

# After the Field: Laboratory Analysis

July 6, 2015

*At the Center for Historic and Military Archaeology, Heidelberg University*

Although working in the field is a major component of archaeology, lab work comprises the majority of an archaeologist's time. The lab is where everything comes together, be it analysis, background research, or actual artifact refitting. There are a multitude of tasks done in the lab, but our main focus as field school students is artifact processing and refitting. Artifact processing involves multiple steps, beginning with the removal and sorting of cultural materials before they are washed, sorted more specifically, and then refitting of glassware and ceramics. The processing procedure is a long and tedious one that requires patience and attention to detail, but is a necessary and rewarding part of the job.

When we find cultural remains in the field, those that are not deemed a Field Specimen are kept together in a bag labeled with the assigned numbers of the unit or feature as well as 704 Number from the catalogue. The bags with the labeled provenience containing cultural remains are sorted together as one unit. We use lunch trays covered in newspaper labeled with the same 704 Number as the one on the bag. This is so there is no confusion during processing as to where the cultural material was recovered.

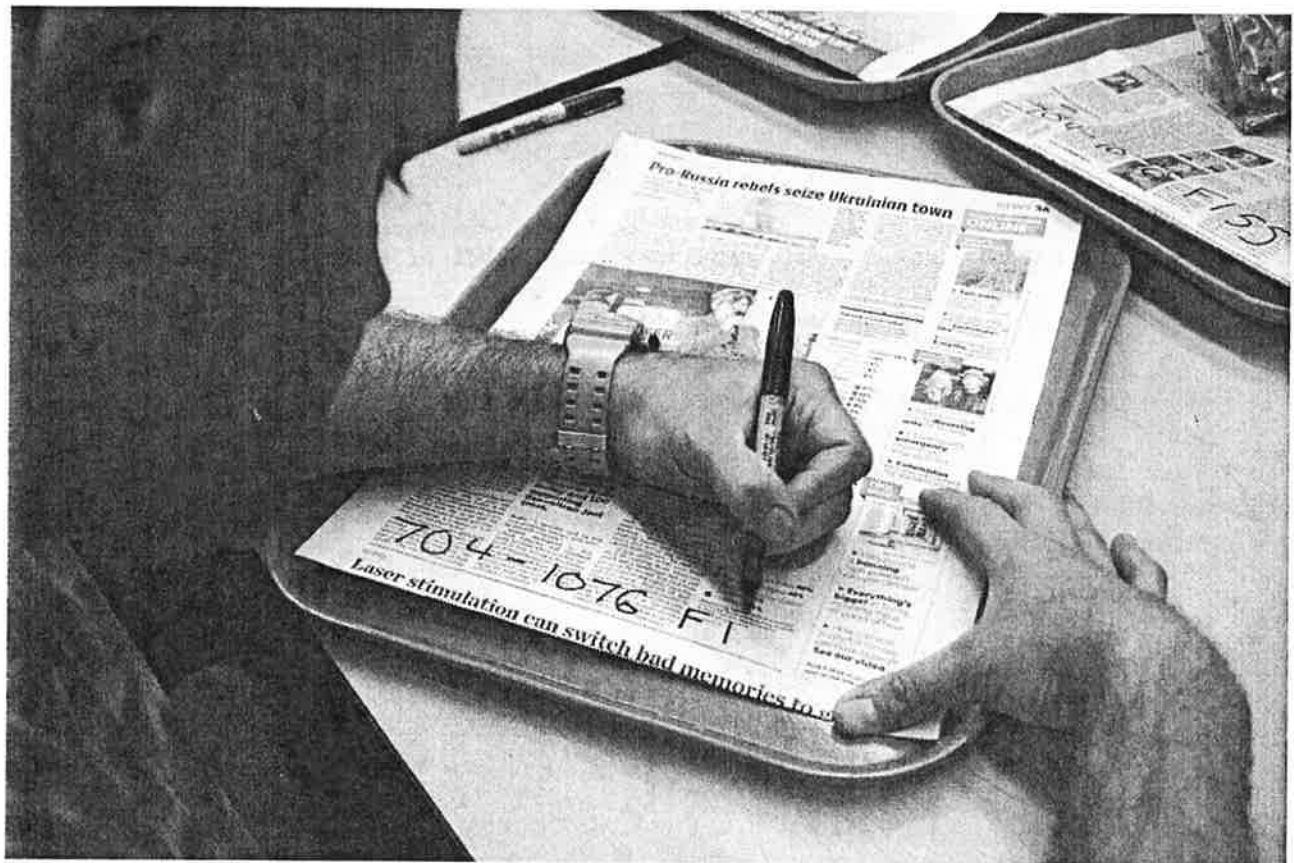


Figure 1 Labeling the tray before artifacts are sorted

The items are then sorted by type. Some of the common types we find on Johnson's Island are brick, nails, bone, window glass, ceramics, and glass bottle shards. They are all grouped together on the same tray, unless more trays are required due to a large amount of artifacts.

