULT TOILET AT ILLIA DUNES REC AREA
375	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00400	80	61511	MAINTENANCE	INSTALL FISHING ACCESS PLATFORM
376	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00400	65	61511	MAINTENANCE	REPLACE ILLIA LANDING BREAKWATER STYLE DOCK
377	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00400	160	61511	MAINTENANCE	RE-PAVE ROAD ABOVE LITTLE GOOSE DAM
378	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00400	26	60511	OPERATIONS	ROUT OPER OF RECREATION AREAS
379	LITTLREC-STUDIES AND SURVEYS FOR RECREATION	0.00400	15	60520	OPERATIONS	DISTRICT VISITOR SURVEY (VERS)

8.3.2. Case 2

Rank	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
1	THE DHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.24017	400	60392	OPERATIONS	FACILITY SECURITY -- GUARDS, MONITORING
2	BONNEHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.14613	133	60392	OPERATIONS	SECURITY GUARD CONTRACT
3	BONNEHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.14613	1000	60392	OPERATIONS	FACILITY SECURITY GUARDS, MONITORING
4	BONNEJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.07886	200	60692	OPERATIONS	SECURITY GUARD CONTRACT
5	BONNEJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.07886	58	60692	OPERATIONS	OPERATION OF RAM-D SECURITY IMPROVEMENTS
6	THE DOJO-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.07848	17	60632	OPERATIONS	JHYD-HSS GATE INSPECTION
7	THE DOJO-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.07848	13	60650	OPERATIONS	JHYD--MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
8	THE DOJO-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.07603	1	60632	OPERATIONS	JHYD--PERIODIC INSPECTIONS - BRIDGES
9	THE DOJO-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.07584	2	60633	OPERATIONS	JHYD-HYDROLOGIC CAPACITY INITIAL EVALUATION
10	THE DOJO-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.07577	200	60692	OPERATIONS	OPERATION OF RAM-D SECURITY IMPROVEMENTS
11	THE DOJO-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.07577	400	60692	OPERATIONS	SECURITY GUARD CONTRACT
12	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07577	356	61610	MAINTENANCE	CAPJ--REPLACE SPILLWAY GATE BRAKE THRUSTERS & LININGS
13	THE DOJO-JOINT COSTS FOR OPS ACTIVITIES	0.07577	174	60610	OPERATIONS	JHYD--OPERATION OF JOINT ACTIVITIES
14	THE DOJO-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.07577	186	60641	OPERATIONS	JHYD--WATER CONTROL & WATER QUALITY ACTIVITIES
15	THE DOJO-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.07577	66	60642	OPERATIONS	JHYD--COLLECTION OF WATER CONTROL DATA
16	THE DOJO-JOINT COSTS FOR WATER MGMT EQUIP ACTIVITIES	0.07577	2	61640	MAINTENANCE	JHYD-NWD WATER MGMT EQUIPMENT MAINTENANCE
17	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07315	1921	61610	MAINTENANCE	JHYD-REHAB/REPAIR PROJECT SEWAGE SYSTEM
18	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07240	20	61610	MAINTENANCE	JHYD--REPAIR RAILROAD TRACKS
19	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07240	201	61610	MAINTENANCE	CAPJ--REPLACE PROJECT & MARINE RADIO SYSTEM
20	LITTLHYD-FACILITY SECURITY PHYSICAL IMPRVMTS, MODS, MAINT, AND REPLACE FOR HYDROPOWER	0.06830	185	61390	MAINTENANCE	CPSP/RAM-D LITTLE GOOSE
21	BONNEJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.06718	31	60632	OPERATIONS	JHYD--INSPECT HYDRAULIC STEEL STRUCTURES
22	THE DOJO-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.06591	31	61660	MAINTENANCE	JHYD-UPGRADE EXISTING HAZARDOUS MATERIALS STORAGE AREA
23	THE DOJO-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.06591	13	60660	OPERATIONS	JHYD-PERFORM ENVIRONMENTAL COMPL ASSESSMENT, REPORTS
24	THE DOJO-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.06591	7	60631	OPERATIONS	JHYD--EVALUATIONS & DATA GATHERING
25	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06591	232	61610	MAINTENANCE	JHYD--MAINTENANCE OF JOINT ACTIVITIES
26	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06591	24	61610	MAINTENANCE	JHYD--REFURBISH 23 SPILLWAY GATES E&D
27	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06591	247	61610	MAINTENANCE	CAPJ--RECOVER SERVICE BUILDING ROOF
28	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06591	200	61610	MAINTENANCE	JHYD-PERFORM BACKLOG SPILLWAY MAINTENANCE
29	BONNEJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.06521	23	60631	OPERATIONS	JHYD-EVALUATIONS & DATA GATHERING
30	BONNEJAV-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR NAVIGATION	0.06296	30	60192	OPERATIONS	SECURITY GUARD CONTRACT
31	BONNEJAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06296	4800	61110	MAINTENANCE	CENTRALIZE OPERATION OF NAVIGATION LOCK
32	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06254	104	61610	MAINTENANCE	JHYD-REPAIR PROJECT ACCESS ROADS
33	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06254	42	61610	MAINTENANCE	JHYD--REPLACE PROJECT PAGER SYSTEM
34	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06254	11	61610	MAINTENANCE	CAPJ - UPGRADE SECURITY SYSTEM
35	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.06166	700	61660	MAINTENANCE	JHYD-HTW CORRECTIVE ACTION-CLEANUP OF BRADFORD ISLAND
36	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06047	46	61110	MAINTENANCE	REPAIR NAVLOCK UPSTREAM GATE
37	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06047	269	61110	MAINTENANCE	RECOVER NAVLOCK BUILDING ROOF
38	BONNEJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.05849	26	60633	OPERATIONS	JHYD-STILLING BASIN EROSION MONITORING AND EVALUATION

R a n k	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
39	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.05849	14	60660	OPERATIONS	JHYD-PERFORM ENVIRONMENTAL COMPL ASSESSMENT,REPORTS
40	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.05849	56	60660	OPERATIONS	JHYD-ENVIRONMENTAL COMPLIANCE ACTIVITIES-ADD'L NEEDS
41	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05849	748	61610	MAINTENANCE	JHYD-MAINTENANCE OF JOINT ACTIVITIES
42	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05849	90	61610	MAINTENANCE	CAPJ REPLACE SPILLWAY ELEVATORS
43	BONNEJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05849	21	60610	OPERATIONS	JHYD-OPERATION OF JOINT ACTIVITIES
44	BONNEJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05849	488	60610	OPERATIONS	JHYD-ACCOMPLISH PREVENTIVE MAINTENANCE BACKLOG
45	BONNEJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.05849	22	60650	OPERATIONS	JHYD-MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
46	BONNEJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.05849	142	60641	OPERATIONS	JHYD-WATER CONTROL & WATER QUALITY ACTIVITIES
47	BONNEJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.05849	59	60642	OPERATIONS	JHYD-COLLECTION OF WATER CONTROL DATA
48	BONNEJOI-JOINT COSTS FOR WATER MGMT EQUIP ACTIVITIES	0.05849	2	61640	MAINTENANCE	JHYD - NWD WATER MGMT EQUIPMENT MAINTENANCE
49	THE DJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05606	42	61610	MAINTENANCE	JHYD-REPLACE WESTRICK CONFERENCE CENTER ROOF
50	THE DJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05580	64	61610	MAINTENANCE	JHYD--UPGRADE BATTERY STORAGE AREA
51	BONNEAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.05509	517	61110	MAINTENANCE	SCHEDULED MAINTENANCE OF NAVIGATION LOCKS
52	BONNEAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.05509	615	60110	OPERATIONS	OPERATION OF LOCKS 24 HRS/DAY, 7 DAYS/WEEK B1
53	BONNEAV-INSTRUMENTATION, DATA COLLECTION AND ANALYSIS FOR NAVIGATION	0.05509	14	60131	OPERATIONS	SURVEY MONITORING - NAVLOCK
54	BONNEREC-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR RECREATION	0.05435	34	60592	OPERATIONS	SECURITY GUARD CONTRACT
55	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.05291	412	61110	MAINTENANCE	SCHEDULED MAINTENANCE OF NAVIGATION LOCKS
56	THE DNAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.05291	389	60110	OPERATIONS	OPERATION OF LOCKS 24 HRS/DAY, 7 DAYS/WEEK
57	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05124	103	61610	MAINTENANCE	JHYD-REPAIR AND REPAINT SPILLWAY GATES
58	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05124	223	61610	MAINTENANCE	CAPJ-REPLACE SPILLWAY POWER DISTRIBUTION EQUIP PH1
59	BONNEREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.04755	7	60513	OPERATIONS	JHYD-LAW ENFORCEMENT SERVICES
60	BONNEREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.04755	29	60513	OPERATIONS	JHYD-LAW ENFORCEMENT SVCS - ADD'L NEEDS
61	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04755	106	61511	MAINTENANCE	JHYD-MAINTENANCE OF RECREATION FACILITIES-ADD'L NEEDS
62	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.04755	73	60511	OPERATIONS	JHYD-OPERATION OF REGIONAL VISITOR CENTER
63	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.04755	260	60511	OPERATIONS	JHYD - LEWIS & CLARK BICENTENNIAL MANAGEMENT PLAN
64	BONNEAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04722	261	61110	MAINTENANCE	STABILIZE ORIGINAL NAVIGATION LOCK NORTH WALL
65	DWORSHYD-FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT, AND REPLACE FOR HYDROPOWER	0.04670	70	61390	MAINTENANCE	CPSP/RAM-D DWORSHAK
66	BONNEENV-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR ENVIRONMENTAL STEWARDSHIP	0.04670	41	60492	OPERATIONS	SECURITY GUARD CONTRACT
67	BONNEENV-MANAGEMENT OF SPECIAL STATUS SPECIES	0.04670	2	60418	OPERATIONS	JHYD-ESA-CONSULTATION AND COORDINATION
68	DWORSENV-MGMT OF NATURAL RESOURCES	0.04670	4	60411	OPERATIONS	TIMBER SALE SUPPORT,REVIEW FORESTRY & RANGE MGMT
69	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	13	60415	OPERATIONS	JHYD- TRAP & TRANSPORT PROGRAM
70	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	34	60415	OPERATIONS	JHYD- BIOP- ADDITIONAL FISH COUNTING
71	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	24	60415	OPERATIONS	JHYD- ROUT OPER OF ADULT FISH PASSAGE FACS
72	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	1	60415	OPERATIONS	JHYD- ROUT OPER OF JUVENILE PASSAGE FACS
73	LITLLENV-FISHERIES MGMT - OPS OF FISH HATCHERIES	0.04587	8	60414	OPERATIONS	JHYD- BIOP- IMPROVED DEBRIS HANDLING
74	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	9	61414	MAINTENANCE	JHYD-ROUT MAINT ADULT FISHWAY FACS
75	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	2	61414	MAINTENANCE	JHYD- BIOP- ESBS OVERHAUL
76	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	10	61414	MAINTENANCE	JHYD-REPLACE SEWAGE & WATER LINES TO JFF
77	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	13	61414	MAINTENANCE	JHYD-RECON FISH WTR ATTRACT PUMP TURBINE WICKET GATES

R a n k	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
78	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	15	61414	MAINTENANCE	JHYD- ROUT ANNUAL MAINT OF FISHWAY FACS, ETC
79	LITLLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.04587	2	61413	MAINTENANCE	JHYD- KELLBERG WELL REPAIR
80	LITLLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.04587	1	61413	MAINTENANCE	JHYD- ROUTINE MAINT OF WILDLIFE
81	LITLLENV-MGMT OF NATURAL RESOURCES	0.04587	5	60411	OPERATIONS	JHYD-ENVIRONMENTAL COMPLIANCE FOR NATURAL RESOURCES
82	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	26	61110	MAINTENANCE	PERFORM BACKLOG NAVLOCK MAINTENANCE
83	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	770	61110	MAINTENANCE	INSTALL GDACS MONITORING OF NAVLOCK
84	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	86	61110	MAINTENANCE	REPLACE DOWNSTREAM NAVLOCK GATE PINTLE BEARINGS-E&D
85	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	365	60415	OPERATIONS	JHYD-OPERATION OF FISH PASSAGE FACILITIES
86	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	164	60415	OPERATIONS	JHYD-FISH HAULING & COUNTING ACTIVITIES BY NWW
87	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	48	60415	OPERATIONS	JHYD-ESA IMPLEMENT BIOP-NEW FISH COUNT/TRANSPORT RQMTS
88	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	235	61414	MAINTENANCE	JHYD-MAINTENANCE OF FISH PASSAGE FACILITIES
89	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	42	61414	MAINTENANCE	JHYD-ESA-DEVELOP & IMPLEMENT PREVENTIVE MAINT FOR FISH
90	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	155	61414	MAINTENANCE	JHYD-ESA-REMOVE OBSTRUCTIONS FROM TURBINE ENVIRONMENT
91	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	52	61414	MAINTENANCE	JHYD-ESA-PURCHASE SPARE PARTS FOR AUXILIARY WATER SYS
92	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	1	60420	OPERATIONS	JHYD -- ESA ADD'L BIOP BULL TROUT MONITORING AND SURVEYS
93	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	38	60420	OPERATIONS	JHYD -- ESA BULL TROUT MONITORING
94	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	24	60420	OPERATIONS	JHYD-ESA-ANADROMOUS FISH EVALUATION PROGRAM
95	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	3	60441	OPERATIONS	JHYD-ESA-TOTAL MAXIMUM DAILY LOADS MONITORING PROGRAM
96	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	10	60650	OPERATIONS	JHYD-MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
97	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	18	60441	OPERATIONS	JHYD-ESA HYD EVAL ADULT BYPASS SYSTEM
98	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - OPS OF WTR CTRL DATA SYS	0.04495	26	60442	OPERATIONS	JHYD-ESA-TOTAL DISSOLVED GAS FIXED MONITORING PROGRAM
99	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	15	60411	OPERATIONS	JHYD- ENVIRONMENTAL COMPLIANCE FOR NATURAL RESOURCES
100	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	44	60411	OPERATIONS	JHYD- RESERVOIR SURVEY - FISH AND HABITAT
101	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	71	60411	OPERATIONS	JHYD - SITE INVENTORY, BIRDS AND BATS
102	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	3	60411	OPERATIONS	JHYD- BIOP ACTION 139 DWORSHAK GAS ABATEMENT STUDY
103	DWORSENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	49	60413	OPERATIONS	JHYD-OPER OF WILDLIFE MITIGATION
104	DWORSENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	18	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
105	DWORSENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	36	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
106	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 198 REGIONAL DATABASE
107	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 133 SYSTEM TDG MODELING
108	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	18	60441	OPERATIONS	JHYD-BIOP ACTION APPENDIX B - SYSTEM TEMPERATURE STUDY
109	LITLLENV-MGMT OF NATURAL RESOURCES	0.04495	3	60411	OPERATIONS	JHYD- ROUTINE OPERATIONS OF NATURAL RESOURCES
110	LITLLENV-MGMT OF NATURAL RESOURCES	0.04495	1	60411	OPERATIONS	JHYD- RESERVOIR SURVEY - FISH AND HABITAT
111	LITLLENV-MGMT OF NATURAL RESOURCES	0.04495	1	60411	OPERATIONS	JHYD - SITE INVENTORY, BIRDS AND BATS
112	LITLLENV-MGMT OF NATURAL RESOURCES	0.04495	5	60411	OPERATIONS	JHYD - RESERVOIR LANDS, VEGETATION SURVEY
113	LITLLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	18	60413	OPERATIONS	JHYD-LEVEL II WILDLIFE INVENTORIES
114	LITLLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	28	60413	OPERATIONS	JHYD-GIS MAPPING

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115	LITLLENV-PURCHASE/MAINT OF WATER MGMT EQUIP FOR ENVIRON STEWARDSHIP	0.04495	2	61440	MAINTENANCE	JHYD- BIOP ACTION 131 REDUNDANT TOTAL DISSOLVED GAS MONI
116	LITLLENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	19	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
117	LITLLENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	18	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
118	LITLLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 198 REGIONAL DATABASE
119	LITLLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	4	60441	OPERATIONS	JHYD- BIOP ACTION 132 REVIEW TOTAL DISSOLVED GAS MONITOR
120	LITLLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 133 SYSTEM TDG MODELING
121	LITLLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	7	60441	OPERATIONS	JHYD- BIOP ACTION 143 TEMPERATURE MODELING PLAN (LOWER S
122	LITLLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	7	60441	OPERATIONS	JHYD-BIOP ACTION APPENDIX B - SYSTEM TEMPERATURE STUDY
123	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	183	60415	OPERATIONS	JHYD--OPERATION OF FISH PASSAGE FACILITIES
124	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	29	60415	OPERATIONS	JHYD--FISH HAULING & COUNTING ACTIVITIES BY NWW
125	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	111	60415	OPERATIONS	JHYD-ESA IMPLEMENT NEW FISH COUNT/TRANSP REQMTS
126	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	1	60415	OPERATIONS	JHYD--ESA INCIDENTAL TAKE ACTIVITIES
127	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	167	61414	MAINTENANCE	JHYD--MAINTENANCE OF FISH PASSAGE FACILITIES
128	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	14	61414	MAINTENANCE	JHYD-ESA SPARE PARTS FOR AWS
129	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD--ESA REMOVE OBSTRUCTIONS FROM TURBINE ENVIRONMENT
130	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD-ESA DEVELOP/IMPLEMENT FISH FAC PREVENTIVE MAINT PRO
131	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD--REPLACE DIFFUSION WATER GRATINGS-N FISHLADDER
132	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	3	61414	MAINTENANCE	JHYD-PROCURE & INSTALL DIFFUSION VALVES
133	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	29	61414	MAINTENANCE	CAPJ-EVALUATE & REHAB FISH COUNTING STATION
134	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	72	61414	MAINTENANCE	JHYD-REHAB N. FISHLADDER & AWS
135	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	358	61414	MAINTENANCE	JHYD-ESA-AUTOMATE AUXILIARY WATER SYSTEM
136	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD-ESA-REPLACE COUNT STATION CROWDER/WINDOW BRUSH
137	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	42	61414	MAINTENANCE	JHYD-ESA-REFURBISH WEIR GUIDES
138	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	240	61414	MAINTENANCE	JHYD--REPAIR FISH LADDER STRUCTURE ROOF
139	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	CAPJ-INSTALL GDACS CONTROL OF FISHWAYS
140	THE DENV-MANAGEMENT OF SPECIAL STATUS SPECIES	0.04495	6	60418	OPERATIONS	JHYD-ESA-CONSULTATION AND COORDINATION
141	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	88	60420	OPERATIONS	JHYD-ESA-ANADROMOUS FISH EVALUATION PROGRAM
142	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	3	60420	OPERATIONS	JHYD-ESA BULL TROUT MONITORING
143	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	25	60420	OPERATIONS	JHYD-ADDITIONAL BI-OP BULL TROUT MONITORING STDY & SURV
144	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	44	60441	OPERATIONS	JHYD-ESA HYDRAULIC EVAL ADULT BYPASS SYSTEM
145	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	19	60441	OPERATIONS	JHYD-TOTAL MAXIMUM DAILY LOADS MONITORING PROGRAM
146	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - OPS OF WTR CTRL DATA SYS	0.04495	30	60442	OPERATIONS	JHYD-ESA-TOTAL DISSOLVED GAS FIXED MONITORING PROGRAM
147	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04076	22	61511	MAINTENANCE	CAPJ-REHAB HAMILTON ISL REC AREA BOAT RAMP BN2
148	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04076	31	61511	MAINTENANCE	CAPJ-REHAB WASH SHORE VISITOR CENTER - PH2
149	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04076	392	61511	MAINTENANCE	CAPJ-REHAB BRAD. ISL. VISITOR CTR.ROOF BN1
150	LITLLOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03595	10	61610	MAINTENANCE	RE-PAVE EARTHFILL/SUBSTATION ROAD AT LITTLE GOOSE DAM
151	BONNEREC-FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT, AND REPLACE FOR RECREATION	0.03397	31	61590	MAINTENANCE	ENCLOSE PH1 VISITOR GALLERY FOR SECURITY

