**October 2, 2011**

This project was initiated by a class field trip to the Lapwai Watershed on Oct. 2. The trip, which included students from two other University of Idaho College of Natural Resources classes, was guided by Dr. Brian Kennedy, of CNR’s department for Fish and Wildlife Resources, along with WR 506 professors Dr. Jan Boll and Barbara Cosens. The field trip started at Spalding, where Lapwai Creek cuts through the Nez Perce National Historical Park, about one-quarter mile upstream of its confluence with the Clearwater River. Dr. Kennedy gave a brief overview of the watershed as well as an historic backdrop.

From there the group traveled approximately five miles south to a field-study site on Lapwai Creek located between the towns of Lapwai and Sweetwater. The group observed UI graduate students conducting surveys of juvenile steelhead located in an approximately 100-yard stretch of Lapwai Creek. The graduate students displayed their various methods—capturing and isolating the fish, flushing their digestive contents, implanting a microchip for tracking purposes, and returning the fish to the stream. Students also examined the geological, ecological, and biological contours of Lapwai Creek, viewing alluvial deposits in cut banks of the stream, habitat in the floodplain, and aquatic life in the streambed.

The last stop was at the Bureau of Reclamation/Lewiston Orchards Irrigation District diversion site, located approximately 10 miles south on Sweetwater Creek, a tributary of Lapwai Creek. The nearly century-old diversion, a concrete structure spanning Sweetwater Creek, feeds a gravity-flow system that is the primary source for one of LOID’s three reservoirs, Mann Lake. Kennedy explained how the diversion, which was built without fish passage, had eliminated a significant portion of the watershed’s steelhead habitat while affecting both streamflow and water temperature. [note about disciplinary adequacy, Repko page 43, research 143].

**October 17, 2011**

This meeting was organized after Audrey created a doodle poll and emailed the group, asking each person to select acceptable times. In this email, Audrey also reminded the group of the purpose for this meeting. She wrote, “[a]s a reminder, in this meeting we are planning to talk about our backgrounds and how we see them fitting into this project; what disciplines could be involved in the problem and then which ones we will use in our analysis; and if we want/have time we could address things like a conceptual map, an integrating question, ground rules, etc.”

At this second meeting, we reviewed the agenda we developed in the last meeting and set goals that we wanted to accomplish by the end of the meeting.

First, we agreed we agreed to utilize a system of filing shared documents. Based on our previous experiences with various programs, we decided to use WikiPages; Chris agreed to set up a group page. People noted that the updated history feature is useful because new versions are saved and old versions are archived. Because this archiving was a built in feature, we hoped we would be able to track the process of our project becoming interdisciplinary.

We also discussed the need to utilize legal Bluebook citations in this paper. Jim and Allison, the two law students in the group, agreed to create a “cheat-sheet” of Bluebook citations.

We then discussed how often we would like to meet and how we would like to structure these meetings.

After covering these administrative topics, we each took a few minutes to discuss our individual backgrounds, interests, and research. Not surprisingly, we all shared an interest and background in natural resource management. Additionally, many of us have backgrounds in or are interested in cultural and sociological history, hydrology, fisheries, and jurisdictional issues.

Once we considered our own disciplinary make-up, we brainstormed disciplines applicable to the Lapwai issue and then each person identified which disciplines he or she had interest in working on. Ultimately, we determined that Chris had interest in working on the project from a historical perspective, Jim from Native American law, Allison from jurisdictional and land use planning, Ryan from hydrology, and Audrey from fisheries.

Once we determined which disciplines we wanted to use, we considered how to narrow the scope of our issue. We discussed the use of integrating questions as means of narrowing the issue. Some members previously used integrating questions after deciding which disciplines to use, while others used integrating questions as a means of narrowing group focus and determining which disciplines to use. Because we already had identified the disciplines of interest, we decided to use integrating questions as a tool for narrowing the groups focus. Each person agreed to come to the next meeting with an integrating question. [decision-making process, Repko]

Once we decided to come prepared with integrating questions to the next meeting, we discussed the group’s goals for scheduling work tasks. We decided to develop internal deadlines for rough draft and editing schedules, but decided to make an official schedule at a later date.

**October 18 and 20, 2011**

At the group meeting during the previous week, a mutually agreed upon time for the next meeting was set for Monday, October 24th, however, various members of the group missed this meeting without notification sent to the others. This presented the possibility of conflict but, more importantly, the opportunity for the group to overcome it. Since we had already established open lines of communication, the members that were present at the meeting called the absence to the attention of the others. The absent group members apologized and suggested a new meeting time for the next day which was accepted by all and the meeting was held. During that meeting, ground rules were re-established and the group was strengthened. Conflict was avoided because we followed the guidelines set by Prof. Maureen Laflin in her lecture to the Water Resources 506 class (30 Aug. 2011) on group dynamics and how to manage conflict effectively.