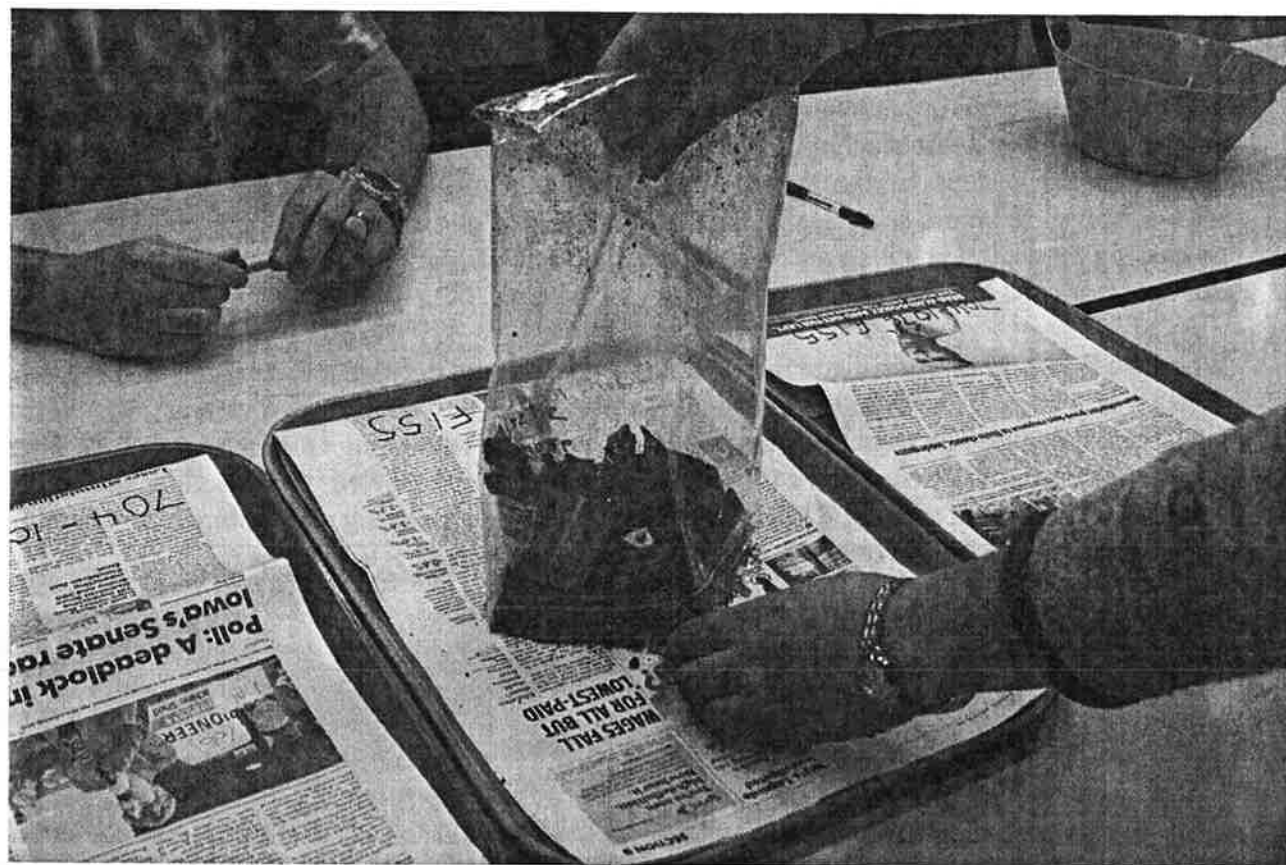


Figure 2 Artifacts from the field

Once the artifacts are sorted we begin the process of cleaning. For a basic cleaning of these common artifacts, a soft bristled brush is used with clean water. By cleaning artifacts in this manner, we hope to remove as much of the surface dirt as possible and ensure that all edges are removed of any sort of particles that could keep the glue from sticking during the refitting process. Once washing is complete, the artifacts are left to dry.



Figure 3 Washing glass and ceramics

When the artifacts are completely dry, we use archival pens to label the full 704 Number as stated earlier that is on the bag and then tray. Items like brick and nails are not labeled, but glass, bone and pottery and glass shards are commonly marked. Once labeled, we apply polyvinyl acetate over the number to protect it from being rubbed off. This way future workers in the lab will be able to identify the artifacts and know where they came from at the site.

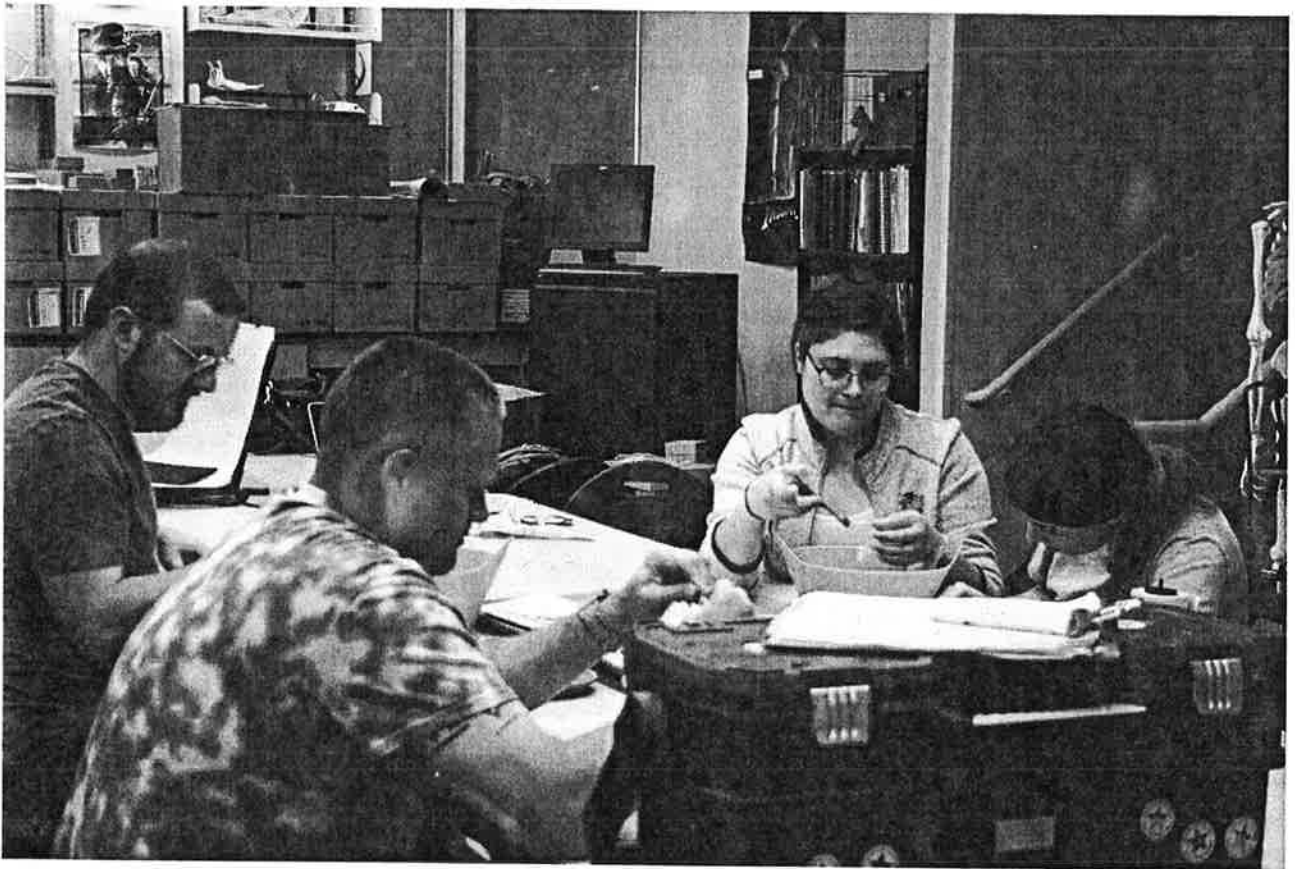


Figure 4 Here we are working in the lab

Once the pieces have been cleaned it is time for us to do another round of sorting. For this sorting we include the Field Specimens in our task. We take pieces of glassware and ceramics and look for similar color and thickness and separate them out into different trays. We then look for different areas of the glass bottles and ceramics. Glass bottle necks and finishes have a different look compared to the base, and ceramic rim pieces are distinguishable from smaller sherds off the center. Any indicators such as seems, scratches, or colors, helps to refit the individual pieces back together. By performing this process we are recreating cultural material in their entirety.