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152	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	516	61511	MAINTENANCE	SCAPJOI - PURCHASE/INSTALL CONCRETE VAULT TOILETS
153	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	284	61511	MAINTENANCE	CAPJ REPLACE ELEVATORS- BRADFORD IS VISITOR CTR
154	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	515	61511	MAINTENANCE	JHYD-UPGRADE BRAD ISL VISITOR CTR RESTROOM BN1
155	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	24	61511	MAINTENANCE	JHYD-MAINTENANCE OF RECREATION FACILITIES & VISITOR CTR
156	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.03397	15	60511	OPERATIONS	JHYD-MANAGEMENT OF RECREATION AREAS & FACILITIES
157	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.03397	50	60511	OPERATIONS	JHYD-MANAGEMENT OF REC AREAS - ADD'L ROUTINE NEEDS
158	BONNEENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	60	60412	OPERATIONS	JHYD-CULTURAL RESOURCES TO MEET NATIVE AMERICAN AGREE
159	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03349	12	61413	MAINTENANCE	JHYD-IMPROVE RD CONDITIONS-GRANDAD WILDLIFE MITIGATION AREA
160	THE DENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	22	60412	OPERATIONS	JHYD-CULTURAL RESOURCES TO MEET NATIVE AMERICAN AGREE
161	THE DENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	100	60412	OPERATIONS	JHYD--CONTR LAW ENFORCEMENT- CULTURAL AREAS
162	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03296	84	61610	MAINTENANCE	INSTALL GDACS CONTROL OF SPILLWAY
163	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03296	19	61610	MAINTENANCE	SCAPJOI - PURCHASE PATROL BOAT & TRAILER
164	LITTLENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	7	60412	OPERATIONS	JHYD- FEDERAL COLUMBIA R. POWER SYSTEM - CUL RES
165	LITTLENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	22	60412	OPERATIONS	MGMT OF CULTURAL RESOURCES
166	LITTLENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	1	60412	OPERATIONS	JHYD - CULTURAL RESOURCE PROGRAM COMPLIANCE
167	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03188	17	61610	MAINTENANCE	JHYD - SECURITY MODIFICATIONS
168	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	39	61414	MAINTENANCE	JHYD-EVAL/REHAB FISH COUNTING STATION
169	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	13	61414	MAINTENANCE	JHYD-ANNUAL FISHWAY OVERHAUL
170	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	100	61414	MAINTENANCE	JHYD-MAINTENANCE OF SUBMERGED TRAVELING FISH SCREENS
171	BONNEENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	10	61411	MAINTENANCE	JHYD-MAINTENANCE OF NATURAL RESOURCE FACILITIES
172	BONNEENV-MGMT OF NATURAL RESOURCES	0.03175	33	60411	OPERATIONS	JHYD-NATURAL RESOURCES MANAGEMENT
173	DWORSENV-BOUNDARY MONUMENTATION AND RECTIFICATION FOR ENVIRON STEWARD	0.03175	7	61453	MAINTENANCE	JHYD-PROJECT BOUNDARY MONUMENTATION
174	DWORSENV-ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) FOR ENVIRON STEWARD	0.03175	6	61460	MAINTENANCE	JHYD- EXTERNAL ENVIRONMENTAL REVIEWS
175	DWORSENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.03175	79	60415	OPERATIONS	JHYD- MANAGEMENT OF RESIDENT FISHERIES
176	DWORSENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.03175	5	60415	OPERATIONS	JHYD- TRAP & TRANSPORT PROGRAM
177	DWORSENV-FISHERIES MGMT - OPS OF FISH HATCHERIES	0.03175	247	60414	OPERATIONS	JHYD- HATCHERY-ROUTINE OPER BY U.S.FISH & WILDLIFE SERVI
178	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	217	61414	MAINTENANCE	JHYD- ROUTINE MAINT ASSISTANCE TO NAT'L HATCHERY
179	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	62	61414	MAINTENANCE	JHYD- EMERGENCY GENERATORS - DNFH
180	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	123	61414	MAINTENANCE	JHYD-SYSTEM III MEDIA CHANGE
181	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	12	61414	MAINTENANCE	JHYD- REROOF OTHER BUILDINGS - DNFH
182	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	280	61414	MAINTENANCE	CAPF - HATCHERY NURSERY BLDG ROOF REPAIR
183	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	18	61414	MAINTENANCE	JHYD- FISH CROWDER - DNFH
184	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	41	61414	MAINTENANCE	JHYD- HATCHERY-CONVERT SYS 2 & 3 BURROWS PONDS TO RACEWA
185	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	17	61414	MAINTENANCE	JHYD- HATCHERY- ROUTINE MAINT BY U.S.FISH & WILDLIFE SERV
186	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.03175	17	60441	OPERATIONS	JHYD- BIOP ACTION 143 TEMPERATURE MODELING PLAN (LOWER S
187	LITTLENV-BOUNDARY MONUMENTATION AND RECTIFICATION FOR ENVIRON STEWARD	0.03175	9	61453	MAINTENANCE	JHYD-SURVEY & MONUMENT CORPS BOUNDARY LINES

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188	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	4	61414	MAINTENANCE	JHYD- BIOP- DEVELOP PREVENTATIVE MAINTENANCE PROGRAM
189	LITLLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	10	61411	MAINTENANCE	JHYD-REPLACE CATTLE WATERING CORRIDORS WITH WELLS
190	LITLLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	16	61411	MAINTENANCE	JHYD-PHRAGMITES CONTROL
191	LITLLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	1	61411	MAINTENANCE	JHYD-SHORELINE STABILIZATION
192	LITLLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	1	61411	MAINTENANCE	REHAB WORK BOAT
193	LITLLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03175	1	61413	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
194	LITLLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.03175	3	60413	OPERATIONS	JHYD - NATURAL RESOURCE SPECIALIST POSITION
195	THE DENV-MGMT OF NATURAL RESOURCES	0.03175	35	60411	OPERATIONS	JHYD-NATURAL RESOURCES MANAGEMENT
196	THE DENV-PEST MANAGEMENT	0.03175	13	60419	OPERATIONS	JHYD-NOXIOUS WEEDS, BIRDS, AND RODENT CONTROL
197	LITLJJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.03137	2	60633	OPERATIONS	JHYD-GEOLOGICAL & SEISMOLOGICAL REEVALUATION
198	LITLJJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.03119	2	60650	OPERATIONS	JHYD- COMPLIANCE INSPECTIONS, OUTGRANT ACTIONS
199	DWORSENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03083	7	61411	MAINTENANCE	JHYD- ROUT ANNUAL MAINTENANCE OF NATURAL RESOURCES
200	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03083	5	61413	MAINTENANCE	MAINT OF WILDLIFE MITIGATION
201	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	32	60412	OPERATIONS	JHYD- FEDERAL COLUMBIA R. POWER SYSTEM-CUL RES
202	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	75	60412	OPERATIONS	MGMT OF CULTURAL RESOURCES
203	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	22	60412	OPERATIONS	JHYD - CULTURAL RESOURCE PROGRAM COMPLIANCE
204	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	3	60412	OPERATIONS	JHYD- ADD'L CULTURAL RESOURCES PROTECTION
205	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	48	60412	OPERATIONS	JHYD - MGMT OF CULTURAL RESOURCES
206	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	9	60412	OPERATIONS	JHYD- NEPA - SUPPLEMENT PROJECT EIS
207	DWORSENV-COMPREHENSIVE MASTER PLANS	0.03000	280	60416	OPERATIONS	JHYD-MASTER PLAN REVIEW
208	DWORSENV-MGMT OF NATURAL RESOURCES	0.03000	169	60411	OPERATIONS	JHYD- ROUTINE OPERATIONS - NATURAL RESOURCES
209	LITLLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.02908	1	60413	OPERATIONS	JHYD- OPRE OF WILDLIFE MITIGATION
210	LITLJJOI-JOINT COSTS FOR OPS ACTIVITIES	0.02801	2	60610	OPERATIONS	JHYD- CONTINUOUS SAMPLER FOR POTABLE WATER
211	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02781	19	61610	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
212	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02781	2	61610	MAINTENANCE	JHYD- REPAIR SPILLWAY GATES
213	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02781	1	61610	MAINTENANCE	JHYD- REPAIR SPILLWAY WATERSTOP ON GATE 1
214	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02781	21	61610	MAINTENANCE	JHYD- BUILD WELDING AND CARPENTER SHOP
215	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.02717	9	60511	OPERATIONS	JHYD-OPERATION OF REGIONAL VISITOR CENTER- ADD'L NEEDS
216	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.02717	57	60511	OPERATIONS	JHYD-PROVIDE INCREASED VISITOR ASSISTANCE FOR LEW & CLRK
217	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02703	7	61610	MAINTENANCE	JHYD-CORRECT SIEMIC DEFICIENCIES
218	LITLJJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.02387	40	60692	OPERATIONS	JHYD- SECURITY GUARDS
219	LITLJJOI-JOINT COSTS FOR FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT AND REPLACE	0.02374	2180	61690	MAINTENANCE	CPSP/IRAM-D LITTLE GOOSE
220	LITLJJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.02374	1	60632	OPERATIONS	JHYD-SPILLWAY ROLLER BASIN SOUNDINGS
221	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02374	2	61610	MAINTENANCE	JHYD-SMALL CAP JOINT IMPROVEMENTS (SMC)
222	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02374	23	61610	MAINTENANCE	JHYD- ROUT ANNUAL MAINT ON DAM, SPILLWAY GATES, BLDGS, ETC
223	LITLJJOI-JOINT COSTS FOR OPS ACTIVITIES	0.02337	2	60610	OPERATIONS	JHYD-TIME AND COST STANDARD
224	LITLJJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.02272	1	60632	OPERATIONS	JHYD- HYDRAULIC STREEL STRUCTURES INSPECTION
225	LITLJJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.02272	3	60631	OPERATIONS	JHYD-EVALUATION OF INSTRUMENTATION DATA
226	LITLJJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.02272	1	60631	OPERATIONS	JHYD- INSTRUMENTATION MONITORING/READING

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227	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02272	1	61610	MAINTENANCE	JHYD - SPILLWAY 1 WATERSTOP REPAIR
228	LITTLJOI-JOINT COSTS FOR STUDIES AND SURVEYS	0.02272	1	60621	OPERATIONS	JHYD- ENERGY PROD RPTS, FLOOD DAMAGES REPORTS
229	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02268	131	61110	MAINTENANCE	REMODEL NAVLOCK STANDS
230	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02213	25	61610	MAINTENANCE	JHYD- REPLACE RESOURCE OFFICE HVAC
231	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.02213	8	60610	OPERATIONS	JHYD-(SMC) ULTRASONIC FLOW TRANSDUCERS FOR PENSTOCKS
232	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.02213	11	60610	OPERATIONS	JHYD - (SMC) NEW GEARBOX FOR TAILRACE CRANE
233	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02171	62	61610	MAINTENANCE	JHYD- INSTRUMENTATION MAINT/RPR
234	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.02171	162	60610	OPERATIONS	JHYD- UPDATE EMERGENCY NOTIFICATION PLAN
235	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.02171	25	60610	OPERATIONS	SMC- REPLACE SEALS ON BULKHEADS, GATES, AND VALVES
236	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.02167	8	61660	MAINTENANCE	JHYD-ENVIRONMENTAL COMPLIANCE W/FED STATE, LOCAL REGS
237	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02167	4	61610	MAINTENANCE	JHYD-REPLACE SEALS ON BULKHEADS, GATES, & VALVES
238	DWORSJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.02167	11	60650	OPERATIONS	JHYD- COMPLIANCE INSPECTIONS, OUTGRANT ACTIONS
239	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02086	9	61610	MAINTENANCE	JHYD- INSTRUMENTATION MAINT/RPR
240	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.02040	5	61660	MAINTENANCE	JHYD- REMOVE DAM UST
241	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.02040	5	60660	OPERATIONS	JHYD- CYCLE III EXTERNAL ERGO ASSESSMENTS
242	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02026	103	61110	MAINTENANCE	NAVIGATION LOCK WATER-STOPS REPAIR
243	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02026	575	61110	MAINTENANCE	REPLACE NAVIGATION LOCK SEAL HEATERS
244	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02026	500	61110	MAINTENANCE	ROUT ANNUAL MAINT OF LOCKS & ASSOCIATED EQUIP
245	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01967	46	60641	OPERATIONS	JHYD- NWD RESERVOIR CONTROL CENTER
246	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01967	23	60641	OPERATIONS	JHYD- NWD WATER MANAGEMENT MOVE TO NEW BUILDING
247	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01967	2	60641	OPERATIONS	JHYD-WTR CONTROL COORDINATION & WTR QUALITY ANALYSIS
248	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01967	7	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
249	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01967	5	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
250	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.01967	28	60642	OPERATIONS	JHYD- DISSOLVED GAS DATA COLLECTION
251	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.01967	8	60642	OPERATIONS	JHYD-COLLECT WTR QUALITY DATA & COLLECT STREAMGAGE, ETC
252	DWORSJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.01907	4	60633	OPERATIONS	JHYD - REEVALUATE PROBABLE MAXIMUM FLOOD
253	DWORSJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.01907	9	60633	OPERATIONS	JHYD-LOW LEVEL OUTLET EMERGENCY CLOSURE GATES EVAL
254	DWORSJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.01907	100	60692	OPERATIONS	JHYD- SECURITY GUARDS
255	DWORSJOI-JOINT COSTS FOR FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT AND REPLACE	0.01907	1430	61690	MAINTENANCE	CPSP/RAM-D DWORSHAK
256	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.01907	8	60632	OPERATIONS	JHYD-FORMAL PERIODIC INSPECTIONS AND RPTS.
257	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.01907	1	60632	OPERATIONS	JHYD-SPILLWAY STILLING BASIN SOUNDINGS
258	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.01907	3	60632	OPERATIONS	JHYD- HYDR STEEL STRUCT INSP, REGULATING OUTLET INSP
259	DWORSJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.01907	10	60631	OPERATIONS	JHYD- EVALUATION OF INSTRUMENTATION DATA
260	DWORSJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.01907	1	60631	OPERATIONS	JHYD- INSTRUMENTATION MINOR MAINT
261	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01907	16	61610	MAINTENANCE	JHYD- MISC. SMALL CAP PURCHASES (SMC)
262	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01907	101	61610	MAINTENANCE	JHYD- MEASURE SPILLWAY GATE FRICTION COEFFICIENT
263	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01907	5	61610	MAINTENANCE	JHYD - REPLACE SNOWPLOW
264	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01907	6	61610	MAINTENANCE	JHYD-CORRECT SEISMIC DEFICIENCIES

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265	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01907	1	61610	MAINTENANCE	JHYD-REPAIR & UPDATE AUTOMATED INSTRUMENTATION
266	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01907	8	61610	MAINTENANCE	JHYD - DWA DAM MONOLITH JOINT DRAIN WATERSTOP REPAIR
267	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01907	1	60610	OPERATIONS	JHYD- DAM SAFETY TRAINING
268	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01907	1	60610	OPERATIONS	JHYD - PROJECT PAVING
269	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01907	18	60610	OPERATIONS	JHYD - PURCHASE MAN-LIFT
270	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01907	5	60610	OPERATIONS	JHYD-CORRECT SEISMIC DEFICIENCIES
271	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01907	11	61610	MAINTENANCE	SMC- AUTOMATE DAM INSTRUMENTATION
272	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01907	2	61610	MAINTENANCE	JHYD-FOREBAY TEMPERATURE DATA LOGGER
273	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01907	11	61610	MAINTENANCE	JHYD-ROUT ANNUAL MAINT OF DAM, SPILLWAY GATES, BLDGS, ET
274	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01897	2	60641	OPERATIONS	JHYD- NWD RESERVOIR CONTROL CENTER
275	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01897	1	60641	OPERATIONS	JHYD-WATER CONTROL COORDINATION & WTR QUALITY ANALYSIS
276	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01897	3	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
277	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.01897	4	60642	OPERATIONS	JHYD- DISSOLVED GAS DATA COLLECTION
278	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.01897	4	60642	OPERATIONS	JHYD- COLLECT WTR QUALITY DATA & COLLECT STREAMGAGE, ETC
279	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01880	25	61610	MAINTENANCE	JHYD-UPGRADE ELEVATOR CONTROLS
280	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01844	2	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
281	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01833	16	61610	MAINTENANCE	JHYD- SEEPAGE CONTROL AND MONITORING
282	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01809	74	61610	MAINTENANCE	JHYD-DEBRIS REMOVAL
283	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01809	98	61610	MAINTENANCE	CAPF- REPAIR SPILLWAY GATE SEAL HEATERS
284	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01809	13	61610	MAINTENANCE	JHYD-ROUTINE MAINT. OF DAM, SPILLWAY, INTAKE & OUTLET
285	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01809	10	61610	MAINTENANCE	JHYD - POWERHOUSE ELEVATOR MODERNIZATION
286	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01809	49	60610	OPERATIONS	JHYD-EXTERNAL ERGO INSPECTION
287	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01809	1	60610	OPERATIONS	JHYD - EMERGENCY ACTION PLAN REVISION
288	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01809	1	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
289	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01809	10	60610	OPERATIONS	JHYD- UPDATE EMERGENCY NOTIFICATION PLAN
290	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01783	225	61511	MAINTENANCE	INSTALL FISHING PIER
291	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01783	107	61511	MAINTENANCE	REPLACE COURTESY DOCKS
292	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01783	45	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
293	DWORSREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.01783	789	60511	OPERATIONS	ROUTINE OPER OF RECREATION AREAS
294	DWORSREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.01783	423	60511	OPERATIONS	ROUTINE OPER OF RECREATION AREAS
295	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01773	259	61110	MAINTENANCE	LOCK CULVERT REPAIR
296	LITTLNAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01773	282	60110	OPERATIONS	ROUTINE OPERATION OF LOCKS
297	LITTLNAV-STUDIES AND SURVEYS FOR NAVIGATION	0.01773	55	60121	OPERATIONS	NAVIGATION CONDITION SURVEYS
298	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01726	21	60641	OPERATIONS	JHYD- NWD WATER MANAGEMENT MOVE TO NEW BUILDING
299	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01713	25	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
300	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01713	5	60610	OPERATIONS	JHYD- RADIO REPLACEMENT (HANDHELDS/BASE STATIONS)
301	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01656	8	61610	MAINTENANCE	JHYD-REPLACE/UPDATE SECURITY & EMERGENCY NOTIFICATION SY
302	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01643	25	61610	MAINTENANCE	JHYD- REPLACE LOG BOOMS

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303	DWORSENV-COMPREHENSIVE MASTER PLANS	0.01587	12	60416	OPERATIONS	JHYD- PROJECT MASTER PLANNING
304	DWORSENV-COMPREHENSIVE MASTER PLANS	0.01587	25	60416	OPERATIONS	JHYD-MASTER PLAN UPDATE
305	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.01587	9	61413	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
306	LITTLENV-COMPREHENSIVE MASTER PLANS	0.01587	1	60416	OPERATIONS	JHYD-MASTER PLAN REVIEW
307	LITTLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.01587	2	60413	OPERATIONS	JHYD-FORESTRY AND VEGETATION CONSULTATION
308	LITTLJOI-JOINT COSTS FOR LAND ACQ AND DISPOSAL MGMT ACTIV, SETTLE CLAIMS, AND AUDITS	0.01580	1	61651	MAINTENANCE	JHYD- LAND DISPOSAL
309	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01559	40	61610	MAINTENANCE	JHYD-FIRE MONITORING/PROTECTION FOR DAM & PH
310	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01559	11	61610	MAINTENANCE	JHYD- SEEPAGE CONTROL AND MONITORING
311	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01559	21	60610	OPERATIONS	JHYD- DAM SAFETY TRAINING
312	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01559	4	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
313	LITTLNAV-FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT AND REPLACE FOR NAVIGATION	0.01519	68	61190	MAINTENANCE	CPSP/RAM-D LITTLE GOOSE
314	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01379	3	61610	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
315	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01379	21	61610	MAINTENANCE	JHYD-REPAIR 1603 GALLERY WATER INTRUSION
316	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01379	50	61610	MAINTENANCE	JHYD-ROAD MAINT GRANDAD CREEK TO BREAKFAST CREEK RD
317	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01379	35	61610	MAINTENANCE	JHYD-REPAIR ASPHALT ROADWAYS
318	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01379	11	61610	MAINTENANCE	JHYD - FOUNDATION DRAIN CLEANING
319	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01379	49	61610	MAINTENANCE	JHYD- S. DAM SECURITY FENCING/CAMERA
320	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01379	49	61610	MAINTENANCE	SMC- 350 TON BRIDGE CRANES (2)- REHAB
321	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01379	7	60610	OPERATIONS	JHYD- FIRE MONITORING/PROTECTION FOR DAM &POWERHOUSE
322	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01379	17	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
323	DWORSJOI-JOINT COSTS FOR STUDIES AND SURVEYS	0.01379	1	60621	OPERATIONS	JHYD- ENERGY PROD RPTS, FLOOD DAMAGES REPORTS
324	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01274	45	61511	MAINTENANCE	IMPROVE DISPERSED AREA SANITARY FACILITIES
325	DWORSREC-REAL ESTATE MGMT FOR RECREATION	0.01274	72	60550	OPERATIONS	COMPL INSP, OUTGRANTS FOR RECREATION
326	DWORSREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.01274	58	60513	OPERATIONS	LAW ENFORCEMENT-CLEARWATER COUNTY
327	LITTLNAV-FORMAL PERIODIC INSPECTIONS AND REPORTS FOR NAVIGATION	0.01266	5	60132	OPERATIONS	NAV LOCK HYDR STEEL STRUCT INSP
328	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01266	41	61110	MAINTENANCE	REPAIR WATERSTOPS IN NAVIGATION LOCK
329	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	213	61511	MAINTENANCE	REPAIR DENT REC SITE ELECTRICALSYSTEM
330	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	258	61511	MAINTENANCE	BIG EDDY PLAYGROUND
331	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	154	61511	MAINTENANCE	PURCHASE BOAT TRAILER
332	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	121	61511	MAINTENANCE	BEACH SAFETY IMPROVEMENTS
333	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	250	61511	MAINTENANCE	IMPROVE BOAT ACCESS TO THE VISITOR CENTER
334	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	585	61511	MAINTENANCE	JHYD-IMPROVE RD CONDITIONS-GRANDAD WILDLIFE MITIGATION AREA
335	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	70	61511	MAINTENANCE	REPAIR BOAT RAMP - BRUCE'S EDDY
336	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	62	61511	MAINTENANCE	REPLACE RANGER PATROL BOAT
337	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	23	61511	MAINTENANCE	LEWIS AND CLARK BICENTENNIAL
338	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	195	61511	MAINTENANCE	LOW WATER ACCESS PARKING
339	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	55	61511	MAINTENANCE	IMPROVE 1603 GALLERY LIGHTING & INTERPRETIVE SIGNS
340	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	54	61511	MAINTENANCE	REPAIR 1603 GALLERY AND VISITOR CENTER WINDOW SEALS
341	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	480	61511	MAINTENANCE	REPLACE REMOTE SANITARY FACILITIES
342	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	98	61511	MAINTENANCE	UPDATE PROJECT MULTIMEDIA EQUIPMENT

