

# *Work Categories and Elements with Definitions*

## *Work Category*

## *Work Element # Work Element*

## *Description*

### *BPA Internal Operations*

1	BPA Environmental Compliance - External	Covers any work contracted out by KEC, the Environmental Compliance arm of BPA.
2	BPA Environmental Compliance - Internal	Covers any work completed internally by KEC, the Environmental Compliance arm of BPA.
3	Computer Purchase	Covers any direct purchase of computers external to a contract.
4	Land Audit	Covers the hazardous material/Phase 1 work done by Fred Walasavage's group usually in support of land acquisitions.
5	Land Purchase	Covers the direct wiring of money to escrow associated with real estate transactions.
6	TBL Work	Any work the Transmission Business Line provides in support of a Fish and Wildlife project. May include appraisal review, appraisals, help in development of an MOA, real estate negotiations, and GIS work.

### *Data Management*

163 See RM&E and Data Management

### *Environmental Compliance*

10	Conduct Hazardous Materials Survey	Any work done by a contractor related to hazardous material land audits or Phase 1 review.
11	Obtain Cultural Resource Compliance	Any archeological work done by a contractor related to cultural resource surveys. May include either on the ground or literature surveys. Currently does not include work contracted out through KEC.
12	Obtain ESA Compliance	Refers to work done by the contractor in support of complying with ESA regulations developed by NOAAF. NOAAF regulations cover threatened and endangered Anadromous fish. Covers both use of the programmatic HIP BO and the approach of developing an individual BA.
14	Obtain Permits	Covers any work done by the contractor related to obtaining state, local, and federal permits.
15	Prepare NEPA Checklist	Covers all of the contractor's work in support of the completion of the NEPA checklist.
165	Obtain Environmental Compliance	

### *Habitat / Passage O&M*

16	Law Enforcement	
18	Maintain Terrestrial Structure	
19	Maintain Instream Structure	
22	Maintain Vegetation	The upkeep of vegetation that may include the application of herbicides, mowing, watering, predator exclusion, etc. Does not include fencing (see WE: Install Fence). This work element may have some overlap with remove vegetation.
24	Operate Facility	

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### *Habitat Improvement*

26	Investigate Trespassing	Use this work element to cover the effort involved in establishing what, if any, trespassing is occurring (human or wildlife). Use the corresponding WE for the actions taken to prevent trespassing (e.g., Install Fence). This does not include actions such as law enforcement.
27	Remove Debris	Any work to remove items from a stream or land that are undesirable, such as trash, etc. Does not include the removal of a diversion.
28	Trap and Haul	Work to capture fish and transport for the purposes of assisting migration.
29	Add Roughness/LWD	Work that adds natural materials in-stream to create habitat features or to improve channel morphology. Includes J-hooks, barbs, vortex weirs, and LWD. Can include work to stabilize or maintain a streambank, such as riprap. If structures are being added primarily to overcome a fish passage barrier, use work element # 81
30	Realign Channel	Any active attempt to directly add sinuosity, meanders, or otherwise to return stream channel to a natural state. Involves excavation of stream channel. If work is solely to add features that change hydraulic conditions that may eventually cause channel realignment, then use work element # 29
31	Conduct Controlled Burn	Use of fire to improve habitat.
33	Decommission Road	Covers any work to make a road unusable, such as a berm or removal of the road altogether
34	Develop Alternative Water Source	Includes watering troughs, spring development...
35	Develop Pond	Build a pond, most frequently for the purpose of benefiting resident fish.
36	Develop Terrestrial Habitat Features	Install nesting boxes, snags, guzzlers, etc.
37	Excavate Spawning Channel	Most often associated with Chum Salmon, is work to improve a channel by digging, dredging, etc. May or may not be a channel used historically. May also include work to add material conducive to spawning activities.
38	Improve Road	Work to correct road conditions that impact stream quality
39	Install Cattle Guard	Work to install various types of cattle guards. This activity may include the project design. Or, project design for fencing may be in the xyz work element, if the project is extremely large.
40	Install Fence	Work to install various types of fence and/or gates. This activity may include the project design. Or, if the project is extremely large, then design of the fencing may be in another work element. Can also include water gaps for livestock access. If the fence were for a riparian enclosure, then the protection metrics are covered under the work element by which the land rights were legally secured (i.e., #92, #96, or #97)
42	Install Tidegate	Usually refers to the installation of a modified tidegate. Could either be replacement of a pre-existing tidegate or the installation of a new one. It is anticipated that project design work will be captured in a separate work element, due to the magnitude of the design task. Use "Remove/Breach Dike" if the tidegate is only temporary. O+M is usually required but is often not paid for by BPA.
43	Install Water Control Structure	Usually refers to the creation of a wetland. Often requires O+M once the structure is in place, which may or may not be paid for by BPA.
44	Nutrient Enhancement	May involve the addition of either carcasses or direct nutrient introduction via a fertilizer.
45	Nutrient Reduction	Usually designed to reduce algal blooms.