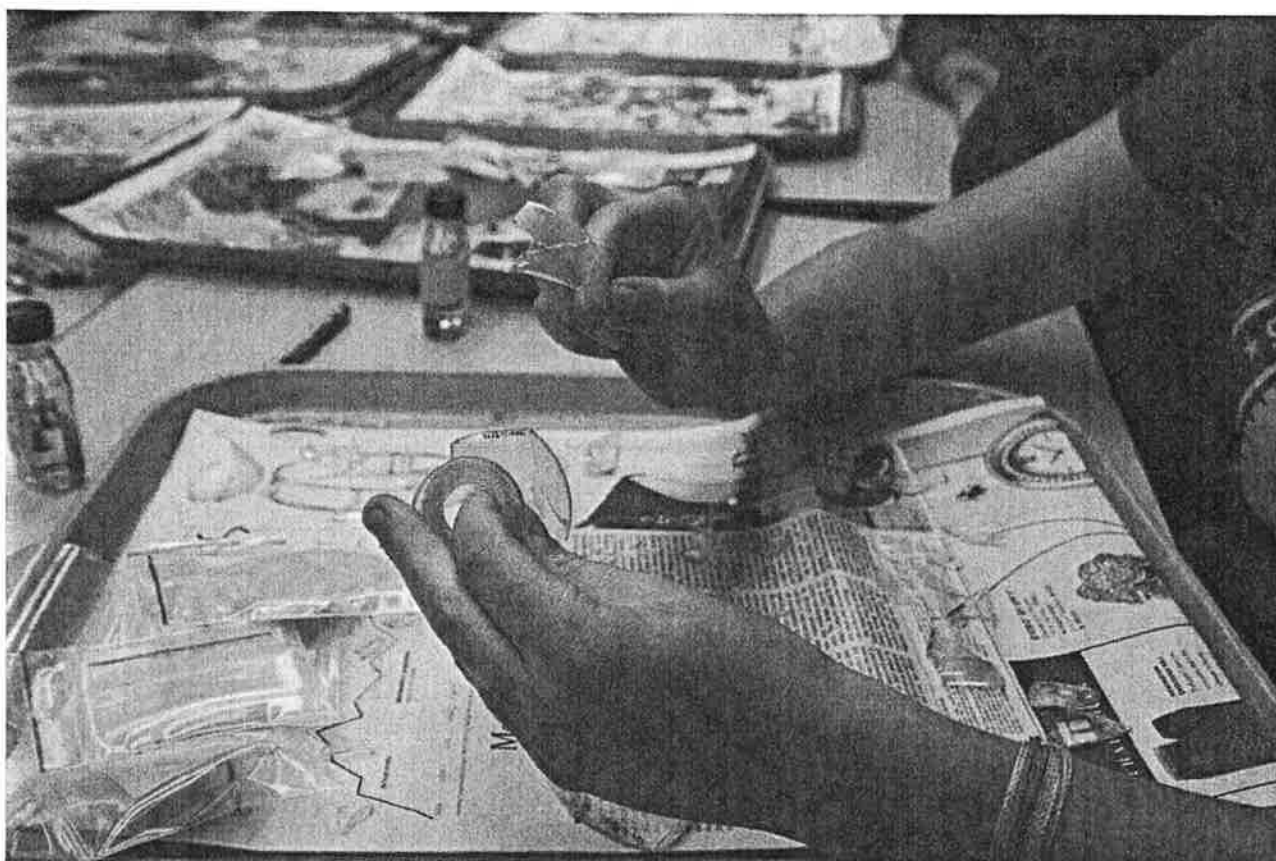


Figure 5 Finding glass shards that fit the finish (botte top)

The whole purpose of resorting and integrating our FS-ed artifacts in with the smaller, less identifiable ones is for refitting. This is rather like putting together a puzzle, only with missing pieces here and there: difficult at first, but rewarding at the end. When we refit artifacts into their larger whole, we like to start with either the base or rim as they are the easiest to add other pieces to. However, sometimes in the first round of refitting you do not have much of either the base or rim and must make do. In those cases, we place the pieces that fit together in their proper order on the tray and set them aside until more of the pieces are discovered.

In order to refit, we focus on not only the edges of each glass shard or ceramic sherd, but the designs, scratches, inclusions, etc. as well. Each of these characteristics acts as a clue to how the pieces fit together. Not to say it is easy to refit. Refitting is a long process, and relies on our fieldwork to be completed. If we are in the process of excavating a feature while we are refitting, there is a high probability that some of our missing pieces have yet to be uncovered. If one or more of the connecting artifacts has been FS-ed, we place the artifact bag along with the pieces together on a tray to keep track of which artifacts go where. What pieces we are able to glue together easily we do with polyvinyl acetate, the same adhesive we use to keep the labels from rubbing off the artifacts. However, there are different concentrations. For thinner pieces of glass we use a 10% solution, and for thicker shards as well as ceramics we tend to use a 30% solution as it is thicker and acts as a stronger binding agent. Once the pieces are refitted and glued



together, they are set in sand to ensure they dry properly. And then the process repeats itself until we have refitted everything that we can.

