

**River Corridor End State and Final Closure Project Update and SAP Refinement  
Workshop for Inter-Area Riparian and Near-Shore Assessment  
(June 12 and 13, 2006)**

**RISK INTEGRATION**

Jeff Lerch presented a briefing on the Washington Closure Hanford (WCH) long-term stewardship plan and integration strategy document status. WCH is finishing an annotated outline of the draft long term stewardship document. "Long-term" defined by WCH pertains to the extent of the contract. It was acknowledged that the integration strategy document will address ecological risk assessments underway currently and will consider impacts from the 200 Area and from groundwater.

The River Corridor Baseline Risk Assessment (RCBRA) report was discussed. In answer to whether this milestone document is primary or secondary, it was clarified that the RCBRA risk assessment is a primary document. A conceptual model diagram was presented showing various source terms at the Hanford Site and it was noted that this schematic is not to scale. It was noted that the different schedules and scope for the 100/300 Area Component of the RCBRA and the Inter-Areas assessment are the types of issues that would be good for the integration strategy document to address. The Inter-Areas assessment is more inclusive than the title implies, it is also designed to address data gaps for the 100-N and 100-B/C Areas. However, it does not address open land between the reactors and beyond the shore areas (which is under the orphan sites project) or the river beyond the near-shore along the Hanford Site (south and west shorelines.). In response, WCH recognized that, ultimately, people want to see a holistic approach to the whole Hanford site. Given Hanford's size and complexity, this has to be managed in pieces that are manageable. The assessments are designed so that each piece can stand on its own merit and can be evaluated relative to the other pieces. It must be kept in mind that as WCH is evaluating risk, site cleanup is continuing in tandem. An action item was for John Sands (DOE) to create a brief (1-2 slide) presentation on DOE's plans for integration in the near future.

**100/300 AREA COMPONENT OF THE RCBRA SCHEDULE UPDATE**

Important dates related to the RCBRA report and associated meetings were presented by Randy Ryti. These dates include the following meetings:

- Jul (12-13th): Overview & introduction, Part A
- Jul (19th): Overview & introduction, Part B
- Aug (16th): Human health and ecological risk assessment methodology - general
- Sep (20th): Data summary
- Oct (18th): Human health and ecological risk assessment methodology – specific, focused on data
- Nov (15th): Data teleconference
- Dec (13th): Methodology teleconference

- Jan 2007 (17th): Complete data set and Guided Interactive Statistical Decision Tools (GiSdT) interface
- Mar 2007 (21st): Initial conclusions workshop
- May 2007 (15th): Report overview workshop - conclusions and recommendations

Additional project dates were provided as detailed in the presentation (available at [http://www.washingtonclosure.com/projects/endstate/risk\\_library.html](http://www.washingtonclosure.com/projects/endstate/risk_library.html))

With regard to the 100/300 RCBRA and Inter-Areas assessment, it was observed that two separate risk assessment reports will be the result because it will not be possible to complete analysis of Inter-Areas data to meet the milestone for the 100/300 Area Component. It was asked if the milestone could be moved. It would be a year and half departure from the June 2007 RCBRA risk assessment report milestone if Inter-Areas results were included. Neptune and Company, Inc. is tasked with two separate efforts – 100/300 RCBRA and Inter Areas. These are proceeding in parallel. A suggested solution to merging the efforts was to have feedback with Trustees as data from both projects comes in. That way interim reports can be produced as data are received and the ultimate analysis as to what data mean can be wrapped into one final risk assessment report.

