Region III
Photodocumentation Guidelines

Learn to use the camera BEFORE you have to respond.

These tips will help, but learning during an incident is not recommended.

Before You Travel:

- **Still vs. Video camera?** Many digital cameras will take both still and video images, but the image quality is not the same. Since the still camera takes better still shots, and the video camera better movies, **select the one you will likely need the most**. **If in doubt–bring the still** since they are generally more useful, and the 15 to 30 second movie clip they take can tell a lot.
- **Bring a 35 mm film camera and extra film as a back-up.** They are simpler and more reliable. When you have the film processed **have them create a digital image disk** at the same time.
- **Charge all batteries and bring extras** – digital cameras use them up fast. No battery power…no pictures! Have at least one fully charged spare battery, two is even better.
- **Check & clear the memory sticks** – If they already have images on them, save them to a computer (or verify this has already been done), and then clear the memory stick. You can do this on-scene if you have the ability to transfer the images while there, see below.)
- **Have the ability to save the images to a computer while on-scene at the end of the day** – Most digital cameras come with a cable to connect the camera to a computer, usually a USB port. Be sure the camera software is loaded on the computer you will use on-scene. For removable memory sticks/flash cards, you can use a separate reader devise (like a tiny floppy drive), but this also needs the device software loaded.
- **If you don't have the ability to transfer the images while on-scene, use one or more of these suggestions**:
    - Take fewer pictures.
    - Set the image file size (resolution) lower.
    - Delete unneeded images from the memory stick. You can do this in the field with the camera.
    - Buy more memory media – purchase the highest capacity sticks available (at least 512 MB, 1 GB available).

Before You Go Into The Field For The Day:

- **Moisture and Cold Air = Internal Condensation = Camera Won't Work!** Digital cameras are very sensitive to internal moisture condensation. If this occurs you should get a warning message. It will occur when going from warm to cold air, and vice-versa as well. It will often go away in a few minutes if the camera is allowed to equilibrate to the ambient temperature. Rainy or very humid days and sea spray often cause it. In the tropics, going outside from a cold air-conditioned car or room causes it.
- **Check to be sure you have all the charged batteries & empty memory sticks with you**.

- **Be able to protect the camera!** Physical shock, rain, and especially salt spray are very bad for electronics. "Pelican" brand hard cases are the best protection for our work, but regular soft cases are OK too, especially if you use heavy duty ("Freezer") zip-lock bags around the gear inside as well. Protect the spare batteries and memory sticks in bags also. If field conditions are rainy or salt spray is present – don't try to use a digital camera without protection!

Using Digital Still Cameras:

- **Set the image file size – This is important!** This sets the resolution or quality of the digital image and the image file size (JPEG files). **The higher the image quality…the larger the file size…the more memory used.** You set this by using the menu function. The largest numbers (of pixels*, like 2048 x 1536 = 3.15 megapixel) give the best quality, but also create the largest file size (about 1.5 MB per image). The two numbers are the horizontal x vertical pixel counts. Large files are harder to email as attachments. An image of 640 x 480 (about 25 KB) can be easily emailed, but image details will not be captured. (* Note: Pixels are the tiny squares of color that combine to create the image you see. Magnify a digital image on your computer screen and you can see individual pixels.)
- **Date/Time On-Off –** Use the menu to set this as you desire, but be sure the date/time is set correctly or that will be worse than no date/time stamp at all.
- **Low light –** Digital cameras generally have lower light capability than 35 mm film. However, you need to hold the camera very still, as they have a very slow shutter speed in low light. You can also use the flash, but that doesn't work for distant shots.

Movie Clips With A Still Camera:

- Many digital cameras can take 30 second to to several minutes of video. If you use this feature, use the highest quality (HQ, largest image size) available, as the others are very poor.
- Set the camera to Video.
- Pressing and releasing the shutter button will activate the movie recording feature – up to the maximum time allowed by the camera. Pressing the shutter button prior to the end of the video duration capabilities will end the filiming.
- Movies are saved as MPEG files. Most computers can play these files.

Field Photography Techniques:

Professional quality photographs are absolutely essential when documenting a response. Photographs convey ideas and information much more effectively than written words alone. In transmitting data, a photograph should assist—not confuse and irritate—the audience. Video-recording the incident may be necessity for documenting spill occurrence and distribution. Following are some helpful hints to avoid some of the common pitfalls made while photographing an oil spill site.

1. Beach Shots. At least three photographs should be taken of the beach: (1) up and (2) down the coast and (3) directly perpendicular to the beach. At zonal stations, additional photographs should include those of the profile line, trenches, and all aspects of oil distribution and biological effects. A person in the photograph is useful for discerning scale and depth of field.

