

The Disney WWII U.S. Navy Aerology Series Film Pamphlets

By David A. Bossert



(Walt Disney pitching storyboards for the U.S. Navy training film titled WEATHER AT WAR to a group of Navy officers and Disney Studios artists in 1943. Photo Private Collection.)

Outside, the “storm of the century” was bearing down with rain and increasing winds. The forecast called for snow, a rare occurrence in Los Angeles, and the term “snowmageddon” was being bantered about in some parts of the country. It just seemed like an appropriate time to stay inside and write about the Disney World War Two (WWII) Weather films and associated pamphlets.

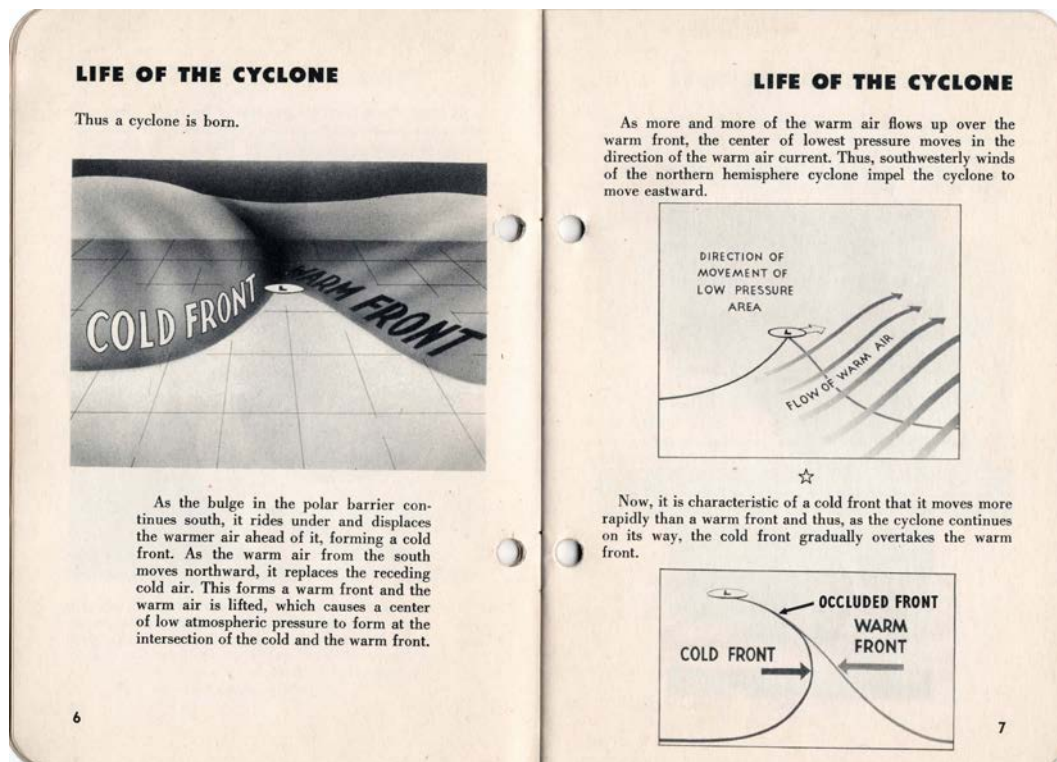
The United States entered WWII on December 7, 1941, in the wake of the Japanese sneak attack on Pearl Harbor, Hawaii. But the Walt Disney Studios had already felt the economic effects of the war raging in Europe for several years since the Nazi invasion of Poland on September 1, 1939.ⁱ As other European countries were invaded and occupied by Nazi Germany, Disney's film revenues were choked off from those territories. That motivated Walt Disney to look for other avenues to exploit animation and keep his studio afloat financially. This led to the studio creating more than 200 educational and training films for the United States Government and the U.S. Armed Forces.



(Three of the weather pamphlets in the U.S. Navy's Aerology Series based on the films produced by Walt Disney Productions during WWII. Private Collection.)