#### RCBRA DATA STATUS

The status of data collection was presented by Jackie Queen (WCH), and Brett Tiller (Environmental Assessment Services) provided additional information. Brett indicated that two measures, kingbirds and amphibians, were not available to the extent that was anticipated. The high river flows washed tadpoles out of traditional rearing areas (e.g., sloughs) and the kingbird nests were experiencing severe predation by ravens. Regarding the latter, 30 nests have been observed with hatching rate recorded. But fledging success was not recorded in most cases due to predation. Participants inquired about contingencies for both lines of evidence. It was noted that amphibians are being evaluated with alternate lines of evidence (e.g., FETAX toxicity tests) and that for kingbirds, additional nests were being sought to gather enough material (fledglings) for analyses of contaminants of potential ecological concern (COPECs). While there were no issues with collecting adequate numbers of kingbirds at the reference site, it was considered unlikely that more nests would be found elsewhere along the river corridor for sampling this year. Similarly, for amphibians reference site animals could be collected (quarry at Vernita holds water and is not subject to scouring) but collection of juveniles elsewhere in the Hanford Reach study areas seems unlikely this season. Given the opportunity for the Inter-Areas Assessment (see below) to address supplemental data needs for the 100/300 Area RCBRA, kingbird and amphibian surveys and collection were proposed for all areas along the Hanford Reach.

Several discussions followed topics associated with the 100/300 Area Component SAP approval letter from the regulatory agencies as described below.

Uncertainty – In a follow-on to the data status presentation, it was observed that the project did not get all the data that were targeted because of environmental conditions such as the river being as high this year as it's been in the last decade. Considering this has been an unusual year with respect to water flow, it was asked if river data would be representative; specific issues with dilution were raised and it was confirmed that dilution could affect measures such as aquifer tubes. In response to queries about sampling in the fall when water levels are lower, it was noted that horizontal aquifer tubes were placed in November and that they were sampled beginning in December and January when water was low. Sampling did, however, extend into periods with higher water levels (up to about 120k cfs). It was asked how variability like high water can be accounted with only one year of sampling, in response it was noted that we have existing data spanning several decades of sampling for some parameters (e.g., Columbia River Component [CRC] sediment data cover the last 20 years).

Trustees were still concerned about confidence with regard to variability and stated that one way to address this is to do more than one round of sampling. Neptune clarified that they are writing the risk assessment report based on the assumption that the results of the current sampling efforts will supply the RCBRA data necessary to write the report. It was noted that the CRC data, the 100-NR-2 data and the B/C Pilot data exist and, as a segue to Inter-Areas, there is follow up sampling planned for the 100-B/C Pilot and the 100-NR-2 assessment.

Trustees noted that it makes more sense to plan a multi-year study than to cobble together perhaps unrelated studies in different areas at different times. In response, it was observed that the project will not lump disparate data, only use other data to compare to RCBRA data. This response raised concerns about how incorporation of "other" data such as 100-NR-2 and 100-B/C Pilot will take place. The understanding is that all risk assessment projects are supposed to fit together. It was clarified that the RCBRA will identify gaps in existing data sets and use what it can. Looking at data from all sources provides an indication of variability.

With further regard to uncertainty, it was noted that the project has historical data to gauge where we are, we will probably never have the optimal sample sizes, and variability is important in considering sample sizes. If we can see the variability we'll have a sense of whether data are comparable. It was noted that time series data will help separate/differentiate causes of variability. As an example, amphibians were present around the Vernita reference site but not near the waste sites once the river level came up. Is that a finding? Or is it because there are unique aspects of the reference site having the capacity to not flush through with high river flows? In response it was noted that Pacific Northwest National Laboratory looked at amphibian presence/absence in waste site areas and that they were present in waste site areas in low flow years. From the beginning, multiple lines of evidence were emphasized because not all lines will come to fruition (e.g., amphibians assessed through toxicity testing as well). Considering tissues in general, there are some biological tissues that are collected every year and we have the long-term continuity to identify how anomalous this year is.

Reference Sites: Ecology noted that they are within weeks of issuing a statement of work to have reference sites evaluated which would involve considering possibilities for reference sites that are alternatives to current locations. One question that will be asked is if current reference areas on the Hanford Site meet EPA criteria. There are perceived problems with current sites: that they're on the Hanford Site and within realm of contaminant influence. Also, does the degree of disturbance (e.g., borrow pits) compromise reference site integrity?