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343	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	250	61511	MAINTENANCE	REPLCMNT OF DISPLAYS IN VISITOR CENTER
344	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	51	61511	MAINTENANCE	ACCESSIBLE TOILET FACILITIES
345	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	42	61511	MAINTENANCE	EXTEND BOAT RAMPS
346	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	83	61511	MAINTENANCE	CANYON CREEK CAMPSITE REPAIR
347	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	42	61511	MAINTENANCE	REHABILITATE PARKING LOT ENTRANCE
348	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	52	61511	MAINTENANCE	DENT ACRES - IMPROVE CAMPGROUND ACCESS
349	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	14	61511	MAINTENANCE	INTERACTIVE CURRENT ISSUES INTERPRETIVE DISPLAY
350	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	58	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
351	DWORSREC-STUDIES AND SURVEYS FOR RECREATION	0.00764	55	60520	OPERATIONS	DISTRICT VISITOR SURVEY (VERS)
352	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00272	75	61511	MAINTENANCE	REHABILITATE BOAT RAMPS
353	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00272	354	60511	OPERATIONS	REPLACE FENCE AT ILLIA DUNES
354	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00272	76	60511	OPERATIONS	ROUT OPER OF RECREATION AREAS
355	LITTLREC-DREDGING ACTIVITIES FOR RECREATION	0.00238	41	61520	MAINTENANCE	DREDGE BOAT BASINS AT ILLIA AND WILLOW LANDINGS
356	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00238	25	61511	MAINTENANCE	REPLACE HVAC SYSTEM IN FISH VISITOR BUILDING
357	THE DREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.00238	32	60513	OPERATIONS	LAW ENFORCEMENT CT - RECREATION AREAS
358	THE DREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00238	369	60511	OPERATIONS	MANAGEMENT OF RECREATION AREAS & VISITOR CTR
359	THE DREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00238	36	60511	OPERATIONS	LEWIS & CLARK BICENTENNIAL MANAGEMENT PLAN
360	THE DREC-STUDIES AND SURVEYS FOR RECREATION	0.00238	80	60520	OPERATIONS	RECREATION USE SURVEYS
361	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	85	61511	MAINTENANCE	MAINTENANCE OF RECREATION FACILITIES & VISITOR CTR
362	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	200	61511	MAINTENANCE	REPAIR BOAT RAMP FACILITIES AT CELILO PARK
363	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	185	61511	MAINTENANCE	PRINT BROCHURES
364	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	95	61511	MAINTENANCE	REPAIR VISITORS CENTER ROOFS
365	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	32	61511	MAINTENANCE	CONSTRUCT PLAY STRUCTURE AT CELILO PARK
366	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	210	61511	MAINTENANCE	L&C - NORTH SHORE/RESTROOM/BOAT L/TRAIL/SIGNS REHAB
367	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	70	61511	MAINTENANCE	REPLACE 2 RESTROOMS AT CELILO PARK
368	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	172	61511	MAINTENANCE	MAINTENANCE OF SEUFERT VISITOR CENTER
369	LITTLREC-REAL ESTATE MGMT FOR RECREATION	0.00170	21	60550	OPERATIONS	COMPL INSPS, OUTGRANTS, REAL PROP RECONCIL FOR RECREATION
370	LITTLREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.00170	26	60513	OPERATIONS	LAW ENFORCEMENT
371	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00136	70	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
372	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00136	250	61511	MAINTENANCE	EXPAND DAY AREA-N. SHORE & CELILO PK-E&D
373	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	70	61511	MAINTENANCE	LEWIS AND CLARK BICENTENNIAL
374	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	62	61511	MAINTENANCE	REPLACE VAULT TOILET AT ILIA DUNES REC AREA
375	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	80	61511	MAINTENANCE	INSTALL FISHING ACCESS PLATFORM
376	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	65	61511	MAINTENANCE	REPLACE ILLIA LANDING BREAKWATER STYLE DOCK
377	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	160	61511	MAINTENANCE	RE-PAVE ROAD ABOVE LITTLE GOOSE DAM
378	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00102	26	60511	OPERATIONS	ROUT OPER OF RECREATION AREAS
379	LITTLREC-STUDIES AND SURVEYS FOR RECREATION	0.00102	15	60520	OPERATIONS	DISTRICT VISITOR SURVEY (VERS)

8.3.3. Case 3

R a n k	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
1	DWORSHYD-FACILITY SECURITY PHYSICAL IMPRVMTS, MODS, MAINT, AND REPLACE FOR HYDROPOWER	0.28083	70	61390	MAINTENANCE	CPSP/RAM-D DWORSHAK
2	THE DHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.12707	400	60392	OPERATIONS	FACILITY SECURITY – GUARDS, MONITORING
3	BONNEHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.11564	133	60392	OPERATIONS	SECURITY GUARD CONTRACT
4	BONNEHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.11564	1000	60392	OPERATIONS	FACILITY SECURITY GUARDS, MONITORING
5	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07900	25	61610	MAINTENANCE	JHYD- REPLACE RESOURCE OFFICE HVAC
6	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.07900	8	60610	OPERATIONS	JHYD-(SMC) ULTRASONIC FLOW TRANSDUCERS FOR PENSTOCKS
7	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.07900	11	60610	OPERATIONS	JHYD - (SMC) NEW GEARBOX FOR TAILRACE CRANE
8	DWORSJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.07411	4	60633	OPERATIONS	JHYD - REEVALUATE PROBABLE MAXIMUM FLOOD
9	DWORSJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.07411	9	60633	OPERATIONS	JHYD-LOW LEVEL OUTLET EMERGENCY CLOSURE GATES EVAL
10	DWORSJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.07411	100	60692	OPERATIONS	JHYD- SECURITY GUARDS
11	DWORSJOI-JOINT COSTS FOR FACILITY SECURITY PHYSICAL IMPRVMTS, MODS, MAINT AND REPLACE	0.07411	1430	61690	MAINTENANCE	CPSP/RAM-D DWORSHAK
12	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.07411	8	60632	OPERATIONS	JHYD-FORMAL PERIODIC INSPECTIONS AND RPTS.
13	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.07411	1	60632	OPERATIONS	JHYD-SPILLWAY STILLING BASIN SOUNDINGS
14	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.07411	3	60632	OPERATIONS	JHYD- HYDR STEEL STRUCT INSP , REGULATING OUTLET INSP
15	DWORSJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.07411	10	60631	OPERATIONS	JHYD- EVALUATION OF INSTRUMENTATION DATA
16	DWORSJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.07411	1	60631	OPERATIONS	JHYD- INSTRUMENTATION MINOR MAINT
17	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07411	16	61610	MAINTENANCE	JHYD- MISC. SMALL CAP PURCHASES (SMC)
18	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07411	101	61610	MAINTENANCE	JHYD- MEASURE SPILLWAY GATE FRICTION COEFFICIENT
19	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07411	5	61610	MAINTENANCE	JHYD - REPLACE SNOWPLOW
20	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07411	6	61610	MAINTENANCE	JHYD-CORRECT SEISMIC DEFICIENCIES
21	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07411	1	61610	MAINTENANCE	JHYD-REPAIR & UPDATE AUTOMATED INSTRUMENTATION
22	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07411	8	61610	MAINTENANCE	JHYD - DWA DAM MONOLITH JOINT DRAIN WATERSTOP REPAIR
23	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.07411	1	60610	OPERATIONS	JHYD- DAM SAFETY TRAINING
24	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.07411	1	60610	OPERATIONS	JHYD - PROJECT PAVING
25	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.07411	18	60610	OPERATIONS	JHYD - PURCHASE MAN-LIFT
26	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.07411	5	60610	OPERATIONS	JHYD-CORRECT SEISMIC DEFICIENCIES
27	LITTLHYD-FACILITY SECURITY PHYSICAL IMPRVMTS, MODS, MAINT, AND REPLACE FOR HYDROPOWER	0.06783	185	61390	MAINTENANCE	CPSP/RAM-D LITTLE GOOSE
28	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06705	1921	61610	MAINTENANCE	JHYD-REHAB/REPAIR PROJECT SEWAGE SYSTEM
29	BONNEJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.06619	200	60692	OPERATIONS	SECURITY GUARD CONTRACT
30	BONNEJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.06619	58	60692	OPERATIONS	OPERATION OF RAM-D SECURITY IMPROVEMENTS
31	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06436	62	61610	MAINTENANCE	JHYD- INSTRUMENTATION MAINT/RPR
32	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.06436	162	60610	OPERATIONS	JHYD- UPDATE EMERGENCY NOTIFICATION PLAN
33	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.06436	25	60610	OPERATIONS	SMC- REPLACE SEALS ON BULKHEADS, GATES, AND VALVES
34	THE DJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.06327	1	60632	OPERATIONS	JHYD--PERIODIC INSPECTIONS - BRIDGES
35	THE DJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.06308	2	60633	OPERATIONS	JHYD-HYDROLOGIC CAPACITY INITIAL EVALUATION
36	THE DJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.06302	200	60692	OPERATIONS	OPERATION OF RAM-D SECURITY IMPROVEMENTS
37	THE DJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.06302	400	60692	OPERATIONS	SECURITY GUARD CONTRACT
38	BONNEAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06296	4800	61110	MAINTENANCE	CENTRALIZE OPERATION OF NAVIGATION LOCK

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39	BONNEAV-INSTRUMENTATION, DATA COLLECTION AND ANALYSIS FOR NAVIGATION	0.06296	14	60131	OPERATIONS	SURVEY MONITORING - NAVLOCK
40	BONNEJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.06184	31	60632	OPERATIONS	JHYD--INSPECT HYDRAULIC STEEL STRUCTURES
41	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06047	46	61110	MAINTENANCE	REPAIR NAVLOCK UPSTREAM GATE
42	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06047	269	61110	MAINTENANCE	RECOVER NAVLOCK BUILDING ROOF
43	BONNEJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.05987	23	60631	OPERATIONS	JHYD-EVALUATIONS & DATA GATHERING
44	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.05709	700	61660	MAINTENANCE	JHYD-HTW CORRECTIVE ACTION-CLEANUP OF BRADFORD ISLAND
45	BONNEAV-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR NAVIGATION	0.05509	30	60192	OPERATIONS	SECURITY GUARD CONTRACT
46	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	11	61610	MAINTENANCE	SMC- AUTOMATE DAM INSTRUMENTATION
47	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	2	61610	MAINTENANCE	JHYD-FOREBAY TEMPERATURE DATA LOGGER
48	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	11	61610	MAINTENANCE	JHYD-ROUT ANNUAL MAINT OF DAM, SPILLWAY GATES, BLDGS, ET
49	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	25	61610	MAINTENANCE	JHYD- REPLACE LOG BOOMS
50	BONNEREC-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR RECREATION	0.05435	34	60592	OPERATIONS	SECURITY GUARD CONTRACT
51	BONNEJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.05391	26	60633	OPERATIONS	JHYD-STILLING BASIN EROSION MONITORING AND EVALUATION
52	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.05391	14	60660	OPERATIONS	JHYD-PERFORM ENVIRONMENTAL COMPL ASSESSMENT,REPORTS
53	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.05391	56	60660	OPERATIONS	JHYD-ENVIRONMENTAL COMPLIANCE ACTIVITIES- ADD'L NEEDS
54	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05391	748	61610	MAINTENANCE	JHYD-MAINTENANCE OF JOINT ACTIVITIES
55	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05391	90	61610	MAINTENANCE	CAPJ REPLACE SPILLWAY ELEVATORS
56	BONNEJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05391	21	60610	OPERATIONS	JHYD-OPERATION OF JOINT ACTIVITIES
57	BONNEJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05391	488	60610	OPERATIONS	JHYD-ACCOMPLISH PREVENTIVE MAINTENANCE BACKLOG
58	BONNEJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.05391	22	60650	OPERATIONS	JHYD-MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
59	BONNEJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.05391	142	60641	OPERATIONS	JHYD-WATER CONTROL & WATER QUALITY ACTIVITIES
60	BONNEJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.05391	59	60642	OPERATIONS	JHYD-COLLECTION OF WATER CONTROL DATA
61	BONNEJOI-JOINT COSTS FOR WATER MGMT EQUIP ACTIVITIES	0.05391	2	61640	MAINTENANCE	JHYD - NWD WATER MGMT EQUIPMENT MAINTENANCE
62	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05267	25	61610	MAINTENANCE	JHYD-UPGRADE ELEVATOR CONTROLS
63	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05260	20	61610	MAINTENANCE	JHYD--REPAIR RAILROAD TRACKS
64	THE DOJO-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.05166	17	60632	OPERATIONS	JHYD-HSS GATE INSPECTION
65	THE DOJO-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.05166	13	60650	OPERATIONS	JHYD--MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
66	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	356	61610	MAINTENANCE	CAPJ--REPLACE SPILLWAY GATE BRAKE THRUSTERS & LININGS
67	THE DOJO-JOINT COSTS FOR OPS ACTIVITIES	0.04895	174	60610	OPERATIONS	JHYD--OPERATION OF JOINT ACTIVITIES
68	THE DOJO-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04895	186	60641	OPERATIONS	JHYD--WATER CONTROL & WATER QUALITY ACTIVITIES
69	THE DOJO-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.04895	66	60642	OPERATIONS	JHYD--COLLECTION OF WATER CONTROL DATA
70	THE DOJO-JOINT COSTS FOR WATER MGMT EQUIP ACTIVITIES	0.04895	2	61640	MAINTENANCE	JHYD-NWD WATER MGMT EQUIPMENT MAINTENANCE
71	THE DOJO-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.04895	31	61660	MAINTENANCE	JHYD-UPGRADE EXISTING HAZARDOUS MATERIALS STORAGE AREA
72	THE DOJO-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.04895	13	60660	OPERATIONS	JHYD-PERFORM ENVIRONMENTAL COMPL ASSESSMENT, REPORTS
73	THE DOJO-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.04895	7	60631	OPERATIONS	JHYD--EVALUATIONS & DATA GATHERING
74	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	232	61610	MAINTENANCE	JHYD--MAINTENANCE OF JOINT ACTIVITIES
75	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	24	61610	MAINTENANCE	JHYD--REFURBISH 23 SPILLWAY GATES E&D
76	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	247	61610	MAINTENANCE	CAPJ--RECOVER SERVICE BUILDING ROOF

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77	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	200	61610	MAINTENANCE	JHYD-PERFORM BACKLOG SPILLWAY MAINTENANCE
78	BONNEREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.04755	7	60513	OPERATIONS	JHYD-LAW ENFORCEMENT SERVICES
79	BONNEREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.04755	29	60513	OPERATIONS	JHYD-LAW ENFORCEMENT SVCS - ADD'L NEEDS
80	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04755	106	61511	MAINTENANCE	JHYD-MAINTENANCE OF RECREATION FACILITIES-ADD'L NEEDS
81	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.04755	73	60511	OPERATIONS	JHYD-OPERATION OF REGIONAL VISITOR CENTER
82	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.04755	260	60511	OPERATIONS	JHYD - LEWIS & CLARK BICENTENNIAL MANAGEMENT PLAN
83	BONNEAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04722	517	61110	MAINTENANCE	SCHEDULED MAINTENANCE OF NAVIGATION LOCKS
84	BONNEAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04722	615	60110	OPERATIONS	OPERATION OF LOCKS 24 HRS/DAY, 7 DAYS/WEEK B1
85	BONNEENV-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR ENVIRONMENTAL STEWARDSHIP	0.04670	41	60492	OPERATIONS	SECURITY GUARD CONTRACT
86	BONNEENV-MANAGEMENT OF SPECIAL STATUS SPECIES	0.04670	2	60418	OPERATIONS	JHYD-ESA-CONSULTATION AND COORDINATION
87	DWORSENV-MGMT OF NATURAL RESOURCES	0.04670	4	60411	OPERATIONS	TIMBER SALE SUPPORT, REVIEW FORESTRY & RANGE MGMT
88	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04666	103	61610	MAINTENANCE	JHYD-REPAIR AND REPAINT SPILLWAY GATES
89	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04666	223	61610	MAINTENANCE	CAPJ-REPLACE SPILLWAY POWER DISTRIBUTION EQUIP PH1
90	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	13	60415	OPERATIONS	JHYD- TRAP & TRANSPORT PROGRAM
91	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	34	60415	OPERATIONS	JHYD- BIOP- ADDITIONAL FISH COUNTING
92	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	24	60415	OPERATIONS	JHYD- ROUT OPER OF ADULT FISH PASSAGE FACS
93	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	1	60415	OPERATIONS	JHYD- ROUT OPER OF JUVENILE PASSAGE FACS
94	LITLLENV-FISHERIES MGMT - OPS OF FISH HATCHERIES	0.04587	8	60414	OPERATIONS	JHYD- BIOP- IMPROVED DEBRIS HANDLING
95	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	9	61414	MAINTENANCE	JHYD-ROUT MAINT ADULT FISHWAY FACS
96	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	2	61414	MAINTENANCE	JHYD- BIOP- ESBS OVERHAUL
97	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	10	61414	MAINTENANCE	JHYD-REPLACE SEWAGE & WATER LINES TO JFF
98	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	13	61414	MAINTENANCE	JHYD-RECON FISH WTR ATTRACT PUMP TURBINE WICKET GATES
99	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	15	61414	MAINTENANCE	JHYD- ROUT ANNUAL MAINT OF FISHWAY FACS, ETC
100	LITLLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.04587	2	61413	MAINTENANCE	JHYD- KELLBERG WELL REPAIR
101	LITLLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.04587	1	61413	MAINTENANCE	JHYD- ROUTINE MAINT OF WILDLIFE
102	LITLLENV-MGMT OF NATURAL RESOURCES	0.04587	5	60411	OPERATIONS	JHYD-ENVIRONMENTAL COMPLIANCE FOR NATURAL RESOURCES
103	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04557	201	61610	MAINTENANCE	CAPJ--REPLACE PROJECT & MARINE RADIO SYSTEM
104	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04557	104	61610	MAINTENANCE	JHYD-REPAIR PROJECT ACCESS ROADS
105	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04557	42	61610	MAINTENANCE	JHYD--REPLACE PROJECT PAGER SYSTEM
106	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04557	11	61610	MAINTENANCE	CAPJ - UPGRADE SECURITY SYSTEM
107	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	412	61110	MAINTENANCE	SCHEDULED MAINTENANCE OF NAVIGATION LOCKS
108	THE DNAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	389	60110	OPERATIONS	OPERATION OF LOCKS 24 HRS/DAY, 7 DAYS/WEEK
109	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	26	61110	MAINTENANCE	PERFORM BACKLOG NAVLOCK MAINTENANCE
110	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	770	61110	MAINTENANCE	INSTALL GDACS MONITORING OF NAVLOCK
111	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	86	61110	MAINTENANCE	REPLACE DOWNSTREAM NAVLOCK GATE PINTLE BEARINGS-E&D
112	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	365	60415	OPERATIONS	JHYD-OPERATION OF FISH PASSAGE FACILITIES
113	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	164	60415	OPERATIONS	JHYD-FISH HAULING & COUNTING ACTIVITIES BY NWW
114	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	48	60415	OPERATIONS	JHYD-ESA IMPLEMENT BIOP-NEW FISH COUNT/TRANSPORT RQMTS
115	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	235	61414	MAINTENANCE	JHYD-MAINTENANCE OF FISH PASSAGE FACILITIES

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116	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	42	61414	MAINTENANCE	JHYD-ESA-DEVELOP & IMPLEMENT PREVENTIVE MAINT FOR FISH
117	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	155	61414	MAINTENANCE	JHYD-ESA-REMOVE OBSTRUCTIONS FROM TURBINE ENVIRONMENT
118	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	52	61414	MAINTENANCE	JHYD-ESA-PURCHASE SPARE PARTS FOR AUXILIARY WATER SYS
119	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	1	60420	OPERATIONS	JHYD -- ESA ADD'L BIOP BULL TROUT MONITORING AND SURVEYS
120	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	38	60420	OPERATIONS	JHYD -- ESA BULL TROUT MONITORING
121	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	24	60420	OPERATIONS	JHYD-ESA-ANADROMOUS FISH EVALUATION PROGRAM
122	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	3	60441	OPERATIONS	JHYD-ESA-TOTAL MAXIMUM DAILY LOADS MONITORING PROGRAM
123	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	10	60650	OPERATIONS	JHYD-MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
124	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	18	60441	OPERATIONS	JHYD-ESA HYD EVAL ADULT BYPASS SYSTEM
125	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - OPS OF WTR CTRL DATA SYS	0.04495	26	60442	OPERATIONS	JHYD-ESA-TOTAL DISSOLVED GAS FIXED MONITORING PROGRAM
126	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	15	60411	OPERATIONS	JHYD- ENVIRONMENTAL COMPLIANCE FOR NATURAL RESOURCES
127	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	44	60411	OPERATIONS	JHYD- RESERVOIR SURVEY - FISH AND HABITAT
128	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	71	60411	OPERATIONS	JHYD - SITE INVENTORY, BIRDS AND BATS
129	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	3	60411	OPERATIONS	JHYD- BIOP ACTION 139 DWORSHAK GAS ABATEMENT STUDY
130	DWORSENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	49	60413	OPERATIONS	JHYD-OPER OF WILDLIFE MITIGATION
131	DWORSENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	18	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
132	DWORSENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	36	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
133	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 198 REGIONAL DATABASE
134	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 133 SYSTEM TDG MODELING
135	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	18	60441	OPERATIONS	JHYD-BIOP ACTION APPENDIX B - SYSTEM TEMPERATURE STUDY
136	LITTLENV-MGMT OF NATURAL RESOURCES	0.04495	3	60411	OPERATIONS	JHYD- ROUTINE OPERATIONS OF NATURAL RESOURCES
137	LITTLENV-MGMT OF NATURAL RESOURCES	0.04495	1	60411	OPERATIONS	JHYD- RESERVOIR SURVEY - FISH AND HABITAT
138	LITTLENV-MGMT OF NATURAL RESOURCES	0.04495	1	60411	OPERATIONS	JHYD - SITE INVENTORY, BIRDS AND BATS
139	LITTLENV-MGMT OF NATURAL RESOURCES	0.04495	5	60411	OPERATIONS	JHYD - RESERVOIR LANDS, VEGETATION SURVEY
140	LITTLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	18	60413	OPERATIONS	JHYD-LEVEL II WILDLIFE INVENTORIES
141	LITTLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	28	60413	OPERATIONS	JHYD-GIS MAPPING
142	LITTLENV-PURCHASE/MAINT OF WATER MGMT EQUIP FOR ENVIRON STEWARDSHIP	0.04495	2	61440	MAINTENANCE	JHYD- BIOP ACTION 131 REDUNDANT TOTAL DISSOLVED GAS MONI
143	LITTLENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	19	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
144	LITTLENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	18	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
145	LITTLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 198 REGIONAL DATABASE
146	LITTLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	4	60441	OPERATIONS	JHYD- BIOP ACTION 132 REVIEW TOTAL DISSOLVED GAS MONITOR
147	LITTLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 133 SYSTEM TDG MODELING
148	LITTLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	7	60441	OPERATIONS	JHYD- BIOP ACTION 143 TEMPERATURE MODELING PLAN (LOWER S
149	LITTLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	7	60441	OPERATIONS	JHYD-BIOP ACTION APPENDIX B - SYSTEM TEMPERATURE STUDY
150	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	183	60415	OPERATIONS	JHYD--OPERATION OF FISH PASSAGE FACILITIES
151	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	29	60415	OPERATIONS	JHYD--FISH HAULING & COUNTING ACTIVITIES BY NWW

