

HNRTC January Meeting Summary
Meeting January 20-22, 2009
Department of Ecology, Richland, WA

JANUARY 20, 2009

Administrative

Attendees (including those participating by telephone) were introduced. See Attachment 1.

Paul Shaffer opened the meeting at 12:45pm by going over administrative items. A quote was recited from President Obama's inaugural speech "Let's restore Science back into its rightful place" to which the trustees all agreed.

The agenda was reviewed and approved. See Attachment 2.

The November 2008 meeting minutes were approved as submitted.

Each action item from the November meeting was reviewed and determined to be either completed or pending. The Action Item list will no longer be maintained and is not part of this summary .

There was discussion of the December Stratus Workshop. Some trustees felt that there was a lot of information presented that most trustees already knew. The Trustees would have appreciated more examples of case studies; pitfalls; data collection; models with real numbers and costs of projects; scenarios answering questions about why a council would choose one tool (e.g., HEA , REA) over another; and building conceptual site models. DOE offered to discuss options with Stratus to have additional workshops.

Jim Hansen, Fish and Wildlife encouraged trustees to attend a 4 ½ day "Basic Training" NRDA course organized by the Fish and Wildlife Service; the next course is to be held in West Virginia this July. Paul asked if others had suggestions or recommendations on worthwhile training offered by other organizations such as National Oceanic and Atmospheric Administration (NOAA) and Washington Department of Fish and Wildlife (WDFW). These might be very helpful for the TWG participants who have not been active on the Council, especially with integrating NRDA and CERCLA.

There has been recurring email issues experienced by a few trustees, with failures on receiving messages sent through the DOE mail server. Al explained that he has discussed the email distribution list situation with some of Lockheed Martin's top IT people in attempts to remedy the email problem. They have been working on the issue for some time and will be conducting testing to resolve the problem. The problem appears to have been resolved by the end of the meeting.

NRDA Budget



The Council was briefed on status of the FY2009 and FY2010 budgets. Al Hawkins stated there was hope that some of Obama's stimulus package would provide additional funding for Hanford cleanup. Actual funding won't be known until Congress passes a stimulus package sometime in the February timeframe. Al also noted there is \$875 of 2008-09 funding that has not yet been that the trustee organizations, in general, have not yet used the funding in their 2008-2009 budgets. The Council discussed use of remaining funds; with one possibility being to hire a facilitator or project coordinator/project manager. Stratus Phase I is not yet complete and contingency funding needs to be held for that work. Phase II should be ready to start as soon as the SOW has been completed and startup funding for Phase II is a high priority. Al stated that there is \$875K unobligated at this time that could be utilized for funding support.

Facilitator/Project Coordinator Discussions

Discussion of hiring a facilitator included the question of where that person would work and how they could be hired; also, what exactly do we want this person to do? Al reminded us that the DOE Manager requires that the Council has the money "in hand" before we get approval to hire a facilitator and to award a contract for Phase II. He also reminded us that FY 2010 dollars will not arrive until a budget is approved by Congress and signed, so we cannot count on funding at the start of 2010.

Paul posed the question whether we want to go forward with the hiring process for a facilitator or especially a project coordinator now, or wait until we know what funds we can expect to have to work with in 2010. Before we can hire a project coordinator, we also need a scope of work for the project coordinator position. The Trustees agreed to move forward on hiring a facilitator who could help keep the Council focused and the meetings productive.

Some objectives that the Council needs to accomplish with a project coordinator were: having a very clear understanding about what we already have accomplished and want to accomplish; finding a coordinator who can lead on working on concept papers so that Technical Working Groups (TWGs) could start working on such items as early restoration plans; and prioritize work so the Council can move forward. Yakama representatives stated that they are hoping funds materialize to help us move forward with a business plan and outline the studies needed.

From his experience, Jim Hanson mentioned that he believes that some projects can already move forward, that sampling analysis and a QA plan will take 6 months to a year just to plan. He reiterated the idea that the trustees need to prioritize and come up with placeholders now for projects. He believes that a project coordinator is needed immediately to assist the group in identifying questions for Stratus, and helping to establish reasonable target dates.

Paul requested that Jay's draft job description (SOW) for a Project Coordinator be revisited and be resent to the trustees electronically. Jay suggested that a quote for the position be requested from YAHS GS, by February 5, 2009.

Phase II Discussions

The group shifted discussion to the Phase II Statement of Work (SOW). Al mentioned that Connie Smith (DOE legal counsel) redlined some wording on the Phase II SOW; DOE remains

concerned about conflicts of interest that could limit bidding by Stratus on Phase II. He reminded the group that the Council should remain flexible. All agreed that the final SOW needs to include deliverables. Al will review Connie's suggested SOW changes; he will also ask DOE legal whether it is possible to extend Stratus' contract to conduct Phase II, or to name them as a sole source for bidding on Phase II. He agreed to draft the next iteration of the SOW Phase II including a QA plan in the framework and discuss it in the February conference call.

Al agreed to draft the next iteration of the SOW for Phase II to include a QA plan. The revised SOW will be discussed at the next conference call.

The meeting adjourned at 5:00pm.

JANUARY 21, 2009

Meeting started at 8:35am

Administration

No changes to agenda at this time. Attendees (including those on telephone) were introduced.

Special Note: Helen Bottcher and Rebecca Arensen informed the trustees that NOAA has eliminated their division and that they will no longer be representing NOAA on the Trustee Council. NOAA will continue to participate on the Trustee Council, but no decision has been made about who would represent them.

Facilitator/Project Coordinator Discussion Resumed

The group resumed discussion from yesterday about the pros and cons of getting a Project Coordinator on board and the advantages of a facilitator over a project coordinator and vice versa. They also discussed the cost associated with each position. Who should be hired first? One option was for NOAA to fill the coordinator position since both Helen and Rebecca will otherwise be reassigned or may leave NOAA for another government agency.

Yakama Nation's representative, Jay McConnaughey, moved that a facilitator be hired until the end of FY09. NOAA's representative, Helen Bottcher, seconded the motion. Vote was passed by the Council with DOE abstaining.

Council then discussed candidates for the position, working from resumes provided by YAHS GS. Some members urged the council to request Teresa Michelsen as the best candidate to fill the facilitator position. Some felt she could be a very good project coordinator too. A motion was proposed by the Nez Perce to select Michelsen for the position but it failed when Washington State voted no, and DOE abstained. The issue was not Teresa's qualifications, but

the lack of an objective, defensible procedure for evaluating candidates. Larry Goldstein offered to recommend an evaluation/scoring process; trustees will agree to that process, review candidates tonight, and revisit this topic on Thursday.

2010 Budget Planning

The agreed-to Council request to DOE HQ is for \$4.2 million in FY 2010. The President's budget has not yet been released and will not be released until late in February. Congress will then take action and the budget will eventually be established. The group discussed the history of what funds are needed to move forward with Phase II, funding trust organizations, a facilitator, a Project Coordinator and NRDA studies. There were some discussions on funding TWGs and their workscope.

Stratus Conference Call

Jamie Holmes and David Chapman joined the trustees meeting by conference call. Their short presentation and subsequent discussion centered on proposed actions for next week's workshop to be held on January 27 and 28. The workshop will focus on basics of conceptual site models (CSM), what is a CSM, Hanford CSMs, and organization of a CSM. The workshop will emphasize commonalities.

Stratus also revisited discussion of forming technical work groups (TWGs). It was reiterated that Stratus recommends forming at least five TWGs, including Groundwater Resources, Terrestrial Resources, Aquatic Resources, Human Uses, and Contaminant Source/Pathway.

Much of the work in planning and conducting injury assessment should be accomplished within a TWG and each TWG would develop a CSM. The composition of a TWG should range between 6 and 10 individuals. TWGs will not make binding decisions for the Council but will bring information and decision points to the Council for action.

Paul reminded the council of an earlier consensus to form a Restoration TWG. Stratus agreed that additional TWGs may be necessary and that TWGs could be added and dropped by the Council as needed.

A list of tentative dates for TWG meetings was discussed and determined. Stratus encouraged participation in the January 27 and 28 workshops on CSMs and TWGs.

Letter Writing Process

It was determined that there was not enough time to fully address Larry Goldstein's proposal for a process for letter writing. His draft white paper titled, "Hanford Natural Resources Trustee Council, Final Letter Process" was distributed for review and consideration, and will be discussed tomorrow or at the March meeting. See **Attachment 3.**

Resume Discussions on Budget

While waiting for the scheduled presentation on bats in the 183-F Clearwell, trustees resumed discussion of the budget. Concern was raised that the Council has not addressed the 2010 budget during this meeting and that planning for 2011 should also be considered. Concern was again raised that not all of the requested funding for 2010 was included as a within-target request. It was suggested that, because the Senior Trustees, including Dave Brockman of DOE, came to an agreement on an NRTC/NRDA budget proposal and that DOE should find a way to include that entire amount in the within-target budget request sent to DOE HQ and Congress. No final action was taken.

Bats

Bats in the 183 – F Clearwell

A presentation on bats in Clearwell 183F was presented by Ken Gano with Washington Closure Hanford. The 183F Clearwell was an underground structure about the size of a football field that contained water for F Reactor. The Clearwell is now dry and has a somewhat stable thermal environment; it has become a major nursery for bats. A video on bats in the Clearwell was shown, followed by discussion between the WCH staff and the Council. Many questions were raised on the use of the Clearwell as a maternity colony. It appears that there are over 2000 bats utilizing the structure in the summer and some may use it in the winter. Our knowledge of the habits of bats, and particularly of those residing at Hanford, is limited. One important unanswered question is where do the bats go in the winter if they do not stay in the Clearwell? There was only conjecture and speculation as to where the bats go since it is difficult to track such a small animal.

The bats and their guano appear not to be contaminated with radionuclides. The clearwell structures are also uncontaminated since they were only reservoirs for clean river water to be used in the reactors.

Some trustees brought up the question of restoration credit for keeping the clearwell, which was previously scheduled for demolition. It was noted that there were clearwells at other reactors that are most likely being used by bats. It may be possible to include credit for bats as a topic for the restoration TWG.

Facilitator

The Council determined a method of judging the seven different applicants for the job of facilitation. Each applicant will be judged and rated on four criteria. The criteria were as follows: 1. experience with NRDA at a large site, 2. experience with diverse trust organizations at complex sites, 3. an understanding of NRDA regulations and, 4. facilitation experience. The trustees will review the applicants and be ready to rate each one tomorrow.

Please note: On January 22nd, a motion was proposed by Nez Perce representative, Dan Landeen, to request DOE/YAHS GS to select Teresa Michelsen as the facilitator until end of FY09. If she is not able to fill the position, then the 2nd highest ranked individual would be offered the job. Washington State's representative, Larry Goldstein, seconded the motion. The motion passed unanimously. (Note: Teresa has since been hired for this position).

Meeting adjourned at 5:15pm

JANUARY 22, 2009

Meeting started at 8:40am

Administration

The agenda schedule was adjusted to meet the schedules of the speakers.

Response Activities

Brett Tiller, Environmental Assessment Services supporting Washington Closure Hanford, presented a MS Power Point presentation, "Mapping and Characterization of Hanford Site Releases via Groundwater Upwellings into the Columbia River." Brett reviewed the use, and the results obtained, from using a device called a Liquid Phase Trident Probe. The probe is used to determine specific conductivity in river water and pore water. Through analysis it can be determined where upwelling of groundwater is occurring. For a complete review of Brett's presentation and findings please see **Attachment 4.**

John Sands of the DOE gave a brief status on the River Corridor Baseline Risk Assessment. The large "new" report will be released in the May timeframe. There will be a 45 day review period. A workshop could be arranged for the Council after the document is released and trustees have had a chance to read it.

