

The War on Aviation (Chapter 4 - The Closing Years)

Background and Review;

This the fourth chapter of a document that goes back almost 20 years. The original objective was a factual record of decisions and actions taken by regulators of Yukon aviation. It was never intended to be a personal record of perceived transgressions or a forum for whining. I believe that a chronological record of government actions combined with a summary of the aviation situation is an effective tool for evaluation and improvement.

I am committed to accuracy and objectivity. Where I make judgements or draw conclusions I intend to clearly label it. Should I make errors in fact or treat anyone unfairly, I urge the readers to contact me to allow correction or clarification.

August 12 , 2022

As I start this new (the 4th) chapter, **100 LL** is \$2.15 at the bulk distributor and \$2.35 at the pump at CYXY yesterday, and was \$ 2.85 in CYDA last week. (Interestingly, the price of domestic house heating oil is currently somewhere in between?) Commercial aviation in Yukon seems busy but is suffering from a shortage of pilots and maintenance staff and everywhere the availability and costs of parts and equipment is becoming a serious problem. Nationally and Internationally the conventional media is full of stories and images of travellers delayed as travel resumes post-COVID. Since I was first licensed to fly in 1976 a lot of things have changed in the aviation world, but I suppose a lot of it was predictable, hence the creation of COPA and other organizations to defend private general aviation from Government over-control (I think I'll write an article exploring this and append it to my website).

Last week Fort Selkirk airstrip was in excellent condition. Dawson City was busy and in good shape. Unfortunately CYXY is not. Just now I hear the Tower tell a transient aircraft on 121.9 ; "Sorry, because of all the construction there is no place to tie down here.", and there isn't. I will attach some photos here. There are at least three major construction sites underway on the airport property and one or two more about to start. Rather than speculate on how or why the entire infrastructure got to this point I guess we should be glad long lasting repairs are finally underway. The inconvenience will appear in this document from time to time for the next little while.

The War on Aviation (Chapter 4 - The Closing Years)

Schwatka Lake air operations has been left more or less alone this year and seem as busy as historic levels. The operators there are not immune from the shortage of staff and aircraft parts I am sure. There are less private aircraft moored on the lake than there were historically following the City of Whitehorse 's aggressive regulatory initiative.

It seems the 'old-days', when one senior Government manger controlled the entire Yukon Aviation and Marine Branch and all things aviation in the Yukon, have been replaced by a new regime where the elected politicians act arbitrarily and restrict any public input or Department output to an elusive on-line maze in order to reduce controversy?

Nationally Transport Canada has several initiatives underway that will affect private aviation. These too are only found 'on-line' on their website at; <https://tc.canada.ca/en/corporate-services/consultations>

In a move typical of how they now operate they meet their obligation to consult without advertising their intentions to add more restrictions by confining the discussion to a forum that's 'out-of-sight'. I was alerted by another Yukon aviator to a proposal found there to increase many of TC's fees by more than 400 %. I submitted my usual response, I suggest others do so.

All this is status-quo as of today, as for the future COPA is having a fly-in in Carcross on Saturday August 20 that should be a good time.

September 15 , 2022

Not a great deal is changing in this past month. (That includes construction at CYXY - they have been working on the 100 meters of sewer along 02/20 all summer and still not completed it. They spent two days working on Taxi-way GOLF, and stopped. The Alaska highway along the airport has been similarly torn up all summer and will not be completed now before snow. That is likely because only one or two pieces are working on it at any time, and they don't work at all on weekends or evenings? Someone, somewhere, knows why!)

Atlin has 24 hour automated 100LL and Jet Fuel sales that takes all major credit cards. Thats good news.

The War on Aviation (Chapter 4 - The Closing Years)

Oct. 20, 2022

The Government started construction on taxi-way 'GOLF' (on the third week of October?) The 100 meters of sewer work along the edge of 'APRON 2' is still not completed (yesterday all the equipment was still parked and the trenches partly filled.) It looks like work has ended on 14L / 32 R although it is still closed, and the ramp in front of the terminal is in use again. Down on Schwatka Lake the last floatplane has left to be stored or returned to wheels.

World-wide aviation has returned but with a lot of problems. Costs have increased dramatically and the numbers of travellers and apparent shortage of support workers have made long distance and international air travel a mess. Air North has done well keeping fares on their routes at or near pre-covid levels. Someone complained to me that pre-booking a family of 4 from here to Mexico in December on Air Canada was in excess of \$ 8,000.00.