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152	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	111	60415	OPERATIONS	JHYD-ESA IMPLEMENT NEW FISH COUNT/TRANSP REQMTS
153	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	1	60415	OPERATIONS	JHYD--ESA INCIDENTAL TAKE ACTIVITIES
154	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	167	61414	MAINTENANCE	JHYD--MAINTENANCE OF FISH PASSAGE FACILITIES
155	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	14	61414	MAINTENANCE	JHYD-ESA SPARE PARTS FOR AWS
156	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD--ESA REMOVE OBSTRUCTIONS FROM TURBINE ENVIRONMENT
157	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD-ESA DEVELOP//IMPLEMENT FISH FAC PREVENTIVE MAINT PRO
158	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD--REPLACE DIFFUSION WATER GRATINGS-N FISHLADDER
159	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	3	61414	MAINTENANCE	JHYD-PROCURE & INSTALL DIFFUSION VALVES
160	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	29	61414	MAINTENANCE	CAPJ-EVALUATE & REHAB FISH COUNTING STATION
161	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	72	61414	MAINTENANCE	JHYD-REHAB N. FISHLADDER & AWS
162	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	358	61414	MAINTENANCE	JHYD-ESA-AUTOMATE AUXILIARY WATER SYSTEM
163	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD-ESA-REPLACE COUNT STATION CROWDER/WINDOW BRUSH
164	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	42	61414	MAINTENANCE	JHYD-ESA-REFURBISH WEIR GUIDES
165	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	240	61414	MAINTENANCE	JHYD--REPAIR FISH LADDER STRUCTURE ROOF
166	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	CAPJ-INSTALL GDACS CONTROL OF FISHWAYS
167	THE DENV-MANAGEMENT OF SPECIAL STATUS SPECIES	0.04495	6	60418	OPERATIONS	JHYD-ESA-CONSULTATION AND COORDINATION
168	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	88	60420	OPERATIONS	JHYD-ESA-ANADROMOUS FISH EVALUATION PROGRAM
169	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	3	60420	OPERATIONS	JHYD-ESA BULL TROUT MONITORING
170	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	25	60420	OPERATIONS	JHYD-ADDITIONAL BI-OP BULL TROUT MONITORING STDY & SURV
171	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	44	60441	OPERATIONS	JHYD-ESA HYDRAULIC EVAL ADULT BYPASS SYSTEM
172	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	19	60441	OPERATIONS	JHYD-TOTAL MAXIMUM DAILY LOADS MONITORING PROGRAM
173	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - OPS OF WTR CTRL DATA SYS	0.04495	30	60442	OPERATIONS	JHYD-ESA-TOTAL DISSOLVED GAS FIXED MONITORING PROGRAM
174	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.04300	8	61660	MAINTENANCE	JHYD-ENVIRONMENTAL COMPLIANCE W/FED.STATE.LOCAL REGS
175	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04300	4	61610	MAINTENANCE	JHYD-REPLACE SEALS ON BULKHEADS,GATES, & VALVES
176	DWORSJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.04300	11	60650	OPERATIONS	JHYD- COMPLIANCE INSPECTIONS, OUTGRANT ACTIONS
177	THE DJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04192	42	61610	MAINTENANCE	JHYD-REPLACE WESTRICK CONFERENCE CENTER ROOF
178	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.04172	5	61660	MAINTENANCE	JHYD- REMOVE DAM UST
179	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.04172	5	60660	OPERATIONS	JHYD- CYCLE III EXTERNAL ERGO ASSESSMENTS
180	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	46	60641	OPERATIONS	JHYD- NWD RESERVOIR CONTROL CENTER
181	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	23	60641	OPERATIONS	JHYD- NWD WATER MANAGEMENT MOVE TO NEW BUILDING
182	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	2	60641	OPERATIONS	JHYD-WTR CONTROL COORDINATION & WTR QUALITY ANALYSIS
183	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	7	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
184	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	5	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
185	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.04100	28	60642	OPERATIONS	JHYD- DISSOLVED GAS DATA COLLECTION
186	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.04100	8	60642	OPERATIONS	JHYD-COLLECT WTR QUALITY DATA & COLLECT STREAMGAGE, ETC
187	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04076	22	61511	MAINTENANCE	CAPJ-REHAB HAMILTON ISL REC AREA BOAT RAMP BN2
188	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04076	31	61511	MAINTENANCE	CAPJ-REHAB WASH SHORE VISITOR CENTER - PH2

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189	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04076	392	61511	MAINTENANCE	CAPJ-REHAB BRAD. ISL. VISITOR CTR.ROOF BN1
190	BONNEAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.03935	261	61110	MAINTENANCE	STABILIZE ORIGINAL NAVIGATION LOCK NORTH WALL
191	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03512	25	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
192	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03512	5	60610	OPERATIONS	JHYD- RADIO REPLACEMENT (HANDHELDS/BASE STATIONS)
193	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	3	61610	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
194	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	21	61610	MAINTENANCE	JHYD-REPAIR 1603 GALLERY WATER INTRUSION
195	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	50	61610	MAINTENANCE	JHYD-ROAD MAINT GRANDAD CREEK TO BREAKFAST CREEK RD
196	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	35	61610	MAINTENANCE	JHYD-REPAIR ASPHALT ROADWAYS
197	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	11	61610	MAINTENANCE	JHYD - FOUNDATION DRAIN CLEANING
198	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	49	61610	MAINTENANCE	JHYD- S. DAM SECURITY FENCING/CAMERA
199	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	49	61610	MAINTENANCE	SMC- 350 TON BRIDGE CRANES (2)- REHAB
200	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03512	7	60610	OPERATIONS	JHYD- FIRE MONITORING/PROTECTION FOR DAM &POWERHOUSE
201	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03512	17	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
202	DWORSJOI-JOINT COSTS FOR STUDIES AND SURVEYS	0.03512	1	60621	OPERATIONS	JHYD- ENERGY PROD RPTS, FLOOD DAMAGES REPORTS
203	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03463	64	61610	MAINTENANCE	JHYD-UPGRADE BATTERY STORAGE AREA
204	BONNEREC-FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT, AND REPLACE FOR RECREATION	0.03397	31	61590	MAINTENANCE	ENCLOSE PH1 VISITOR GALLERY FOR SECURITY
205	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	516	61511	MAINTENANCE	SCAPJOI - PURCHASE/INSTALL CONCRETE VAULT TOILETS
206	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	284	61511	MAINTENANCE	CAPJ REPLACE ELEVATORS-BRADFORD IS VISITOR CTR
207	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	515	61511	MAINTENANCE	JHYD-UPGRADE BRAD ISL VISITOR CTR RESTROOM BN1
208	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	24	61511	MAINTENANCE	JHYD-MAINTENANCE OF RECREATION FACILITIES & VISITOR CTR
209	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.03397	15	60511	OPERATIONS	JHYD-MANAGEMENT OF RECREATION AREAS & FACILITIES
210	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.03397	50	60511	OPERATIONS	JHYD-MANAGEMENT OF REC AREAS - ADD'L ROUTINE NEEDS
211	BONNEENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	60	60412	OPERATIONS	JHYD-CULTURAL RESOURCES TO MEET NATIVE AMERICAN AGREE
212	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03349	12	61413	MAINTENANCE	JHYD-IMPROVE RD CONDITIONS-GRANDAD WILDLIFE MITIGATION AREA
213	THE DENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	22	60412	OPERATIONS	JHYD-CULTURAL RESOURCES TO MEET NATIVE AMERICAN AGREE
214	THE DENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	100	60412	OPERATIONS	JHYD-CONTR LAW ENFORCEMENT- CULTURAL AREAS
215	LITTLENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	7	60412	OPERATIONS	JHYD- FEDERAL COLUMBIA R. POWER SYSTEM - CUL RES
216	LITTLENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	22	60412	OPERATIONS	MGMT OF CULTURAL RESOURCES
217	LITTLENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	1	60412	OPERATIONS	JHYD - CULTURAL RESOURCE PROGRAM COMPLIANCE
218	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	39	61414	MAINTENANCE	JHYD-EVAL/REHAB FISH COUNTING STATION
219	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	13	61414	MAINTENANCE	JHYD-ANNUAL FISHWAY OVERHAUL
220	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	100	61414	MAINTENANCE	JHYD-MAINTENANCE OF SUBMERGED TRAVELING FISH SCREENS
221	BONNEENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	10	61411	MAINTENANCE	JHYD-MAINTENANCE OF NATURAL RESOURCE FACILITIES
222	BONNEENV-MGMT OF NATURAL RESOURCES	0.03175	33	60411	OPERATIONS	JHYD-NATURAL RESOURCES MANAGEMENT
223	DWORSENV-BOUNDARY MONUMENTATION AND RECTIFICATION FOR ENVIRON STEWARD	0.03175	7	61453	MAINTENANCE	JHYD-PROJECT BOUNDARY MONUMENTATION
224	DWORSENV-ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) FOR ENVIRON STEWARD	0.03175	6	61460	MAINTENANCE	JHYD- EXTERNAL ENVIRONMENTAL REVIEWS
225	DWORSENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.03175	79	60415	OPERATIONS	JHYD- MANAGEMENT OF RESIDENT FISHERIES

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226	DWORSENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.03175	5	60415	OPERATIONS	JHYD- TRAP & TRANSPORT PROGRAM
227	DWORSENV-FISHERIES MGMT - OPS OF FISH HATCHERIES	0.03175	247	60414	OPERATIONS	JHYD- HATCHERY-ROUTINE OPER BY U.S.FISH & WILDLIFE SERVI
228	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	217	61414	MAINTENANCE	JHYD- ROUTINE MAINT ASSISTANCE TO NAT'L HATCHERY
229	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	62	61414	MAINTENANCE	JHYD- EMERGENCY GENERATORS - DNFH
230	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	123	61414	MAINTENANCE	JHYD-SYSTEM III MEDIA CHANGE
231	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	12	61414	MAINTENANCE	JHYD- REROOF OTHER BUILDINGS - DNFH
232	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	280	61414	MAINTENANCE	CAPF - HATCHERY NURSERY BLDG ROOF REPAIR
233	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	18	61414	MAINTENANCE	JHYD- FISH CROWDER - DNFH
234	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	41	61414	MAINTENANCE	JHYD- HATCHERY-CONVERT SYS 2 & 3 BURROWS PONDS TO RACEWA
235	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	17	61414	MAINTENANCE	JHYD- HATCHERY- ROUTINE MAINT BY U.S.FISH & WILDLIFE SERV
236	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.03175	17	60441	OPERATIONS	JHYD- BIOP ACTION 143 TEMPERATURE MODELING PLAN (LOWER S
237	LITTLENV-BOUNDARY MONUMENTATION AND RECTIFICATION FOR ENVIRON STEWARD	0.03175	9	61453	MAINTENANCE	JHYD-SURVEY & MONUMENT CORPS BOUNDARY LINES
238	LITTLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	4	61414	MAINTENANCE	JHYD- BIOP- DEVELOP PREVENTATIVE MAINTENANCE PROGRAM
239	LITTLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	10	61411	MAINTENANCE	JHYD-REPLACE CATTLE WATERING CORRIDORS WITH WELLS
240	LITTLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	16	61411	MAINTENANCE	JHYD-PHRAGMITES CONTROL
241	LITTLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	1	61411	MAINTENANCE	JHYD-SHORELINE STABILIZATION
242	LITTLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	1	61411	MAINTENANCE	REHAB WORK BOAT
243	LITTLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03175	1	61413	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
244	LITTLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.03175	3	60413	OPERATIONS	JHYD - NATURAL RESOURCE SPECIALIST POSITION
245	THE DENV-MGMT OF NATURAL RESOURCES	0.03175	35	60411	OPERATIONS	JHYD-NATURAL RESOURCES MANAGEMENT
246	THE DENV-PEST MANAGEMENT	0.03175	13	60419	OPERATIONS	JHYD-NOXIOUS WEEDS, BIRDS, AND RODENT CONTROL
247	DWORSENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03083	7	61411	MAINTENANCE	JHYD- ROUT ANNUAL MAINTENANCE OF NATURAL RESOURCES
248	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03083	5	61413	MAINTENANCE	MAINT OF WILDLIFE MITIGATION
249	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	32	60412	OPERATIONS	JHYD- FEDERAL COLUMBIA R. POWER SYSTEM-CUL RES
250	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	75	60412	OPERATIONS	MGMT OF CULTURAL RESOURCES
251	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	22	60412	OPERATIONS	JHYD - CULTURAL RESOURCE PROGRAM COMPLIANCE
252	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	3	60412	OPERATIONS	JHYD- ADD'L CULTURAL RESOURCES PROTECTION
253	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	48	60412	OPERATIONS	JHYD - MGMT OF CULTURAL RESOURCES
254	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	9	60412	OPERATIONS	JHYD- NEPA - SUPPLEMENT PROJECT EIS
255	DWORSENV-COMPREHENSIVE MASTER PLANS	0.03000	280	60416	OPERATIONS	JHYD-MASTER PLAN REVIEW
256	DWORSENV-MGMT OF NATURAL RESOURCES	0.03000	169	60411	OPERATIONS	JHYD- ROUTINE OPERATIONS - NATURAL RESOURCES
257	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.02980	2	60610	OPERATIONS	JHYD- CONTINUOUS SAMPLER FOR POTABLE WATER
258	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02960	10	61610	MAINTENANCE	RE-PAVE EARTHFILL/SUBSTATION ROAD AT LITTLE GOOSE DAM
259	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02960	17	61610	MAINTENANCE	JHYD - SECURITY MODIFICATIONS
260	LITTLJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.02960	2	60633	OPERATIONS	JHYD-GEOLOGICAL & SEISMOLOGICAL REEVALUATION
261	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02960	2	61610	MAINTENANCE	JHYD- REPAIR SPILLWAY GATES
262	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02960	1	61610	MAINTENANCE	JHYD- REPAIR SPILLWAY WATERSTOP ON GATE 1
263	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02960	21	61610	MAINTENANCE	JHYD- BUILD WELDING AND CARPENTER SHOP

R a n k	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
264	LITLLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.02908	1	60413	OPERATIONS	JHYD- OPRE OF WILDLIFE MITIGATION
265	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.02717	9	60511	OPERATIONS	JHYD-OPERATION OF REGIONAL VISITOR CENTER-ADD'L NEEDS
266	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.02717	57	60511	OPERATIONS	JHYD-PROVIDE INCREASED VISITOR ASSISTANCE FOR LEW & CLRK
267	LITLJJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.02646	40	60692	OPERATIONS	JHYD- SECURITY GUARDS
268	LITLJJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.02642	2	60650	OPERATIONS	JHYD- COMPLIANCE INSPECTIONS, OUTGRANT ACTIONS
269	LITLJJOI-JOINT COSTS FOR FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT AND REPLACE	0.02632	2180	61690	MAINTENANCE	CPSP/RAM-D LITTLE GOOSE
270	LITLJJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.02632	1	60632	OPERATIONS	JHYD-SPILLWAY ROLLER BASIN SOUNDINGS
271	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02632	2	61610	MAINTENANCE	JHYD-SMALL CAP JOINT IMPROVEMENTS (SMC)
272	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02448	84	61610	MAINTENANCE	INSTALL GDACS CONTROL OF SPILLWAY
273	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02448	19	61610	MAINTENANCE	SCAPJOI - PURCHASE PATROL BOAT & TRAILER
274	LITLJJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.02429	1	60632	OPERATIONS	JHYD- HYDRAULIC STREEL STRUCTURES INSPECTION
275	LITLJJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.02429	3	60631	OPERATIONS	JHYD-EVALUATION OF INSTRUMENTATION DATA
276	LITLJJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.02429	1	60631	OPERATIONS	JHYD- INSTRUMENTATION MONITORING/READING
277	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02429	1	61610	MAINTENANCE	JHYD - SPILLWAY 1 WATERSTOP REPAIR
278	LITLJJOI-JOINT COSTS FOR STUDIES AND SURVEYS	0.02429	1	60621	OPERATIONS	JHYD- ENERGY PROD RPTS, FLOOD DAMAGES REPORTS
279	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02304	19	61610	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
280	LITLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02279	103	61110	MAINTENANCE	NAVIGATION LOCK WATER-STOPS REPAIR
281	LITLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02279	575	61110	MAINTENANCE	REPLACE NAVIGATION LOCK SEAL HEATERS
282	LITLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02279	500	61110	MAINTENANCE	ROUT ANNUAL MAINT OF LOCKS & ASSOCIATED EQUIP
283	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02268	131	61110	MAINTENANCE	REMODEL NAVLOCK STANDS
284	LITLJJOI-JOINT COSTS FOR OPS ACTIVITIES	0.02266	2	60610	OPERATIONS	JHYD-TIME AND COST STANDARD
285	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02197	7	61610	MAINTENANCE	JHYD-CORRECT SIESMIC DEFICIENCIES
286	LITLNAV-FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT AND REPLACE FOR NAVIGATION	0.02026	68	61190	MAINTENANCE	CPSP/RAM-D LITTLE GOOSE
287	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02013	9	61610	MAINTENANCE	JHYD- INSTRUMENTATION MAINT/RPR
288	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01783	225	61511	MAINTENANCE	INSTALL FISHING PIER
289	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01783	107	61511	MAINTENANCE	REPLACE COURTESY DOCKS
290	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01783	45	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
291	DWORSREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.01783	789	60511	OPERATIONS	ROUTINE OPER OF RECREATION AREAS
292	DWORSREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.01783	423	60511	OPERATIONS	ROUTINE OPER OF RECREATION AREAS
293	LITLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01773	259	61110	MAINTENANCE	LOCK CULVERT REPAIR
294	LITLNAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01773	282	60110	OPERATIONS	ROUTINE OPERATION OF LOCKS
295	LITLNAV-STUDIES AND SURVEYS FOR NAVIGATION	0.01773	55	60121	OPERATIONS	NAVIGATION CONDITION SURVEYS
296	LITLNAV-FORMAL PERIODIC INSPECTIONS AND REPORTS FOR NAVIGATION	0.01773	5	60132	OPERATIONS	NAV LOCK HYDR STEEL STRUCT INSP
297	LITLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01773	41	61110	MAINTENANCE	REPAIR WATERSTOPS IN NAVIGATION LOCK
298	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01738	74	61610	MAINTENANCE	JHYD-DEBRIS REMOVAL
299	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01738	98	61610	MAINTENANCE	CAPF- REPAIR SPILLWAY GATE SEAL HEATERS
300	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01738	13	61610	MAINTENANCE	JHYD-ROUTINE MAINT. OF DAM, SPILLWAY, INTAKE & OUTLET
301	LITLJJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01738	10	61610	MAINTENANCE	JHYD - POWERHOUSE ELEVATOR MODERNIZATION
302	LITLJJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01738	49	60610	OPERATIONS	JHYD-EXTERNAL ERGO INSPECTION
303	LITLJJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01738	1	60610	OPERATIONS	JHYD - EMERGENCY ACTION PLAN REVISION
304	LITLJJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01738	1	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK

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305	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01738	10	60610	OPERATIONS	JHYD- UPDATE EMERGENCY NOTIFICATION PLAN
306	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01659	2	60641	OPERATIONS	JHYD- NWD RESERVOIR CONTROL CENTER
307	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01659	1	60641	OPERATIONS	JHYD-WATER CONTROL COORDINATION & WTR QUALITY ANALYSIS
308	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01659	3	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
309	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.01659	4	60642	OPERATIONS	JHYD- DISSOLVED GAS DATA COLLECTION
310	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.01659	4	60642	OPERATIONS	JHYD- COLLECT WTR QUALITY DATA & COLLECT STREAMGAGE, ETC
311	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01649	23	61610	MAINTENANCE	JHYD- ROUT ANNUAL MAINT ON DAM, SPILLWAY GATES,BLDGS,ETC
312	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01606	2	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
313	DWORSENV-COMPREHENSIVE MASTER PLANS	0.01587	12	60416	OPERATIONS	JHYD- PROJECT MASTER PLANNING
314	DWORSENV-COMPREHENSIVE MASTER PLANS	0.01587	25	60416	OPERATIONS	JHYD-MASTER PLAN UPDATE
315	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.01587	9	61413	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
316	LITTLENV-COMPREHENSIVE MASTER PLANS	0.01587	1	60416	OPERATIONS	JHYD-MASTER PLAN REVIEW
317	LITTLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.01587	2	60413	OPERATIONS	JHYD-FORESTRY AND VEGETATION CONSULTATION
318	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01515	16	61610	MAINTENANCE	JHYD- SEEPAGE CONTROL AND MONITORING
319	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01501	8	61610	MAINTENANCE	JHYD-REPLACE/UPDATE SECURITY & EMERGENCY NOTIFICATION SY
320	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01404	21	60641	OPERATIONS	JHYD- NWD WATER MANAGEMENT MOVE TO NEW BUILDING
321	LITTLJOI-JOINT COSTS FOR LAND ACQ AND DISPOSAL MGMT ACTIV, SETTLE CLAIMS, AND AUDITS	0.01341	1	61651	MAINTENANCE	JHYD- LAND DISPOSAL
322	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01321	40	61610	MAINTENANCE	JHYD-FIRE MONITORING/PROTECTION FOR DAM & PH
323	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01321	11	61610	MAINTENANCE	JHYD- SEEPAGE CONTROL AND MONITORING
324	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01321	21	60610	OPERATIONS	JHYD- DAM SAFETY TRAINING
325	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01321	4	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
326	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01274	45	61511	MAINTENANCE	IMPROVE DISPERSED AREA SANITARY FACILITIES
327	DWORSREC-REAL ESTATE MGMT FOR RECREATION	0.01274	72	60550	OPERATIONS	COMPL INSP. OUTGRANTS FOR RECREATION
328	DWORSREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.01274	58	60513	OPERATIONS	LAW ENFORCEMENT- CLEARWATER COUNTY
329	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	213	61511	MAINTENANCE	REPAIR DENT REC SITE ELECTRICALSYSTEM
330	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	258	61511	MAINTENANCE	BIG EDDY PLAYGROUND
331	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	154	61511	MAINTENANCE	PURCHASE BOAT TRAILER
332	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	121	61511	MAINTENANCE	BEACH SAFETY IMPROVEMENTS
333	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	250	61511	MAINTENANCE	IMPROVE BOAT ACCESS TO THE VISITOR CENTER
334	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	585	61511	MAINTENANCE	JHYD-IMPROVE RD CONDITIONS-GRANDAD WILDLIFE MITIGATION AREA
335	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	70	61511	MAINTENANCE	REPAIR BOAT RAMP - BRUCE'S EDDY
336	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	62	61511	MAINTENANCE	REPLACE RANGER PATROL BOAT
337	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	23	61511	MAINTENANCE	LEWIS AND CLARK BICENTENNIAL
338	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	195	61511	MAINTENANCE	LOW WATER ACCESS PARKING
339	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	55	61511	MAINTENANCE	IMPROVE 1603 GALLERY LIGHTING & INTERPRETIVE SIGNS
340	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	54	61511	MAINTENANCE	REPAIR 1603 GALLERY AND VISITOR CENTER WINDOW SEALS
341	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	480	61511	MAINTENANCE	REPLACE REMOTE SANITARY FACILITIES
342	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	98	61511	MAINTENANCE	UPDATE PROJECT MULTIMEDIA EQUIPMENT