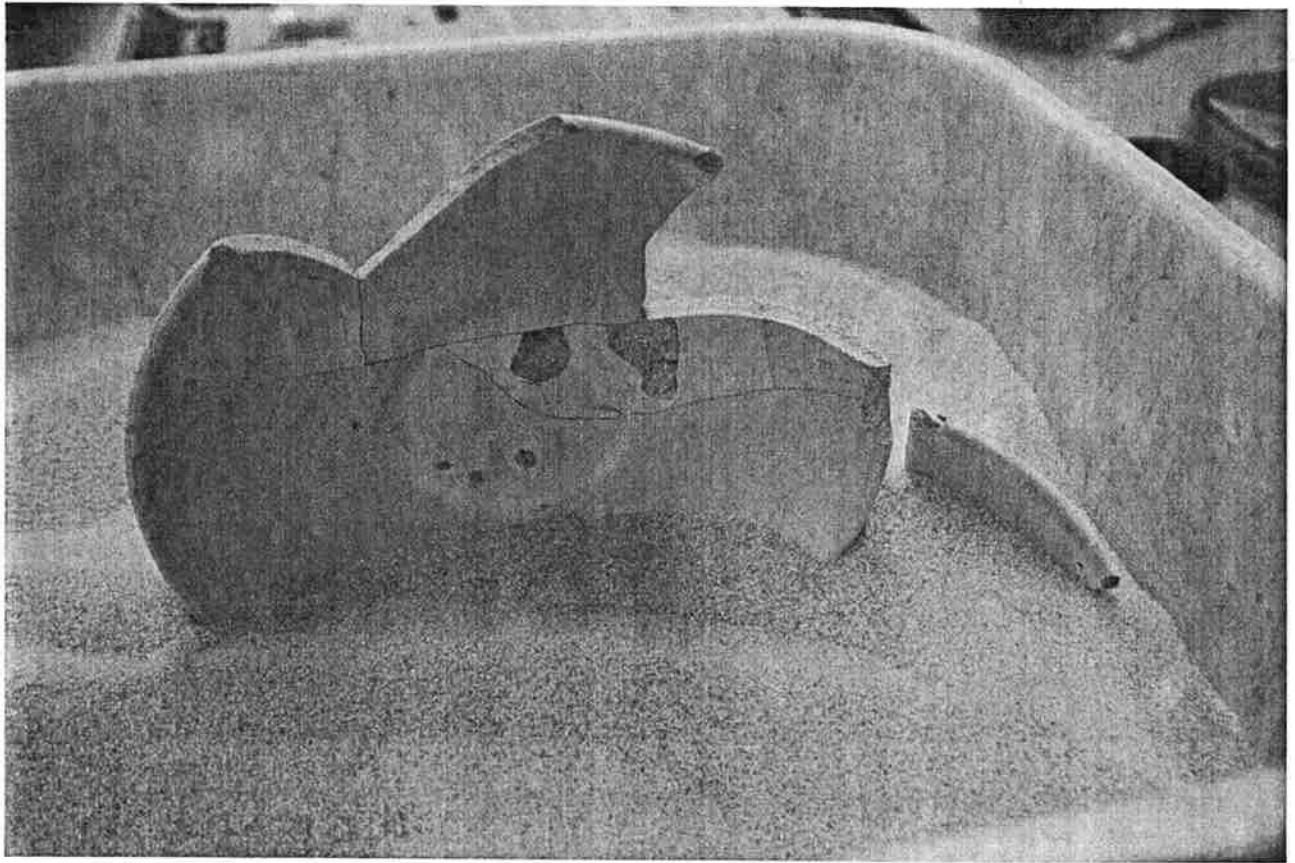


Figure 6 A ceramic saucer from the prison hospital discovered and being refitted

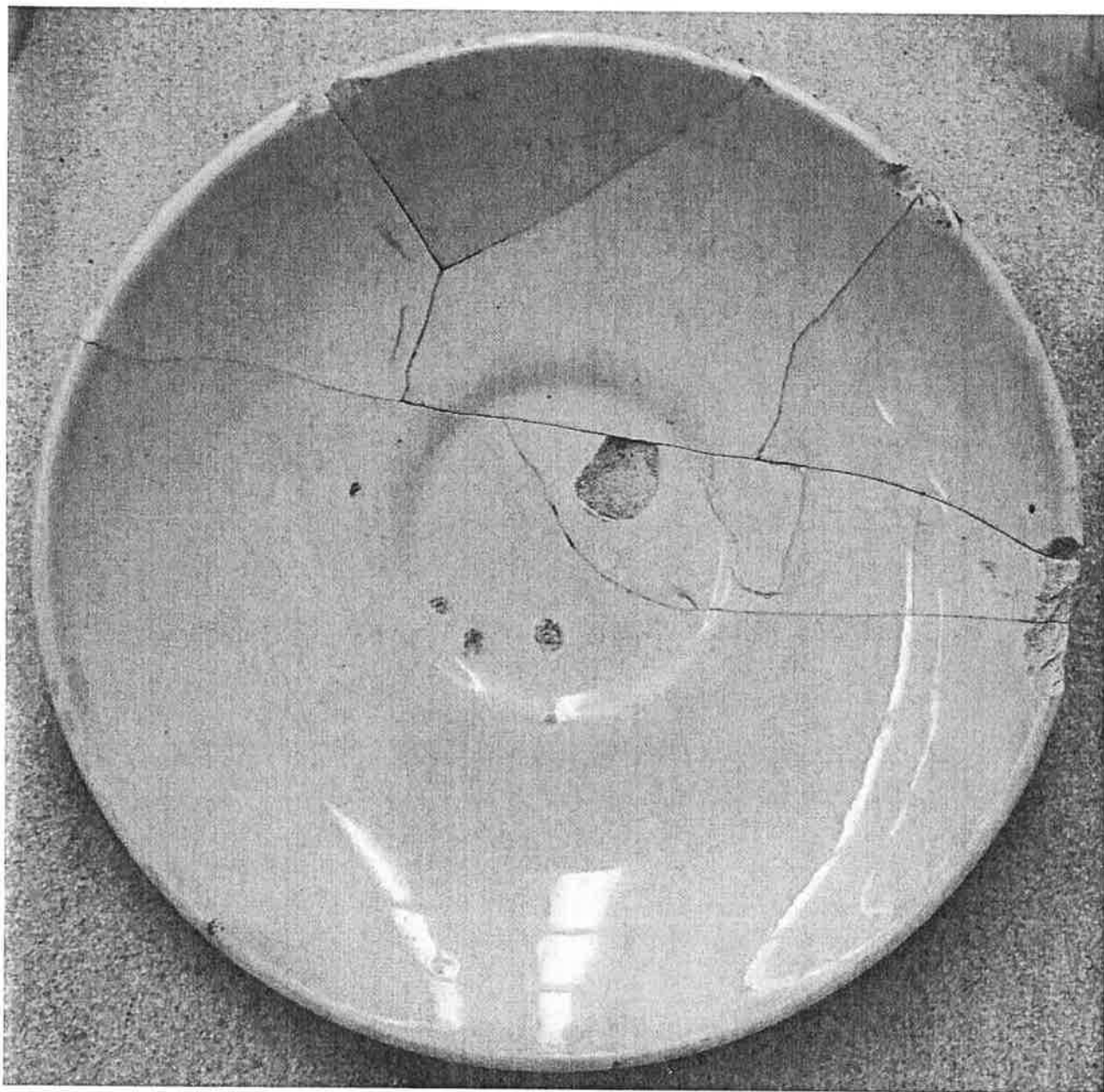


Figure 7 After refitting, we have a complete saucer

Archaeology is a destructive process, particularly archaeological fieldwork. Working in the lab is a bit different though; it is not nearly as destructive. Refitting is especially satisfying because it allows us to quite literally reconstruct once broken objects in hopes of better understanding their appearance and use at Johnson's Island. Lab work does take time—much longer than the fieldwork aspect of archaeology—but the purpose is to understand the lifeways of past humans after all, and no matter how much fun we have digging at the site, it is the artifacts we find and their processing and analysis in the lab that give us the answers we seek.

