

**From:** Hutton, David [PHSA]  
**To:** Manson, Bob [PHSA]; Marcon, Heidi [PHSA]; Hinde, Grace [PHSA]; Lavery, John [PHSA]; McGowan, Jennifer [PHSA]  
**Subject:** FW: Sitreps and updates  
**Date:** Wednesday, June 30, 2021 5:02:39 PM  
**Attachments:** [RE Update #5- NE HSDA and NI HSDA - HWY 97 North closures due to fire - Evacuation Alert issued.msg](#)  
[WVE PREOC Situation Report and Map for 2021JUN30.msg](#)  
[VICCR PREOC Situation Report #84 June 30 2021.msg](#)

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Thanks, Amy. Done.

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**From:** Romanas, Amy [PHSA] <amy.romanash@phsa.ca>  
**Sent:** Wednesday, June 30, 2021 5:00 PM  
**To:** Thanh, David [PHSA] <david.thanh@phsa.ca>; James, Landon [PHSA] <Landon.James@phsa.ca>; Sheridan, Jesse [PHSA] <Jesse.Sheridan@phsa.ca>; Francescutti, Jay [PHSA] <Jay.Francescutti@phsa.ca>; Delorme, Gerry [PHSA] <Gerry.Delorme@phsa.ca>; Woo, Deanna [PHSA] <deanna.woo@phsa.ca>; Robin Gardner <**s.22(1)**>; Mike Personal <**s.22(1)**>; Hutton, David [PHSA] <david.hutton@phsa.ca>; Hyland, Ita [PHSA] <Ita.Hyland@phsa.ca>  
**Subject:** Sitreps and updates

Hi Team,

Here are the consolidated SITEPS and info from VIR, SWR and North. I have not seen anything from Interior at this time. If anyone has – please share.

I have included the PHSA HEMBC Team as they are interested in SA across the province where PHSA programs and facilities may be impacted. Dave and Ita can you please forward to the team as appropriate.

Cheers,

Amy

Amy Romanas,  
Pronouns: She/Her  
Coordinator, Emergency Management – Provincial Operations  
Health Emergency Management British Columbia (HEMBC)  
Provincial Health Services Authority (PHSA)

Cell ☎ +1 (778) 828-5628  
Email ✉ [Amy.Romanash@phsa.ca](mailto:Amy.Romanash@phsa.ca)

*I honour and acknowledge that my place of work is within the traditional homelands of the Snuneymuxw First Nations.*

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**From:** HEMBC\_North  
**To:** HEMBC\_North; Weper\_Annette [NHA]; Biddercombe\_Moira [NHA]; De\_Smit\_Angela [NHA]; Fraser\_Sherry [NHA]; Ulrich\_Cathy [NHA]; Chapman\_Desa [NHA]; Collins\_Fryn [NHA]; Quinn\_Jessica [NHA]; Paper\_Steve [NHA]; Corcoran\_Jeanne [NHA]; Fugere\_Connor [NHA]; Quibe\_I\_Doug [NHA]; Zulu\_Chelan [NHA]; Cornell\_Trevor [NHA]; King\_Rakel [NHA]; Tielson\_Sherri [NHA]; Fumerton\_Raina [NHA]; Kim\_Jong [NHA]; Kiss\_Kendra [NHA]; Steward\_Erin [NHA]; Maracle\_Melanie [NHA]; Barlow\_Keltie [NHA]; Shawara\_Judy [Judith] [NHA]; Potsky\_Darly [NHA]; Clemas\_Lia [NHA]; Angush\_Penny [NHA]; Johnston\_Sandra [Sandie] [NHA]; Oliver\_Jordan [NHA]; Patient\_Transfer\_Kelliher\_Courtney [NHA]; Steele\_Andrew [NHA]; Marr\_Gregory [NHA]; Nordli\_Kim [NHA]; Cunningham\_Krista [NHA]; Barbw\_Keltie [NHA]; Romanas\_Amy [PHSA]; Lavery\_John [PHSA]  
**Cc:**  
**Subject:** RE: Update #5 NE HSDA and NI HSDA HWY 97 North closures due to fire Evacuation Alert issued  
**Date:** Wednesday June 30 2021 4:47:02 PM  
**Attachments:** image001.png image002.jpg

Yesterday's information in **black**, todays update in **red**.

The NorthEast PREOC called a coordination call at 1530 hours today. Updates are as follows:

**Environment Canada:** West of Williston Lake expecting thunderstorms today, concerns for tonight and tomorrow with thunder and lightning, winds expected and rain with hail. Tomorrow north part of northeast region in peace area , Muncho Lake area expecting rain, thunderstorms expected.

**Prince George Fire Centre:** expecting lightning into Van Jam, Mackenzie and PG – between 1800-2200 hours. Do not think lightning will not be as intense as first forecasted.

### 3 Fires of Note

**G80997- Pink Mountain area - 4800 hectares and growing, not active suppression at this time. Continue to monitor and growth projections, looking at where they can put crews.**

**G811007- south of G80997- 22 hectares no crew son fire – assessing at this time. Looking at putting in guards.**

**G91020 – Fort Nelson area – off Hwy 97 – 2500 hectares – no crew on fire – assessing at this time.**

All fires are impacting Hwy 97 North – intermittent road closures – closed during day , patrols during night and patrol cars to open intermittently.

Evacuation alert in place – no pending need to put that into an order. No evacuation alerts or orders in place for any communities at this time.

**Focus will be on communities and infrastructure.**

**Cariboo Fire Centre not expecting any lightning tonight in the Quesnel zone as once thought. 1600-2100 anticipating lightning in Williams Lake area and along Highway 97.**

**River Forecast Centre: Main weather – heat driving forecast – cooler, but hotter causing snow melt at a high rate. Rain and thunderstorm warming for McBride and PG areas – concern in McBride as Fraser already high, some concern for the Dore River to rise as well. McBride area and upstream - Flood Watch.**

Any further call minutes will be forwarded to you as they occur. Next call will be 1530 tomorrow, Thursday, July 1.

Many thanks

Jana Hargreaves

Coordinator

Northern Health Emergency Management

308 – 1488 4<sup>th</sup> Avenue Prince George BC V2L 4Y2

Cel(s.15(1)(i))

email: jana.hargreaves@northernhealth.ca

**Northern Health Emergency Management On-Call: 1-855-554-3622**



*I am honoured and privileged to live, work and play on the traditional territory of the Lheidli T'enneh*

Issued Tuesday June 29 21 37 hours

Please see the attached Evacuation Alert issued at 2100 hours by the Peace River Regional District for areas in the G80997 Buckinghorse/Sikanni Chief area, between Mile 202 and South to Buckinghorse River.

<https://prrd.bc.ca/wp-content/uploads/post/evacuation-alert-1-north-peace-fires/Evacuation-ALERT-2019-06-29-@-2100-Signed.pdf>

Any further updates will be sent out as required

Thank you

Jana

The Prince George Fire Centre called a coordination call at 1800-1900 hours this evening with the following to report and discuss:

- Expectations next few days: Forecast next 3 days: ground is dry, dry air, entering into a ridge breakdown and moving into Alberta, upper trough with area of instability, with cooler air. **Wednesday: SEVERE WEATHER, strong winds 15-25 km an hour, possibly 45km-75 km hour by late evening , lightning and thunderstorms in PG as well as north of Peace River to Yukon, NWT. Expecting rapid fire growth with this. Thursday and Friday – cooler, with northerly winds.**
- Fire response – all crews have been pulled due to fire behavior and heat stress concerns for fire fighters, unable to draw resources from around the province as other regions are challenged at this time as well. Focus is on detection, gathering information and tracking.

**G80997: Pink Mountain area – all fires have merged into one fire. Extreme fire behavior. Growth is happening quickly and more expected tomorrow. The fire jumped the highway 97 – 5000 hectares if not bigger. Highway closure of 97 – looking at opening road in the evenings for brief periods to let essential traffic through. Working with RCMP and pilot cars – expect delays. Daytime travel likely will not happen.**

No evacuation alerts at this time have been issued but pending at this time.

Health Care impacts. BCEHS – Fort Nelson Airport is open for medevacs however highway travel is affected.

Smaller communities (Prophet River, Halfway River, Blueberry First Nation) in the area are being asked to consider planning for EVACUATION. EMBC asking receiving communities to prepare for relocating residents.

These two fires have now merged into the larger G80997:

- G9120 – Fort Nelson south of Trutch – 100 hectares in size at Hwy 97 Rank 5 – impact Hwy 97 north soon.
- G90975 – 3000 hectares Rank 5 and 6 – recommendation to put out an Evac Alert in the Pink Mountain area – Highway 97 is currently closed with traffic control by RCMP at Buckinghorse to Sikanni Chief in the Pink Mountain area.

Many thanks and any further developments and updates will be forwarded to you as they come in. There will be a coordination call tomorrow TBD.

**Please see update from Drive BC – will be revisited tomorrow morning at 0900 hours via Drive BC update.**

#### Highway 97 Both Directions

Highway 97, in both directions. Forest fire between Sikanni Chief Rd and Prophet River Sub Rd for 59.3 km (112 km north of Wonowon to 114 km south of Fort Nelson). Road closed. Next update time Wed Jun 30 at 9:00 AM MST. Last updated Tue Jun 29 at 4:13 PM MST. (DBC-31007)

#### Urgent concerns: Tuesday, June 29 – Fire and Flood information

##### ○ Weather Update with Environment and Climate Change Canada

- High pressure system today, extreme heat to continue today and tomorrow with some cooling Thursday and Friday. Showers and Risk of thunderstorms on Wednesday and Thursday in the North East. With this heat – lag time of 3 or 4 days for effect of the heat on individuals as well as environment

##### ○ River Forecast Centre

##### Flood Warning – Upper Fraser River (UPGRADED)

The River Forecast Centre is **upgrading** to a **Flood Warning** for the **Upper Fraser River** including:

- Upper Fraser River including the Robson Valley and areas from Sinclair Mills upstream to Torpy, Dome Creek, Dore River, McBride and surrounding tributaries

##### High Streamflow Advisory – Quesnel River

The River Forecast Centre is **issuing** a **High Streamflow Advisory** for:

- Quesnel River and its tributaries

##### ○ Prince George Fire Centre update

- Lightning overnight – received a number of fires from those event – significant fire behavior, as many resources on as possible –
- **2 fires of note**
- **G9120 – Fort Nelson south of Trutch – 100 hectares in size at Hwy 97 Rank 5 – impact Hwy 97 north soon.**
- **G90975 – 3000 hectares Rank 5 and 6 – recommendation to put out an Evac Alert in the Pink Mountain area – Highway 97 is currently closed with traffic control by RCMP at Buckinghouse to Sikianni Chief in the Pink Mountain area. .**

##### ○ Health Emergency Management BC. / Northern Health

○ Working with facilities on cooling efforts in facilities and in community Monitoring situation of floods and fires

○ **Fraser Fort George Regional district**

■ — one family evacuated from flooding and sandbag stations setup in 3 different locations

Any further Provincial Regional EOC coordination call information will be summarized and forwarded to you as required Currently there are no other calls scheduled at this time

**From:** [EMBC SWE PREOC Operations 1 EMBC:EX](#)  
**Subject:** WWE PREOC Situation Report and Map for 2021JUN30  
**Date:** Wednesday, June 30, 2021 4:21:04 PM  
**Attachments:** [SWE Situation Report #3 2021JUN30.pdf](#)  
[SWE Situation Map 2021JUN30.pdf](#)

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**EXTERNAL SENDER.** If you suspect this message is malicious, please forward to [spam@phsa.ca](mailto:spam@phsa.ca) and **do not** open attachments or click on links.