R a n k	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
343	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	250	61511	MAINTENANCE	REPLCMNT OF DISPLAYS IN VISITOR CENTER
344	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	51	61511	MAINTENANCE	ACCESSIBLE TOILET FACILITIES
345	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	42	61511	MAINTENANCE	EXTEND BOAT RAMPS
346	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	83	61511	MAINTENANCE	CANYON CREEK CAMPSITE REPAIR
347	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	42	61511	MAINTENANCE	REHABILITATE PARKING LOT ENTRANCE
348	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	52	61511	MAINTENANCE	DENT ACRES - IMPROVE CAMPGROUND ACCESS
349	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	14	61511	MAINTENANCE	INTERACTIVE CURRENT ISSUES INTERPRETIVE DISPLAY
350	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	58	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
351	DWORSREC-STUDIES AND SURVEYS FOR RECREATION	0.00764	55	60520	OPERATIONS	DISTRICT VISITOR SURVEY (VERS)
352	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00272	75	61511	MAINTENANCE	REHABILITATE BOAT RAMPS
353	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00272	354	60511	OPERATIONS	REPLACE FENCE AT ILLIA DUNES
354	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00272	76	60511	OPERATIONS	ROUT OPER OF RECREATION AREAS
355	LITTLREC-DREDGING ACTIVITIES FOR RECREATION	0.00238	41	61520	MAINTENANCE	DREDGE BOAT BASINS AT ILLIA AND WILLOW LANDINGS
356	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00238	25	61511	MAINTENANCE	REPLACE HVAC SYSTEM IN FISH VISITOR BUILDING
357	THE DREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.00238	32	60513	OPERATIONS	LAW ENFORCEMENT CT - RECREATION AREAS
358	THE DREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00238	369	60511	OPERATIONS	MANAGEMENT OF RECREATION AREAS & VISITOR CTR
359	THE DREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00238	36	60511	OPERATIONS	LEWIS & CLARK BICENTENNIAL MANAGEMENT PLAN
360	THE DREC-STUDIES AND SURVEYS FOR RECREATION	0.00238	80	60520	OPERATIONS	RECREATION USE SURVEYS
361	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	85	61511	MAINTENANCE	MAINTENANCE OF RECREATION FACILITIES & VISITOR CTR
362	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	200	61511	MAINTENANCE	REPAIR BOAT RAMP FACILITIES AT CELILO PARK
363	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	185	61511	MAINTENANCE	PRINT BROCHURES
364	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	95	61511	MAINTENANCE	REPAIR VISITORS CENTER ROOFS
365	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	32	61511	MAINTENANCE	CONSTRUCT PLAY STRUCTURE AT CELILO PARK
366	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	210	61511	MAINTENANCE	L&C - NORTH SHORE/RESTROOM/BOAT L/TRAIL/SIGNS REHAB
367	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	70	61511	MAINTENANCE	REPLACE 2 RESTROOMS AT CELILO PARK
368	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	172	61511	MAINTENANCE	MAINTENANCE OF SEUFERT VISITOR CENTER
369	LITTLREC-REAL ESTATE MGMT FOR RECREATION	0.00170	21	60550	OPERATIONS	COMPL INSPS, OUTGRANTS, REAL PROP RECONCIL FOR RECREATION
370	LITTLREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.00170	26	60513	OPERATIONS	LAW ENFORCEMENT
371	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00136	70	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
372	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00136	250	61511	MAINTENANCE	EXPAND DAY AREA-N. SHORE & CELILO PK-E&D
373	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	70	61511	MAINTENANCE	LEWIS AND CLARK BICENTENNIAL
374	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	62	61511	MAINTENANCE	REPLACE VAULT TOILET AT ILIA DUNES REC AREA
375	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	80	61511	MAINTENANCE	INSTALL FISHING ACCESS PLATFORM
376	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	65	61511	MAINTENANCE	REPLACE ILLIA LANDING BREAKWATER STYLE DOCK
377	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	160	61511	MAINTENANCE	RE-PAVE ROAD ABOVE LITTLE GOOSE DAM
378	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00102	26	60511	OPERATIONS	ROUT OPER OF RECREATION AREAS
379	LITTLREC-STUDIES AND SURVEYS FOR RECREATION	0.00102	15	60520	OPERATIONS	DISTRICT VISITOR SURVEY (VERS)

8.3.4. Case 4

Rank	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
1	DWORSHYD-FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT, AND REPLACE FOR HYDROPOWER	0.21062	70	61390	MAINTENANCE	CPSP/RAM-D DWORSHAK
2	THE DHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.12707	400	60392	OPERATIONS	FACILITY SECURITY – GUARDS, MONITORING
3	BONNEHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.11564	133	60392	OPERATIONS	SECURITY GUARD CONTRACT
4	BONNEHYD-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR HYDROPOWER	0.11564	1000	60392	OPERATIONS	FACILITY SECURITY GUARDS, MONITORING
5	BONNEJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.07933	200	60692	OPERATIONS	SECURITY GUARD CONTRACT
6	BONNEJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.07933	58	60692	OPERATIONS	OPERATION OF RAM-D SECURITY IMPROVEMENTS
7	DWORSOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07900	25	61610	MAINTENANCE	JHYD- REPLACE RESOURCE OFFICE HVAC
8	DWORSOI-JOINT COSTS FOR OPS ACTIVITIES	0.07900	8	60610	OPERATIONS	JHYD-(SMC) ULTRASONIC FLOW TRANSDUCERS FOR PENSTOCKS
9	DWORSOI-JOINT COSTS FOR OPS ACTIVITIES	0.07900	11	60610	OPERATIONS	JHYD - (SMC) NEW GEARBOX FOR TAILRACE CRANE
10	BONNEAV-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR NAVIGATION	0.07083	30	60192	OPERATIONS	SECURITY GUARD CONTRACT
11	DWORSOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.07022	25	61610	MAINTENANCE	JHYD-UPGRADE ELEVATOR CONTROLS
12	DWORSOI-JOINT COSTS FOR OPS ACTIVITIES	0.07022	25	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
13	DWORSOI-JOINT COSTS FOR OPS ACTIVITIES	0.07022	5	60610	OPERATIONS	JHYD- RADIO REPLACEMENT (HANDHELDS/BASE STATIONS)
14	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06705	1921	61610	MAINTENANCE	JHYD-REHAB/REPAIR PROJECT SEWAGE SYSTEM
15	THE DOJO-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.06572	17	60632	OPERATIONS	JHYD-HSS GATE INSPECTION
16	THE DOJO-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.06572	13	60650	OPERATIONS	JHYD--MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
17	DWORSOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06436	62	61610	MAINTENANCE	JHYD- INSTRUMENTATION MAINT/RPR
18	DWORSOI-JOINT COSTS FOR OPS ACTIVITIES	0.06436	162	60610	OPERATIONS	JHYD- UPDATE EMERGENCY NOTIFICATION PLAN
19	DWORSOI-JOINT COSTS FOR OPS ACTIVITIES	0.06436	25	60610	OPERATIONS	SMC- REPLACE SEALS ON BULKHEADS, GATES, AND VALVES
20	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.06302	356	61610	MAINTENANCE	CAPJ--REPLACE SPILLWAY GATE BRAKE THRUSTERS & LININGS
21	THE DOJO-JOINT COSTS FOR OPS ACTIVITIES	0.06302	174	60610	OPERATIONS	JHYD--OPERATION OF JOINT ACTIVITIES
22	THE DOJO-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.06302	186	60641	OPERATIONS	JHYD--WATER CONTROL & WATER QUALITY ACTIVITIES
23	THE DOJO-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.06302	66	60642	OPERATIONS	JHYD--COLLECTION OF WATER CONTROL DATA
24	THE DOJO-JOINT COSTS FOR WATER MGMT EQUIP ACTIVITIES	0.06302	2	61640	MAINTENANCE	JHYD-NWD WATER MGMT EQUIPMENT MAINTENANCE
25	BONNEAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06296	4800	61110	MAINTENANCE	CENTRALIZE OPERATION OF NAVIGATION LOCK
26	BONNEAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06296	517	61110	MAINTENANCE	SCHEDULED MAINTENANCE OF NAVIGATION LOCKS
27	BONNEAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06296	615	60110	OPERATIONS	OPERATION OF LOCKS 24 HRS/DAY, 7 DAYS/WEEK B1
28	BONNEJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.06184	31	60632	OPERATIONS	JHYD--INSPECT HYDRAULIC STEEL STRUCTURES
29	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06047	46	61110	MAINTENANCE	REPAIR NAVLOCK UPSTREAM GATE
30	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06047	269	61110	MAINTENANCE	RECOVER NAVLOCK BUILDING ROOF
31	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06047	412	61110	MAINTENANCE	SCHEDULED MAINTENANCE OF NAVIGATION LOCKS
32	THE DNAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.06047	389	60110	OPERATIONS	OPERATION OF LOCKS 24 HRS/DAY, 7 DAYS/WEEK
33	BONNEJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.05987	23	60631	OPERATIONS	JHYD-EVALUATIONS & DATA GATHERING
34	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05964	201	61610	MAINTENANCE	CAPJ--REPLACE PROJECT & MARINE RADIO SYSTEM
35	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.05709	700	61660	MAINTENANCE	JHYD-HTW CORRECTIVE ACTION-CLEANUP OF BRADFORD ISLAND
36	BONNEAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.05509	261	61110	MAINTENANCE	STABILIZE ORIGINAL NAVIGATION LOCK NORTH WALL
37	DWORSOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	11	61610	MAINTENANCE	SMC- AUTOMATE DAM INSTRUMENTATION

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38	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	2	61610	MAINTENANCE	JHYD-FOREBAY TEMPERATURE DATA LOGGER
39	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05461	11	61610	MAINTENANCE	JHYD-ROUT ANNUAL MAINT OF DAM, SPILLWAY GATES, BLDGS, ET
40	BONNEREC-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR RECREATION	0.05435	34	60592	OPERATIONS	SECURITY GUARD CONTRACT
41	BONNEJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.05391	26	60633	OPERATIONS	JHYD-STILLING BASIN EROSION MONITORING AND EVALUATION
42	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.05391	14	60660	OPERATIONS	JHYD-PERFORM ENVIRONMENTAL COMPL ASSESSMENT, REPORTS
43	BONNEJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.05391	56	60660	OPERATIONS	JHYD-ENVIRONMENTAL COMPLIANCE ACTIVITIES- ADD'L NEEDS
44	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05391	748	61610	MAINTENANCE	JHYD-MAINTENANCE OF JOINT ACTIVITIES
45	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05391	90	61610	MAINTENANCE	CAPJ REPLACE SPILLWAY ELEVATORS
46	BONNEJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05391	21	60610	OPERATIONS	JHYD-OPERATION OF JOINT ACTIVITIES
47	BONNEJOI-JOINT COSTS FOR OPS ACTIVITIES	0.05391	488	60610	OPERATIONS	JHYD-ACCOMPLISH PREVENTIVE MAINTENANCE BACKLOG
48	BONNEJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.05391	22	60650	OPERATIONS	JHYD-MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
49	BONNEJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.05391	142	60641	OPERATIONS	JHYD-WATER CONTROL & WATER QUALITY ACTIVITIES
50	BONNEJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.05391	59	60642	OPERATIONS	JHYD-COLLECTION OF WATER CONTROL DATA
51	BONNEJOI-JOINT COSTS FOR WATER MGMT EQUIP ACTIVITIES	0.05391	2	61640	MAINTENANCE	JHYD - NWD WATER MGMT EQUIPMENT MAINTENANCE
52	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.05260	20	61610	MAINTENANCE	JHYD--REPAIR RAILROAD TRACKS
53	THE DOJO-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.04920	1	60632	OPERATIONS	JHYD--PERIODIC INSPECTIONS - BRIDGES
54	THE DOJO-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.04902	2	60633	OPERATIONS	JHYD-HYDROLOGIC CAPACITY INITIAL EVALUATION
55	THE DOJO-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.04895	200	60692	OPERATIONS	OPERATION OF RAM-D SECURITY IMPROVEMENTS
56	THE DOJO-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.04895	400	60692	OPERATIONS	SECURITY GUARD CONTRACT
57	THE DOJO-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.04895	31	61660	MAINTENANCE	JHYD-UPGRADE EXISTING HAZARDOUS MATERIALS STORAGE AREA
58	THE DOJO-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.04895	13	60660	OPERATIONS	JHYD-PERFORM ENVIRONMENTAL COMPL ASSESSMENT, REPORTS
59	THE DOJO-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.04895	7	60631	OPERATIONS	JHYD--EVALUATIONS & DATA GATHERING
60	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	232	61610	MAINTENANCE	JHYD--MAINTENANCE OF JOINT ACTIVITIES
61	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	24	61610	MAINTENANCE	JHYD--REFURBISH 23 SPILLWAY GATES E&D
62	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	247	61610	MAINTENANCE	CAPJ--RECOVER SERVICE BUILDING ROOF
63	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04895	200	61610	MAINTENANCE	JHYD-PERFORM BACKLOG SPILLWAY MAINTENANCE
64	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04870	64	61610	MAINTENANCE	JHYD--UPGRADE BATTERY STORAGE AREA
65	BONNEREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.04755	7	60513	OPERATIONS	JHYD-LAW ENFORCEMENT SERVICES
66	BONNEREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.04755	29	60513	OPERATIONS	JHYD-LAW ENFORCEMENT SVCS - ADD'L NEEDS
67	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04755	106	61511	MAINTENANCE	JHYD-MAINTENANCE OF RECREATION FACILITIES- ADD'L NEEDS
68	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.04755	73	60511	OPERATIONS	JHYD-OPERATION OF REGIONAL VISITOR CENTER
69	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.04755	260	60511	OPERATIONS	JHYD - LEWIS & CLARK BICENTENNIAL MANAGEMENT PLAN
70	BONNEENV-INSTRUMENTATION, DATA COLLECTION AND ANALYSIS FOR NAVIGATION	0.04722	14	60131	OPERATIONS	SURVEY MONITORING - NAVLOCK
71	BONNEENV-FACILITY SECURITY GUARDS, MONITORING ACTIVITIES FOR ENVIRONMENTAL STEWARDSHIP	0.04670	41	60492	OPERATIONS	SECURITY GUARD CONTRACT
72	BONNEENV-MANAGEMENT OF SPECIAL STATUS SPECIES	0.04670	2	60418	OPERATIONS	JHYD-ESA-CONSULTATION AND COORDINATION
73	DWORSENV-MGMT OF NATURAL RESOURCES	0.04670	4	60411	OPERATIONS	TIMBER SALE SUPPORT, REVIEW FORESTRY & RANGE MGMT
74	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04666	103	61610	MAINTENANCE	JHYD-REPAIR AND REPAINT SPILLWAY GATES
75	BONNEJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04666	223	61610	MAINTENANCE	CAPJ-REPLACE SPILLWAY POWER DISTRIBUTION EQUIP PH1

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76	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	13	60415	OPERATIONS	JHYD- TRAP & TRANSPORT PROGRAM
77	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	34	60415	OPERATIONS	JHYD- BIOP- ADDITIONAL FISH COUNTING
78	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	24	60415	OPERATIONS	JHYD- ROUT OPER OF ADULT FISH PASSAGE FACS
79	LITLLENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04587	1	60415	OPERATIONS	JHYD- ROUT OPER OF JUVENILE PASSAGE FACS
80	LITLLENV-FISHERIES MGMT - OPS OF FISH HATCHERIES	0.04587	8	60414	OPERATIONS	JHYD- BIOP- IMPROVED DEBRIS HANDLING
81	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	9	61414	MAINTENANCE	JHYD-ROUT MAINT ADULT FISHWAY FACS
82	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	2	61414	MAINTENANCE	JHYD- BIOP- ESBS OVERHAUL
83	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	10	61414	MAINTENANCE	JHYD-REPLACE SEWAGE & WATER LINES TO JFF
84	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	13	61414	MAINTENANCE	JHYD-RECON FISH WTR ATTRACT PUMP TURBINE WICKET GATES
85	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04587	15	61414	MAINTENANCE	JHYD- ROUT ANNUAL MAINT OF FISHWAY FACS, ETC
86	LITLLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.04587	2	61413	MAINTENANCE	JHYD- KELLBERG WELL REPAIR
87	LITLLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.04587	1	61413	MAINTENANCE	JHYD- ROUTINE MAINT OF WILDLIFE
88	LITLLENV-MGMT OF NATURAL RESOURCES	0.04587	5	60411	OPERATIONS	JHYD-ENVIRONMENTAL COMPLIANCE FOR NATURAL RESOURCES
89	THE DOJ- JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04557	104	61610	MAINTENANCE	JHYD-REPAIR PROJECT ACCESS ROADS
90	THE DOJ- JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04557	42	61610	MAINTENANCE	JHYD--REPLACE PROJECT PAGER SYSTEM
91	THE DOJ- JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04557	11	61610	MAINTENANCE	CAPJ - UPGRADE SECURITY SYSTEM
92	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	26	61110	MAINTENANCE	PERFORM BACKLOG NAVLOCK MAINTENANCE
93	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	770	61110	MAINTENANCE	INSTALL GDACS MONITORING OF NAVLOCK
94	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.04535	86	61110	MAINTENANCE	REPLACE DOWNSTREAM NAVLOCK GATE PINTLE BEARINGS-E&D
95	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	365	60415	OPERATIONS	JHYD-OPERATION OF FISH PASSAGE FACILITIES
96	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	164	60415	OPERATIONS	JHYD-FISH HAULING & COUNTING ACTIVITIES BY NWW
97	BONNEENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	48	60415	OPERATIONS	JHYD-ESA IMPLEMENT BIOP- NEW FISH COUNT/TRANSPORT RQMTS
98	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	235	61414	MAINTENANCE	JHYD-MAINTENANCE OF FISH PASSAGE FACILITIES
99	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	42	61414	MAINTENANCE	JHYD-ESA-DEVELOP & IMPLEMENT PREVENTIVE MAINT FOR FISH
100	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	155	61414	MAINTENANCE	JHYD-ESA-REMOVE OBSTRUCTIONS FROM TURBINE ENVIRONMENT
101	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	52	61414	MAINTENANCE	JHYD-ESA-PURCHASE SPARE PARTS FOR AUXILIARY WATER SYS
102	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	1	60420	OPERATIONS	JHYD -- ESA ADDL BIOP BULL TROUT MONITORING AND SURVEYS
103	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	38	60420	OPERATIONS	JHYD -- ESA BULL TROUT MONITORING
104	BONNEENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	24	60420	OPERATIONS	JHYD-ESA-ANADROMOUS FISH EVALUATION PROGRAM
105	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	3	60441	OPERATIONS	JHYD-ESA-TOTAL MAXIMUM DAILY LOADS MONITORING PROGRAM
106	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	10	60650	OPERATIONS	JHYD-MANAGEMENT, COMPLIANCE & UTILIZATION INSPECTIONS
107	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	18	60441	OPERATIONS	JHYD-ESA HYD EVAL ADULT BYPASS SYSTEM
108	BONNEENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - OPS OF WTR CTRL DATA SYS	0.04495	26	60442	OPERATIONS	JHYD-ESA-TOTAL DISSOLVED GAS FIXED MONITORING PROGRAM
109	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	15	60411	OPERATIONS	JHYD- ENVIRONMENTAL COMPLIANCE FOR NATURAL RESOURCES
110	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	44	60411	OPERATIONS	JHYD- RESERVOIR SURVEY - FISH AND HABITAT
111	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	71	60411	OPERATIONS	JHYD - SITE INVENTORY, BIRDS AND BATS
112	DWORSENV-MGMT OF NATURAL RESOURCES	0.04495	3	60411	OPERATIONS	JHYD- BIOP ACTION 139 DWORSHAK GAS ABATEMENT STUDY