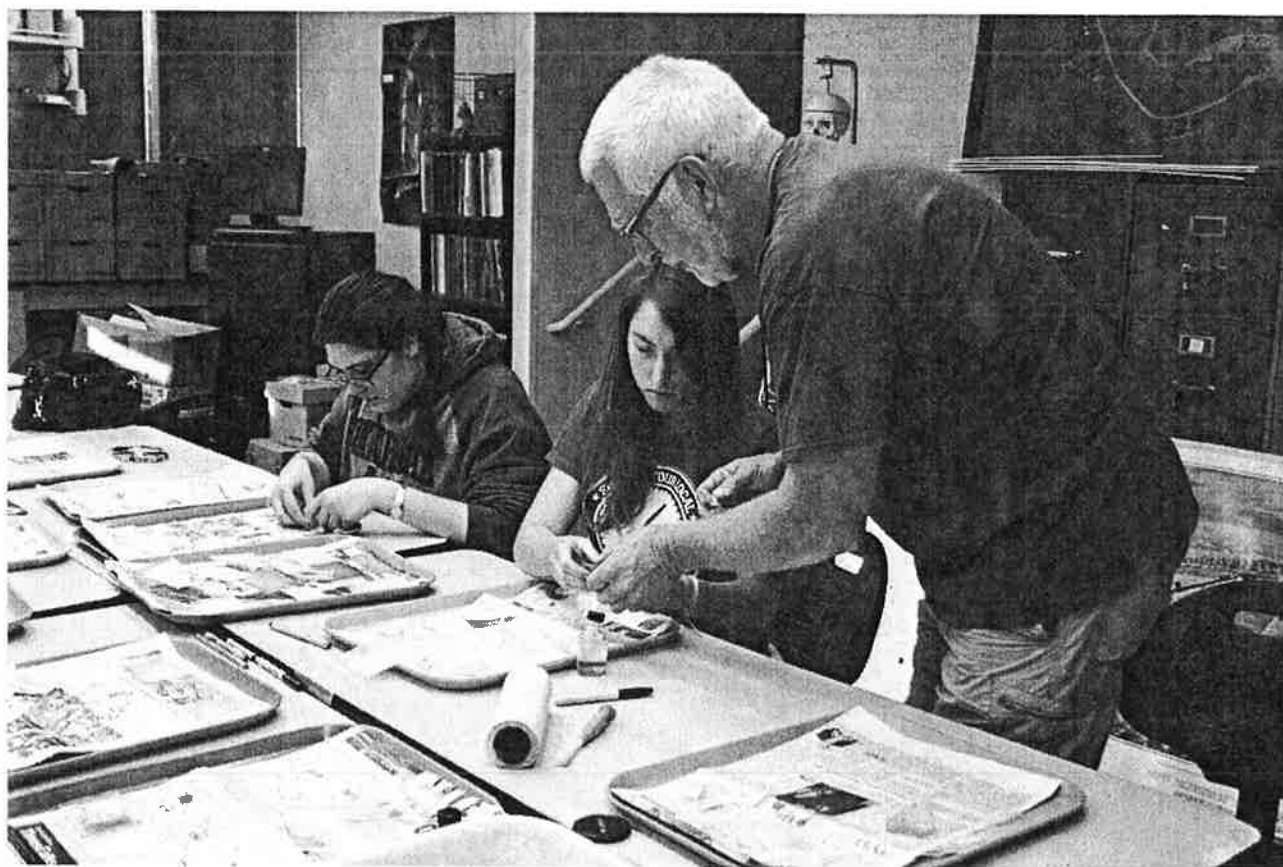


Figure 8 Dr. Bush working with us in the lab



As we excavate, part of our job is to screen buckets of soil for artifacts. Normally, the artifacts we find are set off to the side in trays to be counted and bagged at the end of the day. However, if something is unique or especially nice, it is FS'd. FS stands for "Field Specimen", and every time we find an item that we are able to FS it goes through a bit of a process before making it onto our FS Board.



Artifact in screen

After being uncovered and identified during the initial screening, the artifact goes to be washed (if it can be). We use a wet toothbrush to scrub all of the dirt off and reveal any sort of special markings, etchings, etc.



Washing artifact with water

Once the washing is completed, the artifact needs to be catalogued and photographed. At this point, it gains the official FS number that will be used for future identification and its entry into the Field Specimen Record for Johnson's Island. We then write down the artifact and all vital information about it in our Field Specimen form before making a hand drawing for our records. The artifact is then ready to be photographed situated next to a metric ruler for scale.