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Good afternoon,  
Attached is the SW situation report  
Al Hurley  
Operations Chief  
Southwest Regional PREOC  
Emergency Management British Columbia  
14292 Green Timbers Way  
Surrey, B.C. CANADA V3T 0J4  
*Primary SWE PREOC contact*  
Phone 778-572-3962  
Email [preoc2.ops1@gov.bc.ca](mailto:preoc2.ops1@gov.bc.ca)

## South West Provincial Regional Operations Centre (SWE PREOC)

### SITUATION REPORT #3

Event: SWE 2021 Freshet

Date/Time Issued: [2021-06-30; 1700hrs](#)

Task #: 220938

Operational Period: 2021-06-30; 0830hrs to 1630hrs

Primary PREOC Email: [preoc2.ops1@gov.bc.ca](mailto:preoc2.ops1@gov.bc.ca)

Primary PREOC Phone: 778-572-3962

Primary PREOC Fax: 604-586-4083

Overall Regional Situation: Stable

Activated EMBC Staff: **6** Activated TEAMS: **4**

The next Situation Report will be issued: [2021-07-02 at 1600hrs](#)

\*\* New information

### KEY PROVINCIAL INFORMATION

0. The SWE PREOC is activated to support Local Authorities and First Nations for freshet flooding and wildfire
  0. [State of Local Emergency issued by the SLRD for Electoral Area B on 2021JUN29](#)
    1. [An Evacuation order was issued for Electoral Area B - West Pavilion on 2021JUN29](#)
1. A flood watch was issued 2021JUN26 for the Lillooet River including Pemberton, Lillooet Lake, Lillooet River and tributaries and Harrison Lake
2. The Evacuation Order for certain portions of IR #3 remains in effect
3. The SLRD, Village of Pemberton, Lil'wat Nation and the Pemberton Valley Diking District continue to coordinate response
4. SLRD
  0. The Evacuation Order issued on 2021JUN26 at 2030 hrs for electoral Area C was rescinded 2021JUN29
  1. The State of Local Emergency issued for Electoral Area C Pemberton Valley on 2021JUN26 remains in effect until 2021JUL02
5. Village of Pemberton
  0. The Evacuation Order issued 2021JUN26 2130 hrs for properties on Vine Road, Hwy 99 and Airport Road was rescinded 2021JUN29. The evacuation alert for the properties in these areas was also rescinded 2021JUN29.
  1. State of Local Emergency issued 2021JUN26 remains in effect until 2021JUL02
6. Lil'wat Nation

0. IR #3: Water levels are rising slowly, no concern. Continuing to monitor, Evacuation Order for 3 homes and 10 people remains in effect
1. IR #2: water levels have lowered, will continue to monitor
2. The Evacuation Order and Evacuation Alerts issued on 2021JUN26 for IR #1, 2, 8 was rescinded on 2021JUN29
7. Lower Stl'atl'imx Tribal Council
  - An Evacuation Alert was issued by the Samahquam Council on 2021JUN28 at 16:20 for QalaTKu7eM (Baptiste Smith IR 1B) due to flooding
8. Total Active RCs: 0
9. Total Active Alerts: 1 - Lower Stl'atl'imx Tribal Council for flooding
10. Total Orders: 2 - Lil'wat Nation for flooding, SLRD for wildfire
11. Total States of Local Emergency: 3 - SLRD, Village of Pemberton for flooding, SLRD for wildfire
12. Total Band Council Resolutions: 0

#### **WEATHER FORECAST FOR 2021JUL01 1600 HRS**

Heat Warning issued by Environment Canada for Coastal BC communities remain in effect.

#### **PEMBERTON**

Thursday AM Sunny, High 28, except 32 near Pemberton

Thursday Night Clear, Low 15

Thursday to Sunday the weather is expected to be a mix of sun and clouds. High 27 with the evenings clear with lows of 13-16

#### **SQUAMISH**

Thursday AM Mainly sunny, High 30

Wednesday Night Clear. Low 18

Thursday to Sunday the weather is expected to be sunny to a mix of sun and cloud. Highs 27-28 with the evenings clear with lows 16-17

#### **River forecast centre**

River levels as of 0900 hrs

STATION	WATER LEVEL (m)	DISCHARGE (m <sup>3</sup> /s)
Fraser River at Hope	8.097	8,060
Fraser River at Mission	5.164	9,950
Harrison Lake Near Harrison Hot Springs	12.170	N/A
Lillooet River near Pemberton	4.924	691

#### **LOCAL AUTHORITIES - WILDFIRE**

##### **Squamish Lillooet Regional District (SLRD):**

- Incident: EOC activated in response to The McKay Creek Fire (K71030)

0. **Alerts: 0**
1. **Orders: 1**
2. **State of Local Emergency: 1 - expires 2021JUL06**
3. **Homes Alerted: 44**
4. **Homes Evacuated: 10**
5. **Reception Centre(s): 0**
6. **Individuals Registered with ESS:**
  - The SLRD issued a State of Local Emergency on 2021JUN29 for Electoral Area B due to the McKay Creek Fire (K71030), which is in the vicinity of the 32km mark of the West Pavilion Road, and within 10km of the SLRD community of Pavilion Lake
  - The Evacuation alert issued for Pavilion Area - Electoral Area B on 2021JUN29 at 1900 was upgraded to an Evacuation Order 2021JUN29 at 2130 hrs
    - The Evacuation order issued for Electoral Area B - West Pavilion (West Pavilion Road from the 14 km mark to the SLRD border with Thompson-Nicola

## Regional District and other properties)

- SLRD is working with the RCMP on undertaking a safe evacuation
- ESS is provided through the Red Cross

### LOCAL AUTHORITIES - FRESHET

#### Squamish Lillooet Regional District (SLRD):

- Incident: Flooding in Pemberton Valley
- 7. Alerts: 0
- 8. Orders: 0
- 9. State of Local Emergency: 1 - expires 2021JUL02
- 10. Homes Alerted: 0
- 11. Homes Evacuated: 0
- 12. Reception Centre(s): 0
- 13. Individuals Registered with ESS: 0
  - The SLRD has begun demobilizing some flood response equipment, including gabions and sandbagging machines
  - Assessing agricultural loses due to high ground water levels
  - SLRD reported that all dikes are in good condition after being inspected 2021JUN28
  - Ten additional people registered with ESS/Red Cross on 2021JUN28, reception centre open from 0900 to 1700 hrs
  - SLRD has a pass system in place for people to enter and leave evacuation area to tend to property and livestock
  - Lillooet Lake continues to rise, backwatering the North Arm Channel area. Based on the current and projected rate of rise, water is expected across Highway 99 at Duffy Lake Road in a little over 24 hours. MoTI has cones and signage in place at this location
  - The SLRD, Village of Pemberton, Lil'wat Nation and the Pemberton Valley Dyking District continue to coordinate response
  - The Evacuation Order issued at 2030 hrs on 2021JUN26 was rescinded
  - The SLRD issued a State of Local Emergency on 2021JUN26 for Electoral Area C Pemberton Valley remains in effect
  - An Evacuation Alert was issued on 2021JUN26 at 1130 hrs for Electoral Area C Pemberton Valley, at 2030 hrs those properties were placed on Evacuation Order

#### Village of Pemberton:

- Incident: Flooding in the Pemberton Valley.
- 14. Alerts: 0
- 15. Orders: 0
- 16. State of Local Emergency: 1 - expires 2021JUL02
- 17. Homes Alerted: 0
- 18. Homes Evacuated: 0
- 19. Reception Centre(s): 0
- 20. Individuals Registered with ESS: 0
  - All rivers have leveled off as snowpack is dissipating
  - Based on observed conditions and forecasts, the risk has decreased to the point that it is currently safe to re-occupy the areas of Pioneer Junction, the Peaks, properties on Hwy 99 and Airport Road.
  - Those receiving Emergency Support Services were asked to return home 2021JUN29
  - Communications advising the public to avoid camping near waterways and stay clear of fast-flowing rivers and potentially unstable riverbanks
  - The Evacuation Order for properties on Airport Road, Vine Road, and Hwy 99 was rescinded 2021JUN29. The evacuation alert for the properties in these areas has also been rescinded.
  - The Village of Pemberton declared a State of Local Emergency on 2021JUN26 for flooding in the Pemberton Valley remains in effect

#### Abbotsford

- Incident: EOC activated on 2021JUN04 for potential flooding and to monitor dike erosion.

## District of Kent

- Incident: EOC activated to Level 2 to coordinate flood response along the Harrison River and Harrison Lake.
  - Monitor water levels and forecasts daily
  - Operating a supplemental pump in Harrison Mills area
  - Establish a location for sand and sandbags for residents

## Harrison Hot Springs

- Incident: EOC activated
  - Rockwell Drive closed to heavy commercial traffic as of 2021JUN30, open to private vehicles
  - Press release will go out today advising of high water levels
  - Sandbags will be available in Harrison for any resident who needs them

## Fraser Valley Regional District (FVRD)

- Continuing to monitor river levels
- Operating under a low risk low response based on current modelling

## FIRST NATIONS - FRESHET

### Lil'wat Nation:

21. Incident: EOC activated on 2020JUN25 for freshet flooding
22. Alerts: 0
23. Orders: 1
24. State of Local Emergency:
25. Homes Alerted:
26. Homes Evacuated: 3
27. Reception Centre(s): 0
28. Individuals Registered with ESS: The numbers are included in the count with the SLRD, Village of Pemberton and Lil'wat Nation
  - IR3: Water levels are rising slowly, no concern. Continuing to monitor, Evacuation Order for 3 homes and 10 people remains in effect
  - IR2: water levels have lowered, will continue to monitor
  - The Evacuation Order issued on 2021JUN26 2100 hrs and Evacuation Alerts for IR #1, 2, 8 was rescinded on 2021JUN29.
  - Flooding observed at Hwy 99 north of Birkenhead river that could affect 2 or 3 homes
  - Dike Road remains closed to the public
  - Lil'wat Nation ESS is supporting evacuees for Lil'wat Nation

### Katzie:

29. Incident: EOC activated on 2021JUN03

### Kwikwetlem:

30. Incident: EOC activated on 2021JUN07 for Freshet monitoring

### Lower Stl'atl'imx Tribal Council

31. Incident: EOC activated on 2021JUN27 in response to Lillooet River flooding

32. Alerts: 1

33. Orders: 0

34. Band Council Resolution: 0

35. Homes Alerted: 6
  - Water level down about 8" to 10"
  - Concern regarding road erosion, continuing to monitor
  - Approximately 6" of water on the road, no concern at this time
  - If road needs to be closed, alternate route out is available

- An evacuation alert was issued by the Samahquam Council on 2021JUN28 at 16:20 for QalaTKu7eM (Baptiste Smith IR 1B) due to flooding
- Sandbagging operations are underway in Samahquam to protect property below the 20-year flow line
- Douglas First Nation has one home currently under the 20-year zone
- LSTC Land Crew will be back in Samahquam 2021JUN30 and will continue sandbagging efforts

- Properties below the 20 year flood level along the Lower Lollooet Water System will likely see flooding

**Tsal'ah Nation:**

36. **Incident:** EOC Activated

- The bridge at Whitecap creek, the community's secondary egress has been impacted by flooding, will continue to monitor
- Rip-rap was installed to mitigate ongoing water
  - The bridge has been threatened by previous flood events
- The main river is down 6"

**Shxwha:y Village:**

37. **Incident:** EOC activated for Freshet on 2021JUN04

**Skwah:**

38. **Incident:** EOC activated for Freshet on 2021JUN04

**HEALTH INFORMATION**

No impacts reported

**LIVE STOCK IMPACTED**

No impacts reported

**TRANSPORTATION IMPACTED**

No impacts reported

**UTILITIES IMPACTED**

No impacts reported

**USEFUL LINKS/RESOURCES**

**Wildfires of Note**

- [BC Wildfire Service](#)

**Processes with Adaptations for COVID-19**

- [Spring Flooding Response - COVID19 Guidelines](#) - Currently provides modified berm building methods (e.g., Sandbag, Tiger Dams, Gabions) to assist with physical distancing at worksites. This link is updated as further adaptations are developed for freshet with respect to COVID-19 safety protocols.
- [Dam Safety Guidelines](#) - The Provincial Dam Safety Program has released official messaging regarding the COVID-19 pandemic. This link includes information for dam owners and their responsibilities.