The difficulty in obtaining adequate reference sites was acknowledged and involves controlling for multiple variables or stressors (e.g., disturbed but not contaminated, contaminated but not disturbed, etc.). A reference site outside of influence of contaminants is of course desired. It was suggested to control for variables by identifying several sites, each one controlling for a particular variable, and evaluating them as a whole.

It was suggested that the Bureau of Reclamation has applicable data for reference sites (Jim Curry – HAB – Mattawa given as a contact), though much of the data is from pre-Hanford days. Questions were asked about what is being done at Lake Roosevelt Dam for reference site and it was noted that Art Johnson at Ecology wrote a paper using sites in Canada. Regarding Canada, there are issues with cross-border sampling.

The Yakama firing range was also suggested as a potential reference site. There were some issues with chemical warfare agents that may preclude its suitability as a reference site. Additional issues may affect location of reference site; e.g., there are areas within the range where Yakamas perform cultural food gathering.

## DATABASE DEMO

It was asked if the 100/300 RCBRA database is the data that everyone will be working from. And whether it was static or if it interfaced with fate and transport models? In response, no, it's static. But one can build an interface with such capabilities. How about spatial presentations? Specifically, can you go to a map and get an inventory of what COPECs are present? Neptune cited an example (Umatilla) where this was being done. So the GiSdT interface does have capabilities for mapping using specialized code, and Neptune can put ArcView shape files in R (code) for spatial presentations. It was noted that data qualifiers are included in the database and that one can download the data into Excel if that's preferred. In terms of uncertainty, can you weight the data set? Yes, one can assign confidence to a value and evaluate the data in that respect.

## CUMULATIVE RISK

In the discussion of the EPA framework document on cumulative risk, it was noted that the EPA definition is different from (or does not capture) multiple spatial subparts. It was also noted that it seemed like the presenters were getting from cumulative to integrated risk and that the two shouldn't be confused. In considering cumulative risk, it was noted that the 200 Areas should be added as well. Also consider historical

contamination prior to federal occupation. The question was raised whether WCH was intending to exclude the Central Plateau from cumulative risk consideration. WCH responded that they're looking at emerging contamination at the river; e.g., if the iodine plume reaches/affects the river under current conditions, it will be addressed.

How can you evaluate cumulative risk if you do not account for future conditions? Future conditions must be addressed in order to make proper cleanup decisions. It is important to note, however, that future fate and transport is not part of WCH's work scope. Groundwater plumes coming from the 200 Area belong to Fluor Hanford. It was suggested that Fluor Hanford is not considering the river at all, just current conditions. It was further clarified, however, that future 200 Area impacts to the river are being dealt with by groundwater operable units and an example was given of projecting human health and ecological risks from constituents in groundwater (for 200-ZP-1) to the hyporheic zone and surface water of the Columbia River. It was further noted that John Price (Ecology) and Larry Gadbois (EPA) asked Department of Energy upper-level managers about interaction and scope because they were getting mixed messages from different DOE project managers. They noted that they need to follow up with the DOE high-level managers.

## INTER-AREAS

The schedule for the Inter-Areas assessment was presented and a recommendation was made to move the SAP comment resolution workshop to Sept 19<sup>th</sup> (from the 18<sup>th</sup>) to coordinate with the RCBRA meeting on the 20<sup>th</sup> of September to make it easier for attending both workshops. The revised meeting schedule is:

- June 1&2, SAP refinement workshop #1
- Draft sampling plan revisions
- July 12&13, SAP refinement workshop #2
  - Sampling plan revisions
  - WCH SAP refinement internal revisions
- July 31-Sep 13, DOE and public 45-day review
- Sept 19, SAP comment resolution workshop

In a discussion of measures, the sculpin histopathology line of evidence was appreciated as good observational science, but caveated that it is necessary to carefully review who is doing that kind of work; specifically, WCH should get a "blind" sample submitted and should develop a QA/QC program for this kind of work.