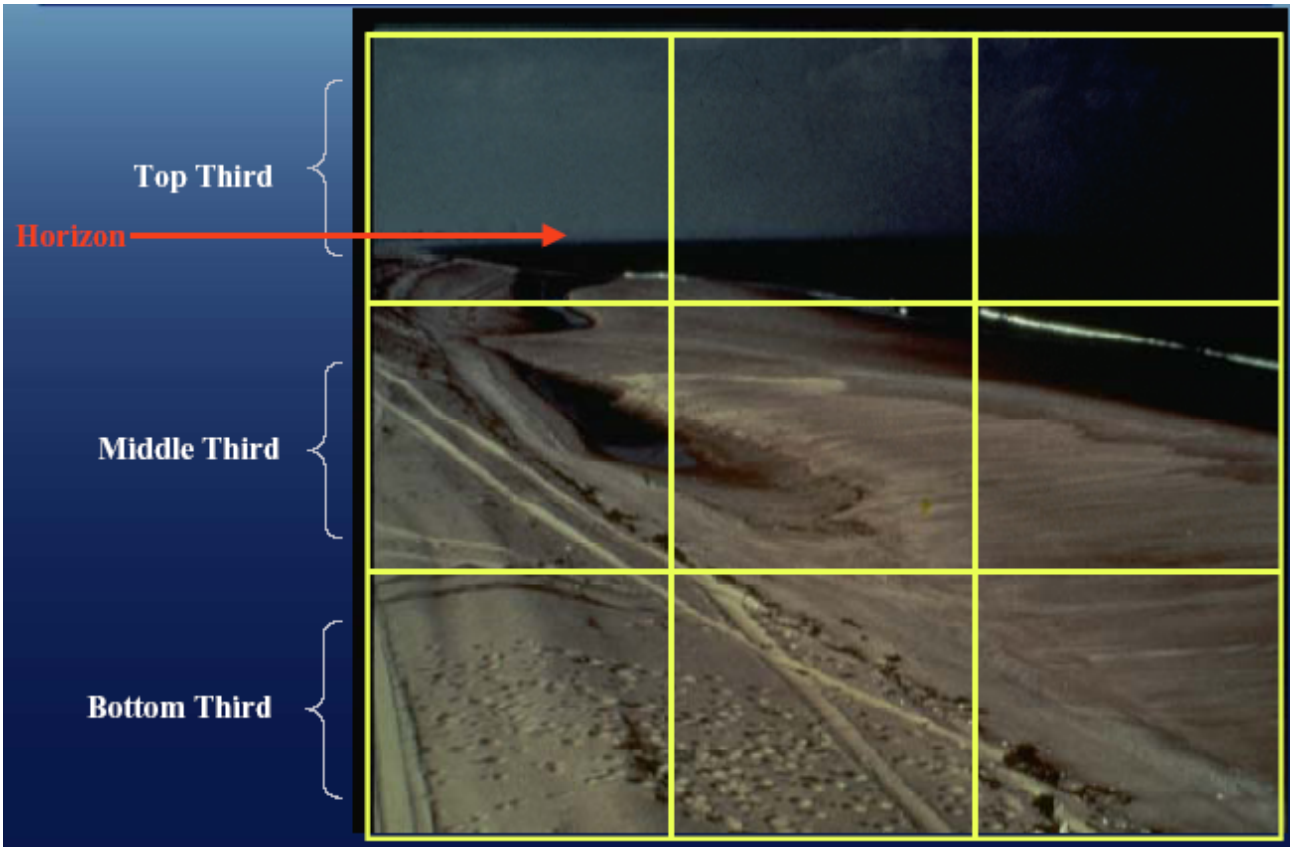
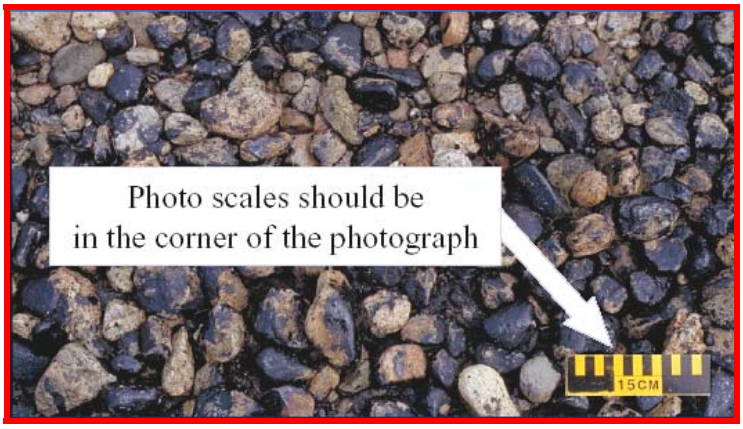


Image from Richard Wingrove, NOAA SSC 2004 Presentation – Observations and Documentation Case Summary.

2. A Straight Horizon. One of the most common problems for the beginner coastal photographer in taking pictures is a crooked horizon—make sure it is straight! In order to present a balanced photograph, it should be composed of approximately one-third sky

3. Close-Up Photographs. For determining the biological and geological impact of an oil spill, the close-up photograph is most useful. In all cases, an object of well-known size must be placed in the photograph for scale. Preferably, the scale should be marked in centimeters and placed in the lower right-hand corner of the photograph. **NEVER** place the scale in the center of the photograph. The camera should be held parallel to the surface to be photographed to prevent out-of-focus edges.