**River Forecast Centre and Instructions for Locating Water Level Information for your Location**

- [Flood Warning and Advisory Notifications](#) - Provides a map showing flood advisory and warning notifications, as updated by the [River Forecast Centre](#) for the Province of British Columbia.
- [Current Stream Flow Conditions and Flood Forecast Modelling](#) - Includes CLEVER Model Forecasts and the Lower Fraser River Gauge Location Map, Dike Patrol Guidelines, etc.
- Steps for locating water level information for your location and how it relates to the Mission Gauge readings
  - STEP 1: Consult the [Lower Mainland Dike Inventory Maps](#) for your location. This provides dike infrastructure, pump stations, flood boxes, riprap & relief wells, known areas of hazard concerns, sand boil locations, low dikes, major road & street networks showing access points onto dikes, and infrastructure relevant to safe operation of the dikes, such as major pipeline crossings.
  - STEP 2: Consult the [Lower Fraser River Gauge Location Map](#) for the gauge closest to your location. Readings for the Water Survey of Canada Mission Gauge are available through the [Gauge Reading Table](#).
  - STEP 3: Consult the [Dike Patrol Guidelines](#) Lower Fraser River for instructions on when to patrol your dikes, and the actions you should take based on the Water Survey of Canada's Mission Gauge Level

**Weather, Snow Conditions and Water Supply Bulletins**

- [Environment Canada Weather Forecast](#)
- [Snow Survey and Water Supply Bulletins](#) - Provides analysis of current snow conditions at automated snow weather stations and manual snow survey sites, and forecasts of flood and low streamflow risk

**Other**

- [EMBC Common Operating Picture](#) (contact SWE PREOC Operations for the password)
- [PreparedBC](#)

- [Flood Personal Preparedness Resources](#)
- [Emergency Info BC](#)
- [Disaster Financial Assistance](#)
- [Roads and Highways Information](#)

### Current Streamflow Conditions and Flood Forecast Modelling

#### **Current River Discharge & Water Level Information**

Used to see what the river flow/level is based on station measurements. This is for things that have already happened, and not projections looking ahead

Access the current hydrometric data:

- [Map of Current Streamflow Conditions for All Real-time WSC Stations in BC](#)
- Water Survey of Canada's [Real-Time Hydrometric Data](#)

#### **CLEVER Model Forecasts**

The Channel Links Evolution Efficient Routing (CLEVER) Model provides 10-day real-time flow forecasts for select locations around British Columbia. During the spring freshet season the model is updated daily during business days, and on weekends during critical periods.

MAIN MODEL FOR FRESHET FLOODING – For spring/summer freshet flooding across the province, with 10-day flow projections on select watercourses

- [Link to the map of the CLEVER Model 10-day Forecasts of Discharges and Return Periods](#)

#### **WARNS Model Forecasts**

The WARNS Model provides discharge and water level forecasts for the Fraser River and its major tributaries. During the spring freshet season, the WARNS model is updated daily during business days, and on weekends during critical periods.

For spring/summer freshet flooding on the FRASER RIVER, used as comparison to the CLEVER model if there is uncertainty in the flow projection

- [WARNS Model Fraser River Flow Forecasts \(PDF\)](#)

#### **COFFEE Model Forecasts**

The Coastal Fall Flood Ensemble Estimation (COFFEE) Model provides a 5-day real-time flow forecast for select watersheds in coastal British Columbia, including Vancouver Island, South Coast, Central Coast and the North-West. The COFFEE model is updated when rainfall events occur during the autumn-winter storm season.

- [Link to the map of COFFEE Model 5-day Forecast of Discharges and Return Periods](#)

#### **Low Flow Conditions**

- [Drought Information Portal](#)
- [Map of 7-Day Average Streamflow Conditions](#)

#### **Lower Fraser River Monitoring & Forecasting**

The province provides regular water-level forecasts for the lower Fraser River, including:

- [Lower Fraser River Modelling Information \(PDF\)](#)
- [Dike Patrol Guidelines, Lower Fraser River 2017 \(PDF\)](#)
- [Lower Fraser River Gauge Location Map \(PDF\)](#)
- [10-Day Lower Fraser River Water Level Forecast](#) - Becomes active when Mission gauge reaches 5.0m for a sustained period

#### **Additional Freshet Context: *Information provided by the River Forecast Centre***

Flow at Hope (m <sup>3</sup> /s – metres cubed per second)	Approximate Equivalent Level at Mission (m – metres)
7000 m <sup>3</sup> /s	4.0m
9000 m <sup>3</sup> /s	5.0m – 5.5m
11,000 m <sup>3</sup> /s	6.0m
12,000 m <sup>3</sup> /s – similar to 2012	6.5m
13,000 m <sup>3</sup> /s – similar to 1972	7.0m – 7.3m

*Note: m<sup>3</sup>/s also referred to as cms (cubic metres per second)*

“Normal Rate of Rise” would be 100-200 m<sup>3</sup>/s rise per day (5-10cm per day Mission, or up to 15cm per day when nearing peak)

“Rapid Rate of Rise” would be 500-1500 m<sup>3</sup>/s rise per day at Hope (30-40cm per day at Mission)

**APPROVED BY:**

*Original signed by*

**Jeff Owens**

Note: Information contained in this situation report is for operational purposes only. The contained information is not meant for public information. If you wish you use contained information for a media release, you must clear it with the PREOC Director.

## South West Provincial Regional Operations Centre (SWE PREOC)

### SITUATION REPORT #3

#### Event: SWE 2021 Freshet

Date/Time Issued: 2021-06-30; 1700hrs

Task #: 220938

Operational Period: 2021-06-30; 0830hrs to 1630hrs

Primary PREOC Email: [preoc2.ops1@gov.bc.ca](mailto:preoc2.ops1@gov.bc.ca)

Primary PREOC Phone: 778-572-3962

Primary PREOC Fax: 604-586-4083

Overall Regional Situation: Stable

Activated EMBC Staff: 6      Activated TEAMS: 4

The next Situation Report will be issued: 2021-07-02 at 1600hrs

\*\* New information

#### KEY PROVINCIAL INFORMATION

- The SWE PREOC is activated to support Local Authorities and First Nations for freshet flooding and wildfire
  - State of Local Emergency issued by the SLRD for Electoral Area B on 2021JUN29
  - An Evacuation order was issued for Electoral Area B – West Pavilion on 2021JUN29
- A flood watch was issued 2021JUN26 for the Lillooet River including Pemberton, Lillooet Lake, Lillooet River and tributaries and Harrison Lake
- The Evacuation Order for certain portions of IR #3 remains in effect
- The SLRD, Village of Pemberton, Lil'wat Nation and the Pemberton Valley Diking District continue to coordinate response
- SLRD
  - The Evacuation Order issued on 2021JUN26 at 2030 hrs for electoral Area C was rescinded 2021JUN29
  - The State of Local Emergency issued for Electoral Area C Pemberton Valley on 2021JUN26 remains in effect until 2021JUL02
- Village of Pemberton
  - The Evacuation Order issued 2021JUN26 2130 hrs for properties on Vine Road, Hwy 99 and Airport Road was rescinded 2021JUN29. The evacuation alert for the properties in these areas was also rescinded 2021JUN29.
  - State of Local Emergency issued 2021JUN26 remains in effect until 2021JUL02
- Lil'wat Nation
  - IR #3: Water levels are rising slowly, no concern. Continuing to monitor, Evacuation Order for 3 homes and 10 people remains in effect
  - IR #2: water levels have lowered, will continue to monitor
  - The Evacuation Order and Evacuation Alerts issued on 2021JUN26 for IR #1, 2, 8 was rescinded on 2021JUN29
- Lower Stl'atl'imx Tribal Council
  - An Evacuation Alert was issued by the Samahquam Council on 2021JUN28 at 16:20 for QalaTKu7eM (Baptiste Smith IR 1B) due to flooding
- Total Active RCs: 0
- Total Active Alerts: 1 – Lower Stl'atl'imx Tribal Council for flooding
- Total Orders: 2 – Lil'wat Nation for flooding, SLRD for wildfire

- **Total States of Local Emergency:** 3 – SLRD, Village of Pemberton for flooding, SLRD for wildfire
- **Total Band Council Resolutions:** 0

## WEATHER FORECAST FOR 2021JUL01 1600 HRS

Heat Warning issued by Environment Canada for Coastal BC communities remain in effect.

### PEMBERTON

Thursday AM            Sunny, High 28, except 32 near Pemberton

Thursday Night        Clear, Low 15

Thursday to Sunday the weather is expected to be a mix of sun and clouds. High 27 with the evenings clear with lows of 13-16

### SQUAMISH

Thursday AM            Mainly sunny, High 30

Wednesday Night      Clear. Low 18

Thursday to Sunday the weather is expected to be sunny to a mix of sun and cloud. Highs 27-28 with the evenings clear with lows 16-17

## RIVER FORECAST CENTRE

River levels as of 0900 hrs

STATION	WATER LEVEL (m)	DISCHARGE (m <sup>3</sup> /s)
Fraser River at Hope	8.097	8,060
Fraser River at Mission	5.164	9,950
Harrison Lake Near Harrison Hot Springs	12.170	N/A
Lillooet River near Pemberton	4.924	691

## LOCAL AUTHORITIES - WILDFIRE

### Squamish Lillooet Regional District (SLRD):

- **Incident:** EOC activated in response to The McKay Creek Fire (K71030)
- **Alerts:** 0
- **Orders:** 1
- **State of Local Emergency:** 1 - expires 2021JUL06
- **Homes Alerted:** 44
- **Homes Evacuated:** 10
- **Reception Centre(s):** 0
- **Individuals Registered with ESS:**
  - The SLRD issued a State of Local Emergency on 2021JUN29 for Electoral Area B due to the McKay Creek Fire (K71030), which is in the vicinity of the 32km mark of the West Pavilion Road, and within 10km of the SLRD community of Pavilion Lake
  - The Evacuation alert issued for Pavilion Area – Electoral Area B on 2021JUN29 at 1900 was upgraded to an Evacuation Order 2021JUN29 at 2130 hrs
    - o The Evacuation order issued for Electoral Area B – West Pavilion (West Pavilion Road from the 14 km mark to the SLRD border with Thompson-Nicola Regional District and other properties)
  - SLRD is working with the RCMP on undertaking a safe evacuation

- ESS is provided through the Red Cross

## LOCAL AUTHORITIES - FRESHET

### Squamish Lilooet Regional District (SLRD):

- **Incident:** Flooding in Pemberton Valley
  - **Alerts:** 0
  - **Orders:** 0
  - **State of Local Emergency:** 1 - expires 2021JUL02
  - **Homes Alerted:** 0
  - **Homes Evacuated:** 0
  - **Reception Centre(s):** 0
  - **Individuals Registered with ESS:** 0
- The SLRD has begun demobilizing some flood response equipment, including gabions and sandbagging machines  
 - Assessing agricultural loses due to high ground water levels  
 - SLRD reported that all dikes are in good condition after being inspected 2021JUN28  
 - Ten additional people registered with ESS/Red Cross on 2021JUN28, reception centre open from 0900 to 1700 hrs  
 - SLRD has a pass system in place for people to enter and leave evacuation area to tend to property and livestock  
 - Lilooet Lake continues to rise, backwatering the North Arm Channel area. Based on the current and projected rate of rise, water is expected across Highway 99 at Duffy Lake Road in a little over 24 hours. MoTI has cones and signage in place at this location  
 - The SLRD, Village of Pemberton, Lil'wat Nation and the Pemberton Valley Dyking District continue to coordinate response  
 - The Evacuation Order issued at 2030 hrs on 2021JUN26 was rescinded  
 - The SLRD issued a State of Local Emergency on 2021JUN26 for Electoral Area C Pemberton Valley remains in effect  
 - An Evacuation Alert was issued on 2021JUN26 at 1130 hrs for Electoral Area C Pemberton Valley, at 2030 hrs those properties were placed on Evacuation Order

### Village of Pemberton:

- **Incident:** Flooding in the Pemberton Valley.
- **Alerts:** 0
- **Orders:** 0
- **State of Local Emergency:** 1 - expires 2021JUL02
- **Homes Alerted:** 0
- **Homes Evacuated:** 0
- **Reception Centre(s):** 0
- **Individuals Registered with ESS:** 0

- All rivers have leveled off as snowpack is dissipating
- Based on observed conditions and forecasts, the risk has decreased to the point that it is currently safe to re-occupy the areas of Pioneer Junction, the Peaks, properties on Hwy 99 and Airport Road.
- Those receiving Emergency Support Services were asked to return home 2021JUN29
- Communications advising the public to avoid camping near waterways and stay clear of fast-flowing rivers and potentially unstable riverbanks
- The Evacuation Order for properties on Airport Road, Vine Road, and Hwy 99 was rescinded 2021JUN29. The evacuation alert for the properties in these areas has also been rescinded.
- The Village of Pemberton declared a State of Local Emergency on 2021JUN26 for flooding in the Pemberton Valley remains in effect

### **Abbotsford**

- **Incident:** EOC activated on 2021JUN04 for potential flooding and to monitor dike erosion.