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113	DWORSENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	49	60413	OPERATIONS	JHYD-OPER OF WILDLIFE MITIGATION
114	DWORSENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	18	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
115	DWORSENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	36	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
116	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 198 REGIONAL DATABASE
117	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 133 SYSTEM TDG MODELING
118	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	18	60441	OPERATIONS	JHYD-BIOP ACTION APPENDIX B - SYSTEM TEMPERATURE STUDY
119	LITLLENV-MGMT OF NATURAL RESOURCES	0.04495	3	60411	OPERATIONS	JHYD- ROUTINE OPERATIONS OF NATURAL RESOURCES
120	LITLLENV-MGMT OF NATURAL RESOURCES	0.04495	1	60411	OPERATIONS	JHYD- RESERVOIR SURVEY - FISH AND HABITAT
121	LITLLENV-MGMT OF NATURAL RESOURCES	0.04495	1	60411	OPERATIONS	JHYD - SITE INVENTORY, BIRDS AND BATS
122	LITLLENV-MGMT OF NATURAL RESOURCES	0.04495	5	60411	OPERATIONS	JHYD - RESERVOIR LANDS, VEGETATION SURVEY
123	LITLLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	18	60413	OPERATIONS	JHYD-LEVEL II WILDLIFE INVENTORIES
124	LITLLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.04495	28	60413	OPERATIONS	JHYD-GIS MAPPING
125	LITLLENV-PURCHASE/MAINT OF WATER MGMT EQUIP FOR ENVIRON STEWARDSHIP	0.04495	2	61440	MAINTENANCE	JHYD- BIOP ACTION 131 REDUNDANT TOTAL DISSOLVED GAS MONI
126	LITLLENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	19	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
127	LITLLENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	18	60420	OPERATIONS	JHYD- ANADROMOUS FISH EVALUATION PROGRAM
128	LITLLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 198 REGIONAL DATABASE
129	LITLLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	4	60441	OPERATIONS	JHYD- BIOP ACTION 132 REVIEW TOTAL DISSOLVED GAS MONITOR
130	LITLLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	1	60441	OPERATIONS	JHYD- BIOP ACTION 133 SYSTEM TDG MODELING
131	LITLLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	7	60441	OPERATIONS	JHYD- BIOP ACTION 143 TEMPERATURE MODELING PLAN (LOWER S
132	LITLLENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	7	60441	OPERATIONS	JHYD-BIOP ACTION APPENDIX B - SYSTEM TEMPERATURE STUDY
133	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	183	60415	OPERATIONS	JHYD-OPERATION OF FISH PASSAGE FACILITIES
134	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	29	60415	OPERATIONS	JHYD--FISH HAULING & COUNTING ACTIVITIES BY NWW
135	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	111	60415	OPERATIONS	JHYD-ESA IMPLEMENT NEW FISH COUNT/TRANSP REQMTS
136	THE DENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.04495	1	60415	OPERATIONS	JHYD--ESA INCIDENTAL TAKE ACTIVITIES
137	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	167	61414	MAINTENANCE	JHYD--MAINTENANCE OF FISH PASSAGE FACILITIES
138	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	14	61414	MAINTENANCE	JHYD-ESA SPARE PARTS FOR AWS
139	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD--ESA REMOVE OBSTRUCTIONS FROM TURBINE ENVIRONMENT
140	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD-ESA DEVELOP/IMPLEMENT FISH FAC PREVENTIVE MAINT PRO
141	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD--REPLACE DIFFUSION WATER GRATINGS-N FISHLADDER
142	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	3	61414	MAINTENANCE	JHYD-PROCURE & INSTALL DIFFUSION VALVES
143	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	29	61414	MAINTENANCE	CAPJ-EVALUATE & REHAB FISH COUNTING STATION
144	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	72	61414	MAINTENANCE	JHYD-REHAB N. FISHLADDER & AWS
145	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	358	61414	MAINTENANCE	JHYD-ESA-AUTOMATE AUXILIARY WATER SYSTEM
146	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	JHYD-ESA-REPLACE COUNT STATION CROWDER/WINDOW BRUSH
147	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	42	61414	MAINTENANCE	JHYD-ESA-REFURBISH WEIR GUIDES
148	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	240	61414	MAINTENANCE	JHYD--REPAIR FISH LADDER STRUCTURE ROOF
149	THE DENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.04495	28	61414	MAINTENANCE	CAPJ-INSTALL GDACS CONTROL OF FISHWAYS
150	THE DENV-MANAGEMENT OF SPECIAL STATUS SPECIES	0.04495	6	60418	OPERATIONS	JHYD-ESA-CONSULTATION AND COORDINATION
151	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	88	60420	OPERATIONS	JHYD-ESA-ANADROMOUS FISH EVALUATION PROGRAM

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152	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	3	60420	OPERATIONS	JHYD-ESA BULL TROUT MONITORING
153	THE DENV-STUDIES, SURVEYS AND INVENTORIES FOR ENVIRONMENTAL STEWARDSHIP	0.04495	25	60420	OPERATIONS	JHYD-ADDITIONAL BI-OP BULL TROUT MONITORING STDY & SURV
154	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	44	60441	OPERATIONS	JHYD-ESA HYDRAULIC EVAL ADULT BYPASS SYSTEM
155	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.04495	19	60441	OPERATIONS	JHYD-TOTAL MAXIMUM DAILY LOADS MONITORING PROGRAM
156	THE DENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - OPS OF WTR CTRL DATA SYS	0.04495	30	60442	OPERATIONS	JHYD-ESA-TOTAL DISSOLVED GAS FIXED MONITORING PROGRAM
157	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.04300	8	61660	MAINTENANCE	JHYD-ENVIRONMENTAL COMPLIANCE W/FED,STATE,LOCAL REGS
158	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04300	4	61610	MAINTENANCE	JHYD-REPLACE SEALS ON BULKHEADS,GATES, & VALVES
159	DWORSJOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.04300	11	60650	OPERATIONS	JHYD- COMPLIANCE INSPECTIONS, OUTGRANT ACTIONS
160	THE DOJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.04192	42	61610	MAINTENANCE	JHYD-REPLACE WESTRICK CONFERENCE CENTER ROOF
161	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) ACTIVITIES	0.04172	5	61660	MAINTENANCE	JHYD- REMOVE DAM UST
162	DWORSJOI-JOINT COSTS FOR ENVIRONMENTAL COMPLIANCE MGMT ACTIVITIES	0.04172	5	60660	OPERATIONS	JHYD- CYCLE III EXTERNAL ERGO ASSESSMENTS
163	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	46	60641	OPERATIONS	JHYD- NWD RESERVOIR CONTROL CENTER
164	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	23	60641	OPERATIONS	JHYD- NWD WATER MANAGEMENT MOVE TO NEW BUILDING
165	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	2	60641	OPERATIONS	JHYD-WTR CONTROL COORDINATION & WTR QUALITY ANALYSIS
166	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	7	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
167	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.04100	5	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
168	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.04100	28	60642	OPERATIONS	JHYD- DISSOLVED GAS DATA COLLECTION
169	DWORSJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.04100	8	60642	OPERATIONS	JHYD-COLLECT WTR QUALITY DATA & COLLECT STREAMGAGE, ETC
170	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04076	22	61511	MAINTENANCE	CAPJ-REHAB HAMILTON ISL REC AREA BOAT RAMP BN2
171	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04076	31	61511	MAINTENANCE	CAPJ-REHAB WASH SHORE VISITOR CENTER - PH2
172	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.04076	392	61511	MAINTENANCE	CAPJ-REHAB BRAD. ISL. VISITOR CTR.ROOF BN1
173	DWORSJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.03512	4	60633	OPERATIONS	JHYD - REEVALUATE PROBABLE MAXIMUM FLOOD
174	DWORSJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.03512	9	60633	OPERATIONS	JHYD-LOW LEVEL OUTLET EMERGENCY CLOSURE GATES EVAL
175	DWORSJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.03512	100	60692	OPERATIONS	JHYD- SECURITY GUARDS
176	DWORSJOI-JOINT COSTS FOR FACILITY SECURITY PHYSICAL IMPRVMTS, MODS, MAINT AND REPLACE	0.03512	1430	61690	MAINTENANCE	CPSP/RAM-D DWORSHAK
177	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.03512	8	60632	OPERATIONS	JHYD-FORMAL PERIODIC INSPECTIONS AND RPTS.
178	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.03512	1	60632	OPERATIONS	JHYD-SPILLWAY STILLING BASIN SOUNDINGS
179	DWORSJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.03512	3	60632	OPERATIONS	JHYD- HYDR STEEL STRUCT INSP , REGULATING OUTLET INSP
180	DWORSJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.03512	10	60631	OPERATIONS	JHYD- EVALUATION OF INSTRUMENTATION DATA
181	DWORSJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.03512	1	60631	OPERATIONS	JHYD- INSTRUMENTATION MINOR MAINT
182	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	16	61610	MAINTENANCE	JHYD- MISC. SMALL CAP PURCHASES (SMC)
183	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	101	61610	MAINTENANCE	JHYD- MEASURE SPILLWAY GATE FRICTION COEFFICIENT
184	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	5	61610	MAINTENANCE	JHYD - REPLACE SNOWPLOW
185	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	6	61610	MAINTENANCE	JHYD-CORRECT SEISMIC DEFICIENCIES
186	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	1	61610	MAINTENANCE	JHYD-REPAIR & UPDATE AUTOMATED INSTRUMENTATION
187	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	8	61610	MAINTENANCE	JHYD - DWA DAM MONOLITH JOINT DRAIN WATERSTOP REPAIR
188	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03512	1	60610	OPERATIONS	JHYD- DAM SAFETY TRAINING

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189	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03512	1	60610	OPERATIONS	JHYD - PROJECT PAVING
190	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03512	18	60610	OPERATIONS	JHYD - PURCHASE MAN-LIFT
191	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03512	5	60610	OPERATIONS	JHYD-CORRECT SEISMIC DEFICIENCIES
192	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	25	61610	MAINTENANCE	JHYD- REPLACE LOG BOOMS
193	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	3	61610	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
194	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	21	61610	MAINTENANCE	JHYD-REPAIR 1603 GALLERY WATER INTRUSION
195	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	50	61610	MAINTENANCE	JHYD-ROAD MAINT GRANDAD CREEK TO BREAKFAST CREEK RD
196	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	35	61610	MAINTENANCE	JHYD-REPAIR ASPHALT ROADWAYS
197	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	11	61610	MAINTENANCE	JHYD - FOUNDATION DRAIN CLEANING
198	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	49	61610	MAINTENANCE	JHYD- S. DAM SECURITY FENCING/CAMERA
199	DWORSJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.03512	49	61610	MAINTENANCE	SMC- 350 TON BRIDGE CRANES (2)- REHAB
200	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03512	7	60610	OPERATIONS	JHYD- FIRE MONITORING/PROTECTION FOR DAM &POWERHOUSE
201	DWORSJOI-JOINT COSTS FOR OPS ACTIVITIES	0.03512	17	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
202	DWORSJOI-JOINT COSTS FOR STUDIES AND SURVEYS	0.03512	1	60621	OPERATIONS	JHYD- ENERGY PROD RPTS, FLOOD DAMAGES REPORTS
203	BONNEREC-FACILITY SECURITY PHYSICAL IMPRVMTS, MODS, MAINT, AND REPLACE FOR RECREATION	0.03397	31	61590	MAINTENANCE	ENCLOSE PH1 VISITOR GALLERY FOR SECURITY
204	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	516	61511	MAINTENANCE	SCAPJOI - PURCHASE/INSTALL CONCRETE VAULT TOILETS
205	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	284	61511	MAINTENANCE	CAPJ REPLACE ELEVATORS- BRADFORD IS VISITOR CTR
206	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	515	61511	MAINTENANCE	JHYD-UPGRADE BRAD ISL VISITOR CTR RESTROOM BN1
207	BONNEREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.03397	24	61511	MAINTENANCE	JHYD-MAINTENANCE OF RECREATION FACILITIES & VISITOR CTR
208	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.03397	15	60511	OPERATIONS	JHYD-MANAGEMENT OF RECREATION AREAS & FACILITIES
209	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.03397	50	60511	OPERATIONS	JHYD-MANAGEMENT OF REC AREAS - ADD'L ROUTINE NEEDS
210	BONNEENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	60	60412	OPERATIONS	JHYD-CULTURAL RESOURCES TO MEET NATIVE AMERICAN AGREE
211	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03349	12	61413	MAINTENANCE	JHYD-IMPROVE RD CONDITIONS-GRANDAD WILDLIFE MITIGATION AREA
212	THE DENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	22	60412	OPERATIONS	JHYD-CULTURAL RESOURCES TO MEET NATIVE AMERICAN AGREE
213	THE DENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03349	100	60412	OPERATIONS	JHYD-CONTR LAW ENFORCEMENT- CULTURAL AREAS
214	LITLLENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	7	60412	OPERATIONS	JHYD- FEDERAL COLUMBIA R. POWER SYSTEM - CUL RES
215	LITLLENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	22	60412	OPERATIONS	MGMT OF CULTURAL RESOURCES
216	LITLLENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03267	1	60412	OPERATIONS	JHYD - CULTURAL RESOURCE PROGRAM COMPLIANCE
217	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	39	61414	MAINTENANCE	JHYD-EVAL/REHAB FISH COUNTING STATION
218	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	13	61414	MAINTENANCE	JHYD-ANNUAL FISHWAY OVERHAUL
219	BONNEENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	100	61414	MAINTENANCE	JHYD-MAINTENANCE OF SUBMERGED TRAVELING FISH SCREENS
220	BONNEENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	10	61411	MAINTENANCE	JHYD-MAINTENANCE OF NATURAL RESOURCE FACILITIES
221	BONNEENV-MGMT OF NATURAL RESOURCES	0.03175	33	60411	OPERATIONS	JHYD-NATURAL RESOURCES MANAGEMENT
222	DWORSENV-BOUNDARY MONUMENTATION AND RECTIFICATION FOR ENVIRON STEWARD	0.03175	7	61453	MAINTENANCE	JHYD-PROJECT BOUNDARY MONUMENTATION
223	DWORSENV-ENVIRONMENTAL COMPLIANCE (REMEDIAL ACTIONS) FOR ENVIRON STEWARD	0.03175	6	61460	MAINTENANCE	JHYD- EXTERNAL ENVIRONMENTAL REVIEWS
224	DWORSENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.03175	79	60415	OPERATIONS	JHYD- MANAGEMENT OF RESIDENT FISHERIES
225	DWORSENV-FISHERIES MGMT - FISH HAULING ACTIV AND FISH PASSAGE STRUCTURES	0.03175	5	60415	OPERATIONS	JHYD- TRAP & TRANSPORT PROGRAM

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226	DWORSENV-FISHERIES MGMT - OPS OF FISH HATCHERIES	0.03175	247	60414	OPERATIONS	JHYD- HATCHERY-ROUTINE OPER BY U.S.FISH & WILDLIFE SERVI
227	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	217	61414	MAINTENANCE	JHYD- ROUTINE MAINT ASSISTANCE TO NAT'L HATCHERY
228	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	62	61414	MAINTENANCE	JHYD- EMERGENCY GENERATORS - DNFH
229	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	123	61414	MAINTENANCE	JHYD-SYSTEM III MEDIA CHANGE
230	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	12	61414	MAINTENANCE	JHYD- REROOF OTHER BUILDINGS - DNFH
231	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	280	61414	MAINTENANCE	CAPF - HATCHERY NURSERY BLDG ROOF REPAIR
232	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	18	61414	MAINTENANCE	JHYD- FISH CROWDER - DNFH
233	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	41	61414	MAINTENANCE	JHYD- HATCHERY-CONVERT SYS 2 & 3 BURROWS PONDS TO RACEWA
234	DWORSENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	17	61414	MAINTENANCE	JHYD- HATCHERY- ROUTINE MAINT BY U.S.FISH & WILDLIFE SERV
235	DWORSENV-WATER MGMT ACTIVITIES FOR ENVIRON STEWARDSHIP - ANALYSIS AND STUDIES	0.03175	17	60441	OPERATIONS	JHYD- BIOP ACTION 143 TEMPERATURE MODELING PLAN (LOWER S
236	LITLLENV-BOUNDARY MONUMENTATION AND RECTIFICATION FOR ENVIRON STEWARD	0.03175	9	61453	MAINTENANCE	JHYD-SURVEY & MONUMENT CORPS BOUNDARY LINES
237	LITLLENV-MAINT OF FISHERIES, FISH HAULAGE ACTIV AND FISH PASSAGE STRUCTURES	0.03175	4	61414	MAINTENANCE	JHYD- BIOP- DEVELOP PREVENTATIVE MAINTENANCE PROGRAM
238	LITLLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	10	61411	MAINTENANCE	JHYD-REPLACE CATTLE WATERING CORRIDORS WITH WELLS
239	LITLLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	16	61411	MAINTENANCE	JHYD-PHRAGMITES CONTROL
240	LITLLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	1	61411	MAINTENANCE	JHYD-SHORELINE STABILIZATION
241	LITLLENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03175	1	61411	MAINTENANCE	REHAB WORK BOAT
242	LITLLENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03175	1	61413	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
243	LITLLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.03175	3	60413	OPERATIONS	JHYD - NATURAL RESOURCE SPECIALIST POSITION
244	THE DENV-MGMT OF NATURAL RESOURCES	0.03175	35	60411	OPERATIONS	JHYD--NATURAL RESOURCES MANAGEMENT
245	THE DENV-PEST MANAGEMENT	0.03175	13	60419	OPERATIONS	JHYD--NOXIOUS WEEDS, BIRDS, AND RODENT CONTROL
246	DWORSENV-MAINT OF NATURAL RESOURCES FACILITIES	0.03083	7	61411	MAINTENANCE	JHYD- ROUT ANNUAL MAINTENANCE OF NATURAL RESOURCES
247	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.03083	5	61413	MAINTENANCE	MAINT OF WILDLIFE MITIGATION
248	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	32	60412	OPERATIONS	JHYD- FEDERAL COLUMBIA R. POWER SYSTEM-CUL RES
249	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	75	60412	OPERATIONS	MGMT OF CULTURAL RESOURCES
250	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	22	60412	OPERATIONS	JHYD - CULTURAL RESOURCE PROGRAM COMPLIANCE
251	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	3	60412	OPERATIONS	JHYD- ADD'L CULTURAL RESOURCES PROTECTION
252	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	48	60412	OPERATIONS	JHYD - MGMT OF CULTURAL RESOURCES
253	DWORSENV-MGMT AND CURATION OF ARCHEOLOGICAL AND CULTURAL RESOURCES	0.03083	9	60412	OPERATIONS	JHYD- NEPA - SUPPLEMENT PROJECT EIS
254	DWORSENV-COMPREHENSIVE MASTER PLANS	0.03000	280	60416	OPERATIONS	JHYD-MASTER PLAN REVIEW
255	DWORSENV-MGMT OF NATURAL RESOURCES	0.03000	169	60411	OPERATIONS	JHYD- ROUTINE OPERATIONS - NATURAL RESOURCES
256	LITLLOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02960	10	61610	MAINTENANCE	RE-PAVE EARTHFILL/SUBSTATION ROAD AT LITTLE GOOSE DAM
257	LITLLENV-MGMT OF WILDLIFE MITIGATION FEATURES	0.02908	1	60413	OPERATIONS	JHYD- OPRE OF WILDLIFE MITIGATION
258	LITLHYD-FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT, AND REPLACE FOR HYDROPOWER	0.02907	185	61390	MAINTENANCE	CPSP/RAM-D LITTLE GOOSE
259	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.02717	9	60511	OPERATIONS	JHYD-OPERATION OF REGIONAL VISITOR CENTER- ADD'L NEEDS
260	BONNEREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.02717	57	60511	OPERATIONS	JHYD-PROVIDE INCREASED VISITOR ASSISTANCE FOR LEW & CLRK
261	LITLLOI-JOINT COSTS FOR REAL ESTATE MGMT ACTIVITIES	0.02642	2	60650	OPERATIONS	JHYD- COMPLIANCE INSPECTIONS, OUTGRANT ACTIONS
262	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02448	84	61610	MAINTENANCE	INSTALL GDACS CONTROL OF SPILLWAY