Entering information into the official Record

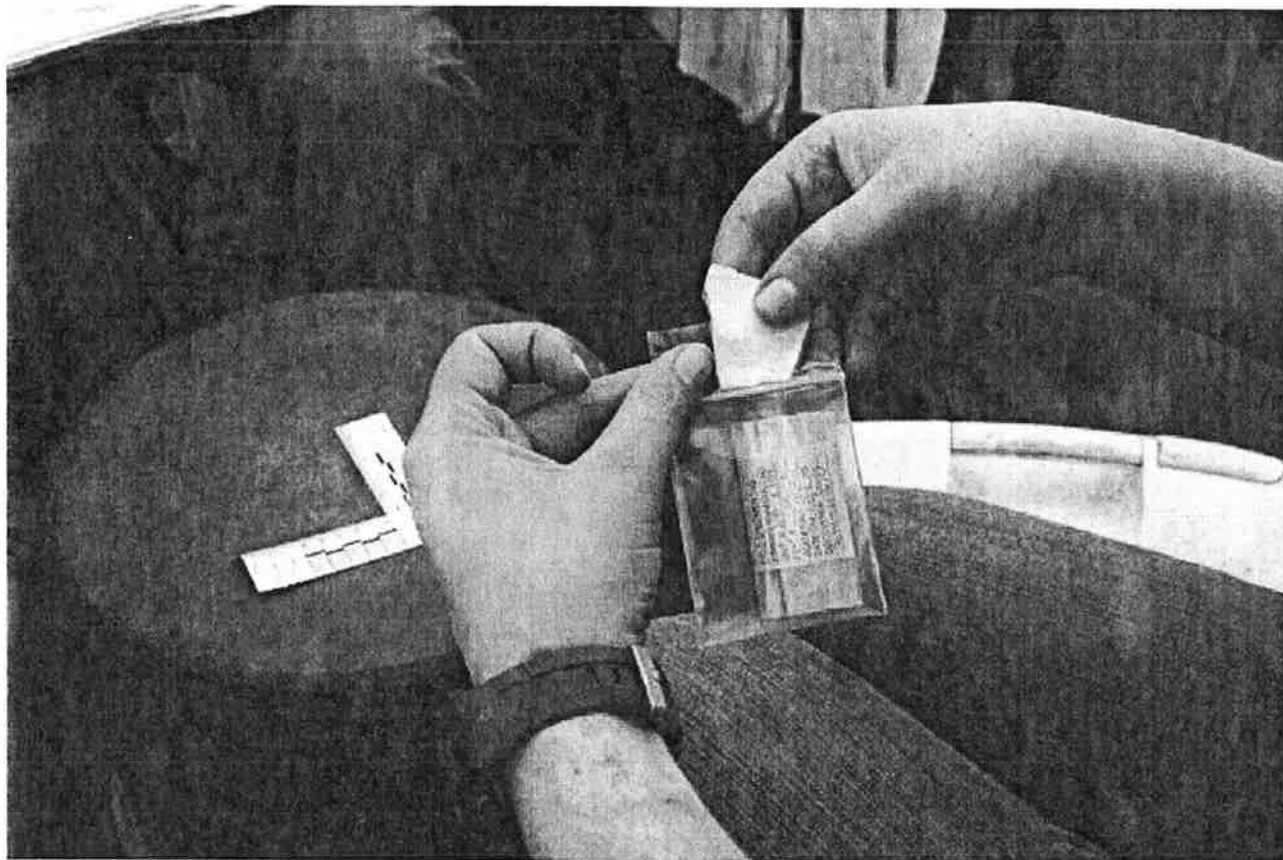


Drawing FS



Photographing FS

A small blue tag is filled out with the FS Number, where the artifact was found, and who discovered it; the FS number is also written on the back of the tag. At this point pictures are taken of the artifact with its blue tag and a metric ruler to gauge the size. The tag is placed in a small plastic bag, sealed, and then placed inside a second bag: the one that we ultimately put our artifact in. Once we place our artifact in the bag, we pin it to our FS Board where it will stay for everyone to admire until the end of the day.



Bagging Artifact







## **Cultural Monitor Training Program Phase III**

**Communication skills for written records and  
Oral communication with project personnel.**

### **DIRK CHARLEY**

**Dunlap Band of Mono Indians, Tribal Council Member At Large.  
Tribal Relations Program Liaison for the Sierra and Sequoia  
National Forests.**



## **Objectives:**

**Demonstrate an ability to perform and communicate clearly and with confidence.**

**Excel in Effective and positive communications.**

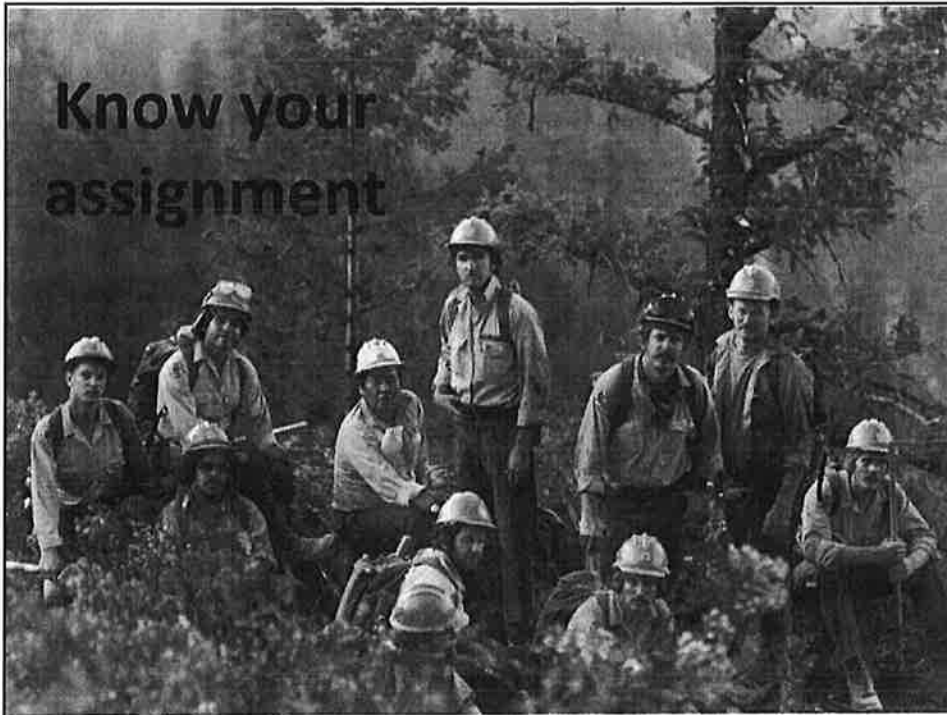
**Effectively communicate management expectations. (Know your position in the hierarchy).**

**Effectively communicate authority under difficult circumstances. (You have the power to shut the project down, any point in time)**

**Use proper oral and written language.**



**Know your  
assignment**



### **Know your assignment**

- Conduct your research, due diligence.
- The Who, What, When, Where, How and Why.
- Have the Contact information for them ready to go. Be sure to get their name and title correct.
- Know their business name/address.
- Set up an appointment.

### **Know your assignment:**

- Have your reference information available (the letter describing the project/assignment);
- Be sure to have cards for yourself, or a letter of authority/direction from your Tribe, group, organization, agency and staff department. Who are you?
- Dress for the occasion.
- Please show up on time.
- Call and verify the appointment again if necessary.

### **The Case File**

- There is the Office stuff.
- Make some time to review ahead of time.
- Is there anyone else who may have knowledge about this?
- Someone who has historical information, corporate memory?
- Website/internet links cited/referenced. Did you try them out?