### **District of Kent**

- **Incident:** EOC activated to Level 2 to coordinate flood response along the Harrison River and Harrison Lake.
  - Monitor water levels and forecasts daily
  - Operating a supplemental pump in Harrison Mills area
  - Establish a location for sand and sandbags for residents

### **Harrison Hot Springs**

- **Incident:** EOC activated
  - Rockwell Drive closed to heavy commercial traffic as of 2021JUN30, open to private vehicles
  - Press release will go out today advising of high water levels
  - Sandbags will be available in Harrison for any resident who needs them

### **Fraser Valley Regional District (FVRD)**

- Continuing to monitor river levels
- Operating under a low risk low response based on current modelling

## **FIRST NATIONS - FRESHET**

### **Lil'wat Nation:**

- **Incident:** EOC activated on 2020JUN25 for freshet flooding
- **Alerts:** 0
- **Orders:** 1
- **State of Local Emergency:**
- **Homes Alerted:**
- **Homes Evacuated:** 3
- **Reception Centre(s):** 0
- **Individuals Registered with ESS:** The numbers are included in the count with the SLRD, Village of Pemberton and Lil'wat Nation
  - **IR3:** Water levels are rising slowly, no concern. Continuing to monitor, Evacuation Order for 3 homes and 10 people remains in effect
  - **IR2:** water levels have lowered, will continue to monitor
  - The Evacuation Order issued on 2021JUN26 2100 hrs and Evacuation Alerts for IR #1, 2, 8 was rescinded on 2021JUN29.
  - Flooding observed at Hwy 99 north of Birkenhead river that could affect 2 or 3 homes
  - Dike Road remains closed to the public
  - Lil'wat Nation ESS is supporting evacuees for Lil'wat Nation

### **Katzie:**

- **Incident:** EOC activated on 2021JUN03

### **Kwikwetlem:**

- **Incident:** EOC activated on 2021JUN07 for Freshet monitoring

### **Lower Stl'atl'imx Tribal Council**

- **Incident:** EOC activated on 2021JUN27 in response to Lillooet River flooding
- **Alerts:** 1
- **Orders:** 0
- **Band Council Resolution:** 0
- **Homes Alerted:** 6

- Water level down about 8" to 10"
- Concern regarding road erosion, continuing to monitor
- Approximately 6" of water on the road, no concern at this time
- If road needs to be closed, alternate route out is available
- An evacuation alert was issued by the Samahquam Council on 2021JUN28 at 16:20 for QalaTKu7eM (Baptiste Smith IR 1B) due to flooding
- Sandbagging operations are underway in Samahquam to protect property below the 20-year flow line
- Douglas First Nation has one home currently under the 20-year zone
- LSTC Land Crew will be back in Samahquam 2021JUN30 and will continue sandbagging efforts
- Properties below the 20 year flood level along the Lower Lollooet Water System will likely see flooding

#### **Tsal'ah Nation:**

- **Incident:** EOC Activated
  - The bridge at Whitecap creek, the community's secondary egress has been impacted by flooding, will continue to monitor
  - Rip-rap was installed to mitigate ongoing water
    - o The bridge has been threatened by previous flood events
  - The main river is down 6"

#### **Shxwha:y Village:**

- **Incident: EOC activated for Freshet on 2021JUN04**

#### **Skwah:**

- **Incident: EOC activated for Freshet on 2021JUN04**

#### **HEALTH INFORMATION**

No impacts reported

#### **LIVE STOCK IMPACTED**

No impacts reported

#### **TRANSPORTATION IMPACTED**

No impacts reported

#### **UTILITIES IMPACTED**

No impacts reported

#### **USEFUL LINKS/RESOURCES**

##### **Wildfires of Note**

- [BC Wildfire Service](#)

##### **Processes with Adaptations for COVID-19**

- [Spring Flooding Response – COVID19 Guidelines](#) – Currently provides modified berm building methods (e.g., Sandbag, Tiger Dams, Gabions) to assist with physical distancing at worksites. This link is updated as further adaptations are developed for freshet with respect to COVID-19 safety protocols.
- [Dam Safety Guidelines](#) – The Provincial Dam Safety Program has released official messaging regarding the COVID-19 pandemic. This link includes information for dam owners and their responsibilities.

##### **River Forecast Centre and Instructions for Locating Water Level Information for your Location**

- [Flood Warning and Advisory Notifications](#) – Provides a map showing flood advisory and warning notifications, as updated by the River Forecast Centre for the Province of British Columbia.

- [Current Stream Flow Conditions and Flood Forecast Modelling](#) – Includes CLEVER Model Forecasts and the Lower Fraser River Gauge Location Map, Dike Patrol Guidelines, etc.
- Steps for locating water level information for your location and how it relates to the Mission Gauge readings
  - **STEP 1:** Consult the [Lower Mainland Dike Inventory Maps](#) for your location. This provides dike infrastructure, pump stations, flood boxes, riprap & relief wells, known areas of hazard concerns, sand boil locations, low dikes, major road & street networks showing access points onto dikes, and infrastructure relevant to safe operation of the dikes, such as major pipeline crossings.
  - **STEP 2:** Consult the [Lower Fraser River Gauge Location Map](#) for the gauge closest to your location. Readings for the Water Survey of Canada Mission Gauge are available through the [Gauge Reading Table](#).
  - **STEP 3:** Consult the [Dike Patrol Guidelines](#), Lower Fraser River for instructions on when to patrol your dikes, and the actions you should take based on the Water Survey of Canada's Mission Gauge Level

### **Weather, Snow Conditions and Water Supply Bulletins**

- [Environment Canada Weather Forecast](#)
- [Snow Survey and Water Supply Bulletins](#) – Provides analysis of current snow conditions at automated snow weather stations and manual snow survey sites, and forecasts of flood and low streamflow risk

### **Other**

- [EMBC Common Operating Picture](#) (contact SWE PREOC Operations for the password)
- [PreparedBC](#)
- [Flood Personal Preparedness Resources](#)
- [Emergency Info BC](#)
- [Disaster Financial Assistance](#)
- [Roads and Highways Information](#)

### **Current Streamflow Conditions and Flood Forecast Modelling**

#### **Current River Discharge & Water Level Information**

Used to see what the river flow/level is based on station measurements. This is for things that have already happened, and not projections looking ahead

Access the current hydrometric data:

- [Map of Current Streamflow Conditions for All Real-time WSC Stations in BC](#)
- Water Survey of Canada's [Real-Time Hydrometric Data](#)

#### **CLEVER Model Forecasts**

The Channel Links Evolution Efficient Routing (CLEVER) Model provides 10-day real-time flow forecasts for select locations around British Columbia. During the spring freshet season the model is updated daily during business days, and on weekends during critical periods.

**MAIN MODEL FOR FRESHET FLOODING – For spring/summer freshet flooding across the province, with 10-day flow projections on select watercourses**

- [Link to the map of the CLEVER Model 10-day Forecasts of Discharges and Return Periods](#)

#### **WARNS Model Forecasts**

The WARNS Model provides discharge and water level forecasts for the Fraser River and its major tributaries. During the spring freshet season, the WARNS model is updated daily during business days, and on weekends during critical periods.

**For spring/summer freshet flooding on the FRASER RIVER, used as comparison to the CLEVER model if there is uncertainty in the flow projection**

- [WARNS Model Fraser River Flow Forecasts \(PDF\)](#)

#### **COFFEE Model Forecasts**

The Coastal Fall Flood Ensemble Estimation (COFFEE) Model provides a 5-day real-time flow forecast for select watersheds in coastal British Columbia, including Vancouver Island, South Coast, Central Coast and the North-West. The COFFEE model is updated when rainfall events occur during the autumn-winter storm season.

- [Link to the map of COFFEE Model 5-day Forecast of Discharges and Return Periods](#)

#### **Low Flow Conditions**

- [Drought Information Portal](#)

- [Map of 7-Day Average Streamflow Conditions](#)

#### **Lower Fraser River Monitoring & Forecasting**

The province provides regular water-level forecasts for the lower Fraser River, including:

- [Lower Fraser River Modelling Information \(PDF\)](#)
- [Dike Patrol Guidelines, Lower Fraser River 2017 \(PDF\)](#)
- [Lower Fraser River Gauge Location Map \(PDF\)](#)
- [10-Day Lower Fraser River Water Level Forecast](#) – Becomes active when Mission gauge reaches 5.0m for a sustained period

#### **Additional Freshet Context: *Information provided by the River Forecast Centre***

Flow at Hope (m <sup>3</sup> /s – metres cubed per second)	Approximate Equivalent Level at Mission (m – metres)
7000 m <sup>3</sup> /s	4.0m
9000 m <sup>3</sup> /s	5.0m – 5.5m
11,000 m <sup>3</sup> /s	6.0m
12,000 m <sup>3</sup> /s – similar to 2012	6.5m
13,000 m <sup>3</sup> /s – similar to 1972	7.0m – 7.3m

Note: m<sup>3</sup>/s also referred to as cms (cubic metres per second)

“Normal Rate of Rise” would be 100-200 m<sup>3</sup>/s rise per day (5-10cm per day Mission, or up to 15cm per day when nearing peak)  
 “Rapid Rate of Rise” would be 500-1500 m<sup>3</sup>/s rise per day at Hope (30-40cm per day at Mission)

#### **APPROVED BY:**

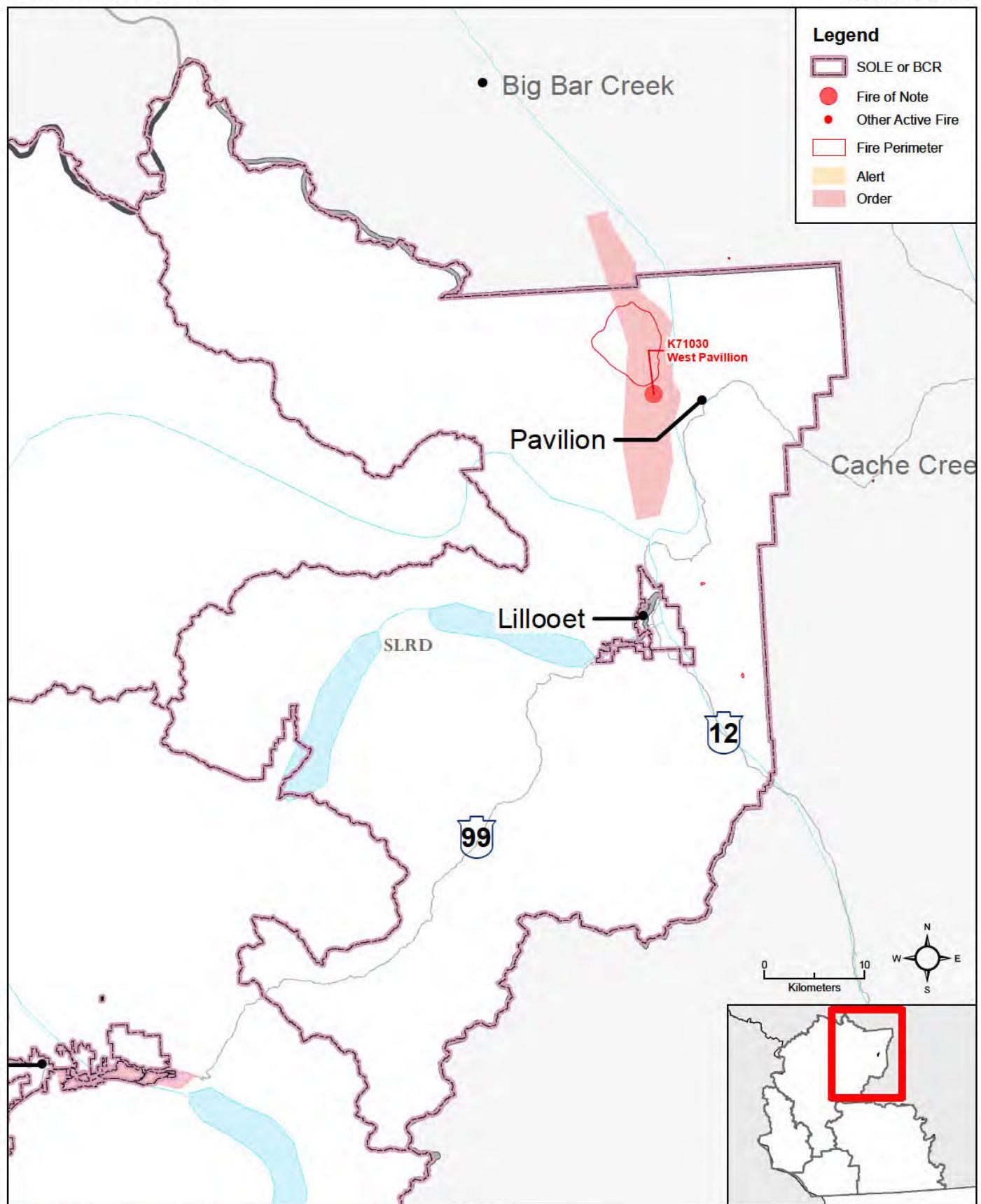
*Original signed by*

**Jeff Owens**

**Note:** Information contained in this situation report is for operational purposes only. The contained information is not meant for public information. If you wish you use contained information for a media release, you must clear it with the PREOC Director.