Larry Holstrum, Washington Closure Hanford, gave a brief Power Point presentation titled, "Remedial Investigation for Hanford Site Releases to the Columbia River." Larry discussed sturgeon and fish sampling and the potential for a follow-up workshop in February to address fish sampling issues. Larry's presentation is **Attachment 5.**

Jamie Zeisloft, DOE, assisted by Helen Bottcher, NOAA, in giving a Power Point presentation on Query Manager and MARPLOT™. The Query Manager is a software program developed by NOAA; it interfaces data with other programs such as MARPLOT or Arc View GIS to display contaminant information for sediments. It could assist Hanford projects in understanding where contaminants are located. For a complete review of the presentation see **Attachment 6.** Council agreed to write a letter communicating to DOE-RL the benefits of Query Manager to DOE actions and for use by the Trustees.

Later in the day, a short discussion resurfaced concerning mapping of contaminants in the Columbia River. The Yakama Nation representatives to the Council suggested that the trustees consider a letter to DOE requesting that contaminant mapping for the Columbia River be performed, possibly in ARC View. The Council agreed to write a letter communicating to the DOE the benefit of Query Manager, not only to the DOE but to the Council.

. A conference call was also suggested to discuss the letter after a draft is distributed.

Briefing by DOE Realty Officer

Boyd Hathaway, DOE RL Realty Officer, discussed property transfer of portions of the Hanford Site outside of DOE's control. He told the Council that Richland Operations Office is not transferring any property. There was a request by Port of Benton for additional lands in the 1100 Area but that request is no longer being considered.

Long-Term Stewardship (LTS) was also discussed. Boyd reviewed a handout which contained basic information concerning LTS and Institutional Controls. See **Attachment 7** for additional information and website.

Boyd also discussed the Comprehensive Land Use Policy and some of the tier down documents such as BRMaP and the Mineral Management Plan. The Mineral Management Plan has never been finalized. Discussions turned to NEPA and Woody Russell, NEPA Compliance Officer, reviewed the requirements of NEPA, especially as it pertains to actions contained within Environmental Impact Statements and Environmental Assessments.

Bylaws/Public Participation

Some possible Bylaw changes were reviewed and Paul Shaffer distributed a handout summarizing comments on the draft amended Bylaws. There was limited discussion on changing the Memorandum of Agreement (MOA) along with changes to the Bylaws. It was felt that the Bylaws could be changed without Senior Trustee approval. It was restated that the DOE Manager, Dave Brockman preferred that the Council not spend time on changing Bylaws, instead utilize that time and resource for doing Council work. It was agreed that some items contained in the Bylaws and the MOA are out-of-date and really need to be revised. It was also felt by some members of the Council that, due to the lawsuit, we should not revise the Bylaws. The Bylaw issue was tabled and should be addressed at a future Council meeting.

The Council also discussed public participation including public involvement at Council meetings and for review of Council products. There was specific concern whether Council meetings and documents needed to be compliant with open meeting laws of the States of Oregon and Washington. No one knew if these laws really applied to the Council which is a federally driven organization under a Memorandum of Agreement. Larry Goldstein provided an informal analysis by the Counsel for the State of Washington, indicating that the Council is not subject to the State's Open Meetings Laws. Paul has requested a similar analysis for Oregon, but a determination is not yet available. It was generally agreed that, while the Council is probably not subject to these laws, we should act within the spirit of them. Some felt that we already provide adequate outreach opportunity to the public, that meetings are announced on the DOE Hanford calendar, and that the public may attend Council meetings. All agreed that visitors will not be allowed to disrupt or intrude on the HNRTC proceedings. Some suggested that if the Council needed a public meeting, that that meeting could be combined with other Hanford public meetings such as with the Hanford Advisory Board.

The meeting was adjourned at 3:15 pm.

ATTACHMENT 1

**HNRTC January Meeting Summary Package
National Resource Trustee Council List
January 20-22, 2009**

**Consisting of 2 pages,
including this coversheet**

NATIONAL RESOURCE TRUSTEE COUNCIL (NRTC)
Ecology Building, Richland, WA
Meeting January 20-22, 2009

PARTICIPANTS:

CTUIR (Confed. Tribes of Umatilla Indian Reservation)

Rico Cruz
Barbara Harper

NPT (Nez Perce Tribe)

Gabriel Bohnee
Dan Landeen

YN (Yakama Nation)

Jay McConnaughey
Wade Riggsbee
Brian Barry (phone)

USFWS (US Fish and Wildlife Service)

Jim Hansen

WA State Dept. of Fish and Wildlife

Charlene Andrade

U.S. Department of Energy

Mary Jarvis
Al Hawkins
Dana Ward
Woody Russell
Jamie Zeisloft
Connie Smith (phone)
John Sands
Ellwood Glossbrenner
Boyd Hathaway

ODOE (State of Oregon Department of Energy)

Paul Shaffer

WCH (Washington Cleanup Hanford)

Larry Hulstrom
Jeff Lerch

State of Washington Department of Ecology

Larry Goldstein
Beth Rochette

NOAA (Nat'l Oceanic and Atmospheric Admin.)

Helen Bottcher
Rebecca Arenson

EPA (Environmental Protection Agency)

Laura Beulow
Emerald Laija
Jacqui Shea
Larry Gadbois

EASS (Environmental Assessment Services, LLC)

CMA (Coastal Monitoring Associates, LLC)

Bart Chadwick
Chris Smith

Observer

Martha Bean, Collaborative Focus

ATTACHMENT 2

**HNRTC January Meeting Summary Package
Final Draft Agenda
January 20-22, 2009**

**Consisting of 3 pages,
including this coversheet**

HANFORD NATURAL RESOURCE TRUSTEE COUNCIL

Final Draft Agenda

January 20-22, 2009

WA Ecology Office, Richland, Washington

Tuesday, January 20th

12:30 Call Meeting to Order

Administrative

- introductions & announcements
- review agenda
- review and approve November minutes
- Calendar - upcoming NRTC meetings and workshops, BRMaP workshop, river component collaborative workshops, other?
- Communication (Are DLHNRTC email problems resolved?)

1:30- NRDA

- Budgets – status on 2009; update on 2010, begin scoping 2011 budget (group discussion)

3:30-3:45 Break

- Scope of Work for Phase II injury assessment plan (group discussion)

5:00 End for day

Wednesday, January 21st

8:30 Start NRDA continued

- Facilitator (process/weighing selection criteria/funding (group discussion)
- Project Coordinator for NRTC (planning path forward)

10:30-10:45 Break

- Planning for 2010-what do we need to do now (group discussion)

11:45-1:00 Lunch

- Stratus – Update on activities and deliverables, Jan/Feb/Mar workshops
- TWGs – General discussion and preparation for Jan. (CSM/TRG) workshop
- Formation of TWGs-which ones?

3:00-3:15 Break

- Letter Writing Process (Larry)
- Bats in 183 clearwell – update on status; discuss whether this is appropriate to be treated as a restoration project or considered as part of response

4:30 **End for the day**

January 22nd

8:30 Start **Response activities**

- Status update – 100/300 risk assessment *John S*
(Jamie Z)
- Query Manager (approximately 1/2 hour) (Helen)
- Status update and discussion of river component risk assessment *Jamie Z.*
 - 2008 sampling and analysis
 - Collaborative workshops to plan future work in the river - fish sampling, groundwater upwellings, contaminant mapping, others
 - Trustee discussion-next steps by the council

10:15-10:30 Break

- River component discussion continued
 - Trustee letter – Shared concerns
- Briefing by DOE realty officer –property transfer, LTS planning vis-a'-vis 2015 vision, mineral management plan (approximately 11:00)

12:00-1:15 Lunch

- Open meetings
 - How do the Washington Open Public Meeting Act (RCW-42.30) and equivalent Oregon laws apply to the HNRTC?
 - Public participation in Council meetings
- Bylaw revisions

3:30-3:45 Break

- Any unfinished business
- Wrap-up

4:30 **Adjourn**

ATTACHMENT 3

HNRTC January Meeting Summary Package
Hanford Natural Resource Trustee Council
Final Letter Process
January 20-22, 2009

Consisting of 2 pages,
including this coversheet

Hanford Natural Resource Trustee Council

Final Letter Process

Purpose

To define a clear process that respects the needs of individual Hanford Natural Resource Trustee Council (Council) members and successfully write letters in a timely manner.

Background

Under the By-laws, letters from the Council typically are conveyed as a Finding. As such a letter is considered a "formal" action. A formal action requires a commitment of resources.

On occasion, a letter is written by the non-Federal trustees. This type of letter could be an "informal" action. One obvious exception is a letter addressing funding for natural resource injury assessment activities.

Proposed Process

For both types of letters the lead author will provide a draft to participating parties for review and comment. The comment period will be ___ business days. No additional comments will be honored after the comment period closes. It is the responsibility of the lead author to make a good faith effort to resolve conflicting draft language. It is equally incumbent for those commenting to be sufficiently flexible to allow the process to move forward.

A formal action letter will be approved by the Council when consensus is achieved. As provided in the By-laws, abstention does not block consensus. An informal action letter will be approved by a majority vote.

The timeframe for signature approval will likely depend on when the letter becomes final and when, in the case of tribal governments, the signatory is authorized to sign. It is the responsibility of each trustee representative to inform

ATTACHMENT 4
PRESENTATION 1

HNRTC January Meeting Summary Package
Mapping and Characterization of Hanford Site Releases
Via Groundwater Upwellings into the Columbia River
January 20-22, 2009

Consisting of 6 pages,
including this coversheet

**MAPPING AND CHARACTERIZATION OF
HANFORD SITE RELEASES VIA
GROUNDWATER UPWELLINGS INTO THE
COLUMBIA RIVER:**

PROGRESS UPDATE

January 21, 2008

Brett Tiller - Environmental Assessment Services, LLC (EAS)

&

**Bart Chadwick, Jon Groves, Ron Paulsen, and Chris Smith – Coastal
Monitoring Associates, LLC (CMA)**

**Support Provided by
Washington Closure Hanford, LLC**

Project Requirements

Phase I - Preliminary Test of Techniques (Liquid Phase Trident Probe)
(Completed September, 2008)

Phase II(a) – Conductivity Mapping (~675 stations):

Apply Trident probe to identify areas with the likelihood of presence of groundwater

Phase II(b) – Indicator Contaminant Screening (~240 stations):

Screen stations selected from Phase II(a) by sampling the pore-water and measuring concentrations of selected Hanford Site contaminants (H3, Cr+6, U/VOC, Sr-90)

Phase III – Groundwater Plume Upwelling Characterization (~40 stations):

Selected stations with elevated indicator contaminant results

Verification of Field Measurements

- Daily 1 point conductivity calibration checks and following initial 3 point calibrations
- Monitor in-situ changes in pore water conductivity (real-time) while pumping pore water from riverbed until high readings stabilize
- Recorded/Logged stable 60 second average (1 every 5 seconds for 60 second period) – Calculates mean Temperature and Conductivity