One topic covered by Disney was weather in the *Aerology Series* of films for the U.S. Navy which began with two titles created in 1942, *Ice Formation on Aircraft* and *Fog*. These titles were followed in 1943 with *Air Masses and Fronts*, *The Cold Front*, *The Occluded Front*, *Thunderstorms*, *The Warm Front*, *V.T.B. Pilot Training*, *Flying the Weather Map, Pt. 1 & 2: The Equatorial Front*, and *Flying the Weather Map, Pt. 3 & 4: The Howgozit Chart*. And in 1944 the films *Weather for the Navigator* and *Weather at War* completed the series.^{ii iii}

Once the individual films were completed by Disney, the Navy created small pamphlets for each of the titles. These were distributed to pilots and flight crews as quick reference guides that could be carried with them onboard the planes. The pamphlets used the graphic imagery derived from the films and supplemented with additional images. This a great example of repurposed and redrawn artwork by the Navy after the Disney Studios created the films.



(Animated diagrams like the ones shown above from *The Occluded Front* (1943) are used both in the film and then repurposed as still images for these pamphlets either directly or inspired by the film images. Private Collection.)

It's curious though that there is no credit or even a reference given to Walt Disney Productions for creating the animated counterparts to these pamphlets. The pamphlets are credited as "PREPARED BY AVIATION TRAINING DIVISION, OFFICE OF THE CHIEF OF NAVAL OPERATIONS U.S. NAVY."^{iv} That lack of credit or reference is likely why no one has written about these pamphlets as part of the Disney WWII history. Identifying the relationship of this material to Disney requires first making the initial connection, and then matching up film and pamphlet images for confirmation.

Once many of these military films were completed at Disney, much of the artwork, film, and negatives were removed from the Studio. This was especially done on the restricted or sensitive title that dealt with bomb sites, auto pilot, and related subjects.

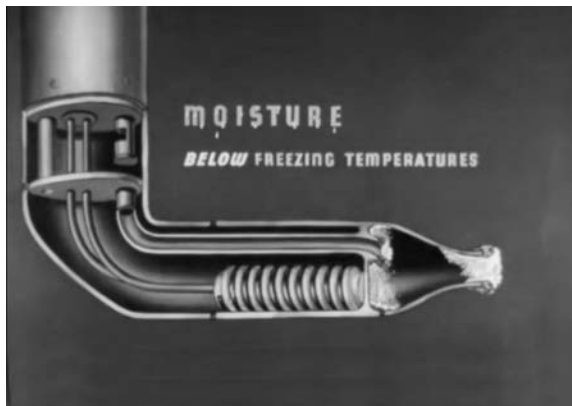


(High Level Precision Bombing title cards, Prod. 2681, 1943.)

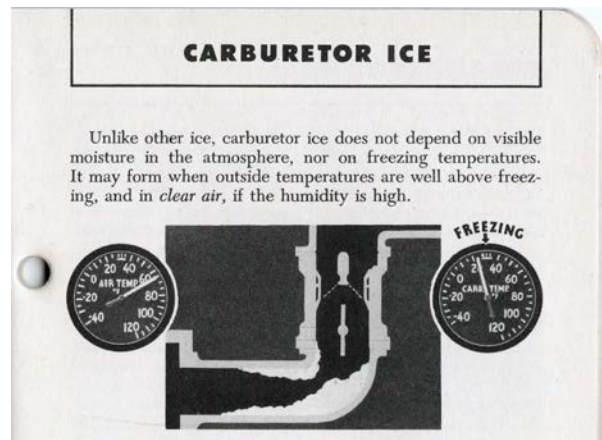
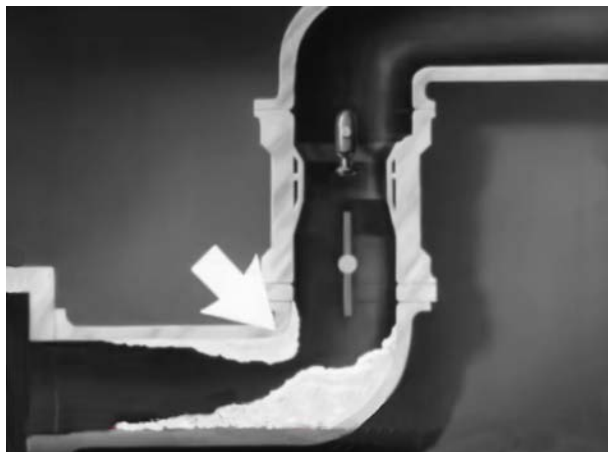
Titles like the *Minneapolis Honeywell Project*, *High Level Precision Bombing*, and *Fixed Gunnery and Fighter Tactics*^v were some of the restricted films made at Disney using separate production teams. Each team worked on a specific segment of the film with no one group of artists knowing what the entire film was about for security. Once the film was completed, the military removed all the artwork, film, and negatives from the Studio.