I notice that the drop in the Canadian dollar against the US has made aircraft parts outrageously priced. Simple items are in short supply too. I was thinking of dressing up the Cub with some new parts and a bit of cosmetic work but anything beyond what is absolutely necessary is out of my reach now. Safety instead of Style....I should get a tattoo?

This all sounds pretty negative, it is important for all of us with experience to help those just starting out in the aviation world in any way we can. This is true at all levels, commercial to recreational. If you are reading this lets commit to making aviation available and enjoyable at every opportunity?

November 10, 2022

Some good, some bad, no ugly?

Yesterday an American registered aircraft (looks like a Piper Pacer?) landed reasonably successfully in the new Whistle Bend subdivision after some failure while landing at CYXY. Both people on board are fine.

The War on Aviation (Chapter 4 - The Closing Years)



Whse Star Photo of Nov 9 Mishap

A second surprise yesterday from YTG. We received a letter from Aviation and Marine that informs us we have been over-paying on our lease fees by about 20% since 2014. They promise to correct the situation and apply the error as a "credit" on our account. This is good news personally of course.

January 7, 2023

This update is simply to start the year. Locally every aviation company I know struggles with the new rules restricting pilot duty times. In order to comply pilot overhead is climbing above realistic levels. Some companies (mostly smaller ones) won't survive. For the public the cost of airfare has to increase significantly. What is surprising is that public expectations have yet to confront Government's actual motives for so many illogical restrictions (after all this is/was about safety is it not)?

For private aviation, fuel and maintenance and insurance costs have yet to eliminate some of us from the activity hopefully for another year.

April 17, 2023

There has been little to update here until today. Unfortunately the RCMP Pilatus PC-12 from Yellowknife had an accident here at CYXY today. The pilot was likely the sole occupant and the rumour is (AND I STRESS THIS IS NOT OFFICIAL IN ANY WAY) she did a pretty good job of getting it down. We wish her the very best speedy recovery

The War on Aviation (Chapter 4 - The Closing Years)

to flying. The wind at the time was from the North and it was snowing and melting at the same time. Visibility has been very poor all morning. We will wait for the investigation for details that are factual.

Another rumour, 14L / 32R has been under repair (replacement) for two years so that it can be used while the main is undergoes needed major repairs. Because of the lack of run-outs at each end, as a result of the escarpment beside it, the rumour is it will not be approved by TC. The way the bureaucracy works this is not that big a surprise? How the major carriers can deal with this remains to be seen.

COPA 106 has a full range of events planned this summer;

Saturday May 27:

Bun-Run to Braeburn. Lunch at Braeburn Lodge

Saturday June 3 (June 10)

Fly-In to Carcross. Carcross Aerodrome Society (CAS) is planning an event together with the Carcross Recreation Board. "Discover Aviation" event (formerly known as Copa for Kids) that day.

Saturday June 24:

Public event at Cousins. Short takeoff and landing competition at Cousins airport, followed by a poker run on Sunday June 25

Saturday July 15:

Fly-out to Ft.Selkirk. Will try to get a guide for a tour. If none available it will just be self-guided thru the historic sites

Saturday August 26:

Carcross meet with Classic Cars. The Schnitzel Truck will be there too

Saturday September 9:

Fly-out and BYO picnic to.....

April 30, 2023

Well, somethings may never change within the bureaucracy, maybe it is because it just can't? Yesterday I was told by a neighbour that I have only a few days to find a place to park my airplane because they will start tearing up the pavement in front of my hanger, again, to dig up the sewer and move it. (This will be the third time that sewer has seen daylight?) It seems we will not have access to our hangers. There was an

The War on Aviation (Chapter 4 - The Closing Years)

email sent to us from YTG months ago telling us that plans were in place to move taxiway "Golf" and we may need to vacate for a short while. I recall the email said they would offer alternative parking for that sort period, but, it seems they forgot. I greatly fear that if this goes the way the sewer move along 02/20 went we may be out for a long time? (That project, done by the same contracted company, started 2 years ago and the roads are still not repaired and equipment has been parked there all winter.)