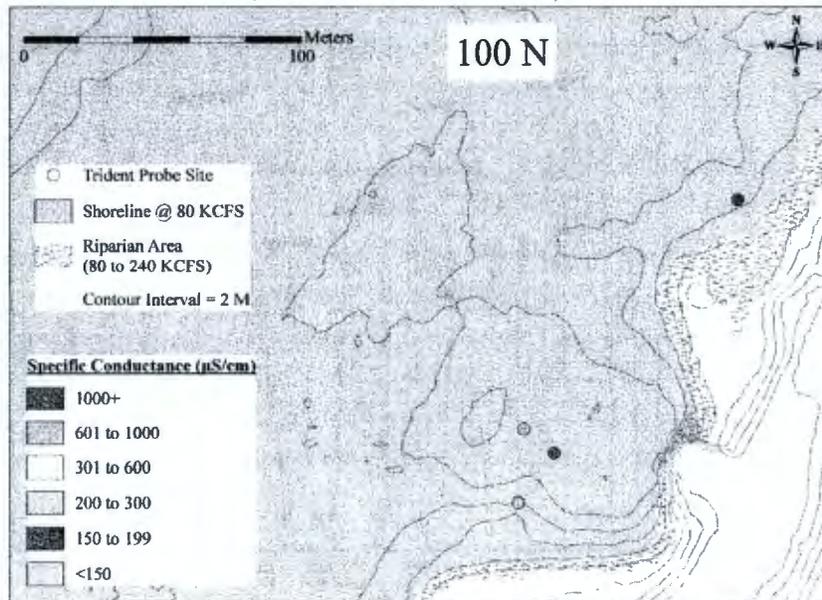
Phase I (September, 2008) Findings

- GW mapping and sampling techniques successfully developed and verified with calibrated water quality meter
- At river flows 60Kcfs – 100Kcfs, highest conductance readings recorded offshore near 100-BC (347 μ S/cm), 100-N (722 μ S/cm), and 100-D (708 μ S/cm) reactor intake structures at water depths 12ft to 18ft
- Use of sonar and underwater camera was useful for identifying optimal probe deployment areas

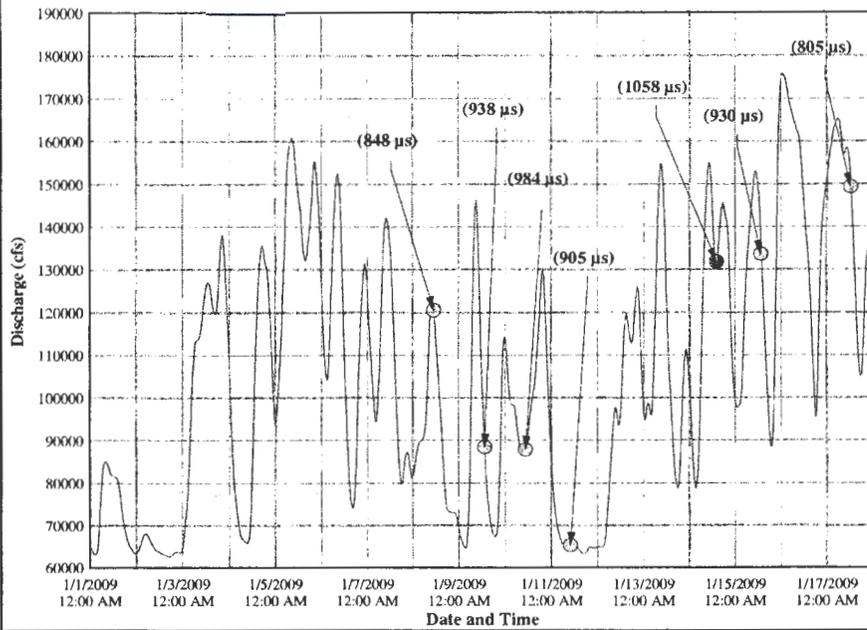
Phase II(a) (January, 2009) Status

- Specific conductivity of surface water:
(~125 – 150 μ S/cm)
- Highest Trident probe conductance readings were found off-shore (10-30ft depths):
 - 100-BC (380 μ S/cm)
 - 100-K (533 μ S/cm)
 - 100-N (1058 μ S/cm)
 - 100-D (978 μ S/cm)
 - 100-H (1347 μ S/cm)

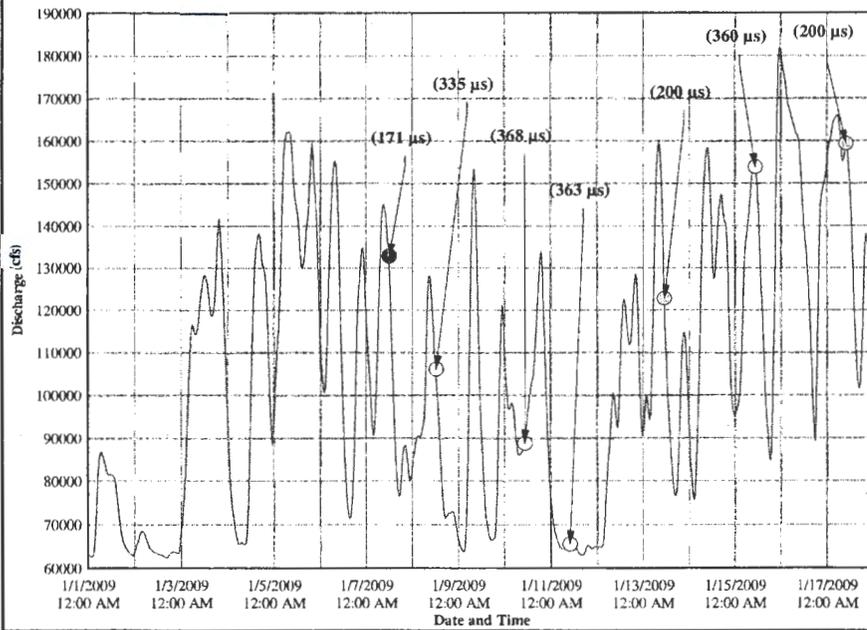
Specific Conductance Readings near 100-N Area (River Flows ~130Kcfs)



Phase II(a) (January, 2009) River Stage Results – Offshore Station @ 100-N
100 N Intake



Phase II(a) (January, 2009) River Stage Results – Nearshore Station @ 100-BC
2A-A (100 BC)



Phase II(a) (January, 2009) Status Summary

- 4 of 89 (4%) of groundwater upwelling samples had pore water specific conductivity \leq surface water conductivity during all river stage evaluations (~65Kcfs to 160Kcfs)
- Regardless of river flows/stage (60Kcfs – 160 Kcfs), stations are being identified that will be likely contaminant screening locations

Phase II(a) Mapping Path Forward

- Continue Phase II(a); to identify upwellings and help select areas for follow-up contaminant screening & sampling [Phase II(b) and Phase III]
- Check stations exhibiting low conductance during high flows again at low flow conditions
- Check a select set of stations in work area each day as benchmark for plume mapping

**ATTACHMENT 4
PRESENTATION 2**

**HNRTC January Meeting Summary Package
Mapping and Characterization of Hanford Site Releases
Via Groundwater Upwellings into the Columbia River:
Progress Update
January 20-22, 2009**

**Consisting of 20 pages,
including this coversheet**

**MAPPING AND CHARACTERIZATION OF
HANFORD SITE RELEASES VIA
GROUNDWATER UPWELLINGS INTO THE
COLUMBIA RIVER:**

PROGRESS UPDATE

January 21, 2009

Brett Tiller - Environmental Assessment Services, LLC (EAS)

&

Bart Chadwick, Jon Groves, Ron Paulsen, and Chris Smith – Coastal
Monitoring Associates, LLC (CMA)

Support Provided by
Washington Closure Hanford, LLC

Project Requirements

Phase I - Preliminary Test of Techniques (Liquid Phase Trident Probe)
(Completed September, 2008)

Phase II(a) – Conductivity Mapping (~675 stations):

Apply Trident probe to identify areas with the likelihood of presence of groundwater

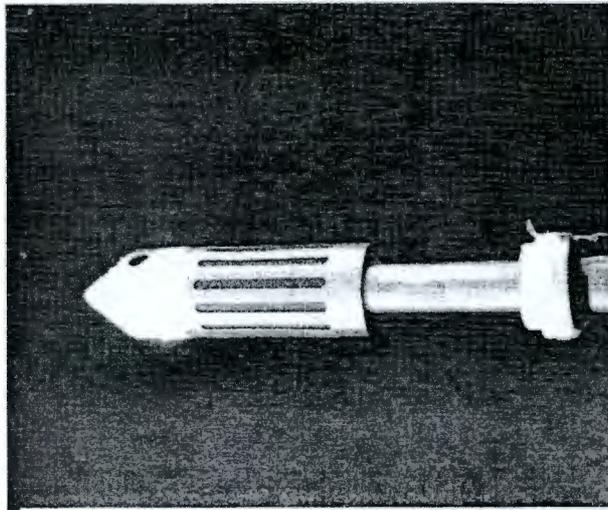
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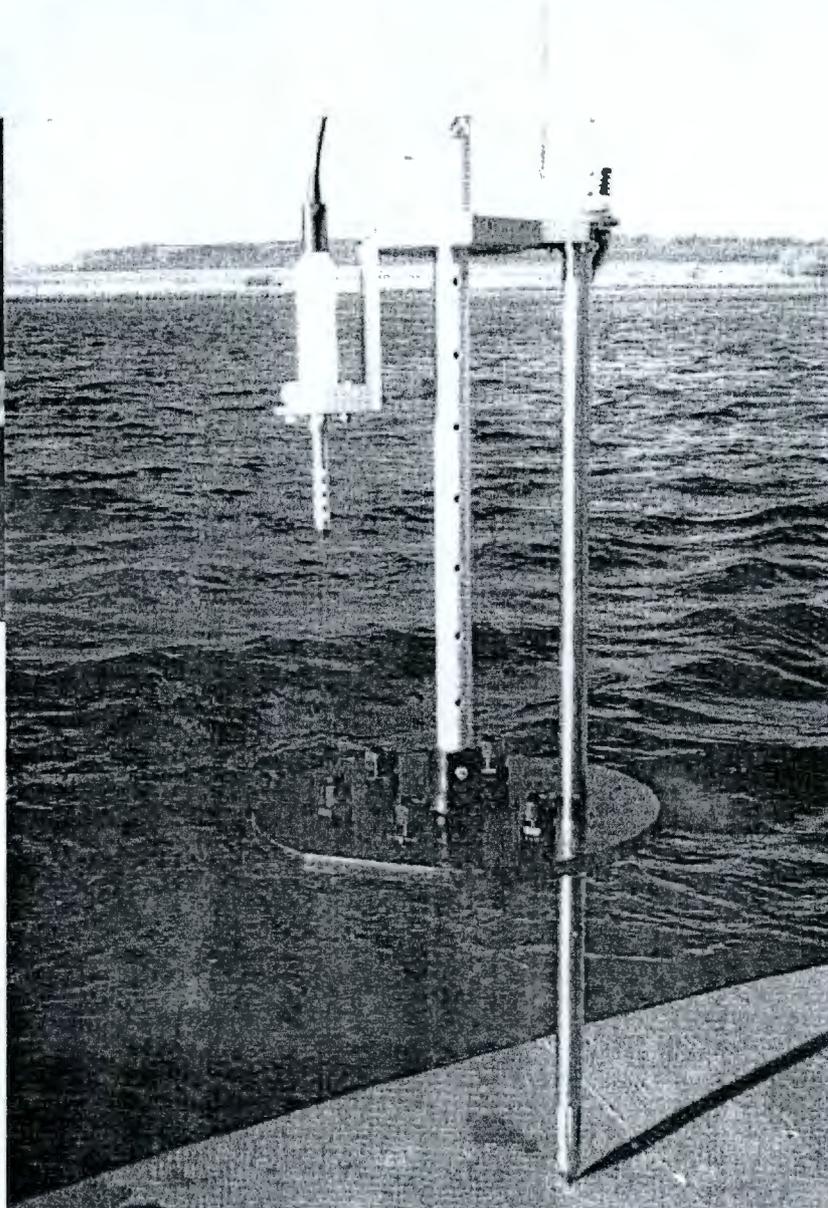
Liquid Phase Trident Probe