In a discussion of biological resources, not all participants realized that there are heron rookeries in the Hanford Reach. The young that fall from the nests could represent opportunistic sampling of these unfortunate animals. Brett Tiller (EAS) indicated that there are some existing data for trace metals in heron livers from White Bluffs and that the rejecta were also measured. Brett recalled that it was concluded that heron were foraging upland and Steve Weiss (WCH) recalled another Dick Fitzner (PNNL) study on PCBs in Hanford Reach herons. There was also an anecdotal reference of "hot" water

towers from bird feces where pigeons perched, and of swallows picking up contaminated mud for their nest material.

It was asked why bald eagles were not successful. Tiller mentioned that this question was a key component of the Biological Resources Management Plan and that there were many possible explanations: e.g., human disturbance or raven predation. Eggshells in nests were never observed.

In discussing the scope of the Inter-Areas, it was noted that the 100-N location will be supplemented with a near shore location for sculpin collection, clam tubes and rock baskets. Furthermore, with regard to breaking up the Hanford Reach of the Columbia River into segments, there was a request to number segments consecutively and covering the whole Hanford Site. Additional questions about spatial boundaries of the assessments included the 600 Area sites and it was suggested that a common slide or set of slides be provided on what contractor assesses which spatial part of the scope.

An overview of the database led to the request for a “clickable” map of the data, similar to the capabilities of JMP, where moving the cursor over a data point revealed attributes (e.g., collection data, media sampled) of that point. It was noted that Neptune has examples of such capabilities built into the Guided Interactive Statistical Decision Tools (GiSDT) database, citing the Umatilla Depot project. Given an emphasis of collecting historical data, Trustees encouraged communication between Neptune and Company, Inc. and Ridolfi on the database. It was further noted that CRCIA divided the risk into many segments and color coded it by risk level and this was broken out by trophic levels. The Trustees and others would like something similar with the 100/300 RCBRA database. Lastly, the request was made for an interface exchange between Ridolfi and Neptune considering the overlap with their related efforts.

In discussing the maps and the types of data plotted (data from the B/C Pilot and from the 100/300 Area Component of the RCBRA) it was emphasized that there is an artificial distinction between data based on who collected the data. For example, if there are near-shore data of the highest quality are those evaluated in the risk assessment? Yes, they will be. Participants were interested in the type of data – biota, water, sediment and different data quality – and that it was important to look at time series of data. Considering how to combine data from multiple organizations, it was noted that data may not always be directly comparable because the various studies often used different methods to collect data; for example, clam tissue data resulted from hand-picked clams *in situ* and from clams placed in tubes near contaminant sources.

It was asked if all the plotted seeps have been sampled. Answer is no – but most have been sampled. The basis for the rare plant data circles was inquired into and the explanation was that these are sensitive data and a boundary rather than a point was plotted to afford some protection to the location of the plant (to prevent its getting picked). There was a request to have the segments displayed on the finer scale maps and in response it was confirmed that this will be done.

In a discussion of the existing data plotted on the maps, it was asked if this included all of Dirkes [aquifer tube] data? The Columbia River Component of the data was a preliminary pull and the contents need to be verified. WCH clarified that this pull was an initial effort to have some data to help inform the Inter-Area addendum. It was asked what year for the reds data were displayed on the maps and the exact year was not recollected at the meeting although 1994 was suggested.

Considering contaminant sources, EPA (Larry Gadbois) noted that downstream of Ringold there is an irrigation return with agricultural contaminants. It was also mentioned that there are recent Bureau of Reclamation data for this area and also data on WE10 waste ponds and it was requested to have these noted on the maps. Regarding Energy Northwest, it was noted that Washington Department of Health (WaDOH) collects monitoring data there. These data should have been included. It was clarified that there are “unpublished” data for the areas around Energy Northwest and a point of contact is Lynn Albin of WaDOH. Brett Tiller also has contacts at Energy Northwest.