I was talking to the people in the Tower at CYXY yesterday and they said they knew nothing about the construction on "Golf", but they were not really surprised because they were still out of the loop on the parallel runway 14L/32R! The vortex of bureaucratic absurdity hovers over that project still, the risk is the whole airport could be unusable by large aircraft.

A return to old times? Not yet, I recall YTG has still been fairly cooperative in the past couple of years, but it seems they (the Federal, Territorial and Municipal governments) have created a system that prevents progress and results only in atrophy and failures.

May 3, 2023 - Was I hasty in suggesting YTG had changed ?

SO, a few days ago I was informed by a neighbour (a local contractor) that they would be tearing up our pavement and eliminating access to our hangers starting this week. I asked around for more details and I even got a photo of the plans as tendered.

So, yesterday afternoon I went looking for somewhere to park while this was underway. I went to the YTG Aviation office in the CYXY terminal and asked there if this start date was accurate, if they had other places they would allow us to park, and if they had any other information. The woman at reception went into full "bureaucrat". The only statement she made was that;

- a) she was alone there,
- b) the start date was not correct, there would be no construction yet, and
- c) an e mail would be sent that clarified everything.

SO, I left, and I received a phone call several hours later from the same woman who clarified the exact same three points. She avoided every question I had and she

The War on Aviation (Chapter 4 - The Closing Years)

stated clearly; "The email will answer all your questions!" I rushed home and opened the following e mail from Russell Radwanski, Project Manager:

From: Russell.Radwanski <Russell.Radwanski@yukon.ca>

Subject: **Notice of Construction Activities to Tenants - Taxiway G**

Date: Tue, 2 May 2023 22:57:42 +0000

Message ID: <YT2PR01MB920743C8A4242A86B97F3826826F9@YT2PR01MB9207.CANPRD01.PROD.OUTLOOK.COM>

Return-Path: <Russell.Radwanski@yukon.ca>

Delivered-To: george@yukonflying.com

Received: from hp211.hostpapa.com by hp211.hostpapa.com with LMTP id EPIGLZeVUWQ5lhKAOT/heQ (envelope-from <Russell.Radwanski@yukon.ca>) for <george@yukonflying.com>; Tue, 02 May 2023 19:58:31 -0400

2023-05-02, 15:57

Reply Forward Archive Junk Delete More


Dear Taxiway Golf/Apron II stakeholder:
Construction on the realignment of Taxiway G is scheduled to begin in the next 10-14 days, with preconstruction activities starting in the area over the next few days.

In preparation for the upcoming work, all tenants are asked to ensure that the lane ways and paths between and adjacent to their lease lots are clear of debris and other obstructions which may hinder this work.

Additionally, tenants who have City water services may experience a temporary interruption to the use of these services during a preliminary pressure testing. We will send out notification of this temporary interruption once we have confirmation about when the interruption is expected to occur.

If you have questions or concerns, please let us know by contacting aviation.lands@yukon.ca and we will schedule a meeting as soon as possible.

Regards,



Russell R. Radwanski
Project Manager
Highways and Public Works | Transportation Aviation Branch W-16
Desk 867-471-0545 | Cell 867-336-1051 | Yukon.ca

So, I only need to make sure the back lane is clear and I should continue to have access to my lease and use of my aircraft ? Since we have no water or sewer the "...temporary interruption..." he speaks of in his third paragraph will not affect us? I asked the following;

Thanks for this info...

Norcope plans (planned ?) to start cutting this week according to their people ??????

So where do we go I wonder. Is there temporary parking somewhere?

Who do we contact to make sure aircraft are not trapped behind the excavator?

How will we know when its safe to access our leases again?

Some more questions likely coming.

George Balmer

And this morning got this reply;

The War on Aviation (Chapter 4 - The Closing Years)

Hi George,

We anticipate the work will proceed as was outlined for last year, and we will be sending additional information as things are confirmed. As with last year, we are planning to phase the construction so as to minimize any inconvenience to the tenants.

Regards,

A quick response, but not much clarity. I suspect they don't know? Stay tuned.

May 4, 2023 Another email with "the PLAN"

Today Mr Radwanski sent me (and many others) the PLAN. It is actually only a Power-Point slide presentation with no specifics but a slide near the end clarifies "the east end of "G" will be partially closed end of May/early June." It also says ; "**Short closures on each Taxiway G stub during construction of the access to G and installation of water, sewer and hydrant infrastructure. Alternate aircraft parking arrangements to be offered.**" This whole plan is posted on our documents list on the Politics Page.

