102-40-87

CHOLMONDELEY SOUND UNIT
FISHERY RESOURCES

The following streams in Cholmondeley Sound were surveyed during the period April 23 through April 26, 1973.

Stream 102-40-11: Ground survey.
This appears to be an excellent salmonid spawning stream. Wide, flat, gravelly riffles are abundant, at least as far as one-half mile above the intertidal zone. Large amounts of logging debris are present along the shores of, and in, the small cove at the mouth of this stream. Numerous salmon skeletons found along the stream banks. The Fish and Wildlife Service, Special Report Number 453, shows pink and chum salmon as major fish species, but list no surveys after 1957. Number of salmon using streams are almost impossible to accurately estimate, but may average between 2,000 and 15,000 per year.

Sport fishing potential appears to be on the low side, primarily because of the lack of large holding pools.

Recommendations
A leave strip of 100 yards in width on either side of the stream upstream a distance of one mile from the mouth should be retained. This will not only provide maximum protection to the stream but will also retain deer winter range and furbearer habitat.

Stream 102-40-13: Ground survey.
Definite barriers to upstream fish migration in the form of sheer falls over boulders and bedrock exist at the upper edges of the intertidal zone on both the mainstem and the major tributary which enters from the southwest and joins the mainstem in the intertidal zone. Small numbers of anadromous salmonids probably spawn in the intertidal zone, which is comprised primarily of pebbles and sand. This stream is not listed in the Fish and Wildlife Service, Special Report Number 453.

Recommendations
Apply standard stream protection measures.

Stream 102-40-15: Air survey.
A beaver dam about one-half mile upstream from the intertidal forms an apparent barrier. Fair spawning areas for salmonids below dam. Fish and Wildlife Service, Special Report Number 453 lists pink and chum salmon as major species. Average annual run of all salmon possibly ranges between 500 and 2,500. Spawning areas above beaver dam appear to be of low quality.

Recommendations
Beaver dam removal does not appear to be a worthwhile project. Apply standard stream protection measures.

Stream 102-40-17: Air survey.
This stream becomes very braided and meandering just a short way above the intertidal zone. Possible beaver dams about one-half mile above the intertidal zone. Appeared to be very little in the way of spawning areas, but difficult to discern from the air. Fish and Wildlife, Special Report Number 453 lists pink and chum salmon as major species with some coho. Special Report Number 453 lists reports of numbers of salmon spawning in this stream over the last twenty years which are considerably higher than I would have guessed; perhaps between 10,000 and 100,000 annually.

Recommendations
An Alaska Department of Fish and Game ground survey indicates unstable soils present along this stream. Because of the large numbers of salmon which use this stream, and the unstable value of the soils, logging and road construction in this watershed should be avoided until some method of timber harvesting, such as balloon or helicopter, which causes little or no soil disturbance becomes available.

Stream 102-40-31: Ground survey.
A small stream fairly steep, that may provide spawning and rearing areas for a few chum or coho salmon. Pinks and chums may spawn in the intertidal zone. Average annual salmon run for all species is probably less than 500. Not listed in Fish and Wildlife, Special Report Number 453.

Recommendations
Apply standard stream protection measures.

Stream 102-40-35: Ground survey.
A definite barrier in the form of a 10' falls exist at the upper edge of the intertidal zone. Several other falls and cascades from 1' to 6' exist in the 200 yards above the 10' falls. Salmon skeletons found along the intertidal zone shore indicate the stream below the falls is used for spawning. Fish and Wildlife Service, Special Report Number 453 lists chum and pink salmon as major species. Surveys indicate the average annual escapement of these two species may fall between 500 and 2,500.

Sport fishing potential above the falls appears good, however, more extensive surveys are required.

Recommendations
Investigate possibility of recreation trail along stream for sportfishing. Apply standard stream protection measures.

Stream 102-40-71: Air survey.
An apparent barrier to upstream fish migration exists in this stream a short distance above the mouth of the main tributary entering from

the west. Below this falls, there appeared to be extensive areas of clean spawning gravels.

Another apparent barrier existed in the main tributary about 100 yards above its mouth.

Spawning areas above each of the two barriers did not appear of sufficient quantity to warrant providing fish passage over either.

According to Fish and Wildlife Service, Special Report Number 453, pink and chum salmon are the major species. Average annual escapement for these two species may be between 1,000 and 15,000.

Recommendations
Apply standard stream protection measures providing fish passage over falls not recommended.

Stream 102-40-73: Air survey.
An apparent barrier exists about one-half mile above the intertidal zone. Spawning areas below the falls appeared of rather low quality. Probably, small numbers of salmon spawn in this stream. It is not listed in Fish and Wildlife, Special Report Number 453.

Recommendations
Apply standard stream protection measures.

Stream 102-40-87 and its North Fork: Ground survey.
A definite barrier to upstream migrating salmonids exists about 200 yards above the major tributary (North Fork) entering from the north. Spawning areas below the falls are extensive and of excellent quality. A smaller falls about midway between the intertidal zone and the North Fork poses a partial barrier, at least to pink salmon. Fish and Wildlife, Special Report Number 453 lists pink and chum salmon as the major species, with some coho and sockeye. From various one time counts over the past twenty years, it appears the average annual escapement of all salmon into Sunny Creek may fall between 15,000 and 50,000

Recommendation
1. Timber harvesting and road construction should be avoided on the southwest side of the North Fork Sunny Creek.

2. A leave strip 200 yard wide should be retained along the northeast side of North Fork Sunny Creek.

3. Timber harvesting should not occur within the 500' elevation contour along Sunny Creek itself.

4. Investigate possibility of providing easier fish passage over smaller falls between mouth and North Fork.

Recommendations 2 and 3 also provide for the retention of deer winter range, and furbearer habitat along Sunny Creek and its North Fork.

Uncataloged stream: Ground survey.
This stream is located at the extreme northeastern tip of Divide Head. The stream is just a trickle. Zero spawning.

Recommendation
None.

General Recommendations
We know road construction and clearcutting, particularly adjacent to streams, cause changes in the aquatic environment. These changes include higher summer water temperatures, temporary increase of sediment in spawning gravels, increased solar radiation impinging on the stream, loss of streamside cover, and in some instances, increased amounts of debris in the stream. Determining the effect these changes have on the size of returning anadromous salmonids is extremely difficult, as many other factors affect these fish during their stream, estuary, and saltwater life. However, we should be aware of the possibility even subtle changes in the aquatic environment may cause significant reductions in salmonid populations.

Land management activities anywhere in a watershed have the potential for causing undesirable alterations in the stream environment. It is management activities within the riparian zone, however, where the greatest potential for stream damage occurs.

The prudent course of action, then, would be to refrain from timber harvesting and road construction within the designated riparian zone of trout and salmon producing streams.

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