Pore-Water (PW) Probe

-Screen for the Presence of Specific Conductivity that is Elevated above River Levels

-Obtain samples of pore-water [Phase II(b) and Phase III]



-Pore Water probe depth (1ft.) (range 8 to 13in.) below riverbed surface

-Surface Water probe depth 1 ft. above riverbed

Trident Probe Deployment Frame



Verification of Field Measurements

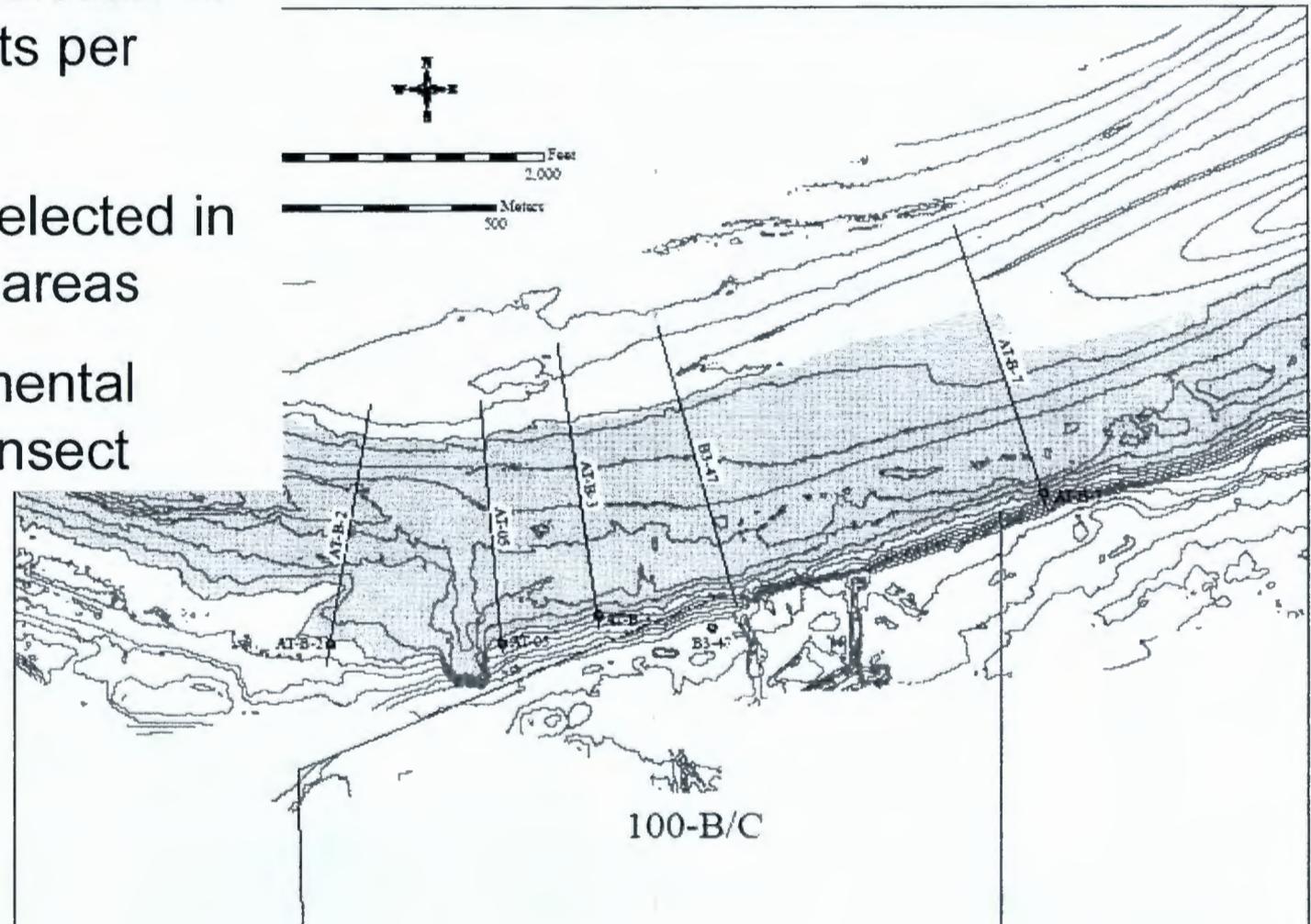
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- Use of sonar and underwater camera was useful for identifying optimal probe deployment areas

General Conductivity Mapping [(Phase II(a)] Approach

- 5 Stations per transect - running perpendicular to river (5 transects per study area)
- 5 Transects selected in between study areas
- 5 to 10 Judgmental stations per transect



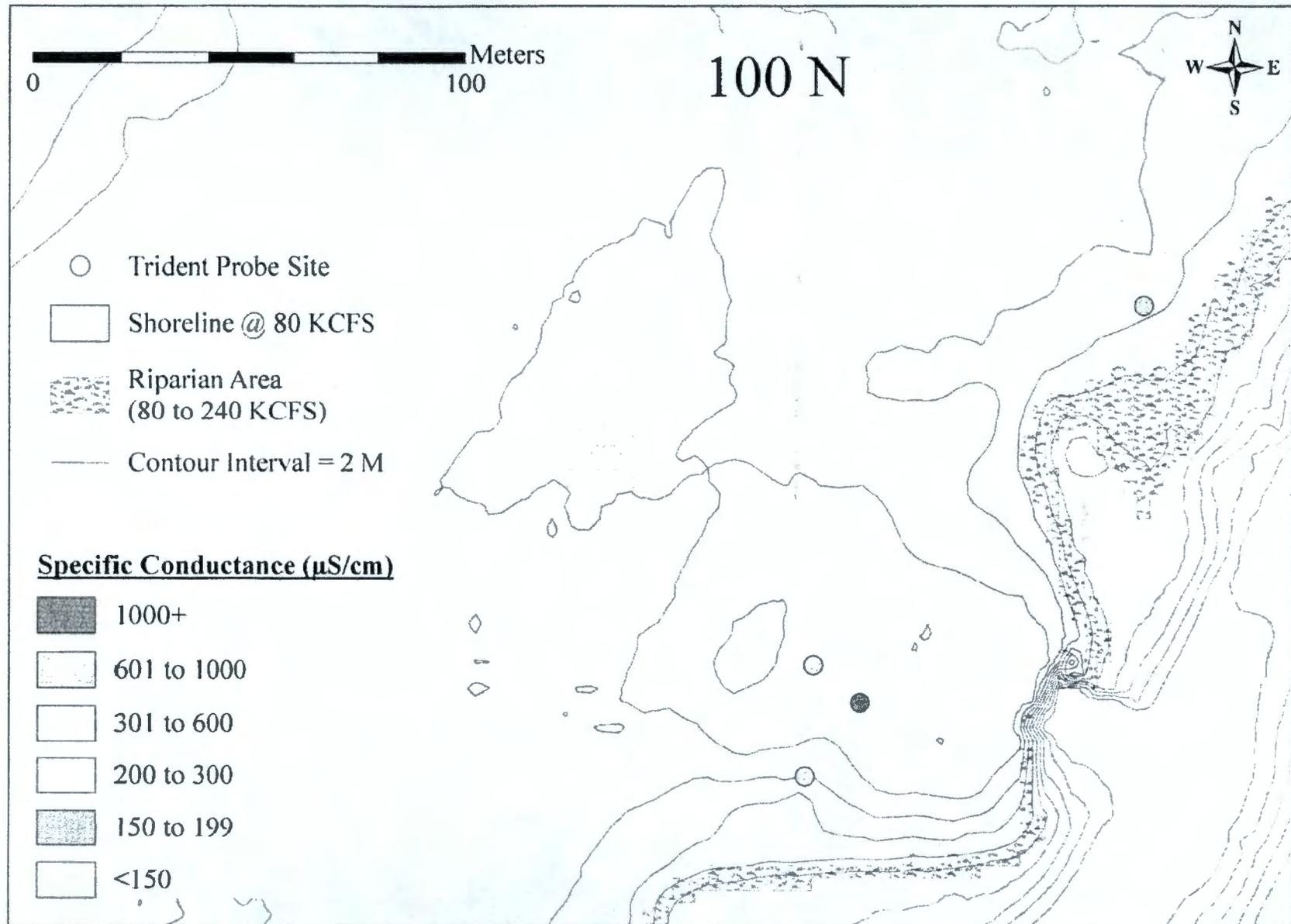
Phase II(a) (through January, 20 2009) Status

- 73 Stations Measured:
(100-BC, 100-K, 100-N, 100-D, 100-H, 100-F, HTS, 300-A)
- 23 Stations measured a total of 95 times during varying river levels (~65Kcfs to 160Kcfs flows)

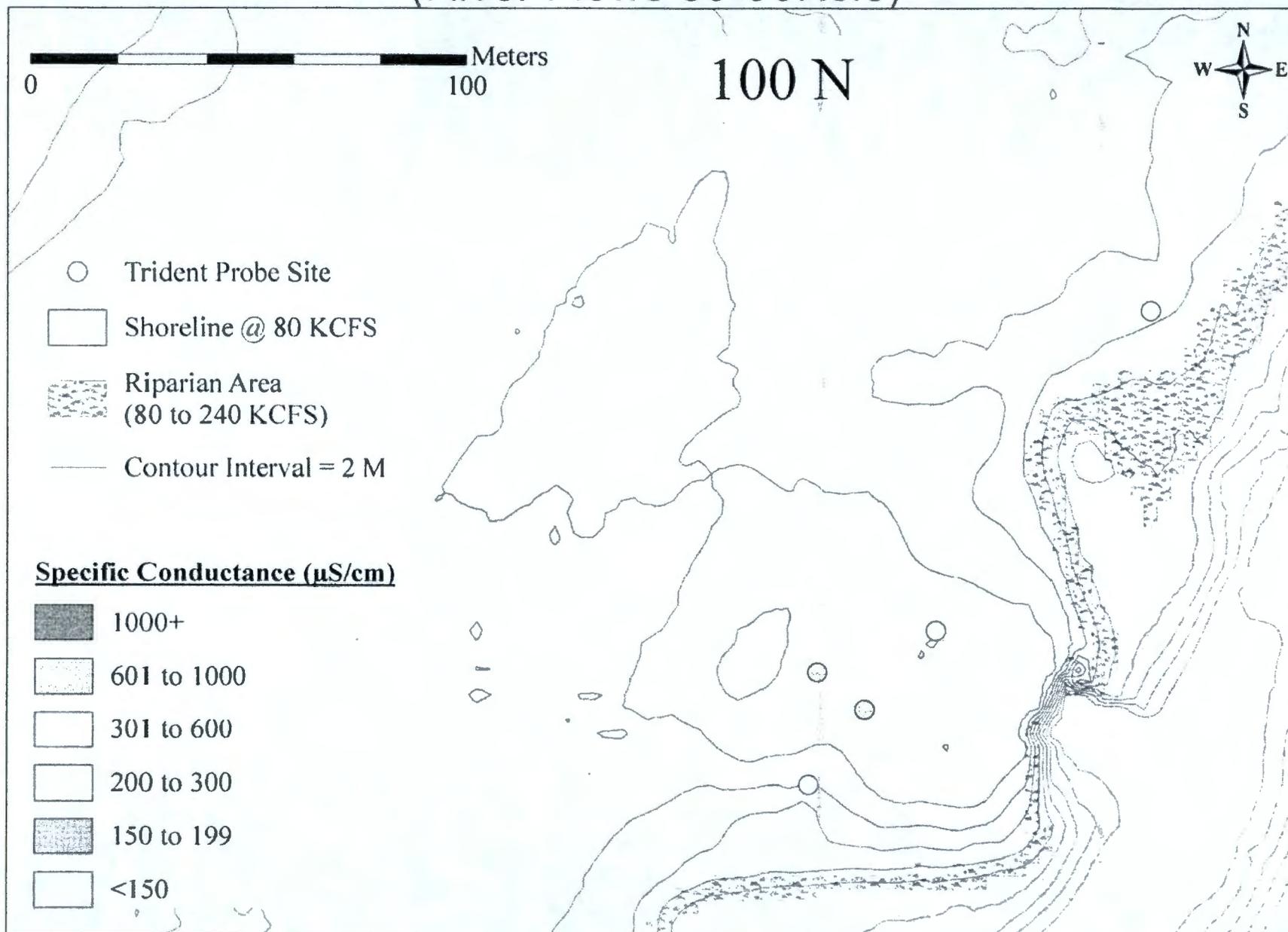
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Specific Conductance Readings near 100-N Area (River Flows ~130Kcfs)