I can only assume from the wording that we will have to vacate our leases as they mention alternative parking arrangements. Our remaining concern is now that we not get trapped on our leases by their contractor. Somehow we each will need to be contacted before we become trapped so we can relocate. Stay tuned, share the information you get as not everyone is always available.

May 8, 2023 - Taxi-way G Confirmation just received from YTG:

Hi Randy,

There will be a minimum of one week's advance notice provided to tenants prior to construction starting on the taxiway stub where their lease is located.

Plans for construction include the ability of Aviation Branch to provide temporary tie down spaces for tenants with no other option for parking their aircraft during the week that their lease parcel is without taxiway access.

The location for each tenant to use will be confirmed after a discussion with each affected tenant.

We will be in touch in the near future,

Renee/ for Russell Raswanski

The War on Aviation (Chapter 4 - The Closing Years)

May 11, 2023 - Small glitch....

This morning I drove in to Whitehorse thinking I would go flying today. When I pulled up to the hanger the contractor had a truck and trailer parked that prevented me from getting the airplane out. I went over and talked with the supervisor, Adriene (?). He seems like a nice guy who apologized and told me YTG has forbidden him from talking to any of us about anything!

I suppose I could have asked him to move, but I figured I didn't need to fly nearly as much as they needed to make progress today. I closed down and went home instead.

May 19, 2023 Taxiway Repairs et al

I received a message from my wife (currently in London) telling me YTG has contacted her there by phone about my need to put a request in for temporary parking (apparently they have lost my contact info)? I went home and found an email that advises YTG will issue me a parking licence if I provide them with insurance. It looks like they are trying to facilitate us, the introduction of licences and insurance are a new glitch though.

June 1, 2023 Taxiway Repairs et al (second)

We have moved off our leases a week now and construction did begin, but we received notice from YTG that the contractor encountered problems and it will be longer (like twice as long) than estimated. A letter from YTG yesterday says "the contractor has learned from their mistakes and should not encounter the same problem on the other two taxiways."

June 10,2023 Taxiway Repairs?



Here is a picture of my lease today (no one working?)

June 16, 2023 Taxiway Repair "action";

No one here. I have to wonder if contractors only work on these projects just enough to "occupy" the projects? They seem to have several projects on the go at any one time and only one or at best two people tinkering on each, and even then only on weekdays



June 20, 2023 (at 2 pm)

No one around? No changes.

The War on Aviation (Chapter 4 - The Closing Years)

June 22, 2023 - A big mess!

I went to the hanger to start cleaning up the mess on what's left of my asphalt. There were three pieces of equipment present but only two people working. Today I tried cleaning the packed clay off what remains of the paved part of my lot with a broom, but that was pointless. So I got a snow shovel and tried scraping it, but it is packed hard and I could not clean it at all. It is going to take high pressure water.

June 23, 2023 Still blocked out, they are digging again.

Today 3 pieces of equipment, no one there, and they have actually started digging a new hole near the start of the taxiway? I'll post a video I took today.

June 25, 2023



The War on Aviation (Chapter 4 - The Closing Years)

(Above) June 26, 2023 AT 10:45 - No sign of anyone working



The photo above shows they have placed nice clean gravel and levelled everywhere except on my lot. Probably just an over-site?

The pavement directly in front of my hanger was used for truck and equipment travel during all the digging. The asphalt my not stand up to that? I tried to clean it once they moved back to the taxiway but I need a pressure washer. I will need a load of new washed gravel to replace what they removed off of my lot, and a piece of equipment (in skilled hands) to level and cover the silt and clay they left there, otherwise it is going to be a soft sticky mess now anytime it rains.

June 27 and 28 - No change

I went to the hanger several times yesterday and then again today and there were two people working there only once. They were using a hoe to fill in the hole they dug at the entrance gate. At the rate they were going I doubt they will be done today. The gravel spreading is not complete, there is still a 6" drop midway down. Several "stock-piles" of fill and clean topping mix piled on the taxiway.

The War on Aviation (Chapter 4 - The Closing Years)



June 28, 11:30 am

June 29.2023 Little Change

I went in and worked in the hanger for a few hours cleaning and sorting. Two young construction workers alternated between their phone and running a hand packer filling the same hole by the gate. I see at least one aircraft has returned but YTG tells me to wait until they do some more packing, they will tell us when we can go back. They also will require us to leave when paving begins.

