# Process for Adding Aerial Photos to Wetscape

1.  Check to see that all the aerial photos are properly oriented, if not use an image editor program to rotate the photos to have North on the top.

2.  Start ArcView and load the Image Georeferencing Tools extension.

3.  Load all the processed photos into the view. They will appear of the view area because they have no location information. Make one of the photos active and click on the blue world map button. There will be an alert that there is no world file (this file contains six lines of data and is named the same as the photo file with the addition of a 'w' at the end); select ok and cut and paste the following data as a starting point:

    ```
    3.7
    0
    0
    -3.7
    507364.76049999997
    5380843.7983590001
    ```

    Click the save button, then close the dialog.

4.  Click the blue map button again and click the show controls button. This will display an array of tools that will let you move and grow/shrink the active image. Try to identify the area where the photo should be and enter numbers that move and resize the image so that it fits that location. Another option is to use the Interactive Image Move tool. By making the tool active, you can make mouse drag motions that will move the active photo the same distance and direction. This way may be more intuitive than the first method.

5.  Once you are satisfied with the placement, write down the last two lines of header information; this is the easting and northing of the upper left hand location of the photo and will be used by Wetscape to place the photo X's. If you would prefer to use the centroid coordinate, the easiest way to get this is to place the mouse in the center of the image and read off the easting and northing from the upper right corner of the ArcView window next to the Scale edit field.

6.  Wetscape uses the grass database directory to get photo files and placement information. Under the LOCATION_NAME will be the PERMANENT mapset along with the individual user mapsets. Create a subdirectory called 'ExternData' in the same directory as PERMANENT. Under ExternData create a subdirectory called 'photos'. Copy all the tif files that you want to display to the photos directory.

7.  Go back to the PERMANENT directory. Under this you will want to create a subdirectory called 'site_lists'. Edit a file called 'photos' in this directory. The photos file will have the following format:

```
name|some name
desc|desc of photos
easting1|northing1|1
easting2|northing2|2
...
```

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***Note -*** *The name and desc fields may not be used by Wetscape.*

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8.  The third line and beyond of the photos file beyond is the location of the given image; substitute 'easting1' and 'northing1' with the first photo's location and repeat. Wetscape reads this file and places the X's accordingly. When the user clicks the X, Wetscape will search for a file called 'photoX'. This means that a soft link will need to be created for each image in the ExternData/photos directory. Change to the ExternData/photos directory and execute:

    ```
    ln -s <image1>.tif photo1
    ln -s <image2>.tif photo2
    ```

    for every tif that you made an entry for in the 'photos' file. Now, hopefully, when you start up Wetscape and go into 'Display Site Maps' mode, X's will appear in each location you entered.