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263	THE DOJO-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02448	19	61610	MAINTENANCE	SCAPJOI - PURCHASE PATROL BOAT & TRAILER
264	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02304	17	61610	MAINTENANCE	JHYD - SECURITY MODIFICATIONS
265	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02304	19	61610	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
266	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02304	23	61610	MAINTENANCE	JHYD- ROUT ANNUAL MAINT ON DAM, SPILLWAY GATES, BLDGS, ETC
267	THE DNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.02268	131	61110	MAINTENANCE	REMODEL NAVLOCK STANDS
268	LITTLJOI-JOINT COSTS FOR DAM SAFETY ASSURANCE STUDIES	0.02203	2	60633	OPERATIONS	JHYD-GEOLOGICAL & SEISMOLOGICAL REEVALUATION
269	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.02096	7	61610	MAINTENANCE	JHYD-CORRECT SIEMIC DEFICIENCIES
270	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01933	2	60610	OPERATIONS	JHYD-TIME AND COST STANDARD
271	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01783	225	61511	MAINTENANCE	INSTALL FISHING PIER
272	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01783	107	61511	MAINTENANCE	REPLACE COURTESY DOCKS
273	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01783	45	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
274	DWORSREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.01783	789	60511	OPERATIONS	ROUTINE OPER OF RECREATION AREAS
275	DWORSREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.01783	423	60511	OPERATIONS	ROUTINE OPER OF RECREATION AREAS
276	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01773	103	61110	MAINTENANCE	NAVIGATION LOCK WATER-STOPS REPAIR
277	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01773	575	61110	MAINTENANCE	REPLACE NAVIGATION LOCK SEAL HEATERS
278	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01773	500	61110	MAINTENANCE	ROUT ANNUAL MAINT OF LOCKS & ASSOCIATED EQUIP
279	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01773	259	61110	MAINTENANCE	LOCK CULVERT REPAIR
280	LITTLNAV-OPS OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.01773	282	60110	OPERATIONS	ROUTINE OPERATION OF LOCKS
281	LITTLNAV-STUDIES AND SURVEYS FOR NAVIGATION	0.01773	55	60121	OPERATIONS	NAVIGATION CONDITION SURVEYS
282	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01669	2	60610	OPERATIONS	JHYD- CONTINUOUS SAMPLER FOR POTABLE WATER
283	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01659	2	60641	OPERATIONS	JHYD- NWD RESERVOIR CONTROL CENTER
284	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01659	1	60641	OPERATIONS	JHYD-WATER CONTROL COORDINATION & WTR QUALITY ANALYSIS
285	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01659	3	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
286	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.01659	4	60642	OPERATIONS	JHYD- DISSOLVED GAS DATA COLLECTION
287	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - OPS OF WTR CTRL DATA SYS	0.01659	4	60642	OPERATIONS	JHYD- COLLECT WTR QUALITY DATA & COLLECT STREAMGAGE, ETC
288	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01649	2	61610	MAINTENANCE	JHYD- REPAIR SPILLWAY GATES
289	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01649	1	61610	MAINTENANCE	JHYD- REPAIR SPILLWAY WATERSTOP ON GATE 1
290	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01649	21	61610	MAINTENANCE	JHYD- BUILD WELDING AND CARPENTER SHOP
291	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01606	2	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES, INTAKE&OUTLET WRK
292	DWORSENV-COMPREHENSIVE MASTER PLANS	0.01587	12	60416	OPERATIONS	JHYD- PROJECT MASTER PLANNING
293	DWORSENV-COMPREHENSIVE MASTER PLANS	0.01587	25	60416	OPERATIONS	JHYD-MASTER PLAN UPDATE
294	DWORSENV-MAINT OF WILDLIFE MITIGATION FEATURES	0.01587	9	61413	MAINTENANCE	JHYD-NARROW BAND RADIO REQUIREMENTS
295	LITTLNAV-COMPREHENSIVE MASTER PLANS	0.01587	1	60416	OPERATIONS	JHYD-MASTER PLAN REVIEW
296	LITTLNAV-MGMT OF WILDLIFE MITIGATION FEATURES	0.01587	2	60413	OPERATIONS	JHYD-FORESTRY AND VEGETATION CONSULTATION
297	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01571	21	60641	OPERATIONS	JHYD- NWD WATER MANAGEMENT MOVE TO NEW BUILDING
298	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01524	9	61610	MAINTENANCE	JHYD- INSTRUMENTATION MAINT/RPR
299	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01515	16	61610	MAINTENANCE	JHYD- SEEPAGE CONTROL AND MONITORING
300	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01404	74	61610	MAINTENANCE	JHYD-DEBRIS REMOVAL
301	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01404	98	61610	MAINTENANCE	CAPF- REPAIR SPILLWAY GATE SEAL HEATERS
302	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01404	13	61610	MAINTENANCE	JHYD-ROUTINE MAINT. OF DAM, SPILLWAY, INTAKE & OUTLET

R a n k	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
303	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01404	10	61610	MAINTENANCE	JHYD - POWERHOUSE ELEVATOR MODERNIZATION
304	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01404	49	60610	OPERATIONS	JHYD-EXTERNAL ERGO INSPECTION
305	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01404	1	60610	OPERATIONS	JHYD - EMERGENCY ACTION PLAN REVISION
306	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01404	1	60610	OPERATIONS	JHYD- ROUT ANNL OPER OF SPILLWAY GATES,INTAKE&OUTLET WRK
307	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01404	10	60610	OPERATIONS	JHYD- UPDATE EMERGENCY NOTIFICATION PLAN
308	LITTLJOI-JOINT COSTS FOR LAND ACQ AND DISPOSAL MGMT ACTIV, SETTLE CLAIMS, AND AUDITS	0.01341	1	61651	MAINTENANCE	JHYD- LAND DISPOSAL
309	LITTLJOI-JOINT COSTS FOR FACILITY SECURITY GUARDS, MONITORING ACTIVITIES	0.01335	40	60692	OPERATIONS	JHYD- SECURITY GUARDS
310	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01335	8	61610	MAINTENANCE	JHYD-REPLACE/UPDATE SECURITY & EMERGENCY NOTIFICATION SY
311	LITTLJOI-JOINT COSTS FOR FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT AND REPLACE	0.01321	2180	61690	MAINTENANCE	CPSP/RAM-D LITTLE GOOSE
312	LITTLJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.01321	1	60632	OPERATIONS	JHYD-SPILLWAY ROLLER BASIN SOUNDINGS
313	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01321	2	61610	MAINTENANCE	JHYD-SMALL CAP JOINT IMPROVEMENTS (SMC)
314	LITTLJOI-JOINT COSTS FOR FORMAL PERIODIC INSPECTIONS AND REPORTS	0.01321	1	60632	OPERATIONS	JHYD- HYDRAULIC STREEL STRUCTURES INSPECTION
315	LITTLJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.01321	3	60631	OPERATIONS	JHYD-EVALUATION OF INSTRUMENTATION DATA
316	LITTLJOI-JOINT COSTS FOR INSTRUMENTATION, DATA COLLECTION AND ANALYSIS	0.01321	1	60631	OPERATIONS	JHYD- INSTRUMENTATION MONITORING/READING
317	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01321	1	61610	MAINTENANCE	JHYD - SPILLWAY 1 WATERSTOP REPAIR
318	LITTLJOI-JOINT COSTS FOR STUDIES AND SURVEYS	0.01321	1	60621	OPERATIONS	JHYD- ENERGY PROD RPTS, FLOOD DAMAGES REPORTS
319	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01321	40	61610	MAINTENANCE	JHYD-FIRE MONITORING/PROTECTION FOR DAM & PH
320	LITTLJOI-JOINT COSTS FOR MAINT ACTIVITIES EXCLUDING DREDGING	0.01321	11	61610	MAINTENANCE	JHYD- SEEPAGE CONTROL AND MONITORING
321	LITTLJOI-JOINT COSTS FOR OPS ACTIVITIES	0.01321	21	60610	OPERATIONS	JHYD- DAM SAFETY TRAINING
322	LITTLJOI-JOINT COSTS FOR WATER MGMT ACTIVITIES - ANALYSIS AND STUDIES	0.01321	4	60641	OPERATIONS	JHYD- WATER CONTROL COORDINATION & WTR QUAL ANALYSIS
323	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.01274	45	61511	MAINTENANCE	IMPROVE DISPERSED AREA SANITARY FACILITIES
324	DWORSREC-REAL ESTATE MGMT FOR RECREATION	0.01274	72	60550	OPERATIONS	COMPL INSP, OUTGRANTS FOR RECREATION
325	DWORSREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.01274	58	60513	OPERATIONS	LAW ENFORCEMENT-CLEARWATER COUNTY
326	LITTLNAV-FACILITY SECURITY PHYSICAL IMPRVMENTS, MODS, MAINT AND REPLACE FOR NAVIGATION	0.01013	68	61190	MAINTENANCE	CPSP/RAM-D LITTLE GOOSE
327	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	213	61511	MAINTENANCE	REPAIR DENT REC SITE ELECTRICALSYSTEM
328	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	258	61511	MAINTENANCE	BIG EDDY PLAYGROUND
329	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	154	61511	MAINTENANCE	PURCHASE BOAT TRAILER
330	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	121	61511	MAINTENANCE	BEACH SAFETY IMPROVEMENTS
331	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	250	61511	MAINTENANCE	IMPROVE BOAT ACCESS TO THE VISITOR CENTER
332	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	585	61511	MAINTENANCE	JHYD-IMPROVE RD CONDITIONS-GRANDAD WILDLIFE MITIGATION AREA
333	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	70	61511	MAINTENANCE	REPAIR BOAT RAMP - BRUCE'S EDDY
334	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	62	61511	MAINTENANCE	REPLACE RANGER PATROL BOAT
335	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	23	61511	MAINTENANCE	LEWIS AND CLARK BICENTENNIAL
336	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	195	61511	MAINTENANCE	LOW WATER ACCESS PARKING
337	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	55	61511	MAINTENANCE	IMPROVE 1603 GALLERY LIGHTING & INTERPRETIVE SIGNS
338	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	54	61511	MAINTENANCE	REPAIR 1603 GALLERY AND VISITOR CENTER WINDOW SEALS
339	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	480	61511	MAINTENANCE	REPLACE REMOTE SANITARY FACILITIES
340	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	98	61511	MAINTENANCE	UPDATE PROJECT MULTIMEDIA EQUIPMENT
341	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	250	61511	MAINTENANCE	REPLCMNT OF DISPLAYS IN VISITOR CENTER
342	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	51	61511	MAINTENANCE	ACCESSIBLE TOILET FACILITIES

R a n k	Alternative ID	Total Weight	Cost (\$'000)	WCC	O or M	WF DESCRIPTION
343	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	42	61511	MAINTENANCE	EXTEND BOAT RAMPS
344	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	83	61511	MAINTENANCE	CANYON CREEK CAMPSITE REPAIR
345	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	42	61511	MAINTENANCE	REHABILITATE PARKING LOT ENTRANCE
346	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	52	61511	MAINTENANCE	DENT ACRES - IMPROVE CAMPGROUND ACCESS
347	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	14	61511	MAINTENANCE	INTERACTIVE CURRENT ISSUES INTERPRETIVE DISPLAY
348	DWORSREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00764	58	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
349	DWORSREC-STUDIES AND SURVEYS FOR RECREATION	0.00764	55	60520	OPERATIONS	DISTRICT VISITOR SURVEY (VERS)
350	LITTLNAV-FORMAL PERIODIC INSPECTIONS AND REPORTS FOR NAVIGATION	0.00760	5	60132	OPERATIONS	NAV LOCK HYDR STEEL STRUCT INSP
351	LITTLNAV-MAINT OF LOCKS, DAMS, RESVRS, SRVC FACS, EQUIP, ETC. FOR NAVIGATION	0.00760	41	61110	MAINTENANCE	REPAIR WATERSTOPS IN NAVIGATION LOCK
352	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00272	75	61511	MAINTENANCE	REHABILITATE BOAT RAMPS
353	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00272	354	60511	OPERATIONS	REPLACE FENCE AT ILLIA DUNES
354	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00272	76	60511	OPERATIONS	ROUT OPER OF RECREATION AREAS
355	LITTLREC-DREDGING ACTIVITIES FOR RECREATION	0.00238	41	61520	MAINTENANCE	DREDGE BOAT BASINS AT ILLIA AND WILLOW LANDINGS
356	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00238	25	61511	MAINTENANCE	REPLACE HVAC SYSTEM IN FISH VISITOR BUILDING
357	THE DREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.00238	32	60513	OPERATIONS	LAW ENFORCEMENT CT - RECREATION AREAS
358	THE DREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00238	369	60511	OPERATIONS	MANAGEMENT OF RECREATION AREAS & VISITOR CTR
359	THE DREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00238	36	60511	OPERATIONS	LEWIS & CLARK BICENTENNIAL MANAGEMENT PLAN
360	THE DREC-STUDIES AND SURVEYS FOR RECREATION	0.00238	80	60520	OPERATIONS	RECREATION USE SURVEYS
361	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	85	61511	MAINTENANCE	MAINTENANCE OF RECREATION FACILITIES & VISITOR CTR
362	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	200	61511	MAINTENANCE	REPAIR BOAT RAMP FACILITIES AT CELILO PARK
363	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	185	61511	MAINTENANCE	PRINT BROCHURES
364	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	95	61511	MAINTENANCE	REPAIR VISITORS CENTER ROOFS
365	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	32	61511	MAINTENANCE	CONSTRUCT PLAY STRUCTURE AT CELILO PARK
366	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	210	61511	MAINTENANCE	L&C - NORTH SHORE/RESTROOM/BOAT L/TRAIL/SIGNS REHAB
367	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	70	61511	MAINTENANCE	REPLACE 2 RESTROOMS AT CELILO PARK
368	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00204	172	61511	MAINTENANCE	MAINTENANCE OF SEUFERT VISITOR CENTER
369	LITTLREC-REAL ESTATE MGMT FOR RECREATION	0.00170	21	60550	OPERATIONS	COMPL INSPS, OUTGRANTS, REAL PROP RECONCIL FOR RECREATION
370	LITTLREC-LAW ENFORCEMENT - COSTS AND SUPR OF LAW ENFORCEMENT AGREEMENTS	0.00170	26	60513	OPERATIONS	LAW ENFORCEMENT
371	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00136	70	61511	MAINTENANCE	ROUTINE ANNUAL MAINT OF REC AREAS & FACS
372	THE DREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00136	250	61511	MAINTENANCE	EXPAND DAY AREA-N. SHORE & CELILO PK-E&D
373	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	70	61511	MAINTENANCE	LEWIS AND CLARK BICENTENNIAL
374	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	62	61511	MAINTENANCE	REPLACE VAULT TOILET AT ILIA DUNES REC AREA
375	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	80	61511	MAINTENANCE	INSTALL FISHING ACCESS PLATFORM
376	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	65	61511	MAINTENANCE	REPLACE ILLIA LANDING BREAKWATER STYLE DOCK
377	LITTLREC-MAINT OF REC FACS, VISITOR CENTERS, OPERATING EQUIP, ETC.	0.00102	160	61511	MAINTENANCE	RE-PAVE ROAD ABOVE LITTLE GOOSE DAM
378	LITTLREC-OPS/MGMT OF REC AREAS/FACS, VISIT CNTRS, FACS, EQUIP, ETC. FOR RECREATION	0.00102	26	60511	OPERATIONS	ROUT OPER OF RECREATION AREAS
379	LITTLREC-STUDIES AND SURVEYS FOR RECREATION	0.00102	15	60520	OPERATIONS	DISTRICT VISITOR SURVEY (VERS)

8.4. APPENDIX D – DATA STATISTICS ON FUNDING LEVEL 3 WORK PACKAGES

Table 18 – Funding Level 3 Data Characteristics According to Business Lines vs. O&M (All Projects)

Business Line	Operations	Maintenance	Total # of WPs
Environment	7	25	32
Joint	7	52	59
Recreation	2	52	54
Navigation	0	14	14
Hydropower	0	0	0
Total	16	143	159

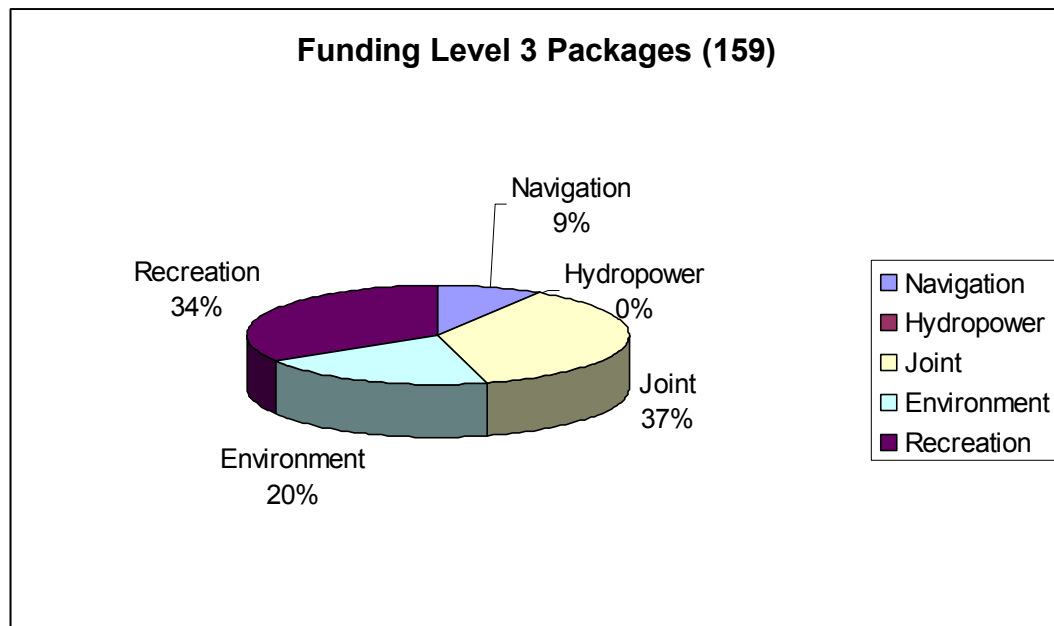


Figure 5 – Distribution of Funding Level 3 Work Packages According to Business Line Categories

Table 19 – Funding Level 3 Data Characteristics According to Business Lines, Dam Projects and O&M

BONNEVILLE			
Business Line	Operations	Maintenance	Total # of WPs
Environment	0	1	1
Joint	1	6	7
Recreation	2	11	13
Navigation	0	4	4
Hydropower	0	0	0
Total	3	22	25
DWORKSHAK			
Business Line	Operations	Maintenance	Total # of WPs
Environment	1	7	8
Joint	1	4	5
Recreation	0	14	14
Navigation	0	0	0
Hydropower	0	0	0
Total	2	25	27
ICE HARBOR			
Business Line	Operations	Maintenance	Total # of WPs
Environment	1	3	4
Joint	2	2	4
Recreation	0	4	4
Navigation	0	0	0
Hydropower	0	0	0
Total	3	9	12
JOHN DAY			
Business Line	Operations	Maintenance	Total # of WPs
Environment	1	2	3
Joint	0	14	14
Recreation	0	10	10
Navigation	0	2	2
Hydropower	0	0	0
Total	1	28	29
LITTLE GOOSE			
Business Line	Operations	Maintenance	Total # of WPs
Environment	1	0	1
Joint	1	2	3
Recreation	0	0	0
Navigation	0	4	4
Hydropower	0	0	0
Total	2	6	8
LOWER GRANITE			
Business Line	Operations	Maintenance	Total # of WPs
Environment	0	0	0
Joint	0	0	0
Recreation	0	0	0
Navigation	0	0	0
Hydropower	0	0	0

Table 19 – (cont'd) Funding Level 3 Data Characteristics According to Business Lines, Dam Projects and O&M

Total	0	0	0
LOWER MONUMENTAL			
Business Line	Operations	Maintenance	Total # of WPs
Environment	1	4	5
Joint	1	3	4
Recreation	0	2	2
Navigation	0	1	1
Hydropower	0	0	0
Total	2	10	12
MCNARY			
Business Line	Operations	Maintenance	Total # of WPs
Environment	2	4	6
Joint	1	4	5
Recreation	0	7	7
Navigation	0	3	3
Hydropower	0	0	0
Total	3	18	21
THE DALLES			
Business Line	Operations	Maintenance	Total # of WPs
Environment	0	2	2
Joint	1	16	17
Recreation	0	4	4
Navigation	0	0	0
Hydropower	0	0	0
Total	1	22	23

Table 20 – Funding Level 3 Data: Work Category Codes

WCC	Work Category Code Title	Bus. line	O Or M	# Of Wps
60110	Ops Of Locks, Dams, Resvrs, Svc Facs, Equip, Etc. For Navigation	Navigation	O	0
60121	Studies And Surveys For Navigation	Navigation	O	0
60122	Major Rehab Evaluation Reports For Navigation	Navigation	O	0
60131	Instrumentation, Data Collection And Analysis For Navigation	Navigation	O	0
60132	Formal Periodic Inspections And Reports For Navigation	Navigation	O	0
60192	Facility Security Guards, Monitoring Activities For Navigation	Navigation	O	0
60392	Facility Security Guards, Monitoring Activities For Hydropower	Hydropower	O	0
60411	Mgmt Of Natural Resources	Environment	O	3
60412	Mgmt And Curation Of Archeological And Cultural Resources	Environment	O	2
60413	Mgmt Of Wildlife Mitigation Features	Environment	O	0
60414	Fisheries Mgmt - Ops Of Fish Hatcheries	Environment	O	0
60415	Fisheries Mgmt - Fish Hauling Activ And Fish Passage Structures	Environment	O	0
60416	Comprehensive Master Plans	Environment	O	2
60418	Management Of Special Status Species	Environment	O	0
60419	Pest Management	Environment	O	0
60420	Studies, Surveys And Inventories For Environmental Stewardship	Environment	O	0
60441	Water Mgmt Activities For Environ Stewardship - Analysis And Studies	Environment	O	0
60442	Water Mgmt Activities For Environ Stewardship - Ops Of Wtr Ctrl Data Sys	Environment	O	0
60492	Facility Security Guards, Monitoring Activities For Environmental Stewardship	Environment	O	0
60511	Ops/Mgmt Of Rec Areas/Facs, Visit Cntrs, Facs, Equip, Etc. For Recreation	Recreation	O	1