July 2, 2023 Moved Home

On Sunday there was no one working on any of the airport construction sites. Although they are not finished, they have removed all equipment from G1, so I moved home to my hanger. I see several others have already done the same.

I returned the next day (July 3) and saw two contractor staff working with one piece of equipment. I conclude only that the contractor works week days only, but for a token worker he works on weekends, (but not holidays) for some reason.

SAD NEWS -

Jim Tweeto died June 16 in his 180 in NW Alaska. Jim visited COPA 106 for breakfast a few years back. I am looking for those photos and will post them.

Sept 8, 2023

The War on Aviation (Chapter 4 - The Closing Years)

Construction still not done, notice today that we need to vacate again for a week, or more?

Nov 26, 2023 CYXY Construction Scandals Brewing ?

The media the last few weeks is full of stories about lawsuits and expensive failures at CYXY. I can't sum up all the problems, but if you have been reading this blog you can imagine much of it;

-The move of taxiway Golf and the installation of new hydrants is mostly complete (although the need is still not evident) and the new hydrants are secure for the winter under a layer of ice and snow.

-The sewer and lot expansions South of Runway 19 (which is still closed) might be done but its hard to tell, the roadwork is definitely not finished (so far it only took 3 years?)

-There is obviously **many millions of dollars** being spent moving earth inside the airport property across from the Weigh Scales. I have heard no explanation why.

-There is much more construction going on on the NE side (between 14L/32R) and the escarpment. But....Rumour is they are no longer planning on moving the maintenance shops over there because of ground instability? (This means we would be back where we started 20 years ago?)

-There is another million or two being spent on a new large building adjacent to the existing Fire Hall. Rumour is it is a second Fire Hall?

-There is another few million being spent filling in the gully off the threshold of 14R. Rumour is this is either to extend the runway, or to allow relocation of the Alaska Highway.

-The reconstruction of the main runway and secondary has already been attempted and failed (re: the lawsuits now ongoing amid mismanagement allegations). YTG will attempt it again but the cost this time will be in the **hundreds of millions** (a guess).

The War on Aviation (Chapter 4 - The Closing Years)

I am going to also guess that there is a financial and project mismanagement scandal brewing. The Government seems to be going to lengths to avoid tying all this work together or publishing any costs. That is never a good sign?

Operationally, this summer things have gone as well as anyone hoped at CYXY. The industry is returning to what I would call normal levels of movements. Parking for small private aircraft is still at a premium. Commercial operators have shuffled around a bit as a few hangers sold

April 1, 2024 - A General Update.

Update edited.....

COPA AGM last week. Discussion was about some Introductory flights for kids and a STOL contest this summer. Also considering some action to address the behaviour of YTG in trying to (or trying no to) meet their legal commitment to the Aviation Advisory Committee. Flashing back to when this was agreed to there was in fact two promises, an "advisory committee of stakeholders, AND a bi-annual meeting between COPA and the Minister to review the overall aviation situation. (The former became only focused on CYXY, and the later was ignored.)

The new underground hydrants are secure in their protective glaciers and should remain that way for months yet. When we asked about this earlier management told us they would just steam them out if they were ever needed. (Perhaps the new building by the fire-hall is to house a fire truck with a dedicated steam-thawing feature?)

April 11, 2024 - YTG says "everything is great at CYXY"

Media release today by YTG minister Nils Clarke trys to spin CYXY construction is all positive. Success is guaranteed by all the money they are spending. (That would be a change.) Condor flights will land in Southern Canada and Air North will pick up the slack.

But, the use of the parallel runway will require reduced loads in and out. This means more flights for same loads. It is safe to assume this will increase costs for everyone.

April 22, 2024 - Flying Across Canada Last Week - BY SUPER CUB

So I flew down to Peterborough Ontario last week and flew a nice Super Cub back (plan for 37 hours for those so inclined). The weather system changes at least twice during that kind of trip. All the way across this country the airports and aviation systems worked extremely well, until you get to the Yukon!