### **There is the Field Stuff:**

- Scout it out if possible – travel to.
- Consider the lay of the land, any special hazards?
- Look in the file. Community contacts mentioned?
- Any special events happening during your project timeframe? (A special event nearby that may be impacted by the project)
- Practice situational awareness. (hunting season).
- Did you consider the safety aspects of the project? Did you look for Parking places or turnouts nearby? Other construction activities or emergency actions?



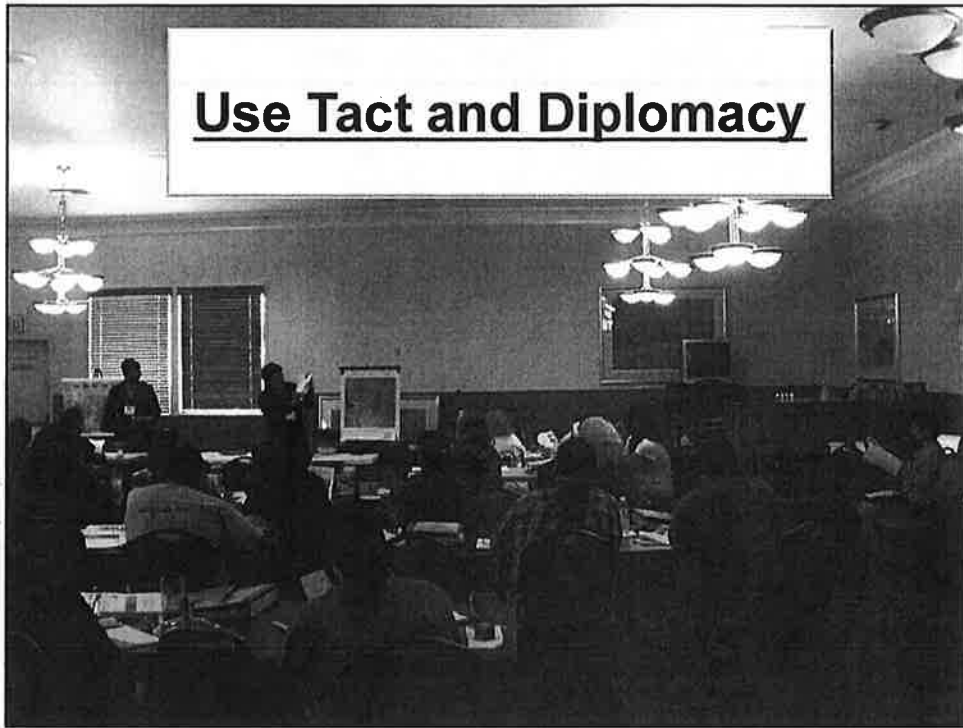
## Become familiar with the project



### Become Familiar

- Did you conduct an adequate amount of research?
- Did you remember to write up the questions that you need to be better informed about regarding your task?
- Take the time to review the material, look up definitions of terms, its ok to ask if there is a glossary for reference.
- Don't just rely upon your memory.
- Remember you are there to explain and convey clear understanding and expectations, etc.
- Be ready to reciprocate/share the information/knowledge that you have.

## Use Tact and Diplomacy



### Tact and diplomacy:

- You are here in the spirit of cooperation!
- Conduct yourself in a smooth and easy manner.
- Avoid using bad language or rough humor.
- Avoid sarcasm or criticize other persons or organizations.
- Follow proper protocol; try to determine ahead of time by asking questions prior to the main event.

### **Tact and diplomacy:**

- Be polite in all situations.
- Handle all visitors with grace and style.
- Welcome others and convey sincere appreciation at every opportunity.
- Try to gain contact information for them and yourself, Tribe, tribal group or organization and department.

### **Practice Listening skills:**

With Respect  
and Gratitude

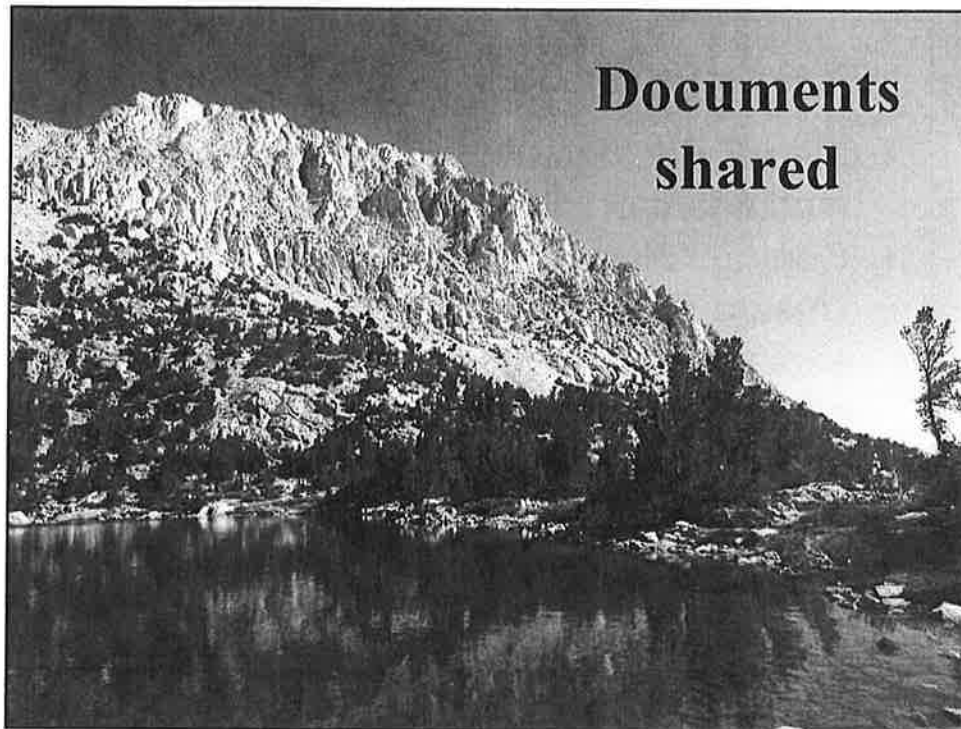


### **Listening skills:**

- Listen for the Key messages.
- When someone says, "I have four key points to make" be sure to take the time to jot them down or get a copy of their notes from the facilitator.
- Who is in charge?
- Who appears to be in charge?
- Consider the Nature of the project?