4. Aerial Photographs. Shutter speed should be set at 1/250 or faster, if possible. Don't steady the camera by leaning against the plane (vibrations!). Photographs should be taken through an open window or door, if possible; if not, at least make sure the window is clean. Again, be careful to avoid crooked horizons. Also, beware of reflections—wear dark shirts to minimize reflection.
5. From an Aircraft. When photo/video documenting oiling or recreational lost use from an aircraft, try to get the pilot to understand what you are doing and use appropriate flight patterns and altitudes. The pictures need to have sufficient resolution to see people.
6. Images. For oil slicks, use a polarizing filter and spin it to see what gives the image you want to show.

FIELD VIDEO TECHNIQUES:

- Have at least two video cameras available to be sent to a spill—one primarily for recording information pertaining to lost use (beaches, marinas, etc.) and one for documenting injury.
- Video cameras preferably should have color viewfinders, since it is often hard to differentiate between oil, waves, and shoreline when shooting from a helicopter with a black and white viewfinder. Investigate the quality and usefulness of the video camera with the large (~3") color viewscreens.

- Video cameras preferably should have image stabilization capabilities to use during helicopter overflights.
- Make sure all response people likely to use the video equipment are trained to use the video cameras and have had some time to practice.
- When shooting video (or still photos) from a helicopter, the best arrangement is to remove the doors on the side on which you are shooting, but leave the opposite side doors on to minimize noise and vibration.
- When shooting from a helicopter or fixed-wing aircraft, try to fly with the sun behind you to minimize glare on the water.
- During helicopter overflights, it is very useful to shoot video and still photographs of the same things: a) provides a level of insurance against operator error; and b) still photos may be very useful in "ground truthing" the video for landmarks, distances, etc.
- Try to minimize the use of the zoom capabilities when shooting video from a helicopter. The camera takes a second or so to autofocus and provides a blurry image during that period.
- All video (and still) cameras should be equipped with polarizing filters.

PhotoDocumentation Requirements:

Every image taken needs to be clearly and completely documented.

For logging of pictures, write everything in a log book during field work, including the photo and video information. That evening, fill in what you can of a regular photo log (attachment A). When downloading the images to your computer, develop an online folder system for all photography and specify a unique identifier with date code (e.g., Case/project #.12.17.04) for the images prior to removing images from the memory stick/card. Then finish filling out the log while looking at the images. Maintain a master list of images.

The following information must be recorded for each photograph:

1. Roll number (roll #) / File Number - the film roll number corresponding to each photograph (for 35mm photography).
2. Frame number (frame #) - the negative frame number corresponding to each photograph.
3. Focal length (foc. lg.) - The focal length of the lens used to take each photograph, recorded in millimetres.
4. Date (date) - the date (day/month/year).

5. Direction (dir.) - the general direction of each photograph with respect to the site from which the photograph was taken, i.e., Up (upstream), Dn (downstream), XS (across the stream) or Bd (towards the stream bed).
6. Location - the location of the photograph must be determined using available mapping or a GPS unit, expressed as a UTM.
7. Comments - any relevant comments about the photograph should be recorded. These should be descriptive enough and concise enough to provide a caption for the photograph.

   Copies of Photo Logs - Make copies of the photo logs for yourself and your agency. Put the originals in the official case file with the photodocumentation archives within the Documentation Unit.

Digital Photograph Files:

A digital copy of all photographs is required. The CD must be clearly labeled and referenced using the Case/Project Code and labelled using the following standards. The following requirements apply to data storage and presentation:

File type – high resolution images are necessary. GIF, JPEG, and TIFF fies are preferred. (High resolution gif, jpeg files may also be suitable. Please contact agency partners for support);

Colour files are required;

Resolution - Resolution requirements for slides is 1200 dpi, and for photographs (4”x6”) is greater than 300 dpi.

Scaling - Photographs must be scaled at 100%.

Labelling - Digital images must be labelled using whiteboards (this will not work with post processing of images) or a software/graphics package to label the image before it is stored on CD (see example below)

OTHER POSSIBLE ITEMS FOR PHOTO DOCUMENTATION

1. Aircraft tail numb
2. Altitude of aircraft (need for determiing the area and quantity of oil spilled)
3. Organization of person taking photo
4. Attach to photo the flight path of the aircraft as shown on a nautical chart with time and date start and stop.

Question: For digital photos do you want to name the photo or describe it in the title on the computer or leave it as a number?

PHOTO DOCUMETATION LOG

Project/Case#: _____ **Photographer:** _____

Camera Type: _____ **Date:** _____

Notes: _____

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Date	Photo #	Photo Name	Location	Description
	1			
	2			
	3			
	4			
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	6			
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	10			
	11			
	12			

Date	Photo #	Photo Name	Location	Description
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