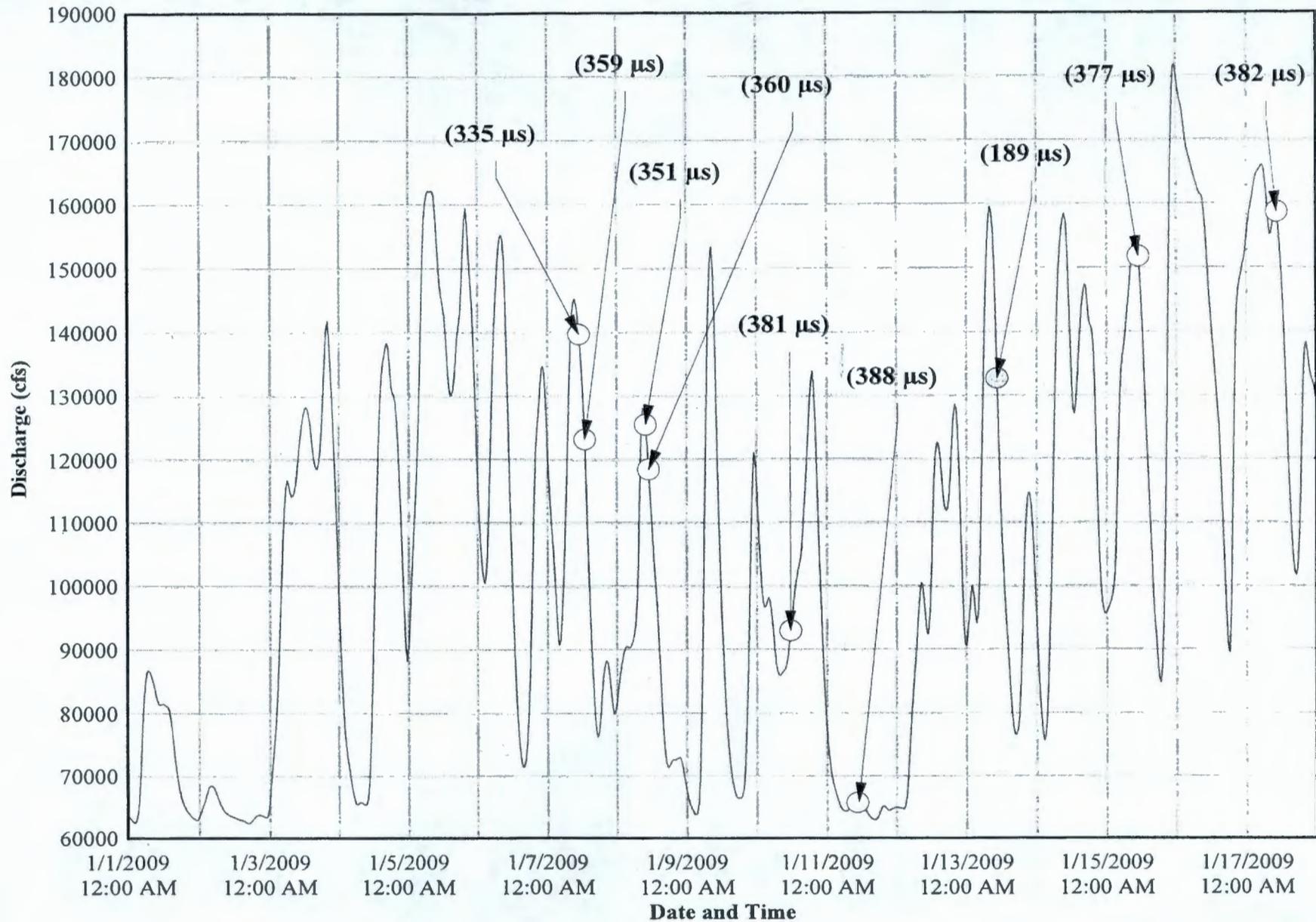


Specific Conductance Readings near 100-N Area (River Flows 80-90Kcfs)

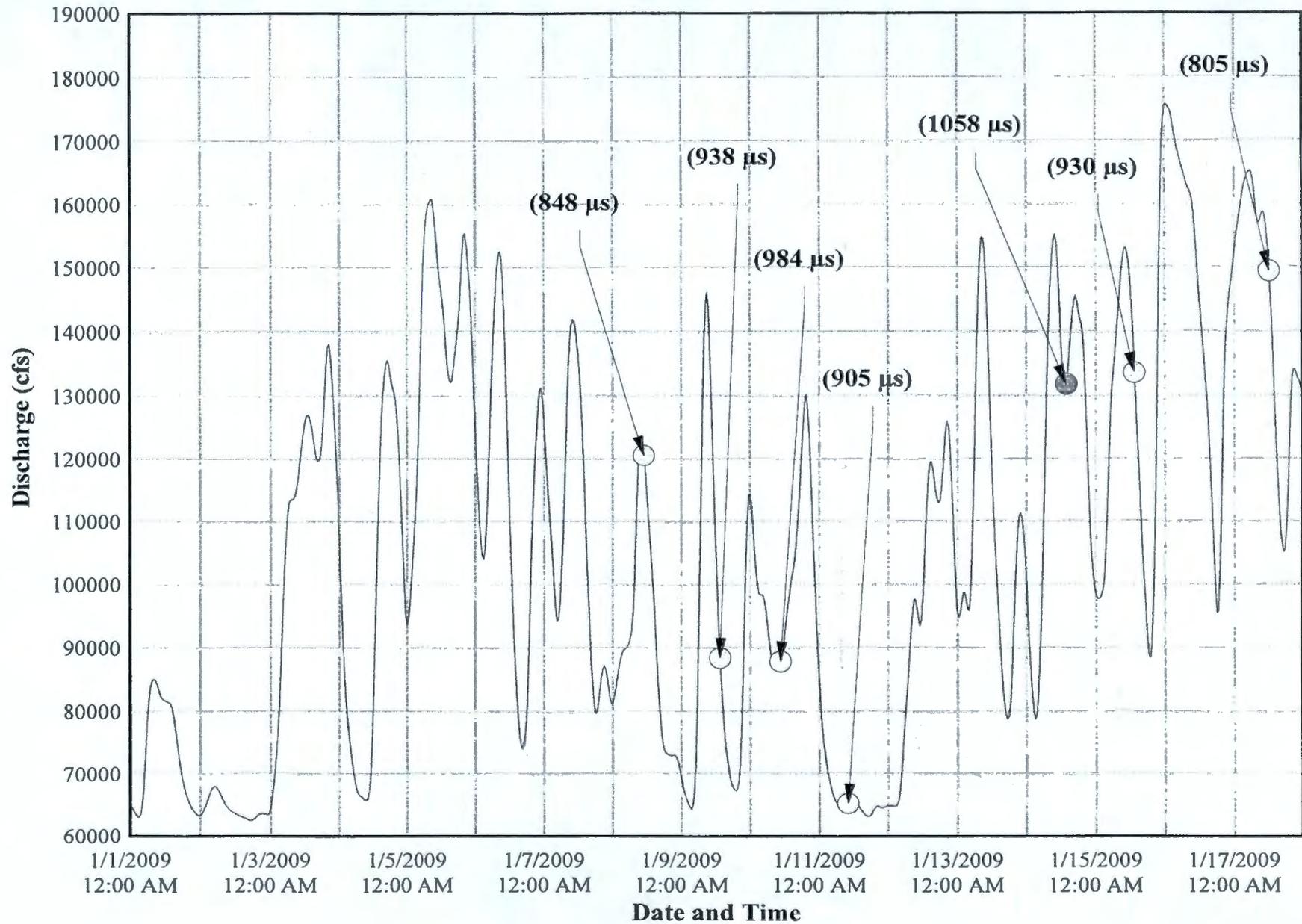


Phase II(a) (January, 2009) River Stage Results – Offshore Station @ 100-BC

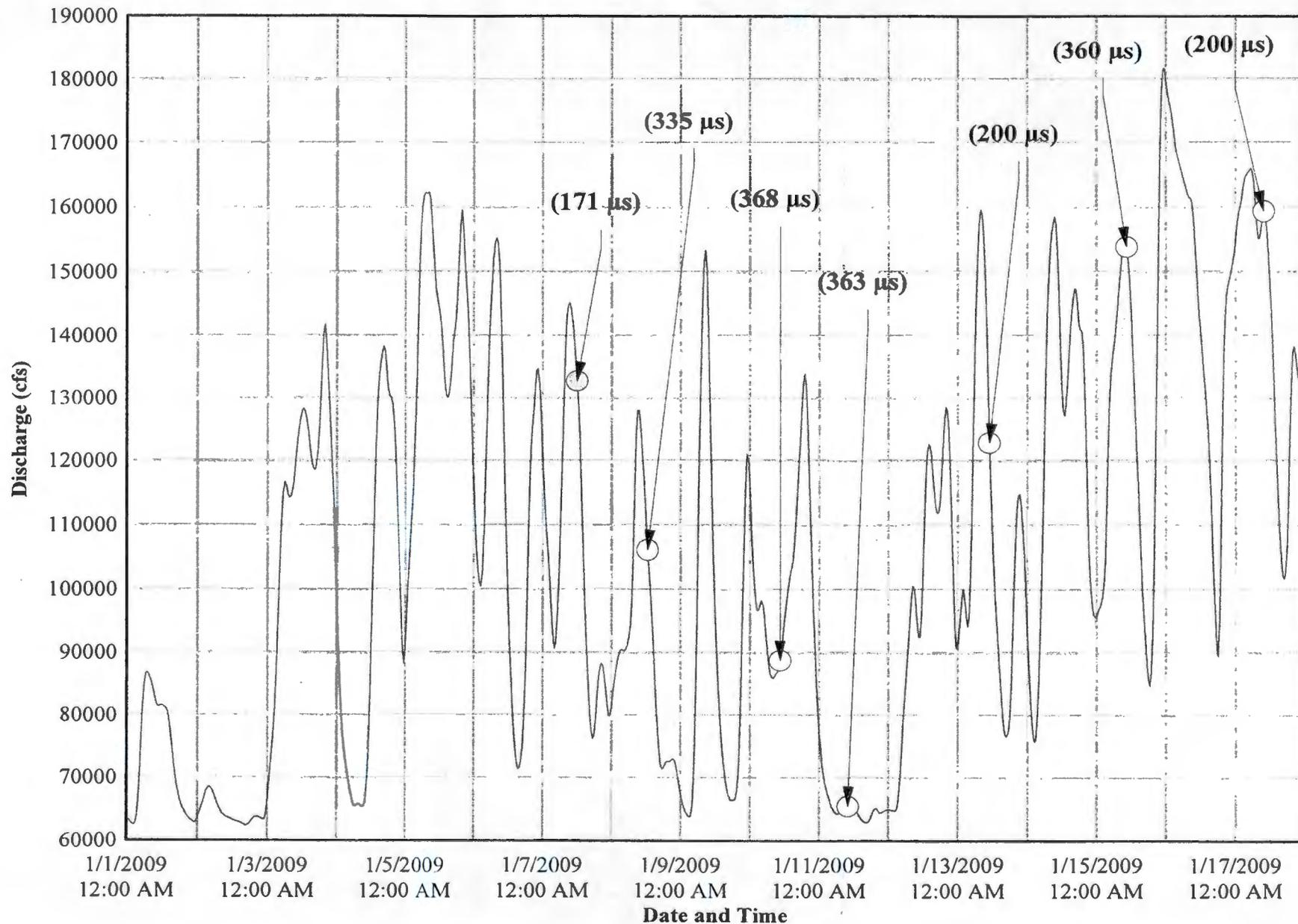
2A-E (100 BC)