Table 20 – (cont'd) Funding Level 3 Data: Work Category Codes

WCC	Work Category Code Title	Bus. line	O Or M	# Of Wps
60513	Law Enforcement - Costs And Supr Of Law Enforcement Agreements	Recreation	O	0
60520	Studies And Surveys For Recreation	Recreation	O	1
60550	Real Estate Mgmt For Recreation	Recreation	O	0
60592	Facility Security Guards, Monitoring Activities For Recreation	Recreation	O	0
60610	Joint Costs For Ops Activities	Joint	O	1
60621	Joint Costs For Studies And Surveys	Joint	O	3
60622	Joint Costs For Major Rehab Evaluation Reports	Joint	O	0
60631	Joint Costs For Instrumentation, Data Collection And Analysis	Joint	O	0
60632	Joint Costs For Formal Periodic Inspections And Reports	Joint	O	0
60633	Joint Costs For Dam Safety Assurance Studies	Joint	O	1
60641	Joint Costs For Water Mgmt Activities - Analysis And Studies	Joint	O	0
60642	Joint Costs For Water Mgmt Activities - Ops Of Wtr Ctrl Data Sys	Joint	O	0
60650	Joint Costs For Real Estate Mgmt Activities	Joint	O	0
60660	Joint Costs For Environmental Compliance Mgmt Activities	Joint	O	0
60692	Joint Costs For Facility Security Guards, Monitoring Activities	Joint	O	0
61110	Maint Of Locks, Dams, Resvrs, Srvc Facs, Equip, Etc. For Navigation	Navigation	M	13
61121	Dredging Activities For Navigation	Navigation	M	0
61160	Environmental Compliance for Navigation	Navigation	M	1
61190	Facility Security Physical Imprvmnts, Mods, Maint And Replace For Navigation	Navigation	M	0
61390	Facility Security Physical Imprvmnts, Mods, Maint, And Replace For Hydropower	Hydropower	M	0
61411	Maint Of Natural Resources Facilities	Environment	M	2
61412	Mitigation of Archeological and Cultural Resources	Environment	M	1
61413	Maint Of Wildlife Mitigation Features	Environment	M	7
61414	Maint Of Fisheries, Fish Haulage Activ And Fish Passage Structures	Environment	M	13
61418	Maintenance For Special Status Species	Environment	M	0
61440	Purchase/Maint Of Water Mgmt Equip For Environ Stewardship	Environment	M	0
61453	Boundary Monumentation And Rectification For Environ Steward	Environment	M	2
61460	Environmental Compliance (Remedial Actions) For Environ Steward	Environment	M	1
61511	Maint Of Rec Facs, Visitor Centers, Operating Equip, Etc.	Recreation	M	52
61512	Maint Of Rec Facs Using Special Recreation Users Fee (Sruf) Funds	Recreation	M	0
61520	Dredging Activities For Recreation	Recreation	M	0
61551	Land Acq And Disposl Mgmt Activ, Settle Claims, And Audits For Recreation	Recreation	M	0
61590	Facility Security Physical Imprvmnts, Mods, Maint, And Replace For Recreation	Recreation	M	0
61610	Joint Costs For Maint Activities Excluding Dredging	Joint	M	47
61640	Joint Costs For Water Mgmt Equip Activities	Joint	M	0
61651	Joint Costs For Land Acq And Disposl Mgmt Activ, Settle Claims, And Audits	Joint	M	0
61660	Joint Costs For Environmental Compliance (Remedial Actions) Activities	Joint	M	1
61690	Joint Costs For Facility Security Physical Imprvmnts, Mods, Maint And Replace	Joint	M	0
		Total		146

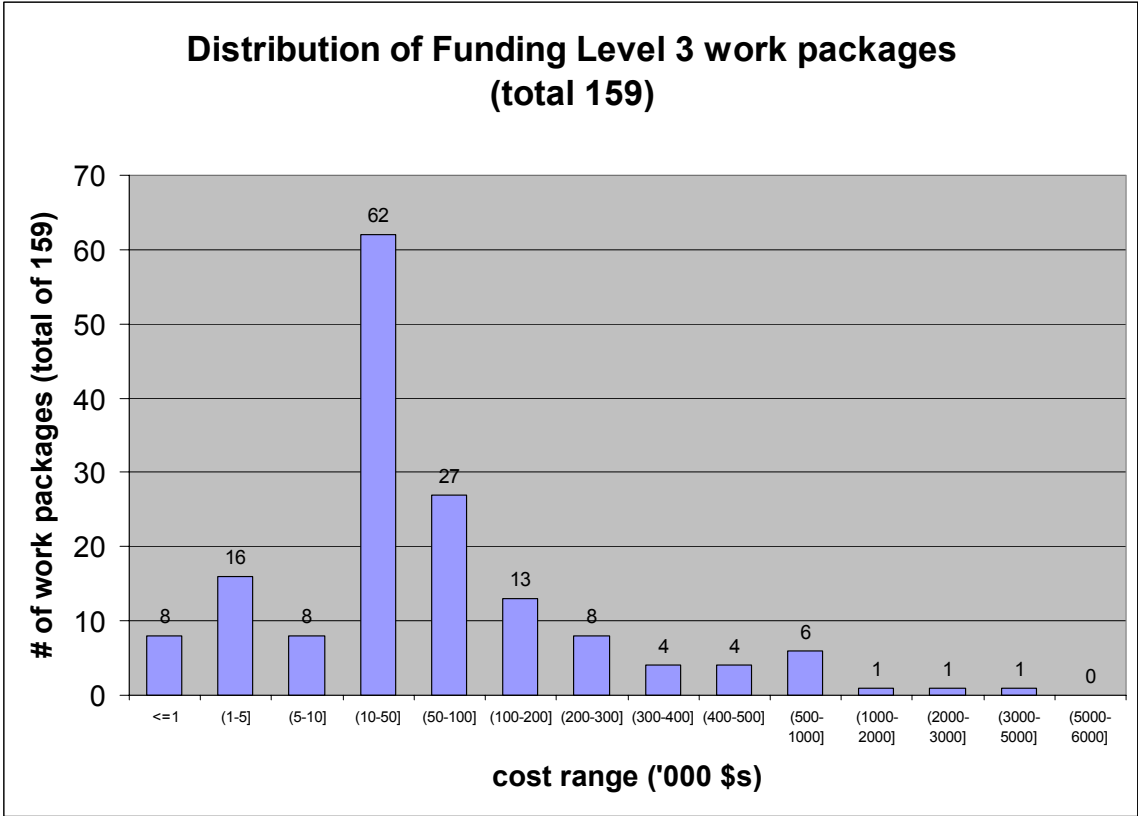


Figure 6 – Distribution of Work Packages in terms of “size” in dollars

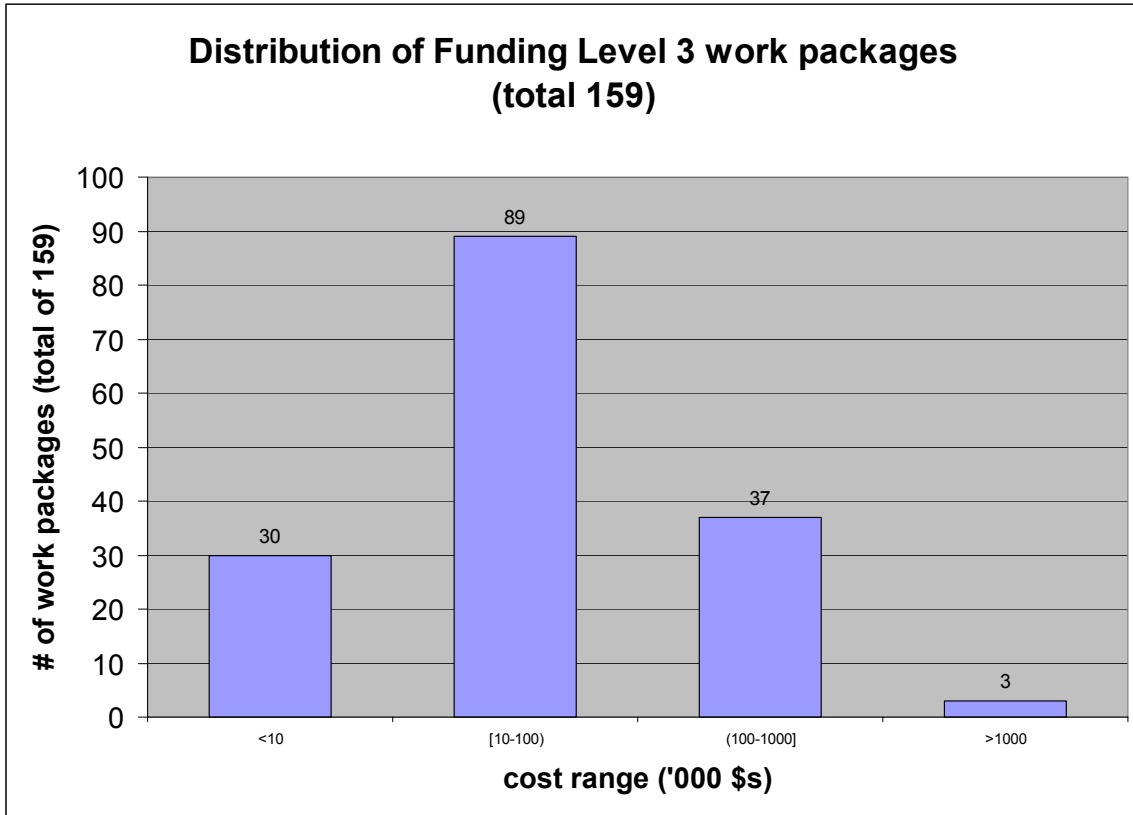


Figure 7 – Distribution of Work Packages in terms of “size” in dollars – (grouped according to 10th order of magnitude: i.e. 1,000 times 10⁰; 10¹; 10²; and 10³.)

8.5. APPENDIX E - TOOLS

8.5.1. Expert Choice

In order to demonstrate our model we use Expert Choice (EC) software package. Expert Choice was developed by experts from the GWU business school to serve as a tool in aiding managerial decision making when multiple stakeholders are present in the decision making with competing and sometimes conflicting viewpoints. EC helps experts/decision makers make comparisons among attributes/criteria for selected objectives and uses these as an input to compute the ratings of the nested hierarchies that are structured by the analysts. It is a powerful tool in terms of presentation with its graphic capability as well as the capability to do fast sensitivity analyses by varying the attribute ratings to certain degrees and measuring the changes in the best estimate outcome of the goal.

8.5.2. ABS Cube

ABS (Analytical Budget System) that was developed by budget personnel at the USACE headquarters is a database tool that helps the USACE personnel that are involved in the budget decision making process. It is a relational database that helps categorize, query, sort and list the data pertaining to the work packages and their relevant information. We use ABS to sort the data we need and query it to Excel.

8.5.3. Microsoft Excel

We also use Microsoft Excel to call work package data from the ABS Cube and then to format it so as to be usable by the Expert Choice. Excel comes in handy for doing the actual rating process of the alternatives. Once the alternatives (Level 5 elements) get rated, the entire database is carried back to EC in order to be processed through the upper levels of the hierarchies and get the final rating in the prioritization process. Excel plays two roles in this modeling and analysis process:

- It acts as an interface between the ABS Cube budget data and the EC which we perform the multi attribute decision analysis.
- It helps overcome the inconsistency/inaccuracy stemming from the issue of dealing with the “joint” type of work packages. More clearly stated, the joint work packages typically fall under two or more business lines and treating the “joint” activities as the 6th line of business creates conflict in terms of the mathematical computations. When a work package is counted more than once because of the fact that it serves more than one business line/process, then it gets a rating more than once. This creates a bias on the side of the joint work package against those that fall under one business category. This bias will result in an error not just in the ranking but in the overall rating of all the work packages. To eliminate that bias, we do the rating process in Excel, where all the work packages are rated against the criteria for the business line that they serve. Thus, there is more than one rating for each joint work package. However, the data then is normalized for those joint work packages such that if one has been rated say 3 times, then the average of those weights are obtained and carried to the EC model so that their importance is not amplified in the overall analysis.

8.6. APPENDIX F - A SUMMARY OF THE COLUMBIA RIVER SYSTEM, ITS USES, OWNERS AND OPERATORS, AND AGREEMENTS¹⁸

8.6.1. Features

- Predominant river and water system in the Pacific Northwest
- **15th longest river** in North America: 1,214 mi. (1,954 km)
- **6th largest volume of runoff**– drains 219,000 sq. mi. (567,000 sq. km) in **7 Western States**: Washington, Oregon, Idaho, Montana, Wyoming, Nevada, and Utah. In addition Columbia River basin covers 39,500-sq. mi. (102,300 sq. km) in British Columbia of Canada.
- Columbia River originates at Columbia Lake at British Columbia's Rocky Mountains, and flows from Canada into the United States and becomes border between Oregon and Washington and empties into the Pacific Ocean near Astoria, OR.

8.6.2. Flow Capacity

- Seasonally, variation of stream flow ranges from 14,000 cfs (396 m³/s.) to 550,000 cfs (15,575 m³/s.)
- Average annual runoff at its mouth is ~244 billion cu. m. (198 million acre-feet) or average year-round flows of 275,000 cfs (7,787 m³/s)
- ~60% of natural runoff occurs during May, June, and July.

8.6.3. Uses

29 major federal dams, dozens of larger non-federal projects, hundreds of small impoundment projects exist on the river and its tributaries, providing:

- Flood control,
- Irrigation,
- Hydroelectric power generation
- Navigation,
- Fish migration, (salmon, trout etc.)
- Fish and wildlife habitat,
- Recreation benefits, and
- Preservation of Cultural Resources.

Facilities physical assets associated with these functions include:

- Navigation channels and locks;
- Hydroelectric power plants;

¹⁸ Extracted mainly from the document “The Columbia River System- Inside Story”.

- High-voltage power lines and substations;
 - Boat launches;
 - Fish ladders, spillways, downstream bypass and collection facilities, and hatcheries;
 - Irrigation diversions and pumps;
 - Parks, and recreation facilities;
 - Lands that are dedicated to projects;
 - Areas set aside to replace wildlife habitat; and
 - Cultural resources protection areas.
- 6% of water diverted for agriculture: Eastern WA, NE OR, and Southern Idaho depend on this water to grow wheat, corn, potatoes, peas, alfalfa, apples, grapes, etc.
 - Generates 50-60% of the electricity of Pacific Northwest, maximum capacity: 22,500 MW and annual average: 12,000 MW (1998 figures).
 - 465 mi. (765 km) navigation from the Pacific Ocean as far as upstream Richland, Washington, and Lewiston, Idaho.
 - 4 Federal dams on Columbia River (Bonneville, The Dalles, John Day, and McNary) have navigation locks through which boats and barges can pass.
 - 4 other dams on Snake River (Ice Harbor, Lower Monumental, Little Goose, and Lower Granite) also accommodate river traffic.
 - Rivers and lakes in Columbia basin attract boaters, windsurfers, sport anglers, swimmers, hunters, hikers, campers and sightseers.
 - Indian cultures existed ~10,000 ago, European and American influence since 1600-1700s. Federal agencies adopted a Record of Decision in the SOR that acknowledges the long-term preservation of cultural resources.

8.6.4. Agreements/Ownership/Operations/Affiliated Agencies (The Coordinated Columbia River System):

Agreements/Guidelines

Pacific Northwest Coordination Agreement (PNCA):

Most projects are operated under PNCA. 14 federal projects are included in the planning. 5 of them are storage dams (Libby, Hungry Horse, Albeni Falls, Grand Coulee, and Dworshak), and the others run-of-river projects¹⁹ (See the excel spreadsheet) (The ones not operated under PNCA, i.e. 'hydro

¹⁹ Storage reservoirs: Built for flood control due to high seasonal variations, hence to conform to water and energy demand uses. Top priority is to shape heavy spring and summer snowmelt runoffs to help prevent flooding. Some runoff stored and some released to help salmon migrate into the ocean. Great variations exist between reservoir levels when it's full and when it is down to its operating level. Some storage dams have 25 (82 ft) to 70 m (224 ft) variations in their reservoir level.

independents' and are outside the scope). Aside from the 16 million acre-feet (19.7 million m³) of combined storage of the federal projects, 3 Canadian dams are also included in planning (Mica, Duncan, and Keenleyside) and they add another 20.5 million acre-feet (25.3 million m³) of storage. These 8 projects are the key since they are located in the middle and upper basin to capture runoff for later release to control flood events and augment downstream flows.

Columbia River Treaty

Federal flood control statutes,

Environmental and fish & wildlife statutes

(For a complete listing and discussion see pp. 21-25).

Agencies that collect and analyze data for - water supply forecasts (volume of runoff expected over a given time period) and rate-of-flow forecasts (streamflows):

U.S. Army Corps of Engineers;

U.S. Bureau of Reclamation;

British Columbia Hydro and Power Authority (BC Hydro);

Columbia River Forecasting Service;

National Weather Service's Northwest River Forecast Center;

U.S. Geological Survey;

Natural Resources Conservation Service;

Columbia River Water Management Group; and

Northwest Power Pool

8.6.5. Owners/ Operators and other affiliates

USACE:

- Operates 12 of 14 federal projects in the Columbia Basin
- Shares responsibility with BPA and BC Hydro in determining operation of Columbia River Treaty reservoirs
- Responsible for flood control operations at all reservoirs in the basin (both US and Canada)
- Constructed and maintains navigation channels that accommodates barges, other river traffic
- Provides operations to accommodate irrigators, recreators, and fish and wildlife needs.

Total water storage (capacity) in the Columbia River System: 55 million acre-ft (67.8 billion cf), 30% of average year's runoff (measured at Dalles, OR) – Reservoirs west of Cascade Mountains maintained more naturally maintained than those in the interior NW that holds 2-3 times of its runoff, since most of the precipitation falls as rain as opposed to snow.

Run-of –river projects: Have limited storage capacity; consequently the main purpose:

Give sufficient depth over obstacles to permit barge navigation ;and

Provide hydraulic head for hydropower generation,

Water levels vary only 3-5 ft during normal operations

U.S. Bureau of Reclamation:

- Operates 2 dams (Grand Coulee and Hungry Horse), and numerous water resource projects in the Upper Snake River Basin.

Irrigation Districts:

- Also operate and maintain water resource facilities such as storage and diversion dams, pumping plants, canal and pipeline distribution systems.
- Some privately owned, some operated under contract to Reclamation

Utilities:

- Also own and operate dams and generating projects
- Three types:
 - Public utility districts (own 5 mid-Columbia dams: Wells, Rocky Reach, Rock Island, Wanapum, and Priest rapids)
 - Municipal utilities
 - Investor-owned utility companies
- They plan and coordinate with the Fed agencies.

British Columbia Hydro and Power Authority (BC Hydro):

- Canadian member of reservoir management team
- Controls the upper Columbia River projects (large-scale projects containing >1/3rd of storage on the system and operated under Columbia River Treaty for the joint benefit of Canada and US.

Bonneville Power Administration (BPA):

- Does not own dams
- Built and operates 16,000 mi (25,000 km) of electric transmission lines
- Markets power generated at the federal dams and some other generating plants to wholesale power customers, public and private utilities and direct service industries
- Pays for Federal Hydro System on behalf of Corps and Reclamation²⁰
- Is required to fund fish and wildlife mitigation programs (under 1980 Northwest Power Planning and Conservation Act)

²⁰ For power purposes, the USACE, Bureau of Reclamation and BPA are collectively referred to as **Federal Columbia River Power System (FCRPS)**

Other agencies:

Act as advisory and regulatory capacity

Federal Energy Regulatory Commission (FERC)

U.S. Dept. of State

NMFS;

USFWS;

US EPA; and

State water resource agencies²¹

²¹ Enforce water rights laws and control how much water is withdrawn from streams and reservoirs for irrigation, municipal and industrial water supply, and other purposes

Table 21 - Columbia River System Dams

Name of dam	Type	Location	average annual discharge (cfs)	storage amount (acre-ft)	power generation capacity (KW)	ownership	agency	in service since	uses	nav. locks	coordinated under
Albeni Falls	Storage	Pend Oreille River, Idaho	25,340	1,160,000	2,000	federal	USACE	1955	power, recreation, navigation, flood control, fish & wildlife	Y	PNCA
Bonneville	Run-of-river	Columbia River, OR/WA	183,300	n/a	1,050,000	federal	USACE	1938	power, recreation, navigation, fish & wildlife	Y	PNCA
Chief Joseph	Run-of-river	Columbia River, WA	108,000	n/a	2,069,000	federal	USACE	1955	power, recreation, navigation, irrigation, fish & wildlife	Y	PNCA
Dworshak	Storage	Clearwater River, Idaho	5,820	2,020,000	400,000	federal	USACE	1973	power, recreation, flood control, irrigation, fish & wildlife	N	PNCA
Grand Coulee	Storage	Columbia River, WA	107,700	5,190,000	6,494,000	federal	Bureau of Reclamation	1941	power, recreation, navigation, flood control, irrigation, fish & wildlife	Y	PNCA
Hungry Horse	Storage	Flathead River, Montana	3,517	3,160,000	285,000	federal	Bureau of Reclamation	1952	power, recreation, flood control, irrigation, fish & wildlife	N	PNCA
Ice Harbor	Run-of-river	Snake River, WA	47,680	n/a	603,000	federal	USACE	1961	power, recreation, navigation, irrigation, fish & wildlife	Y	PNCA
John Day	Run-of-river	Columbia River, WA/OR	172,400	n/a	2,160,000	federal	USACE	1968	power, recreation, navigation, flood control, irrigation, fish & wildlife	Y	PNCA
Libby	Storage	Kootenai River, Montana	11,350	4,980,000	525,000	federal	USACE	1975	power, recreation, flood control, fish & wildlife	N	PNCA
Little Goose	Run-of-river	Snake River, WA	47,230	n/a	810,000	federal	USACE	1970	power, recreation, navigation, fish & wildlife	Y	PNCA
Lower Granite	Run-of-river	Snake River, WA	49,680	n/a	810,000	federal	USACE	1975	power, recreation, navigation, irrigation, fish & wildlife	Y	PNCA
Lower Mounmental	Run-of-river	Snake River, WA	47,670	n/a	810,000	federal	USACE	1969	power, recreation, navigation, irrigation, fish & wildlife	Y	PNCA
McNary	Run-of-river	Columbia River, OR/WA	169,800	n/a	980,000	federal	USACE	1953	power, recreation, navigation, irrigation, fish & wildlife	Y	PNCA
The Dalles	Run-of-river	Columbia River, OR/WA	177,900	n/a	1,780,000	federal	USACE	1957	power, recreation, navigation, fish & wildlife	Y	PNCA

8.7. APPENDIX G - ACRONYMS and ABBREVIATIONS

ABS	Automated Budget System
AHP	Analytic Hierarchy Process
BC	British Columbia Hydro
BPA	Bonneville Power Administration
CISP	Critical Infrastructure Security Projects
EC	Expert Choice/Engineering Circular
EIS	Environmental Impact Study
F&CSDR	Flood and Coastal Storm Damage Reduction
FERC	Federal Energy Regulatory Commission
FY	Fiscal Year
GNP	Generator Nameplate Capacity
GWU	The George Washington University
HQ	Headquarters
IWR	Institute for Water Resources
KW	Kilo Watts
MW	Mega Watt
NW	North West
NWD	North West Division
O&M	Operations & Maintenance
PMCL	Planning and Management Consultants, Limited
PNCA	Pacific Northwest Coordination Agreement
RAM-D	Risk Assessment Methodology-Dams
RUDA	Recreation Unit Day Availability
USACE	United States Army Corps of Engineers
WP	Work Package