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47	Plant Vegetation	Install plants for the purposes of either erosion control or shading. May be riparian or upland in nature. Often requires O+M.
48	Practice No-till Seeding (BMP)	Includes no-till or direct seed for any agricultural programs designed to reduce erosion or sedimentation.
49	Reconnect Channel	Usually involves removal of material in order to re-connect channels to historical configuration.
50	Remove / Breach Dike	Any operation to remove part or all of a dike. Also may include the installation of a cross-dike.
51	Remove Animals	Work to remove an undesirable animal species for an area. Is often work to remove exotic species of fish. May be work to remove undesirable native species of animal.
52	Remove Mine Tailings	Work to remove remnant landscape effects from old mining operations. Could be terrestrial or aquatic in nature.
53	Remove vegetation	Work to remove an undesirable plant species for an area. Is often work to remove exotic or non-native species of plants. May also be work to remove undesirable native plant species.
55	Upland Erosion and Sedimentation Control	
56	Acclimate Juvenile Fish	Describes work only to accumulate fish. If your work includes fish-producing activities other than accumulation, use "Produce Fish".
57	Develop Hatchery Annual Operations Plan	Describes work to develop a hatchery operations plan.
58	Develop HGMP	Hatchery Genetic Management Plan. Is required by Council for all production projects.
59	Incubate Eggs	Describes work only to incubate eggs. If work includes fish-producing activities other than incubation, use work element # 63, "Rear Fish."
60	Maintain Fish Health / Conduct Pathology Sampling	See Peter.
61	Maintain Hatchery	Includes all maintainance activities associated with a hatchery including buildings, grounds, raceways, water treatment, equipment, vehicles, etc. This work element isintended to include all things not specifically related to fish. For example, work to produce fish would be under "Produce Fish" or "Incubate Eggs". Maintain hatchery can also be used for efforts such as accumulation ponds, net pens, etc. that are not full-fledged hatcheries, but are part of the process.
63	Rear Fish	
64	Spawn Fish	
65	Transport Fish	
66	Trap/Collect/Hold Fish - Hatchery	
67	Install Bridge	Work to install a bridge often for the purpose of improved passage and/or flow. Can be associated with removing a dike, or part of a fencing project to route cattle. For a bridge, the design is typically called out in a separate work element when it is of a large magnitude. See "Prepare Implementation Design and Budget".