#### INTER-AREAS DATA PRESENTATION

In showing the plots of the data, it was asked how far back the sediment data go? In response: 20 years. What about the data in segments that are missing? It was clarified that the program used to create box plots, JMP, does not show a box if data are not present. In addressing how distinctions were made for areas, it was clarified that for the CRC project, data outside of reactor areas were used because the 100/300 Area RCBRA was gathering data around the reactors. Considering types of data, for water, it's mainly surface water and few seep or spring data. Not including aquifer tubes etc.

Considering sediments, it was noted that one way to eliminate variability in metal concentrations is to normalize by grain size. This is a good point and it was clarified that for the 100/300 RCBRA a grain size analysis was performed and materials larger than 10 mm were sieved out during the MIS work. Concerning the nitrate plot, was that as N or as  $\text{NO}_3$ ? What is plotted is as N so that would have to be converted to  $\text{NO}_3$ . Concerning the strontium plot, why would the median be less than zero? Background is subtracted from the results, which may show a number that is less than zero. It was noted that strontium units should be pCi/L and pCi/g. Similarly, the uranium slide also has incorrect units. Uranium data were converted to activity (pCi/L and pCi/g).

Regarding the tritium plot, it was inquired if there is a drinking water value for tritium. Yes, 20,000 pCi/L. There are no sediment data for tritium because tritium is not measured in sediment, it's measured in plants and other biological tissues. The historical tritium data will be used in the risk assessments, in addition to new tritium data being collected.

Considering the slide on chromium in sculpin, the question was raised about outliers. Given that they may be related to organs or to size of fish, it was requested to have the size of the fish available to assess confounding factors. For chromium, we know that chromium deposits in organs preferentially. For the 100/300 Area RCBRA, we are

analyzing whole bodies, liver and kidneys. Can we check the body length of the three outliers of the Segment 1 sculpin/chromium data? These were clarified as being all liver data.

In response to the question for why there are so many whitefish samples, it was noted that in the late 1970s, whitefish were chosen as a fish for routine monitoring. CRCIA used whitefish. Whitefish sampling consisted of harvesting filets for cesium and cobalt (for gamma emitters); for strontium-90 the remainder of the fish (eviscerated offal or bones) was analyzed.

## CONTAMINANTS, MEASURES AND ENDPOINTS DISCUSSION

Considering contaminants, it was asked if there are volatile organic chemicals (VOCs) in groundwater. Ecology indicated that there are basically no VOC groundwater plumes in the 100 Area – an exception being trichloroethylene at 100-F. It was asked if technetium-99 was included in the radionuclide suite because there are Tc-99 plumes in some areas. It was suggested that Tc-99 be added to the analytical suite; same for I-129. In a discussion of the predominant Hanford Site contaminants being inorganic chemicals, it was noted that trophic transfer is of less concern relative to organic chemicals. An exception to that was brought up using the example of methyl mercury which can biomagnify. There were questions about measuring mercury in groundwater and there are some Hg data for surface water.

On the endpoints component of the Inter-Area presentation, questions were raised about the receptors and how various receptors would be incorporated in the risk assessment. Spatial presentation of the receptors was requested such as showing where the herons are located on the maps. In response to whether there are heron rookeries in segments 6 and 7, it was clarified that there are but they are more limited here than upriver. In addition, a request was made for labeling the sloughs and an indication of where the kingbirds are located. The observation was that although the BRMaP document is about 10 years old, it provides some of the information requested.