The eventual meeting proved fruitful in furthering our progress on the assignment, as well. Each group member brought what he or she thought to be an integrating question representative of the Lapwai Creek Watershed problem. The integrating questions were read aloud and discussed, merging the common themes, ideas and disciplines into the following: How do historical and legal issues result in water and habit quality issues for Steelhead populations? This question clearly and concisely defines the problem; it is narrow enough in scope for the purposes of our project; and it establishes the importance of this problem (Repko, 2008 p. 147).

We chose to begin this process by writing individual integrating questions so that each group member could highlight what he or she thought were the most important aspects of the problem. The integration process allowed us to discuss the pros and cons of each question, eliminate disciplinary bias, and create what we all agreed would be the focus of our group project (Repko p. 145). The establishment of an integrating question was essential in narrowing the scope of the problem as the Lapwai Creek Watershed is extremely complex and could potentially include many disciplines. Using the integrating question, each of us identified what topic within the scope of the question we would focus on and set a goal for the next week of researching our respective disciplines as they pertain to the problem.

**References:**

Maureen Laflin, Team Building – Cultivating cooperation, collaboration and communication (Aug. 30, 2011).

Allen F. Repko, Interdisciplinary Research: Process and Theory 147 (Vicki Knight ed., 1st ed. 2008).

**November 1, 2011**

In the week prior we drafted an integrated question that helped us to create a common ground among the disciplines that we selected. During the week of November 1st we met to readdress the broad question we had posed and start the process of “integrating insights in order to create an interdisciplinary understanding” (Repko, p. ). With common ground discovered, we were able to create linkages between the disciplines and began to gain a comprehensive understanding of the problem. It became evident that by combining the insights from each discipline we would be able to yield a better explanation and possibly create solutions. The subjects that we choose to address were then selected by a group member and were as follows:

1. How social and cultural history has contributed modern social and cultural conditions. (Chris).
2. How the Legal history of the watershed has developed a mosaic of jurisdictional issues (Jim)
3. What are the modern legal trends in the watershed (introduce the FEMA lawsuit) and the challenges and opportunities for adaptive governance (Allison).
4. How have the decisions of the modern legal trends contributed to land use change causing destruction of flood plain connectivity and channelization within the watershed (Ryan)
5. What are the habitat requirements of steelhead an how have modern legal decisions and land use change affected the species (Audrey).

Each member was going to research and write a report (2 pages) for his or her question posed above. We would then meet again and merge the sections effectively creating an interdisciplinary understanding. At that time we would discuss possible solutions thought of while writing or researching. We discussed how the solutions could either be physical or process based.

With the individual sections of the report outlined it was decided that we should lay out a time line so we could meet our deadline. The time line is as follows: **Or can be placed in Appendix.**

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| **Date** | **Tasks** |
| 11/8 | 1) Individual outlines due.  2) Find common ground and continue integrating the sections. |
| 11/10 | 1) Bluebook examples due.  2) Outline methods section, and assign sections to group members.  3) Start discussing possible solutions. |
| 11/15 | 1) Merge the methods section into a comprehensive whole. |
| 11/17 | 1) Individual sections for the paper written up.  2) Discuss what points we want to touch on in our presentation. |
| 11/19-27 **Fall Break** | 1) Round robin editing |
| 11/28 | 1) Monday in Morrill Hall to create presentation |
| 11/29 | **Final Draft Due** |

Furthermore in this meeting we discussed the interdisciplinary question that we posed the week before. We felt that the question was sufficient for the time being but were open to narrowing it down to a question that could be answered more readily once we had completed our writing and research.

**November 7 and 11, 2011**

The development of the concept map during the latter half of our research project was a successful attempt to visually represent salmonid habitat segmentation in the Lapwai Creek drainage, its stakeholders, and opportunities for solution in the decision space. The concept map itself is a way to visually represent the structure of inquiry, specifically within the Lapwai drainage’s socio-ecologic segmentation the concept model highlights the circuital nature of the current managerial system. The concept map though created after our integrating questions and individual outlines, still provided us with a reinforcement of our findings and solutions. Being able to represent an issue in mixed-media is a functional and needed part of the solution-equation. It was a valuable experience for our group. [Heemskark]

During the making of the conceptual map Dr. Boll visited our work group. Het shed light on our conceptual design by framing it as more of a conceptual map rather than a concept model; a model in this instance was a graphical representation of fact rather than a geographic representation of an issue. This led us to realize that this conceptual map was different than our individual group’s maps from the previous exercise. Lapwai Creek’s issues are more multi-disciplinary relying on not only segmented habitat but also a fractured policy-space unlike the declining Palouse Aquifers. The aquifer issue has a more concrete problem with immediate local stakeholders. Watershed issues are difficult enough to grasp but when adding Tribal influence and all of its history and precedent to the managerial decision-space it adds another layer into an already complex, intertwined problem.