## *Hatchery O&M*

## *In-stream Passage Improvement*

***Work Category***

***Work Element # Work Element***

***Description***

68	Install Culvert	Work to install or replace a culvert often for the purpose of improved passage and/or flow. In the event multiple culverts are used at the same location or passage obstacle, the work should be covered under a single work element. Multiple culverts in different locations should use separate work elements. For a culvert, the design is typically called out in a separate work element when it is of a large magnitude. See "Prepare Implementation Design and Budget".
69	Install Diversion Fish Screen	Work to install or replace a fish screen associated with a diversion. Often of a large scale, screens of this type usually require an active cleaning device. For work to screen a pump, use "Install Pump Screen".
70	Install Fish Trap/Monitoring Weir	Installation of a weir, often with a trap, that is used to monitor fish passage or to collect juvenile or adult fish for biological sampling, trap and haul, hatchery broodstock, etc. This describes the installation of relatively permanent traps, as well as the purchase and deployment of relatively mobile traps like rotary screw smolt traps.
72	Install Headgate	
74	Install Infiltration Gallery	
76	Install Jump Pools	
77	Install Ladders	
78	Install Pump	
79	Install Pump Fish Screen	
80	Install Siphon	
81	Install Weir	Work to install weir-like structures that are intended primarily to overcome a fish passage barrier (e.g., some vortex weirs). Use work element # 70 for weirs installed primarily to restrict fish passage for the purpose of monitoring or collecting fish (e.g., picket weirs).
82	Install Well	
84	Remove Diversion	Work that removes a fish passage barrier associated with an irrigation diversion, including push-up dams.
85	Remove/Modify Dam	Any work that facilitates fish passage over a natural (e.g., beaver) or human-made dam by breaching or removal. If used in conjunction with other fish passage structures like jump pools, ladders, or passage weirs, count the metrics under this work element.
86	Water Exchange	

***Land Acquisition / Conservation Easement***

- 87 Conduct HEP
- 88 Conduct Land Survey
- 89 Define Easement Terms and Conditions
- 90 Develop Capital Package
- 91 Identify Minimum Habitat Units
- 92 Lease Land
- 93 Perform Appraisal
- 94 Perform Title Search

***Work Category***

***Work Element # Work Element***

***Description***

*Other*

*Planning and Coordination*

- 95 Provide Legal Description
- 96 Purchase Easement
- 97 Purchase Fee Title Land

98 Other

- 99 Conduct Community Outreach
- 100 Construction Management

- 101 Create Facility Operation Manual
- 102 Develop Action Plan

103 Develop Annual Maintenance Plan (Facilities / Grounds)

104 Develop Bid Package

105 Develop Construction Plan

106 Develop Fish Passage Operations Plan

107 Develop Implementation Plan

108 Develop Management Plan

109 Develop MOA

110 Develop Monitoring and Evaluation Plan

111 Develop Recovery Plan

112 Develop Subbasin Plan

113 Fund or sponsor Symposia / Workshop / Meeting

114 Identify and Select Projects

115 Inventory/Assess Habitat Conditions

116 Inventory/Assess Passage Impediments

117 Inventory/Assess Watershed

118 Landowner Coordination

119 Manage Projects

120 Prepare Feasibility Study

Oversight of construction activities. Usually only used on larger construction activities where the construction and construction management are split out. Also includes bidding the work, supporting land negotiations, .... What else?

The development of a manual to support the O and M of a facility post-construction.

Usually a large, regionally coordinated plan focused on a specific type of activity in a specific area such as habitat restoration in the estuary. Often in association with the FCRPS Biological Opinion.

A plan developed to coordinate the operation of multiple passage facilities often operated by multiple parties.

Covers the development of Wildlife Management Plans, Land -use Management Plans,

Memorandum of Agreement - often associated with land acquisitions, construction easements.

Covers work by the contractor to identify, prioritize, asses, and ultimately select projects. Often associated with Model Watersheds, or habitat restoration programs that coordinate multiple projects within a larger umbrella project.

Covers work by the contractor to manage on the ground efforts, or to manage subcontractors associated with the project.

Preliminary study to determine the feasibility of a project. Often at a more conceptual stage than - Prepare Implementation Design and Budget

*Work Category*

*Work Element # Work Element*

*Description*

*Predator Control*

121 Prepare Implementation Design and Budget

122 Provide Technical Review

123 Regional Coordination

124 Administer Registration Sites

125 Coordinate Payments

126 Implement Removal Fisheries

*Reporting*

128 Prepare / Submit Journal Article

129 Prepare Annual Property Inventory Report

130 Prepare Final / Close-out Report

131 Prepare Financial Estimates

132 Produce Annual Report

133 Produce BiOp / Metrics Report

136 Produce Research/Evaluation Findings Report

The development of technical details, engineering plans, etc and their associated costs prior to implementation or construction. Usually used on larger construction or habitat restoration projects.