In response to how biological resources will be linked with receptors, it was noted that in ecological risk assessment one looks to see what's there or what could be there. If all we want is a snapshot of current risk, that's fine but it is unclear if that is desired. For example, what would the risk to Woodhouse's toad be if they were to be located in a different spot in the future? Further questions were raised about the assessment policy for current versus future risk. For example, what is risk to a future resident? And just because eagles are not nesting in an area, that doesn't mean that they couldn't. The assessment recognizes this. For example, in the human health exposure scenarios, just because humans are not present at a particular location for a particular lifestyle, a risk assessment on the hypothetical rural residential way of life near a reactor area can still be performed.

Considering fish endpoints, sturgeon were noted as being an important food source and that they have a long residence time; sturgeon should be considered as an assessment

endpoint. While sturgeon have large ranges, their range as adults is confined to the areas between the dams. Alternative fish entities were raised such as squawfish and juvenile pike minnow which can both be found in the Hanford Reach. Trustees asked about microevolutionary adaptations to stress – some fish have adapted to metals in Lake Coeur d’Alene. It would be of interest to measure molecular and cellular endpoints. In response it was noted that the risk assessors are aware of work in this field and will be making full use of the information available from the literature.

The question was raised over where/how biofilms were being evaluated and concern was voiced about what is being done for the periphyton. There was a suggestion to use periphyton as a surrogate for sediment. It was noted that we are assessing the trophic level above biofilms by analyzing contaminant burdens in herbivorous/omnivorous shredders and scrapers (aquatic invertebrates) with the expectation that contaminants in biofilms (including periphyton) would be integrated in the invertebrates consuming biofilms. Contaminants have a greater propensity to enter invertebrates than micro/macrophytes. Consequently, assessment of invertebrates encompasses exposure associated with biofilms and periphyton.

Questions were asked about the toxicity testing results and when those are going to be discussed. The answer is not today but will be during future meetings. There were also questions about bioavailability and a recollection of previous disagreements in uptake parameters. In response it was noted that WCH is collecting empirical uptake data (abiotic and biotic media) and is thus less reliant on non-site specific uptake relationships. Issues of bioavailability were raised such as questions about pocket wetlands and potential anaerobic (e.g., sulfide) zones. In response it was noted that the Columbia River is a predominantly oxidizing environment and that even the groundwater is fairly oxidic considering the oligotrophic nature and flowing/mixing characteristics of the river.

There was a suggestion to decide on the critical endpoints and get data to validate the models. An example of the great blue heron was given and it was noted that these birds can be observed foraging all over the Hanford Site. There were questions for how a few samples can be used to validate a model, citing concerns about beta error. EPA stressed that the assessment will employ multiple lines of evidence. This led into a discussion on the far ranging species, and some participants noted that this was the first they heard that far-ranging species are included. There was a desire to have field data to corroborate modeled exposure to far-ranging species such as herons.

## LOCATION DISCUSSION

The meeting concluded with discussion on the sample locations for the Inter-Areas assessment. Trustees asked about reconnaissance efforts in areas upstream of Priest Rapids Dam, below Wanapum Dam, and Brett said that Pacific Northwest National Laboratory has done work up there including collecting bass and other organisms. There was a suggestion that the USGS should be contacted for considering areas upstream of Priest Rapids Dam. A proposal was presented to the group for having the Inter-Areas

reference site upstream of Priest Rapids Dam. There was a consensus that this would be feasible.

There was a request to correct the summary of segments slide by adding a slough to the Hanford Townsite area and it was suggested that Tc-99 be added to the analytical list for that area. A general comment was raised for converting or augmenting nomenclature of segments with information on the river mile being considered.

There was a request to consider having a site below the irrigation return at about river mile 356. This would help quantify non-Hanford Site contaminant impacts on the Columbia River. In order to put the irrigation return area in perspective, it was considered necessary to have a paired site located on the western side of the Columbia River across from the irrigation ditch. There is also another irrigation return in segment 3 that should be considered.