# South West (SWE) Provincial Regional Operational Centre (PREOC) Wildfire Events

2021-06-30



UPDATED 2021-06-30 Time: 12:21

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**From:** [EMBC VIR PREOC Operations 1 EMBC:EX](#)  
**Subject:** VICCR PREOC Situation Report #84 June 30, 2021  
**Date:** Wednesday, June 30, 2021 4:17:32 PM  
**Attachments:** [VICCR PREOC Situation Report #84 June 30 2021.pdf](#)

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**EXTERNAL SENDER.** If you suspect this message is malicious, please forward to [spam@phsa.ca](mailto:spam@phsa.ca) and **do not** open attachments or click on links.

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Hello everyone,

Please find attached VICCR Situation Report #84.

Stay safe

Acknowledging that we are conducting our operations on the traditional territory of the WSÁNEĆ and Lkwungen speaking peoples.

**Dean Fenn**

**Operations Section Chief**

**Vancouver Island and Central Coast Region Provincial Regional Emergency Operations Centre (PREOC)**

**[Emergency Management British Columbia](#)**

2261 Keating Cross Rd.

Saanichton, B.C. V8W9J1

***NEW Primary VICCR PREOC contact number: 236-478-2830***

Email: [preoc1.ops1@gov.bc.ca](mailto:preoc1.ops1@gov.bc.ca)

24 Hour Emergency Reporting 1-800-663-3456

Follow us on Twitter @EmergencyInfoBC and @PreparedBC

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PLEASE DO NOT DISTRIBUTE

Vancouver Island & Central Coast Region Provincial Regional Operations Centre (VICCR PREOC)

\*\*New information is listed in blue\*\*

Event:	COVID-19
Date/Time Issued:	<b>2021-06-30; 1630hrs</b>
Task #:	206451 (local authority) & 206445 (First Nations)
Operational Period:	<b>2021-06-30 0830hrs to 1630hrs</b>
Primary PREOC Email:	<a href="mailto:preoc1.ops1@gov.bc.ca">preoc1.ops1@gov.bc.ca</a>
Primary PREOC Phone:	<b>236-478-2830</b>
Primary PREOC Fax:	250-952-4539
Overall Regional Situation:	<b>Improving</b>
Next Situation Report will be issued:	<b>N/A</b>

\*Please note, given the dynamic nature of a pandemic, the following information is subject to change after this report is distributed.

Press releases

[State of emergency related to Covid-19 to expire midnight tonight, June 30, 2021.](#)

[COVID-19 school safety funding fully allocated to keep students, staff in classrooms, June 30, 2021](#)

[Joint statement on B.C.'s COVID-19 response, June 29, 2021](#)

[B.C. shifts to Step 3 of restart plan, June 29, 2021](#)

[Campfires prohibited in British Columbia, June 28, 2021](#)

[Recovery Plan investment supports safe K-12 return, June 17, 2021](#)

"Let's take heart in knowing that no matter the obstacle before us or how fierce the storm may be, it is caring and kindness that will see us through as we continue on this journey together."

**Dr.Bonnie Henry**

**1. KEY REGIONAL INFORMATION**

VICCR PREOC is closing for COVID related activities but remains at Level 1 for Severe Heat and Wildfire events. To contact the Regional Duty Manager after hours, please call the ECC at **1-800-663-3456**

## **2. PROVINCIAL COVID 19 SUMMARY**

### **PROVINCIAL COVID-19 PANDEMIC**

**Numbers current as of June 29, 2021**

#### **New and Active Cases:**

**Provincial Totals: 29 New Cases / 876 Active Cases (-54)**

- Vancouver Coastal Health: 7 New Cases / 302 Active Cases (-4)
- Fraser Health: 7 New Cases / 324 Active Cases (-28)
- Vancouver Island Health: 3 New Cases / 22 Active Cases (-3)
- Interior Health: 10 New Cases / 179 Active Cases (-16)
- Northern Health: 0 New Cases / 41 Active Cases (-4)
- People who reside outside Canada: 2 New Cases / 8 Active Cases (+1)

#### **Other:**

- In hospital: 110 (+3)
- In ICU/CCU: 34 (-3)
- New Recovered Cases: 83
- New Deaths Reported: 0

Provincial Declarations	Issued	(current) Expiry	Area Impacted
Provincial Health Emergency	2020/03/17	(At direction of Provincial Health Officer)	Full Province
Provincial State of Emergency	2020/03/18	<b>2021/06/30</b>	Full Province

## **3. HEALTH SYSTEM UPDATES**

### **Symptoms, Testing and Isolation**

Information for anyone concerned that they may have been exposed to, or is experiencing symptoms of COVID-19.

<https://www.islandhealth.ca/learn-about-health/covid-19/symptoms-testing-and-isolation>

1.844.901.8442

### **Provincial Health Orders**

**Link to: Public Health Officer Orders, Notices & Guidance (May 31, 2021)**

<https://www2.gov.bc.ca/gov/content/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/current-health-topics/covid-19-novel-coronavirus>

- [Notice of Repeal of the Workplace and Post-Secondary Institution Safety Order – July 1, 2021 \(PDF, 215.8KB\)](#)
- [Notice of Repeal of the Workplace Safety Plans Order – July 1, 2021 \(PDF, 192.1KB\)](#)
- [Joint statement on resumption of travel within B.C.](#)
- [Gatherings and Events – June 22, 2021 \(PDF, 448KB\)](#)
  - [Variance: Inside Worship Services – June 15, 2021 \(PDF, 224KB\)](#)
  - [Variance: Outside Worship Services – June 15, 2021 \(PDF, 259KB\)](#)
  - [Indoor Exercise Requirements – June 15, 2021 \(PDF, 409KB\)](#)

- [Extension of the Variance Suspension: Indoor Worship Services on Four Days – April 19, 2021 \(PDF, 208KB\)](#)
    - Read related [Public Heath guidance](#)
- [Agricultural Temporary Foreign Workers – June 20, 2021 \(PDF, 286KB\)](#)
- [Food and Liquor Serving Premises – June 15, 2021 \(PDF, 374KB\)](#)
  - Read related [Public Heath guidance](#)
- [Workplace and Post-Secondary Institution Safety – June 14, 2021 \(PDF, 360KB\)](#)
- [Overnight Camps for Children or Youth – June 7, 2021 \(PDF, 310KB\)](#)
- [Long-Term Care Facility Staff Assignment – April 15, 2020 \(PDF, 274KB\)](#)
  - [Variance of the Facility Staff Assignment Order – May 16, 2021 \(PDF, 256KB\)](#)
  - [Amendment: Deployment and redeployment of staff - October 26, 2020 \(PDF, 444KB\)](#)
- [Industrial Camps – May 12, 2021 \(PDF, 394KB\)](#)
  - [Delegation: Industrial Camps – June 9, 2020 \(PDF, 216KB\)](#)
- [Workplace and Post-Secondary Institution Safety – May 2, 2021 \(PDF, 339KB\)](#)
- [Advanced Care Paramedic and Critical Care Paramedic SARS-CoV-2 Swabbing – May 2, 2021 \(PDF, 222KB\)](#)
- [Variance of Existing Orders to Suspend Reconsideration – April 21, 2021 \(PDF, 273KB\)](#)
- [Industrial Projects Within the Northern Health Authority Region – April 13, 2021 \(PDF, 407KB\)](#)
- [Delegation: Workplace Closures – April 11, 2021 \(PDF, 319KB\)](#)
- [Regulated and Unregulated Health Professionals SARS-CoV-2 Immunization Order – March 24, 2021 \(PDF, 458KB\)](#)
- [Emergency Medical Assistants SARS-CoV-2 Immunization Order – March 18, 2021 \(PDF, 289KB\)](#)
- [Agricultural Temporary Foreign Workers – March 14, 2021 \(PDF, 279KB\)](#)
- [Visitation and Visitor Appeal and Review – February 5, 2021 \(PDF, 289KB\)](#)
  - Read related [Ministry of Health guidance](#)
- [Health Authority Regulated Health Professionals SARS-CoV-2 Swabbing – November 16, 2020 \(PDF, 225KB\)](#)
- [Midwives and Certified Practice Speech Language Pathologists SARS-CoV-2 Swabbing – November 16, 2020 \(PDF, 269KB\)](#)
- [British Columbia Emergency Health Services SARS-CoV-2 Swabbing – November 16, 2020 \(PDF, 265KB\)](#)
- [Registered Nurse and Registered Psychiatric Nurse Public Health Pharmacotherapy – September 16, 2020 \(PDF, 227KB\)](#)
- [Overnight Camps for Children and Youth – May 29, 2020 \(PDF, 245KB\)](#)
- [Workplace Safety Plans - May 14, 2020 \(PDF, 188KB\)](#)
- [Licensed Practical Nurse Swabbing - May 7, 2020 \(PDF, 172KB\)](#)
- [Travellers and Employers – April 14, 2020 \(PDF, 365KB\)](#)
  - [Delegation: Travellers – April 14, 2020 \(PDF, 255KB\)](#)
- [Health Care Labour Adjustment \(COVID-19\) – April 10, 2020 \(PDF, 695KB\)](#)
- [Information Collection from Long Term Care Facility Staff – March 26, 2020 \(PDF, 214KB\)](#)
- [Federal Quarantine Order – August 30, 2020 \(PDF, 428KB\)](#)
  - [Government of Canada, Exceptions to Requirement to Quarantine, section 6](#)

## Community Reports

Change to format – only information submitted in a Situation Report will be included in the information listed below.  
Communities who have an active EOC but who have not submitted a Situation Report will be listed but with no further information provided.

**\*\*New information is listed in blue\*\***

**\*\*Information more than 2 weeks old will be removed\*\***

### Ahousaht First Nation

Band Council Resolution: 1

Alert Bay First Nation/Namgis/Cormorant Island/ Whe-la-la-u Area Council

Alberni Clayquot Regional District

Campell River (City of)

- Virtual EOC activated to level 1

Capital Regional District (Juan de Fuca, Salt Spring Island, Southern Gulf Islands)

- EOC activated to level 1
- CRD emergency management software implementation is underway.
- Working with municipal partners to finalize transition of subscribers to the new Public Alert Notification system (PANS)
- Working with Corporate Communications and stakeholders to improve emergency response information sharing in the EAs.
- Maintaining engagement with numerous agencies and all electoral areas on COVID-19 issues and topics.

Central Saanich, District of

- EOC activated to level 1

Colwood (City of)

Comox Valley Regional District

- Virtual EOC activated to level 1

Cowichan Valley RD

- EOC activated to level 1
- Cooling centre established, due to heat.

Ditidaht First Nation

Ehlettesaht First Nation

- Band Council Resolution: 1 (No expiry)
- Declaration of Local State of Emergency, June 30, 2021 due to wildfire.
- Interface wildfire, June 30, 2021. Fire # V81055

Esquimalt (Township of)

Gold River, Town of

Gwa'Sala-'Nakwaxda'xw Nations

Halalt First Nation

Hesquiaht

Highlands, District of

- Virtual EOC activated to level 1

Homalco First Nations

Huu-ay-aht

Kwakiutl – Port Hardy

Kyuquot First Nation

- Virtual EOC activated to level 1
- State of Local Emergency: 1 (effective until the end of Provincial State of Emergency)

Langford, (City of)

- Virtual EOC activated to level 1
- EOC to close end of day today, June 30, 2021.