These reports primarily present findings from analysis and evaluation, including program reviews. "Analysis" typically involves hypothesis testing and/or tests of statistical significance in differences across groups/treatments or time that directly support decisions regarding resource or program/project management. This contrasts with reports that primarily present raw and summary data (including means, variances, and trends), which are covered by work element # 132 (annual progress report) and/or #141 (other regular reports)

139 Produce NEPA / ESA Report

141 Produce Progress/Milestone Report

These include daily logs, monthly and quarterly reports, milestone reports, and any other regular reports of progress other than annual (see work element # 132)

*RM & E and Data Management*

156 Develop RM&E Methods and Designs

Work that develops and tests conceptual, quantitative, and technological tools for application in research, monitoring, and/or evaluation projects. Includes statistical and sampling designs, conceptual models, tagging and other equipment, software development, and generally any other work that prepares for the implementation of actual data collection/generation. Does not apply to producing an RM&E plan itself (reporting), although it does include the analyses required to write the plan. Also does not apply to models that are developed primarily to analyze and interpret existing data.

**Work Category****Work Element # Work Element****Description**

157	Collect/Generate Field and Lab Data	Work to collect, create, generate, or capture source data. Includes entering data into a computer spreadsheet/database, preparing metadata, and quality assurance/quality control processes. Also includes taking samples for later analysis (e.g., genetic and macroinvertebrate samples) and any preparations for collecting data if not covered by another work element. Also includes generating secondary/derived data when those data are stored in a database for access and use by other parties for analysis like primary data. Capturing data includes entering data into a computer from historical records, digitizing images, and other methods for converting information to digital format.
158	Mark/Tag Animals	These are activities integral to placing marks/tags on animals. Recognizing that this is a subset of data collection/generation, it has been separated to facilitate tracking the sometimes-significant costs associated with fish marking/tagging. This work element includes capture and bio-sampling activities when they support a primary purpose of placing the mark/tag. It also includes monitoring the effects of the mark/tag on the animals (e.g., tagging mortality), the mark/tag retention/detectability, other QA/QC for the mark/tag data, and creation of associated metadata. It does not include capture activities when the primary purpose is to collect biological data and does not include subsequent mark/tag observations and analysis.
159	Submit/Acquire Data	This work is for transferring data from one spreadsheet/database to another, typically from a field or lab site to a higher-level (e.g., regional or national) database. It includes both the act of sending and receiving, hardware/software needs for automated uploads/downloads, the development and application of data exchange protocols (including QA/QC), and any formatting and documentation required on the sending end to make the transfer. It does not include initial data entry or manipulating (e.g., reformatting) data at the receiving end. This work element explicitly reinforces the importance of transferring data to databases where they will be maintained and accessible, but does not anticipate that this activity will usually require significant effort or costs.
160	Manage/Maintain Database	Any work that maintains or improves the security, quality, accessibility, or utility of data in a structured database. Includes manipulation of the data to conform to data standards, database hardware/software maintenance and improvements, QA/QC, building and maintaining connectivity with interrelated applications (e.g., GIS, web portals), creation of metadata/documentation and user-support materials, archival, etc. This applies both to larger regional databases and to local databases (can include spreadsheets) maintained on desktops for individual projects. Does not include generation of data queries or reports.
161	Disseminate Data	All work that makes data available to users, including maps, data query systems, internet data distribution, and development of online data display tools. Also includes ad hoc data summaries and reports and regular data reports, except those covered directly by other reporting work elements.
162	Analyze/Interpret Data	These activities apply analytical tools to render meaning from data for making better management decisions. They go beyond data summaries. They often involve tests of statistical significance and may include modeling, indices, and synthesis. They typically culminate in resource management recommendations presented in a report of research/evaluation findings.

***Work Category***                      ***Work Element # Work Element***                      ***Description***

*Water Conservation*

- 148 Install Flow Measuring Device
- 149 Install Pipeline
- 150 Install Sprinkler
- 151 Line Diversion Ditch

*Water Rights Acquisition / Lease*

- 152 Complete Water Entity Checklist
- 153 Lease Water Right
- 154 Negotiate Water Right Transaction
- 155 Purchase Water Right
- 164 Transfer Conserved Water In Stream