However, some pieces of artwork have survived, typically non-descript backgrounds, in the Disney Animation Research Library (ARL).^{vi} Yet, those surviving pieces of art are very few in comparison to the voluminous amount of training films produced at the Walt Disney Studios during the war years.

To get a sense of just how much artwork Disney produced all one must do is look through the *Aerology Series* of pamphlets. Each volume produced is profusely illustrated with still images, many of which correspond directly to the Disney film counterpart. For example, look at the following images that compare film frames with corresponding images found in the pamphlets.



(The image of a pilot tube on the left is from the *Ice Formation on Aircraft* (1942) film the near identical image on the right is from pg.18 of the *Ice Formation on Aircraft* pamphlet.)



(The image of the carburetor intake on the left is from the *Ice Formation on Aircraft* (1942) film with a slightly simplified version on the right from pg.15 of the *Ice Formation on Aircraft* pamphlet. The dials on either side of the carburetor image on the pamphlet page are identical to those used in the film but as separate scenes.)

Not all the Disney *Aerology Series* films artwork translated to the pamphlets. In some instances, for example pamphlet number three, *FOG*, which is based on the film *FOG* (1942), did not utilize much of the film's artwork directly. Instead, the pamphlet illustrations were inspired by what was animated in the film. This was likely because many of the animated scenes used special effects and camera techniques that were unique to animation and not necessarily appropriate or readable visually in print. Hence the need to reinterpret the animated scenes for static still images for these pamphlets.

PILOT COUNSEL

The weather map and upper air data have every bit of essential information you need to fly a cold front, a warm front, or either type of occlusion. It will tell you how to avoid areas of low ceilings and poor visibility, icing and thunderstorms.

It can save your life, if you only learn to understand the significance of all that the weather map is able to tell you.



The next booklet in this series, entitled "Flying the Weather Map," will show you how to read the full import of what is on the weather map.

(The final page from *The Occluded Front*, pamphlet number seven in the *Aerology Series*, featured a happy looking cartoon pilot at the flight controls "flying the weather map." This illustration and others throughout the pamphlet have a very Disneyesque cartoony quality that exhibits a lot of visual appeal. Private Collection.)

The pamphlets were designed to be compact and easy to use, making them ideal for quick reference in the field. The use of visual aids and diagrams made complex concepts easier

to understand and remember, helping pilots and flight crews prepare for a variety of weather conditions.

As a result of Disney's efforts, the U.S. Navy had access to a wealth of high-quality training materials that were both informative and engaging. The success of the *Aerology Series* and other wartime productions paved the way for Disney's later involvement in educational films, particularly those aimed at children.

The *Aerology Series* of films and pamphlets, in particular, offer valuable insights into how Disney's unique blend of art and technology was adapted for military use. Despite the loss of some of the artwork and films, the surviving pieces serve as a testament to Disney's dedication to the war effort and its commitment to innovation and creativity.

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ⁱ United States Holocaust Memorial Museum, Holocaust Encyclopedia: World War II Dates and Timeline; <https://encyclopedia.ushmm.org/content/en/article/world-war-ii-key-dates>

ⁱⁱ Donald Duck Joins Up, Richard Shale, University of Michigan, PH.D. Dissertation, 1976, Pg.289—294

ⁱⁱⁱ Us War Department - Field Manual - List of Films, Filmstrips, And Recognition Slides (1945), National Archives author research.

^{iv} U.S. Navy Aerology Series No. 1—8, 1942—1944, pg.1

^v Us War Department - Field Manual - List of Films, Filmstrips, And Recognition Slides (1945), National Archives.

^{vi} Author Research.