Lantzville, District of

**Malahat First Nation**

Band Council Resolution: 1 (effective until COVID-19 vaccine is widely available and vulnerable membership has received)

- Cooling centre established, due to heat.

**Mount Waddington Regional District**

- EOC activated to level 1

**Metchosin, District of**

- Virtual EOC activated to level 1

**Nanaimo (City of)**

- EOC has been stood down February 10, 2021

**Nanaimo, Regional District**

- EOC stood down June 25<sup>th</sup>
- Cooling centre established, due to heat.

**North Saanich, District of**

- Virtual EOC activated to level 1

**Nuxalk Nation**

- EOC activated at Level 2
- EOC to close July 1, 2021
- Cooling centre established, due to heat.

**Oak Bay, District of**

- Virtual EOC activated to level 1
- We continue to monitor for changes in direction from the PHO and will meet as necessary to respond.

**Oceanside (Qualicum Beach/Parksville)**

- EOC activated to level 1
- Cooling centre established, due to heat.

**Pacheedaht First Nation**

- Cooling centre established, due to heat.

**Pauquachin First Nation**

- Cooling centre established, due to heat.

**Penelakut****Port Hardy, District of****Qathet Regional District (qathet RD, Tla'amin Nation & City of Powell River)**

- EOC activated to level 1 (effective until the end of Provincial State of Emergency)
- Regional EOC held its last regular monthly call-in meeting this afternoon. Latest updates from the province have confirmed progress in vaccination rates across the province and implementation of a phased approach to easing health restrictions. We anticipate a lifting of the provincial State of Emergency around July 15, 2021 at which time the qathet Regional EOC will stand down.
- qathet Regional District, Tla'amin Nation, City of Powell River will continue to monitor provincial health directives, adjust safety plans and deliver local government services.

**Quatsino First Nations**

- Cooling centre established, due to heat.

**Saanich, District of**

- EOC activated to level 1

**Sidney, Town of**

- EOC activated to level 1
- Updating COVID workplace safety plans in anticipation of more staff returning from working remotely and reopening Town Hall and Driver Services to the public in early July upon provincial implementation of Step 3.
- Conducting weekly community wellness checks on homeless population.
- Continued communicating information to business owners interested in adding/expanding outdoor seating areas to their food service businesses

**Snuneymuxw First Nation**

- Band Council Resolution: 1 (effective until the end of Provincial State of Emergency)
- Cooling centre established, due to heat.

**Sooke, District of**

- EOC activated to level 1

**Strathcona, Regional District**

- Virtual EOC activated to level 1

**Stz'uminus First Nations**

- EOC activated to level 2

**Tahsis, Village of**

- EOC activated to level 1

**Tla'amin Nation**

**Tsawout First Nation**

- Cooling centre established, due to heat.

**Tofino (District of)**

**Toquaht Nation**

- State of Local Emergency: 1
- SOLE extended to July 5, 2021

**Tseshaht First Nation**

- Band Council Resolution: 1

**Uchucklesaht**

- Cooling centre established, due to heat.

**Ucluelet First Nation**

State of Emergency: 1

- EOC activated to level 1

**Victoria, City of**

- EOC deactivated

**View Royal (City of)**

- EOC activated to level 1

**APPROVED BY:**

*Original signed by*

**Corey Anderson**

**PREOC Director**

**Note:** Information contained in this situation report is for operational purposes only. The contained information is not meant for public information. If you wish you use contained information for a media release, you must clear it with the PREOC Director.

---

**From:** HEMBC\_North  
**To:** HEMBC\_North; Weger, Annette [NH]; Biddlecombe, Moira [NH]; De Smit, Angela [NH]; Fraser, Sherry [NH]; Ulrich, Cathy [NH]; Chipman, Desa [NH]; Collins, Erin [NH]; Cozac, Joanne [NH]; Quinn, Jessica [NH]; Raper, Steve [NH]; Cozic, Joanne [NH]; Epp, Erin [NH]; Shawara, Judy [Judith] [NH]; Petkul, Daryl [NH]; Clemas, Lia [NH]; Anguish, Penny [NH]; Johnston, Sandra [Sandie] [NH]; Oliver, Jordan [NH]; Patient Transfer, Kelliher, Courtenay [NH]; Steele, Andrew [NH]; Marr, Gregory [NH]; Nordli, Kim [NH]; Cunningham, Krista [NH]; Barlow, Keltie [NH]; Greer, Bonnie [NH]  
**Cc:** Romanas, Amy [PHSA]; Laverty, John [PHSA]  
**Subject:** RE: Update #5- NE HSDA and NI HSDA - HWY 97 North closures due to fire - Evacuation Alert issued  
**Date:** Wednesday, June 30, 2021 5:53:28 PM  
**Attachments:** 2021-06-30...BBRD\_Electoral\_Area\_BC\_Declaration.pdf; image001.jpg

The Peace River Regional District just declared a State of Local Emergency for electoral area B in the Peace River area. There has been no change to evac alerts along Highway 97 or any communities in the area at this time.

Many thanks

Jana

Jana Hargreaves  
Coordinator  
Northern Health Emergency Management  
308 – 1488 4<sup>th</sup> Avenue, Prince George, BC V2L 4Y2  
Cell 5-15(1)(i)  
email: jana.hargreaves@northernhealth.ca  
Northern Health Emergency Management On- Call: 1-855-554-3622



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**Sent:** Wednesday, June 30, 2021 4:47 PM  
**To:** HEMBC, North <HEMBC@northernhealth.ca>; Weger, Annette [NH] <Annette.Weger@northernhealth.ca>; Biddlecombe, Moira [NH] <Moira.Biddlecombe@northernhealth.ca>; De Smit, Angela [NH] <Angela.DeSmit@northernhealth.ca>; Fraser, Sherry [NH] <Sherry.Fraser@northernhealth.ca>; Ulrich, Cathy [NH] <Cathy.Ulrich@northernhealth.ca>; Chipman, Desa [NH] <Des.Chipman@northernhealth.ca>; Collins, Erin [NH] <Erin.Collins@northernhealth.ca>; Quinn, Jessica [NH] <Jessica.Quinn@northernhealth.ca>; Raper, Steve [NH] <Steve.Raper@northernhealth.ca>; Cozic, Joanne [NH] <Joanne.Cozic@northernhealth.ca>; Fugere, Corinna [NH] <Corinna.Fugere@northernhealth.ca>; Quibell, Doug [NH] <Doug.Quibell@northernhealth.ca>; Zirul, Chelan [NH] <Chelan.Zirul@northernhealth.ca>; Cornell, Trevor [NH] <Trevor.Cornell@northernhealth.ca>; Kling, Rakel [NH] <Rakel.Kling@northernhealth.ca>; Tillotson, Sherri [NH] <Sherri.Tillotson@northernhealth.ca>; Fumerton, Raina [NH] <Raina.Fumerton@northernhealth.ca>; Kim, Jong [NH] <Jong.Kim@northernhealth.ca>; Kiss, Kendra [NH] <Kendra.Kiss@northernhealth.ca>; Steward, Erin [NH] <Erin.Steward@northernhealth.ca>; Maracle, Melanie [NH] <Melanie.Maracle@northernhealth.ca>; Barlow, Keltie [NH] <Keltie.Barlow@northernhealth.ca>; Shawara, Judy [Judith] [NH] <Judy.Shawara@northernhealth.ca>; Petkul, Daryl [NH] <Daryl.Petkul@northernhealth.ca>; Clemas, Lia [NH] <Lia.Clemas@northernhealth.ca>; Anguish, Penny [NH] <Penny.Anguish@northernhealth.ca>; Johnston, Sandra [Sandie] [NH] <Sandra.Johnston@northernhealth.ca>; Oliver, Jordan [NH] <Jordan.Oliver@northernhealth.ca>; Patient Transfer <PatientTransfer@northernhealth.ca>; Kelliher, Courtenay [NH] <Courtenay.Kelliher@northernhealth.ca>; Steele, Andrew [NH] <Andrew.Steele@northernhealth.ca>; Marr, Gregory [NH] <Gregory.Marr@northernhealth.ca>; Nordli, Kim [NH] <Kim.Nordli@northernhealth.ca>; Cunningham, Krista [NH] <Krista.Cunningham@northernhealth.ca>; Barlow, Keltie [NH] <Keltie.Barlow@northernhealth.ca>  
**Cc:** Romanas, Amy <amy.roman@phsa.ca>; Laverty, John <john.laverty@phsa.ca>  
**Subject:** RE: Update #5- NE HSDA and NI HSDA - HWY 97 North closures due to fire - Evacuation Alert issued

Yesterday's information in **black**, today's update in **red**.

The NorthEast PREOC called a coordination call at 1530 hours today. Updates are as follows:

**Environment Canada:** West of Williston Lake expecting thunderstorms today, concerns for tonight and tomorrow with thunder and lightning, winds expected and rain with hail. Tomorrow north part of northeast region in peace area , Muncho Lake area expecting rain, thunderstorms expected.

**Prince George Fire Centre:** expecting lightning into Van Jam, Mackenzie and PG – between 1800-2200 hours. Do not think lightning will not be as intense as first forecasted.

### 3 Fires of Note

G80997- Pink Mountain area - 4800 hectares and growing, not active suppression at this time. Continue to monitor and growth projections, looking at where they can put crews.

G811007- south of G80997- 22 hectares no crew son fire – assessing at this time. Looking at putting in guards.

G91020 – Fort Nelson area – off Hwy 97 – 2500 hectares – no crew on fire – assessing at this time.

All fires are impacting Hwy 97 North – intermittent road closures – closed during day , patrols during night and patrol cars to open intermittently.

Evacuation alert in place – no pending need to put that into an order. No evacuation alerts or orders in place for any communities at this time.

Focus will be on communities and infrastructure.

**Cariboo Fire Centre** not expecting any lightning tonight in the Quesnel zone as once thought. 1600-2100 anticipating lightning in Williams Lake area and along Highway 97.

**River Forecast Centre:** Main weather – heat driving forecast – cooler, but hotter causing snow melt at a high rate. Rain and thunderstorm warming for McBride and PG areas – concern in McBride as Fraser already high, some concern for the Dore River to rise as well. McBride area and upstream - Flood Watch.

Any further call minutes will be forwarded to you as they occur. Next call will be 1530 tomorrow, Thursday, July 1.

Many thanks

Jana Hargreaves  
Coordinator  
Northern Health Emergency Management  
308 – 1488 4<sup>th</sup> Avenue, Prince George, BC V2L 4Y2



I am honoured and privileged to live, work and play on the traditional territory of the Lheidli T'enneh

Issued Tuesday June 29 21:37 hours

Please see the attached Evacuation Alert issued at 2100 hours by the Peace River Regional District for areas in the G80997 Buckinghorse/Sikanni Chief area, between Mile 202 and South to Buckinghorse River.

<https://prrd.bc.ca/wp-content/uploads/post/evacuation-alert-1-north-peace-fires/Evacuation-Alert-2019-06-29-@-2100-Signed.pdf>

Any further updates will be sent out as required

Thank you

Jana

The Prince George Fire Centre called a coordination call at 1800-1900 hours this evening with the following to report and discuss:

- Expectations next few days: Forecast next 3 days: ground is dry, dry air, entering into a ridge breakdown and moving into Alberta, upper trough with area of instability, with cooler air. Wednesday: SEVERE WEATHER, strong winds 15-25 km an hour, possibly 45km-75 km hour by late evening, lightning and thunderstorms in PG as well as north of Peace River to Yukon, NWT. Expecting rapid fire growth with this. Thursday and Friday – cooler, with northerly winds.
- Fire response – all crews have been pulled due to fire behavior and heat stress concerns for fire fighters, unable to draw resources from around the province as other regions are challenged at this time as well. Focus is on detection, gathering information and tracking.

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No evacuation alerts at this time have been issued but pending at this time.

Health Care impacts. BCEHS – Fort Nelson Airport is open for medevacs however highway travel is affected.

Smaller communities (Prophet River, Halfway River, Blueberry First Nation) in the area are being asked to consider planning for EVACUATION. EMBC asking receiving communities to prepare for relocating residents.