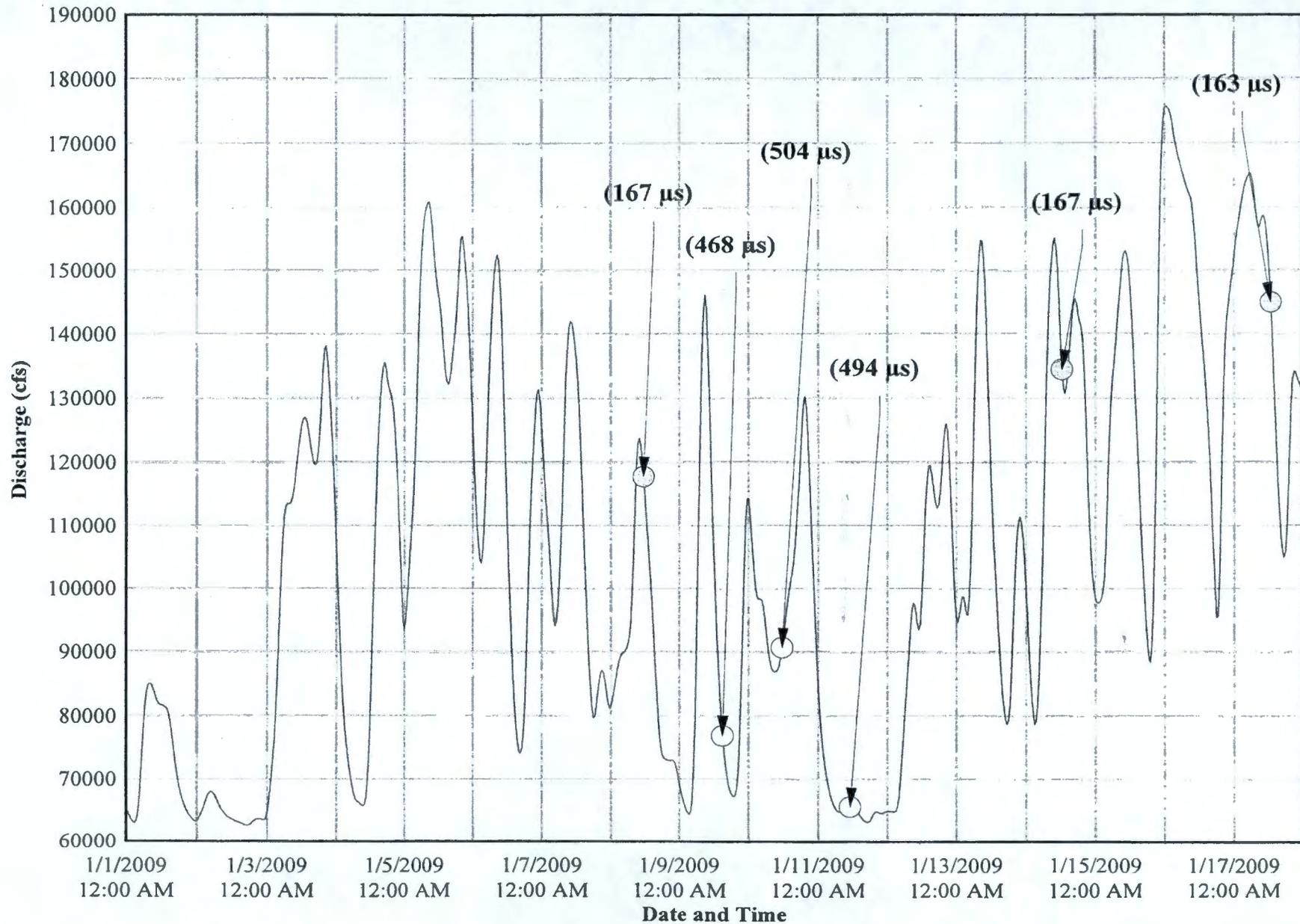
Phase II(a) (January, 2009) River Stage Results – Offshore Station @ 100-N 100 N Intake



Phase II(a) (January, 2009) River Stage Results – Nearshore Station @ 100-BC 2A-A (100 BC)



Phase II(a) (January, 2009) River Stage Results – Nearshore Station @ 100-N 100 N Outfall



Phase II(a) (January, 2009) Status Summary

- River stage did not appear to affect ability to detect ground water
- Highest readings recorded offshore (water 10ft-30ft)
- Specific conductivity relatively unstable at near-shore locations and indicates some suppression when flows $\geq 130\text{Kcfs}$

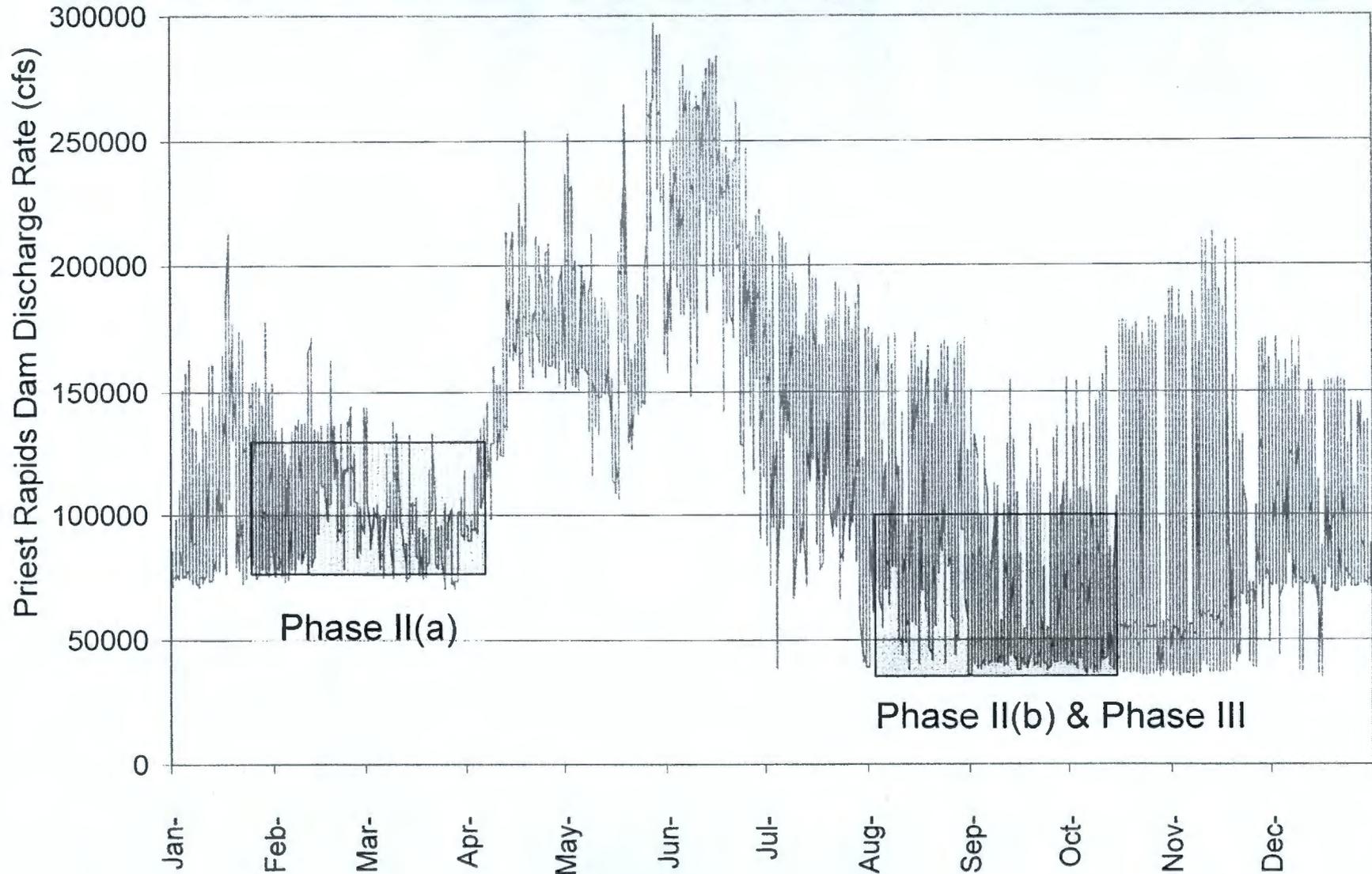
Phase II(a) (January, 2009) Status Summary

- 4 of 89 (4%) of groundwater upwelling samples had pore water specific conductivity \leq surface water conductivity during all river stage evaluations (~65Kcfs to 160Kcfs)
- Regardless of river flows/stage (60Kcfs – 160 Kcfs), stations are being identified that will be likely contaminant screening locations

Phase II(a) Mapping Path Forward

- Continue Phase II(a); to identify upwellings and help select areas for follow-up contaminant screening & sampling [Phase II(b) and Phase III]
- Check stations exhibiting low conductance during high flows again at low flow conditions
- Check a select set of stations in work area each day as benchmark for plume mapping

Mapping & Characterizing Hanford Site Releases via GW Upwellings (Schedule, 2009)



ATTACHMENT 5

HNRTC January Meeting Summary Package
Remedial Investigation for Hanford Site Releases to the Columbia River
January 20-22, 2009

Consisting of 8 pages,
including this coversheet

**NRTC Meeting
January 22, 2009
Remedial Investigation for Hanford Site Releases to the Columbia River**

Briefing Overview

- Field Investigation progress to date
- Two-month look ahead
- Focus Area – Planning for Fish workshop

Field Investigation Progress to Date

- Met with Tri-Parties on November 19 to discuss revisions to sampling locations based on results of sediment mapping surveys and to discuss proposed changes to fish sampling approach (see below for further discussion)
- Cultural/Ecological review clearance received in early December for downriver area
- Trident Probe/groundwater upwelling survey field work initiated in mid December but postponed due to weather conditions; resumed on January 7.
- Initiated shallow and deep sediment sampling on December 1; Majority of sampling completed by mid December, remainder postponed to early February due to weather conditions.
- Split sampling was performed for EPA, Ecology, and WA Department of Health for both surface water and sediment. (See attached Table 1)
- Subcontract awarded to Environmental Assessment Services on January 13 for fish collection and processing; fishing for whitefish to be initiated before the end of January

Fish Sampling Worksopce

Meeting of Tri-Parties held November 19, 2008

- Fishing for whitefish via electrofishing could be completed in the January/February 2009 timeframe.
- Lipid content and the avoidance of spawning time frames for some species will drive the collection of carp, sucker, walleye, bass, and sturgeon to the July through September 2009 timeframe via electrofishing, hook and line, or long line methods. (See the attached Table 2.)
- Should the use of electrofishing be desired during this timeframe it will be necessary to do a "formal consultation" with the National Oceanographic and Atmospheric Administration (NOAA) to obtain approval. The suggestion that this consultation take place in June 2009 was discussed.
- These changes to the proposed sampling period modify the timeframes shown in Table 4-14 of the Work Plan.