A question was raised about the lack of proposed near shore aquatic results in segment 1 (Vernita). It was recommended that repeated sampling occur this year (under Inter-Areas) for media that vary as a result of water levels. This recommendation will be seriously considered. There were also issues over the lack of proposed data collection between 100 B/C and 100 K, citing concerns that something might be missed; e.g., finding new sources. Tiller discussed a scoping survey along the Columbia using handpicked Asiatic clams. EPA concurred with this approach but suggested possibly using something like native clams. This proposal for performing an inventory of the river seemed to stretch the scope of the Inter-Areas assessment. The existing aquifer tube network was cited as an example of this type of survey already taking place. Taking more of a contaminant fate and transport approach to locating sample stations for the Inter-Areas, it seemed that focusing on sloughs would be a good start. This would address the assumption that sloughs represent sediment depositional areas and that contaminants tend to bind preferentially to fine sediments (compared to more common gravel-cobble areas).

Considering sediment sampling in sloughs, there was a suggestion to do multi-increment sampling instead of the typical grabs. Collecting Inter-Area samples as grabs has appeal for direct comparability to the way in which 100/300 RCBRA data were collected. However, the latter were collected as grabs out of necessity given a limited amount of fine materials. This should not be a problem for sloughs and more representative (i.e., MIS) data are a better justification than collecting something just because that was the way it was done in the past.

On the subject of comparability of data between years, there was concern raised over the dynamic nature of the plumes. The question was asked if it is worthwhile to collect data at other sites with already sampled plumes?

With regard to biological samples, questions were raised about using swallows as an alternative to kingbirds; the disadvantage is that swallows might collect mud from unremediated sites. Swallows might be a protective receptor – could also consider

starlings. It was asked if one could identify what kind of biological data has been collected at each station based on the mapped symbols of biological samples.

Suggestions for sampling locations were solicited from the participants and these are being incorporated into the sample design. Trustees were concerned that by suggesting particular locations, they would in fact be endorsing the whole approach. This did not seem appropriate as they have not had time to digest the approach. It was clarified that input was being sought so that it could be incorporated into the design that would be available for the full 45-day review period. WCH and DOE are not asking for buyoff on the design at this stage.

## Memories

1. Consider variability analysis in the risk assessment
2. Identify/present biological information (e.g., tissues taken) and their results
3. Address adequacy of data in the strategic plan – include criteria
4. Maintain interactive exchanges as work progresses ... then consider a June 2007 progress report
5. Evaluate several reference sites and evaluate plus/minus
6. Contact Jim Curry (Mattawa) to obtain historical pre-Hanford information from the Bureau of Reclamation
7. Ecology: consider review of SAP with new RFP
8. Present/coordinate EIS scope/Groundwater/Vadose Zone activity and path forward during conference calls and future trustee meetings. Action: John Sands.
9. Consider revising the segment map to identify Inter-Areas or in-between areas
10. Consider scheduling the 9/18 and 9/20 meetings on consecutive days
11. Need to define where and when risk assessment from terrestrial area, 600 Area and 200 Area will be covered – consider creating two slides to show this (Action: John Sands, and Ecology)
12. Identify “dirty” irrigation line on the east side of the river – at river mile 357
13. [DONE] Scott Van Verst (WDOH) and Brett Tiller (EAS) to provide a point of contact on obtaining WDOH/Energy Northwest data, then get information to Larry Hulstrom.
14. Reflect 300 Area “Steelhead” spawning area on the map – about exactly at RM345 on Hanford side
15. Consider habitat use map in the final SAP
16. Consider establishing a baseline for Tc-99 and I-129
17. Include sturgeon in the assessment
18. Don will get the Bureau of Reclamation water data to exchange and share
19. Add amphibians for next year
20. Consider swallows or starlings versus kingbirds
21. Add BLM numbers to the islands

**100/300 Area River Corridor Baseline Risk Assessment Status  
and SAP Refinement Workshop  
for the Inter-area Riparian and Near-Shore Assessment**

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