These two fires have now merged into the larger G80997:

- G9120 – Fort Nelson south of Trutch – 100 hectares in size at Hwy 97 Rank 5 – impact Hwy 97 north soon.
- G90975– 3000 hectares Rank 5 and 6 – recommendation to put out an Evac Alert in the Pink Mountain area – Highway 97 is currently closed with traffic control by RCMP at Buckinghorse to Sikanni Chief in the Pink Mountain area.

Many thanks and any further developments and updates will be forwarded to you as they come in. There will be a coordination call tomorrow TBD.

Please see update from Drive BC – will be revisited tomorrow morning at 0900 hours via Drive BC update.

**Highway 97 Both Directions**  
Highway 97, in both directions. Forest fire between Sikanni Chief Rd and Prophet River Sub Rd for 59.3 km (112 km north of Wonowon to 114 km south of Fort Nelson). Road closed. Next update time Wed Jun 30 at 9:00 AM MST. Last updated Tue Jun 29 at 4:13 PM MST. (DBC-31007)

#### Urgent concerns: Tuesday, June 29 – Fire and Flood information

##### o Weather Update with Environment and Climate Change Canada

- High pressure system today, extreme heat to continue today and tomorrow with some cooling Thursday and Friday Showers and Risk of thunderstorms on Wednesday and Thursday in the North East With this heat – lag time of 3 or 4 days for effect of the heat on individuals as well as environment

##### o River Forecast Centre

###### Flood Warning – Upper Fraser River (UPGRADED)

The River Forecast Centre is upgrading to a Flood Warning for the Upper Fraser River including:

- Upper Fraser River including the Robson Valley and areas from Sinclair Mills upstream to Torpy, Dome Creek, Dore River, McBride and surrounding tributaries

###### High Streamflow Advisory – Quesnel River

The River Forecast Centre is **issuing a High Streamflow Advisory** for:

- o Quesnel River and its tributaries

- o **Prince George Fire Centre update**

- o Lightning overnight – received a number of fires from those event – significant fire behavior, as many resources on as possible –
- o **2 fires of note**
  - o G9120 – Fort Nelson south of Trutch – 100 hectares in size at Hwy 97 Rank 5 – impact Hwy 97 north soon.
  - o G90975 – 3000 hectares Rank 5 and 6 – recommendation to put out an Evac Alert in the Pink Mountain area – Highway 97 is currently closed with traffic control by RCMP at Buckinghouse to Sikanni Chief in the Pink Mountain area. .

- o **Health Emergency Management BC. / Northern Health**

- o Working with facilities on cooling efforts in facilities and in community Monitoring situation of floods and fires

- o **Fraser Fort George Regional district**

- — one family evacuated from flooding and sandbag stations setup in 3 different locations

Any further Provincial Regional EOC coordination call information will be summarized and forwarded to you as required Currently there are no other calls scheduled at this time

# **Declaration of State of Local Emergency**

## **ORDER**

WHEREAS a wildfire within the jurisdiction in Electoral Area 'B' of the Peace River Regional District,

AND WHEREAS there is an existing or imminent threat to people and property within the area;

AND WHEREAS this wildfire emergency requires prompt coordination of action or special regulation of persons or property to protect the health, safety or welfare of people or to limit damage to property;

NOW THEREFORE:

IT IS HEREBY ORDERED pursuant to Section 12 (1) of the Emergency Program Act (RS, 1996, Chap 111) that a state of local emergency exists in Electoral Area 'B' due to wildfire activity and a risk to lives and properties that exist.

IT IS FURTHER ORDERED THAT the Peace River Regional District, its employees, servants and agents are empowered pursuant to Section 13 (1) of the Emergency Program Act to do all acts and implement all procedures that are considered necessary to prevent or to alleviate the effects of the emergency.

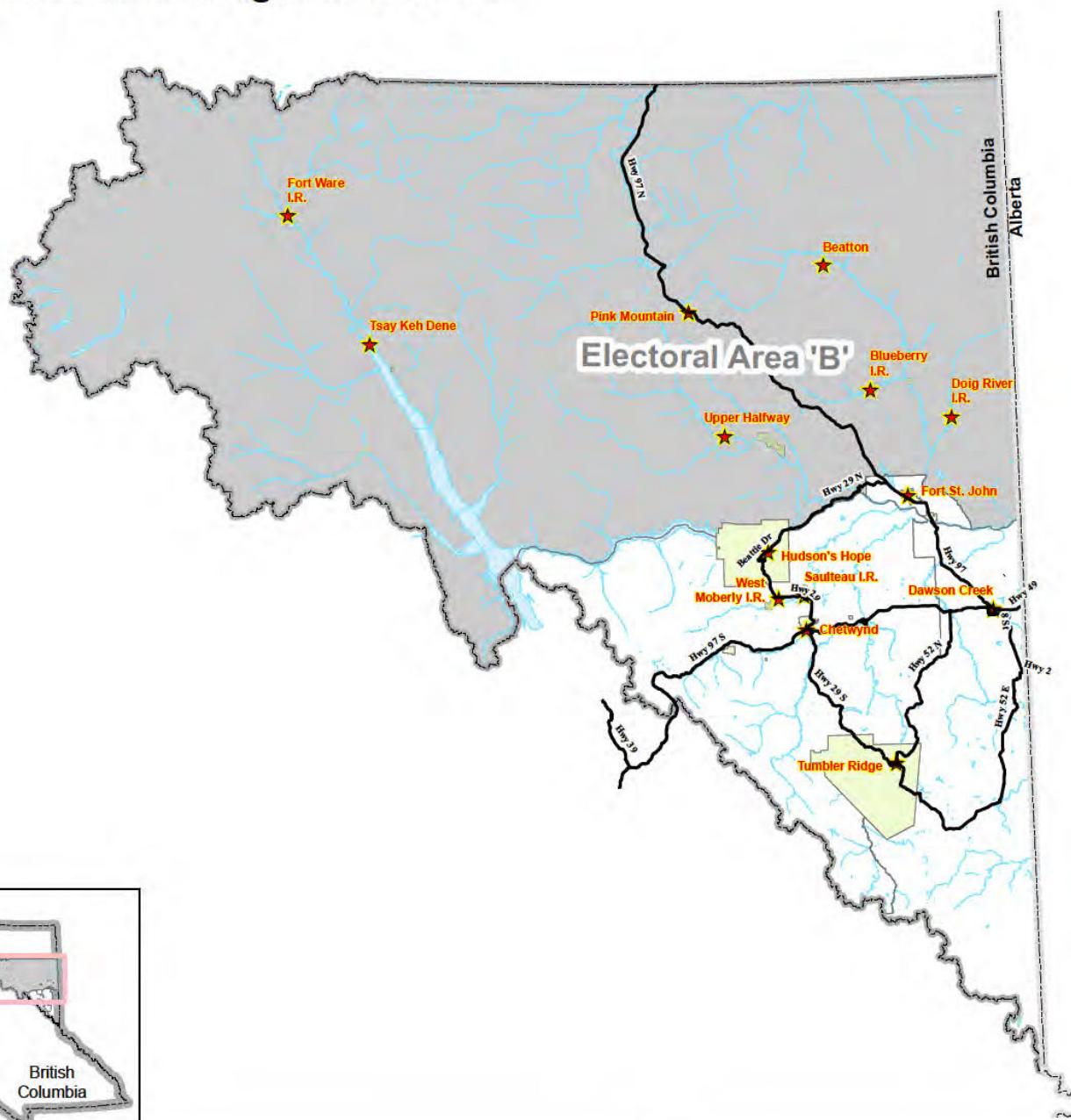
ORDERED by the Chair of the Regional Board, Brad Sperling this date, June 30, 2021 at 5:00PM, to remain in force for seven days until July 7, 2021 at midnight unless cancelled by order of the Peace River Regional District or the Minister responsible.

---

Brad Sperling, Chair



# **Peace River Regional District**



## **Declaration of State of Local Emergency**

## **Electoral Area 'B'**



1:2,750,000

Kilometers

Wednesday, June 30, 2021



*Compiled and produced by the  
Peace River Regional District  
on Wednesday, June 30, 2021.*

**From:** Romanas, Amy [PHSA]  
**To:** James, Landon [PHSA]; Sheridan, Jesse [PHSA]; Thanh, David [PHSA]; Woo, Deanna [PHSA]; Francescutti, Jay [PHSA]; Delorme, Gerry [PHSA]; Lavery, John [PHSA]  
**Subject:** Lytton Evacuation Update #1 and COP access  
**Date:** Wednesday, June 30, 2021 7:49:10 PM

---

Hi Everyone,

The community of Lytton has an evacuation order

I have contacted SW PREOC which activated to support CTL PREOC. Coordination Call information should arrive shortly.

Although PG is experiencing Lightning strikes I have seen no info from the PREOC. I have touched based with Jana who is the on-call lead (I am her backup) and made her aware.

I am sending the COP info below which may be helpful in this event.

Next Update: 30 minutes (2015) unless critical information comes in prior.

For internal use only  
BC Emergency Management COP  
s.15(1)(l)  


Amy Romanas,  
Pronouns: She/Her  
Coordinator, Emergency Management – Provincial Operations  
Health Emergency Management British Columbia (HEMBC)  
Provincial Health Services Authority (PHSA)

Cell  +1 (778) 828-5628  
Email  [Amy.Romanas@phsa.ca](mailto:Amy.Romanas@phsa.ca)

*I honour and acknowledge that my place of work is within the traditional homelands of the Snuneymuxw First Nations.*

This e-mail message, including any attachments, is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged and/or confidential. If you are not the intended recipient or the employee or agent responsible for delivering the communication to the intended recipient, please notify us immediately by replying to this message and then delete this message from your system. You are hereby notified that any use, dissemination, distribution and/or reproduction of this message and/or any attachments by unintended recipients is unauthorized and may be unlawful

**From:** HEMBC, North  
**To:** HEMBC, North; Weger, Annette [NH]; Biddlecombe, Moira [NH]; De Smit, Angela [NH]; Fraser, Sherry [NH]; Ulrich, Cathy [NH]; Chipman, Desa [NH]; Collins, Erin [NH]; Quinn, Jessica [NH]; Raper, Steve [NH]; Cozac, Joanne [NH]; Cunningham, Krista [NH]; Shawara, Judy [Judy] [NH]; Petkul, Daryl [NH]; Clemas, Lia [NH]; Anguish, Penny [NH]; Johnston, Sandra [Sandra] [NH]; Oliver, Jordan [NH]; Patient Transfer, Kelliher, Courtenay [NH]; Steele, Andrew [NH]; Marr, Gregory [NH]; Nordli, Kim [NH]; Romanas, Amy [Amy] [NH]; Laverty, John [John] [NH]  
**Cc:** Romanas, Amy [NH]; Laverty, John [NH]  
**Subject:** RE: Update #5 - NE HSDA - Hwy 97 North closures due to fire - Evacuation Alert issued  
**Date:** Wednesday, June 30, 2021 7:50:40 PM  
**Attachments:** [Evacuation ORDER 2021-06-30\\_0\\_130\\_227444.pdf](#)

Please see the attached Evacuation Order issued for the North Peace area. Areas affected are as such:

- 1.5 kms on either side of HIGHWAY 97N South of Mile 202 to Mile 190.
- 5km west of highway 97N and 25km East of Highway 97N from mile 190 south to Buckinghorse River Bridge either side of the Alaska Highway 97N.

This is a developing situation, however at this time the Prophet River, Blueberry First Nation and Halfway River First Nation communities are not part of the alert of order.

Further updates will be sent to you as they come in.

Thank you

Jana Hargreaves  
Coordinator  
Northern Health Emergency Management  
308 – 1488 4<sup>th</sup> Avenue, Prince George, BC V2L 4Y2  
Cell 778-349-4730  
email: [jana.hargreaves@northernhealth.ca](mailto:jana.hargreaves@northernhealth.ca)  
Northern Health Emergency Management On- Call: 1-855-554-3622



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The Peace River Regional District just declared a State of Local Emergency for electoral area B in the Peace River area. There has been no change to evac alerts along Highway 97 or any communities in the area at this time.

Many thanks

Jana

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- G90975– 3000 hectares Rank 5 and 6 – recommendation to put out an Evac Alert in the Pink Mountain area – Highway 97 is currently closed with traffic control by RCMP at Buckinghorse to Sikanni Chief in the Pink Mountain area.

Many thanks and any further developments and updates will be forwarded to you as they come in. There will be a coordination call tomorrow TBD.