Table 1

Split Samples as of January 21, 2009

EPA:

- 5 surface water and 4 shallow sediment
- Analyzed for tritium (surface water samples only), gross alpha, gross beta, gamma spectrometry, total radiostrontium, isotopic uranium, isotopic thorium, isotopic plutonium, isotopic americium, and metals analyses.

Washington State Department of Ecology:

- 4 surface water and 5 shallow sediment
- Analyzed for metals (including mercury), total uranium, semivolatile organic compounds, and hexavalent chromium analyses.

Washington Department of Health:

- 10 surface water and 4 shallow/deep sediment
- Analyzed for tritium (surface water samples only), gamma spectrometry, isotopic uranium, isotopic thorium, isotopic plutonium, total radiostrontium, technetium-99, and carbon-14 analyses.

Table 2

Information from Paul Hoffarth, WA Department of Fish and Wildlife

November 19, 2008

Species	Spawning time	Common angling times
Sturgeon	June-July	Year-round, May to July most common Sept-Oct still very popular
Carp	Late spring	Commercial harvest late spring
Suckers	April- mid-June	Incidental harvest, usually with bass
Walleye	March-April	Year-round March-Oct most common
Whitefish	Sept-Dec	Nov-early March
Smallmouth bass	April-May	March-Sept

From this and referring to EPA guidance, the Tri-Parties have agreed to sample whitefish in January through February and the rest of the species from July to September, preferably when the river stage is low.

Sturgeon Sampling

Current Plan Overview

- Five fish from each of four sub-areas (upriver, 100 area, 300 area, Lake Wallula) = 20 total fish
- Collection summer 2009
- Legal size (48 – 60 in)
- No composite sampling
- Separate analysis for
 - fillets (with fatty tissue but w/out skin),
 - kidney and liver (combined)
 - carcass
 - eggs (if present)
 - sediment or mussels in stomach (if present in large quantities)

Two-Month Look Ahead

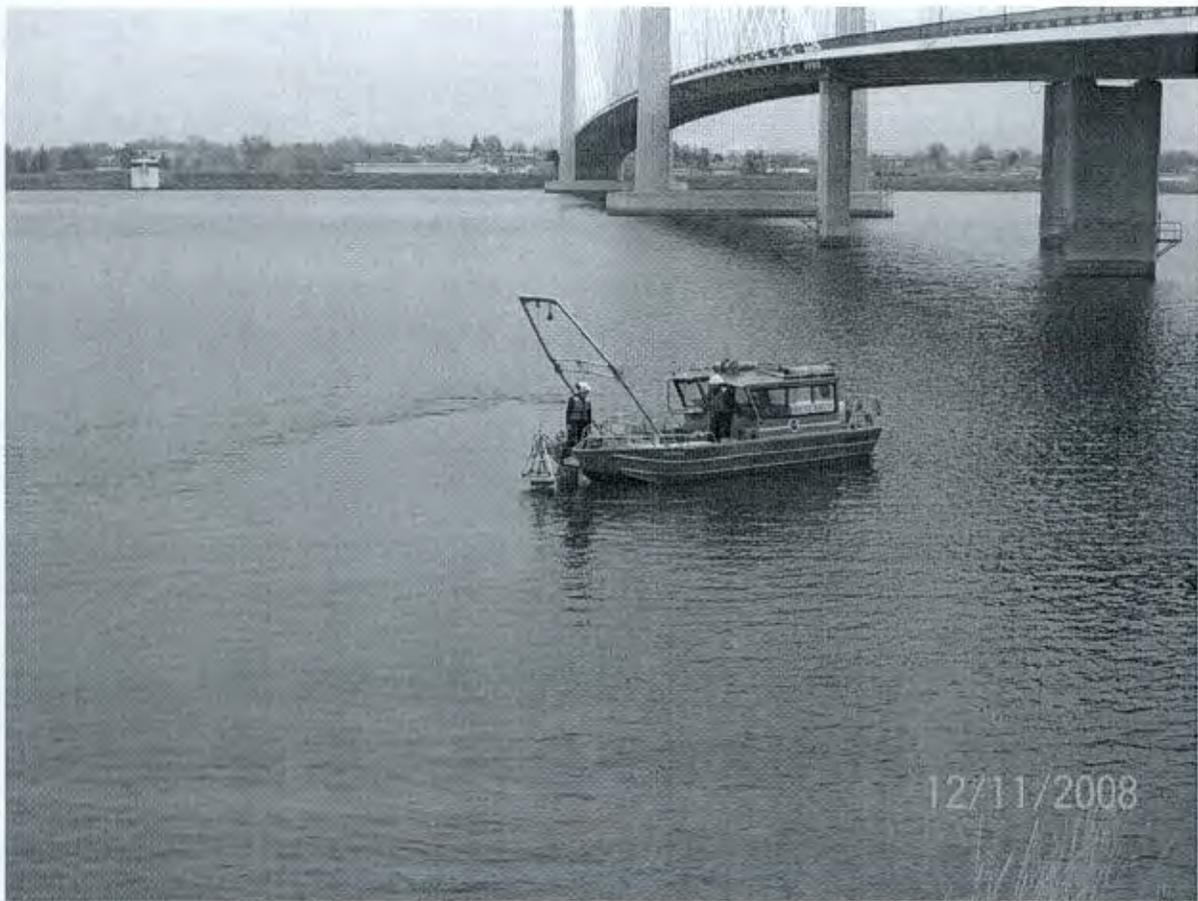
- Complete shallow & deep sediment sampling
- Initiate shoreline sediment and island soil sampling
- Continue Phase IIa (groundwater upwelling delineation surveys)
- Complete fish collection (electrofishing for whitefish only)
- Hold fish/sturgeon workshops

Field Work Status

Sediment Sampling Demonstration 12/9/08



Sediment Sampling near the Cable Bridge in Kennewick

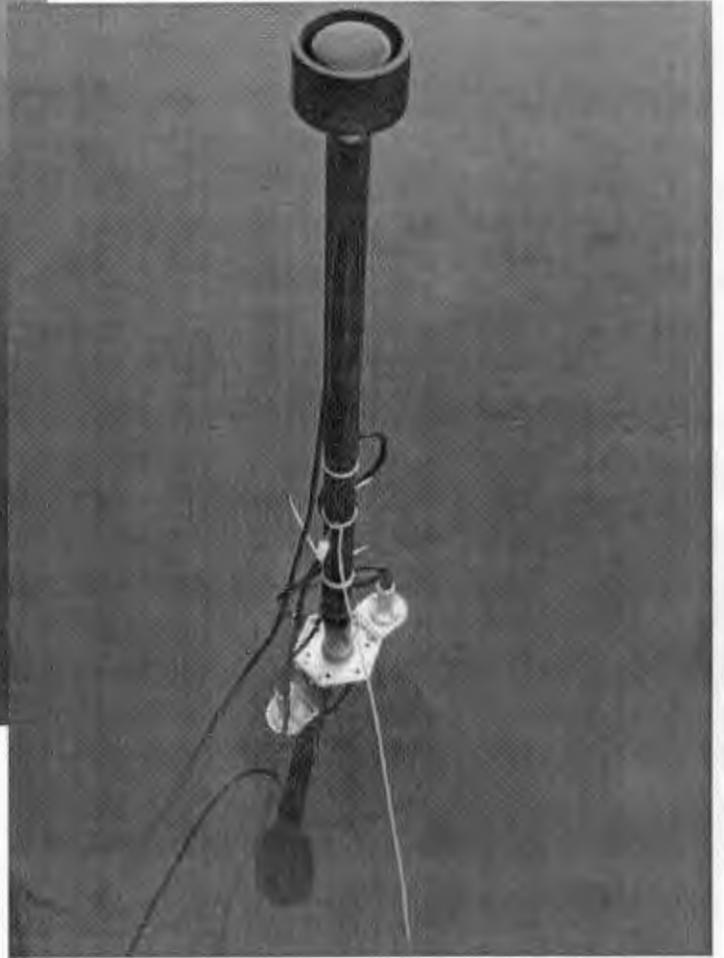
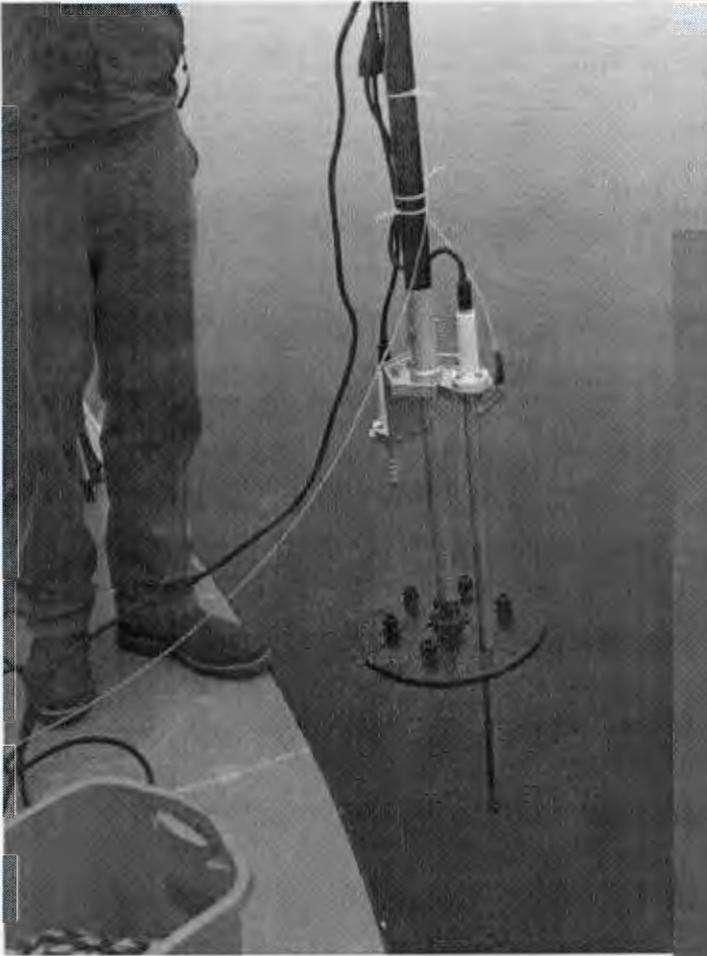


Groundwater Upwelling Field Work

Trident Probe Frame Deployment Test on December 12, 2008



Trident Probe Push Pole Assembly
Deployment



ATTACHMENT 6

**HNRTC January Meeting Summary Package
NOAA's Query Manager and MARPLOT™ Tools
Presentation for Hanford Natural Resource Trustee Council
Dated January 2009
January 20-22, 2009**