### **Listening skills:**

- Timeframes and Deadlines?
- Other important information to consider:
- Weather, (changes in the forecast);
- Safety!
- Access. (who has the keys?)
- Available resources; or changes affecting them.
- Additional/new personnel on site.
- Specialized equipment, transportation routes, communications procedures, etc.



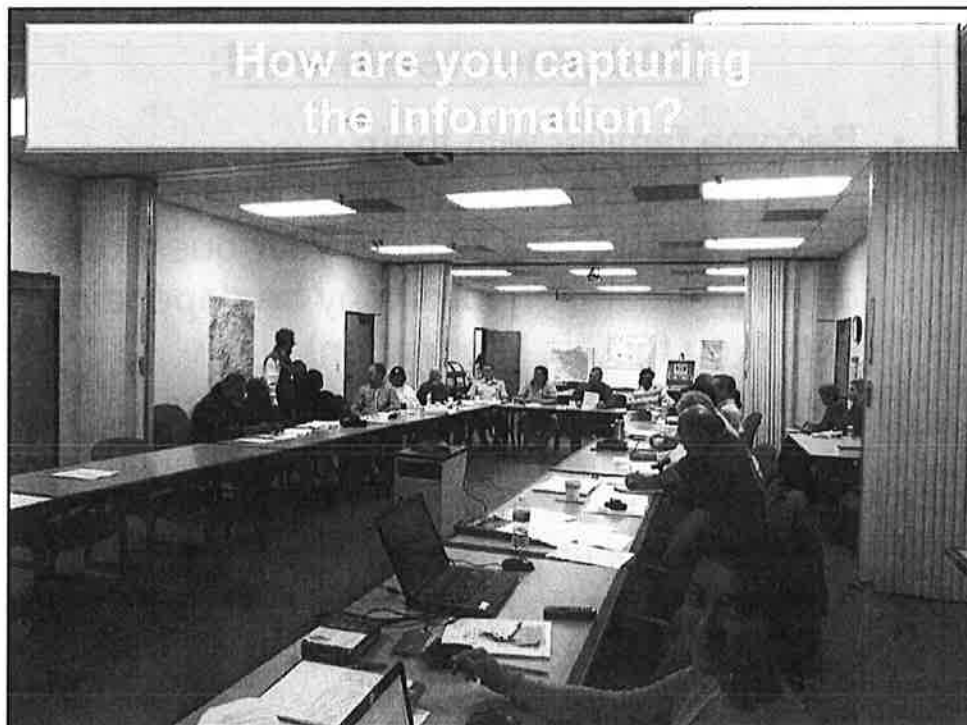
### **Documents shared:**

- Become familiar with them.
- If you have questions or need additional information be sure to write your questions down (Remember, folks may be depending upon you for this information).
- Do it ahead of time or right after the assignment while things are still fresh in your mind!
- Are these documents accurate, up to date, correct and do you have enough copies to go around if needed?



## **Documents shared:**

- Maps? Photographs? (Past and present as a comparator), Satellite photos?
- Contract blueprints/specifications?
- Unsure about definitions? Ask them to explain their meanings as many agencies have similar acronyms or abbreviations but they have different meanings. Gain clarity.
- Don't just rely upon your memory; you're there to gain clear understanding and expectations and get the job done.

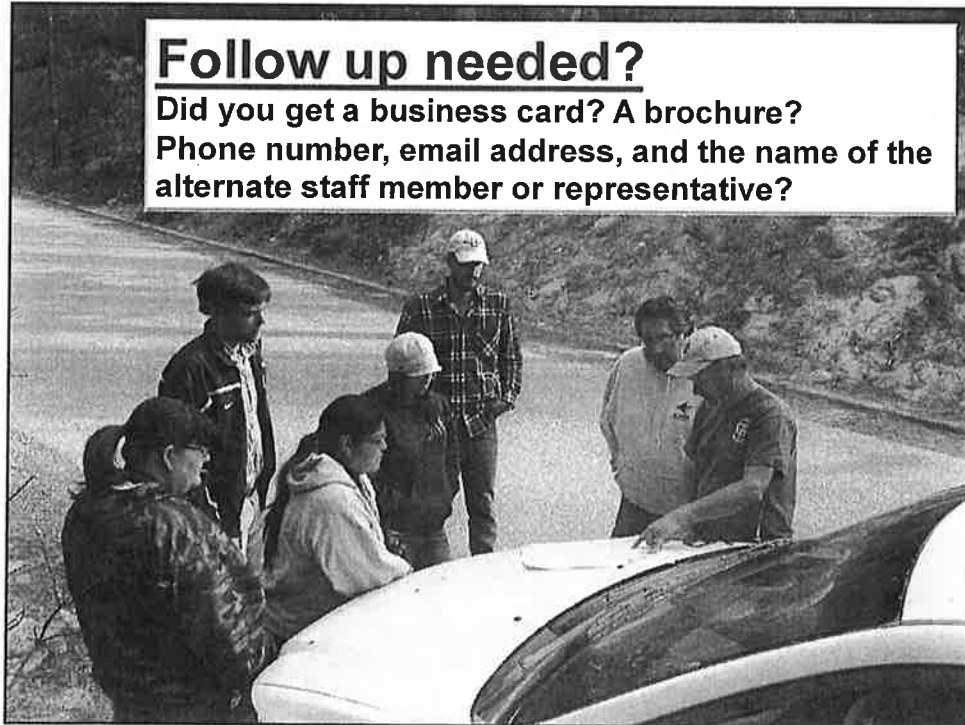


## **How are you capturing the information?**

- Take an assistant or intern with you if possible.
- Take notes, have a tape recorder, or bring a digital camera.
- Take pictures from a 360 degree angle.
- *Tip: Get at least 3 pictures, from a grand perspective of the location, of the key speakers, pieces of equipment, overall operations, unusual features.*
- **Note:** Before taking pictures or video, check to see if it's ok first!

## **Follow up needed?**

**Did you get a business card? A brochure?  
Phone number, email address, and the name of the  
alternate staff member or representative?**



### Transcribed notes:

- Always a challenge, takes time.
- See if you can designate that special person to assist you; share your hand written notes at least.
- Don't forget to share or gain the best contact information for them and yourself again if things change (i.e. unexpected changes, schedules, staffing, etc.)



## **Fire Assignments:**

- Communication methods with designated Chain of Command.
- Cell phone, iPhone, email or radios. (Frequencies)
- Incident Action Plans.
- Emergency Post-Fire Site Inspection Records



**Questions? Comments?**