I stopped in over twenty small airports and several large ones including Peterborough, Sudbury, Kenora, Brandon, Medicine Hat, Grande Prairie and Fort Nelson. All were extremely well run and maintained perfectly. Gas was self-serve at all, and all worked easily. I only encountered security gates at Sudbury, Brandon (and Whitehorse.)

The busiest airport **BY FAR** was Sioux Lookout, and it is a "machine". There is an aircraft movement there every ten minutes. And yet it is an uncontrolled machine. We should send all the Yukon Aviation and Marine employees there to work and train for a week.

The first time I encountered any glitches in all 37 hours and 4500 km was when I entered the Yukon. Firstly I noticed the CFS listed many restrictions on airport use, that had not been done anywhere in Canada until here. The fuel pump in Watson lake had no grounding strap (it was broken and had been for a long time), the system had gas available this trip (it hasn't in past trips), but the machine refused to print a delivery receipt. The CARs station operator is still not allowed to deliver any assistance like weather or planning. He was friendly, but pretty much unnecessary? Then in Whitehorse I was greeted by, well, a mess!

The Yukon system is substandard when compared to any encountered on this entire trip. You can see it is focused on administration and on rules. Before we hire any more people to reinforce and perpetuate this poor standard we should send them to work anywhere else? This is a sad situation stemming back to the decisions made at the very creation of the department 20 years ago, and has been self-replicating ever since I know? And it shows.

Well done across Canada everyone else. It was a great trip.

The War on Aviation (Chapter 4 - The Closing Years)



Above: Arborg Manitoba, (airports don't get any smaller, and yet commercially used, professionally well run, neat and available pilots lounge, cheap gas, and all volunteers. , and like dozens of others I visited welcoming and focused on aviation.)

May 2024 - Everything Old is New Again ! (Sadly)

After attending the COPA Annual General Meeting earlier this spring I was motivated to do a little research on the " Yukon Airports Advisory Committee" (YAAC), that we forced the creation of back in 2018.

At the time our agreement with the Yukon Government was that a public committee would be created to oversee the Yukon Government operation of all Yukon airports because of their consistent failures to manage the airports in a competent fashion. A second commitment was made to have COPA meet directly with the Minister twice a year to deliver a "report card" of their actions. All this was caused by a history of poor decisions documented in this and the previous four editions of this blog (available here).

The Minister at the time was Richard Mostyn and the ADM in charge was Alan Nixon. Shortly after this I resigned from the Presidency of COPA and from my role in the discussions.

The War on Aviation (Chapter 4 - The Closing Years)

Today, as I read the Ministers Order In Council 2018-33 which creates the YAAC, I realize how easily and quickly their commitment was avoided. Rather than committing to full oversight Mostyn and his staff weaselled out of anything binding and confined the creation of the official body to a mandate of solely economic issues. They also watered down the membership to "divide and conquer" airport expertise, the continuation of their 'modus operandi' which has existed ever since the creation of the department.

For those readers not witness to the creation of the Aviation and Marine Services Branch back in the early 1990's, I recall the entire department was created and given mandate over all Yukon airports and operations. In accordance with the policy of the day the entire department was to be "De-centralized" to Haines Junction. A facility was built there and the entire staff was recruited to live and work from there. An unfortunate result was that only people willing to relocate were hired, and an even more unfortunate result was that no one with any actual experience in aviation was hired. That decision dictated two results;

- there was no depth or expertise in staff, and
- it made the staff subject do manipulation by politicians.

This situation was perpetuated in the thirty years since.

I recall that the incompetence was so prevalent that subsequently when a new Director was hired years later all the aviation community was motivated and unanimous in asking only one thing of Minister Mostyn at that time; "...**please just hire some one with expertise in aviation!**"

Of course he did not. Instead they hired a person from Southern BC with policy and HR experience (who I believe, remains in place to this day.) It seems from my attendance at the COPA discussions recently the Yukon Government has skillfully avoided accountability for their airport management. It appears too that, possibly in anticipation of responsible governance by them, COPA failed to force them to deliver on the second commitment, that of bi-annual one on one review of issues. This might have prevented the sabotage of the committee had it been implemented, we will never know.

Because I remain motivated in the pursuit of competent aviation management I have changed my mind about closing this blog (which has documented their behaviour in 4 parts beginning in 2008). Instead I see the need is likely even greater for a first person document of their actions and deceptive promises.

The next edition (**Chapter 5**) will begin with this summary.