**Consisting of 16 pages,
including this coversheet**

NOAA's Query Manager and MARPLOT™ Tools

Presentation for Hanford Natural
Resource Trustee Council

January 2009

6/30/2009



NOAA Watershed Projects

Query Manager Data Set

+

MARPLOT Mapping Tool

+

Arc View GIS Project

= Watershed Project

Query Manager Data Set

Based on standard relational database structure

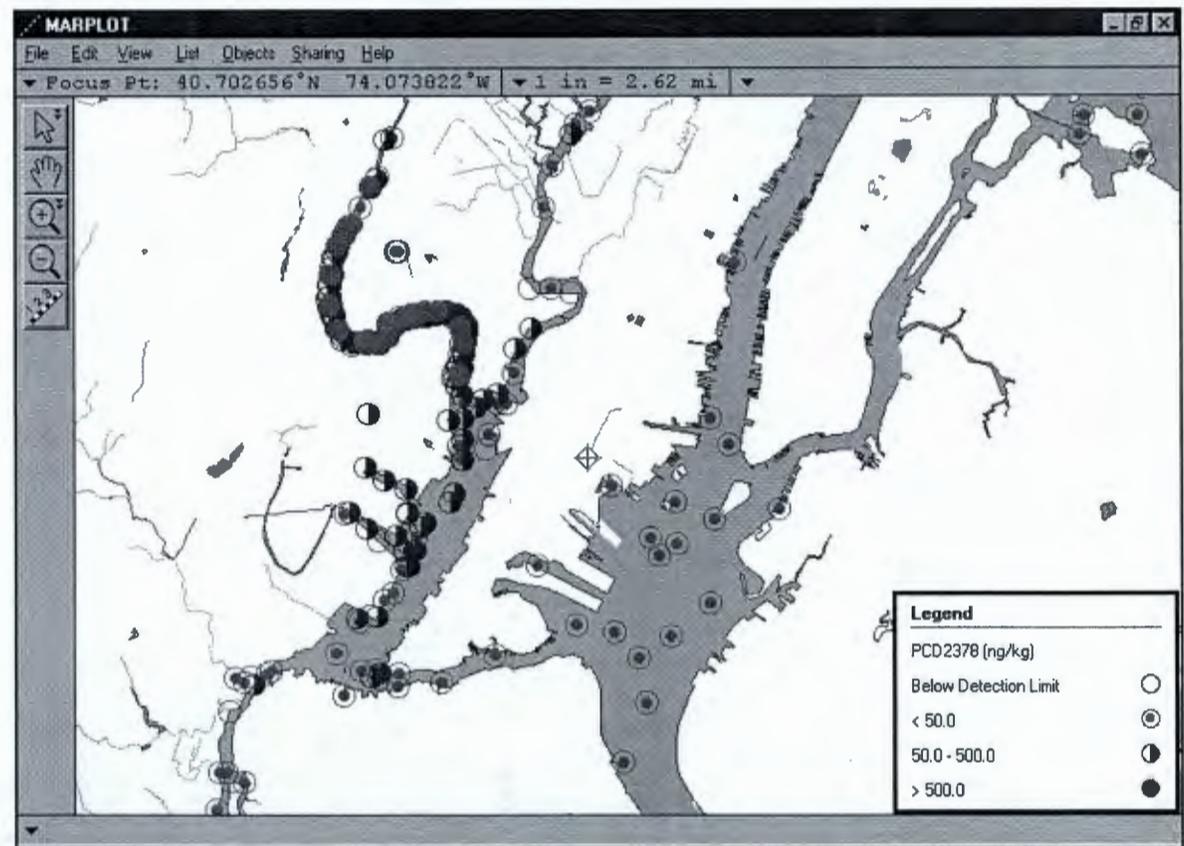
Menu of flexible, built-in database queries to facilitate

- Data integration and management
- Data exploration
- Data delivery/export
- Data sharing



MARPLOT™ Mapping Tool

- Free, run-time mapping software
- Works interactively with Query Manager



Arc View GIS Project



- Better maps
- Overlay other types of data
- Spatial analysis
- QM import tool

NOAA Watershed Projects

Charles River, MA

New Bedford Harbor, MA

Hudson River, NY

Newark Bay, NJ/NY

Christina River, DE

Anacostia River, DC

St. Andrew Bay, FL

St. John River, FL

Elizabeth River, VA

Hurricane Mitch, Central

America

Kalamazoo River, MI

Sheboygan River, WI

St. Louis River, MN

Calcasieu Estuary, LA

San Francisco Bay, CA

Southern California, CA

Portland Harbor, OR

Puget Sound/Duwamish

Waterway, WA

Metlakatla, AK

Pearl Harbor, HI

● Watershed Project Query Manager Data Available

★ Completed Watershed Project CD-ROM Available

Query Manager 2.61

- Self-contained run-time application (free, no software required)
- Standardized watershed databases include multiple studies
- Menu of standard flexible queries for evaluation of sediment (surface and subsurface) chemistry, tissue chemistry, and sediment toxicity
- Library of commonly used sediment screening guidelines
- Effect models: dioxin toxic equivalency (TEQ), PAH toxic unit, logistic regression model probability of

6/30/2009



How data is brought into Query Manager

- Premier Environmental Services
- Older data sets can be tricky
 - Upper and lower depth of samples
 - Chemical name matching
- Electronic Data Deliverable facilitates bringing in new data sets
 - Access & Excel formats

Data manipulation performed by NOAA

- Standardize chemical names and units, perform any necessary unit conversions
- Calculate sums for chemical classes, including PAHs, PCBs, DDTs
- Ensure replicates are handled properly
- Check relational structure
- Make sure station locations are reasonable (e.g., in the right watershed, in water) and address obvious coordinate issues.
- Include study notes on replicates, summing methods, coordinate datum, and other information on the data

6/30/2009



QA/QC work performed by NOAA

- NOAA does not perform chemical data validation on data provided by others
- We do check for missing or unusual results and compare the electronic data to the hardcopy report (if available)
- We verify that we do not introduce any errors when bringing the data into the Query Manager database

6/30/2009





Query Manager Supports

- Surface Sediment Chemistry
- Subsurface Sediment Chemistry
- Sediment Toxicity (bioassay study results)
- Tissue data

6/30/2009



Query Manager Does NOT Support

- Surface water data
- Pore water data
- Soil data
- There is a place to store water data in the Query Manager data structure, but there are no queries to facilitate access and display of the data

6/30/2009



QM Pros

- Free, easy to use
- Puts all the data into one common format
- Facilitates data sharing – both within the council and with the public
- Good metadata – creates transparency
- Reliable archive

6/30/2009





QM Cons

- Can take a while to get new data sets added
- Limited analysis capability – no temporal analysis, only very basic statistics
- Does not handle soil, water, or groundwater data



Try it Yourself!

Application and Databases Downloadable from
OR&R web site:

<http://response.restoration.noaa.gov/querymanager>

6/30/2009



ATTACHMENT 7

HNRTC January Meeting Summary Package
Long-Term Stewardship and Institutional Controls
Boyd Hathaway, DOE-RL Realty Officer
Dated January 22, 2009
January 20-22, 2009

Consisting of 7 pages,
including this coversheet

Long-Term Stewardship and Institutional Controls

Hanford Natural Resource Trustee Council

Boyd Hathaway, DOE-RL Realty Officer

January 22, 2009

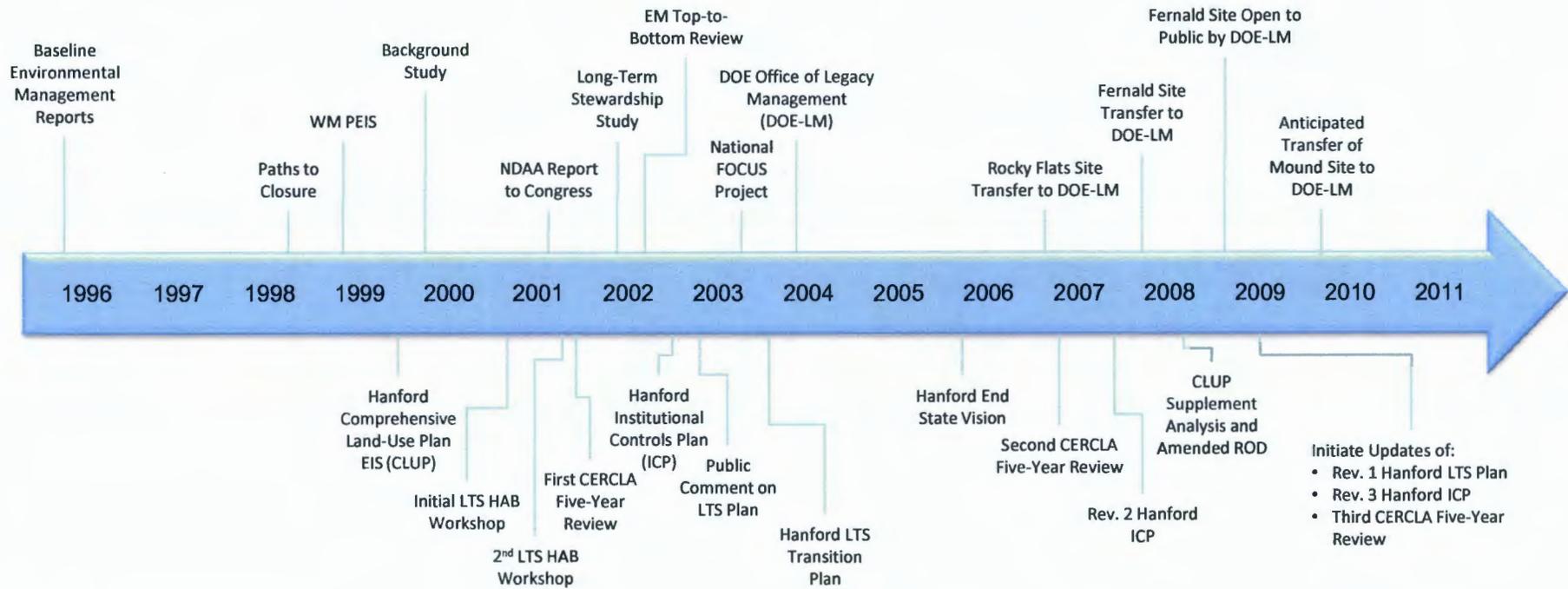


EM *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

Background



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

Real Estate Asset Management

Realm



Lifecycle



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

LTS Interface Requirements Matrix

MSC, Section J: HANFORD SITE SERVICES AND INTERFACE REQUIREMENTS MATRIX

MSC	PRC	TOC	WTP	RCCC	Other Site Users	Requirements	Cost Allocations
Receive input from Site contractors	Deliver input to MSC	N/A	Hanford Site <i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)</i> Records of Decision. CERCLA 5-Year Review criteria.	MSC bears the cost burden of program administration; Hanford Site contractors bear internal implementation costs. Cost for sites transferred (post-remediated) to MSC are the responsibility of the MSC. Transition costs are the responsibility of the respective Hanford Site contractor.			



Additional Information

Hanford

- <http://www.hanford.gov/rl/?page=1127&parent=1126>

Next Steps

- Initiate Updates of:
 - Rev. 1 Hanford LTS Plan
 - Rev. 3 Hanford ICP (ZP-1 Record of Decision)
 - Third CERCLA Five-Year Review

Questions?



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

- Hanford Long-Term Stewardship (LTS) Plan:
 - The Plan was last published in August 2003. It provides a strategic description of the future LTS program at the Hanford Site and is used as an internal DOE management tool to prepare for the transition from cleanup completion to LTS.
- Rev. 3 Hanford Institutional Control (IC) Plan
 - In the process of being updated to capture institutional controls required for the 200-ZP-1 Record of Decision (ROD)
 - Future updates to the IC Plan will reflect any changes in the IC requirements as new CERCLA decision documents are issued.
 - The Plan identifies the institutional controls for the current CERCLA response actions, describes how the institution controls implemented and maintained, and will serve as a reference for the selection of institutional controls in the future.
- Third CERCLA Five-Year Review
 - The CERCLA Five-Year Review was signed by DOE, EPA and Ecology on November 2006.
 - It is anticipated that DOE-RL will initiated planning meetings in the next 2-3 months to develop an integrated team and schedule for completing the CERCLA 5-year Review.
 - The next CERCLA Five-Year Review is planned to be signed by November 2011.