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Please see update from Drive BC – will be revisited tomorrow morning at 0900 hours via Drive BC update.

[Highway 97 Both Directions](#)  
Highway 97, in both directions. Forest fire between Sikanni Chief Rd and Prophet River Sub Rd for 59.3 km (112 km north of Wonowon to 114 km south of Fort Nelson). Road closed. Next update time Wed Jun 30 at 9:00 AM MST. Last updated Tue Jun 29 at 4:13 PM MST. (DBC 31007)

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### Urgent concerns: Tuesday, June 29 – Fire and Flood information

- **Weather Update with Environment and Climate Change Canada**

- High pressure system today, extreme heat to continue today and tomorrow with some cooling Thursday and Friday Showers and Risk of thunderstorms on Wednesday and Thursday in the North East With this heat – lag time of 3 or 4 days for effect of the heat on individuals as well as environment

- **River Forecast Centre**

**Flood Warning – Upper Fraser River (UPGRADED)**

The River Forecast Centre is **upgrading** to a **Flood Warning** for the **Upper Fraser River** including:

- Upper Fraser River including the Robson Valley and areas from Sinclair Mills upstream to Torpy, Dome Creek, Dore River, McBride and surrounding tributaries

**High Streamflow Advisory – Quesnel River**

The River Forecast Centre is **issuing** a **High Streamflow Advisory** for:

- Quesnel River and its tributaries

- **Prince George Fire Centre update**

- Lightning overnight – received a number of fires from those event – significant fire behavior, as many resources on as possible –  
○ **2 fires of note**

- **G9120 – Fort Nelson south of Trutch – 100 hectares in size at Hwy 97 Rank 5 – impact Hwy 97 north soon.**
- **G90975– 3000 hectares Rank 5 and 6 – recommendation to put out an Evac Alert in the Pink Mountain area – Highway 97 is currently closed with traffic control by RCMP at Buckinghouse to Sikanni Chief in the Pink Mountain area.**

- **Health Emergency Management BC. / Northern Health**

- Working with facilities on cooling efforts in facilities and in community Monitoring situation of floods and fires

- **Fraser Fort George Regional district**

- – one family evacuated from flooding and sandbag stations setup in 3 different locations

Any further Provincial Regional EOC coordination call information will be summarized and forwarded to you as required Currently there are no other calls scheduled at this time

# **EVACUATION ORDER**

## **Electoral Area 'B'**

June 30, 2021 at 1830hrs

Pursuant to Section 12 (1) of the BC Emergency Program Act an **Evacuation Order** has been issued by Peace River Regional District due to immediate danger to life safety caused by wildfire. A map of the area can be found on the following page.

Members of the RCMP and other applicable agencies will be expediting this action.

The Evacuation Order is in effect for the following areas,

- 1.5kms on either side of Highway 97N South of Mile 202 to Mile 190.
- 5km West of Highway 97N and 25km East of Highway 97N from mile 190 South to the Buckinghorse River Bridge either side of the Alaska Highway 97N.

## **YOU MUST LEAVE THE AREA IMMEDIATELY**

### **WHAT YOU SHOULD DO:**

- Follow Highway 97N South out of the evacuation area and call the Peace River Regional District if you require assistance at (250)784-3200 or 1-800-670-7773.
- If you need transportation assistance from the area, advise the person providing this notice.
- Shut off all gas and electrical appliances, other than refrigerators and freezers.
- Close all windows and doors.
- Close gates (latch) but do not lock.
- Gather your family and, if you have room, take a neighbour or someone needing transportation. Do not use more vehicles than you have to.
- Take critical items (medicine, purse, wallet, and keys) only if they are immediately available. Take pets in pet kennels or on leash.
- Do not use the telephone unless you need emergency service.

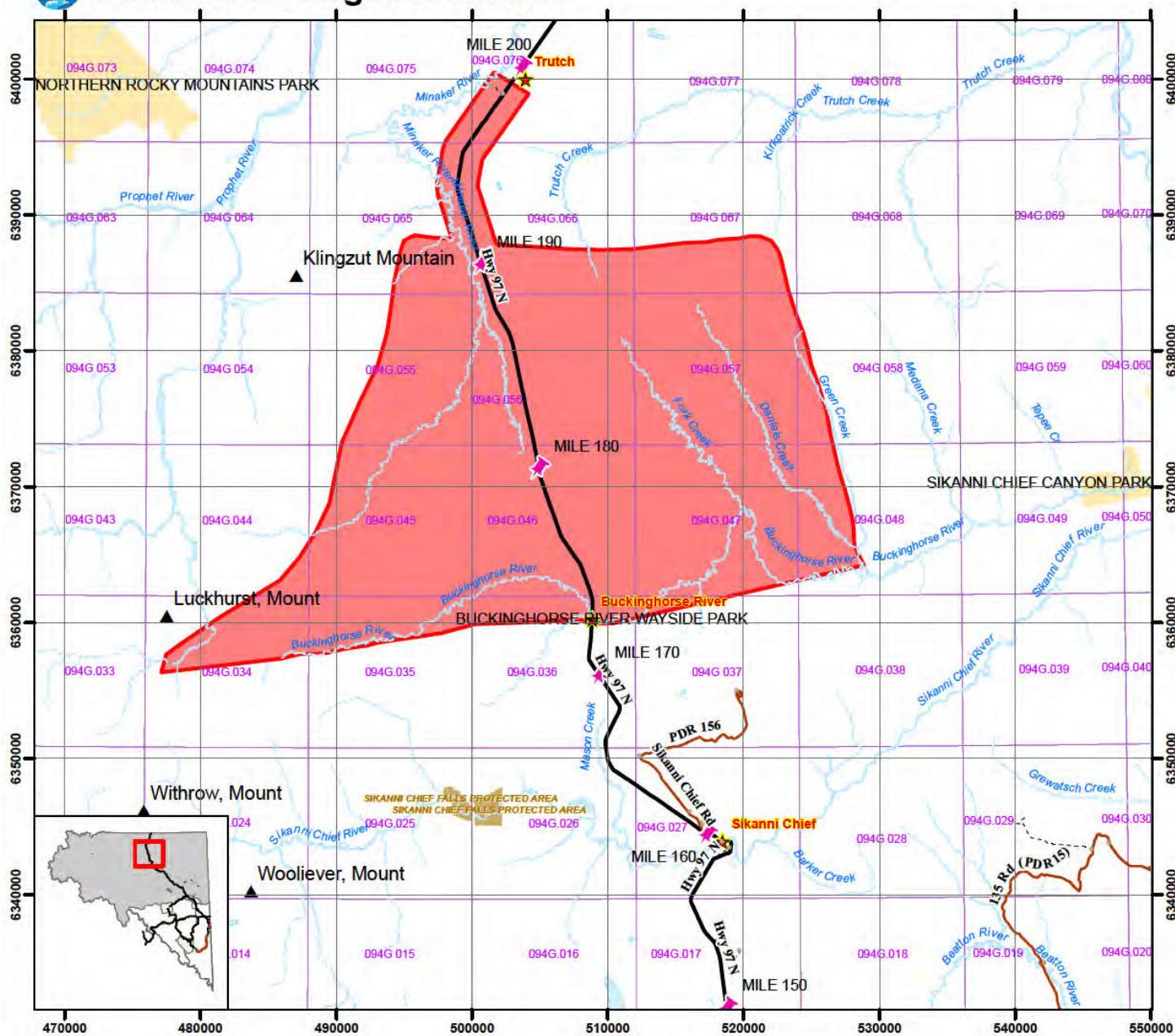
Further information will be issued at prrd.bc.ca for more information.

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Brad Sperling  
Chair,  
Peace River Regional District



# Peace River Regional District



**Evacuation Order**  
#1  
Between Mile 202  
South to  
Buckinghorse  
River  
Fire: G80997



1:400,000  
0 3 6 12  
Kilometers

Wednesday, June 30, 2021

Compiled and produced by  
the Peace River Regional District  
on Wednesday, June 30, 2021.

F21-1133

Page 133 withheld under sections 13(1) and 17(1) of the Act

Pages 136-140 withheld under sections 13(1) and 17(1) of the Act

Page 144 withheld under sections 12(1), 13(1) and 17(1) of the Act

Page 145 withheld under sections 12(1) and 13(1)

Pages 146-147 withheld under sections 12(1), 13(1) and 17(1) of the Act

Pages 171-175 withheld under sections 13(1) and 17(1) of the Act

Pages 181-183 withheld under sections 13(1) and 17(1) of the Act

Pages 185-186 withheld under sections 13(1) and 17(1) of the Act

Pages 203-205 withheld under sections 16(1) of the Act

F21-1149

Here is a summary of the response times overall:

**Response Times for Pre-Hospital Events in Vancouver Dispatch**  
for specific dates

Day	Total MPDS Events	Purple		Red		Orange		Yellow	
		Events	Median Response Time (hh:mm:ss)						
2021-06-25	903	36	0:08:38	281	0:12:07	334	0:19:52	252	0:42:18
2021-06-26	934	20	0:09:31	292	0:12:27	347	0:17:52	275	0:35:01
2021-06-27	891	41	0:12:48	345	0:18:40	313	0:34:32	192	1:03:03
2021-06-28	947	75	0:12:22	397	0:21:20	317	0:54:34	158	1:20:00
2021-06-29	911	108	0:10:35	378	0:24:53	284	1:24:48	141	1:12:22
2021-06-30	907	34	0:07:43	282	0:12:39	320	0:26:00	271	0:47:13
2021-07-01	933	34	0:07:33	247	0:10:01	309	0:14:42	343	0:29:59

Here is a summary of the Heat Related events, the median response time for these was 51.7 minutes:

**Heat Related (MPDS Card 20) Events**

Vancouver Dispatch - for specific dates

Date	Dispatched	Not Dispatched	Total
2021-06-25	3	2	5
2021-06-26	21	9	30
2021-06-27	41	41	82
2021-06-28	53	77	130
2021-06-29	54	46	100
2021-06-30	16	3	19
2021-07-01	5	1	6
<b>Total</b>	<b>193</b>	<b>179</b>	<b>372</b>

Disp Cent	Date	Call Rec'd Hr	NC Block	Community	NC CRM Initial	Resp Time (min.)
VAN	2021-06-25	11	7300 Block	Surrey	Orange	n/a
VAN	2021-06-25	16	2300 Block	Abbotsford	Yellow	n/a
VAN	2021-06-25	17	18700 Block	Surrey	Orange	15.2
VAN	2021-06-25	18	600 Block	Vancouver	Yellow	313.4
VAN	2021-06-25	20	2200 Block	Vancouver	Blue	n/a
VAN	2021-06-26	10	4500 Block	Vancouver	Orange	49.1
VAN	2021-06-26	11	20600 Block	Langley	Yellow	12.2
VAN	2021-06-26	11	3300 Block	Abbotsford	Yellow	n/a
VAN	2021-06-26	12	46000 Block	Chilliwack	Orange	6.4
VAN	2021-06-26	13	2600 Block	Port Coquitlam	Orange	16.9
VAN	2021-06-26	13	DAVIE ST/BURRARD ST	Vancouver	Yellow	n/a
VAN	2021-06-26	13	14900 Block	Surrey	Yellow	n/a
VAN	2021-06-26	13	9700 Block	Langley	Yellow	48.0
VAN	2021-06-26	14	100 Block	Vancouver	Orange	26.9
VAN	2021-06-26	14	LAITY ST/123RD AVE	Maple Ridge	Yellow	11.0
VAN	2021-06-26	14	11900 Block	Maple Ridge	Yellow	n/a
VAN	2021-06-26	15	14600 Block	Surrey	Yellow	41.5
VAN	2021-06-26	15	6600 Block	Vancouver	Yellow	46.6
VAN	2021-06-26	16	46100 Block	Chilliwack	Orange	7.2
VAN	2021-06-26	17	3200 Block	Abbotsford	Yellow	n/a
VAN	2021-06-26	17	14900 Block	Surrey	Orange	74.3
VAN	2021-06-26	17	22600 Block	Maple Ridge	Yellow	n/a
VAN	2021-06-26	18	COMMERCIAL DR/E 6TH AVE	Vancouver	Yellow	n/a
VAN	2021-06-26	18	13700 Block	Surrey	Blue	n/a
VAN	2021-06-26	18	5200 Block	Vancouver	Yellow	n/a
VAN	2021-06-26	19	7300 Block	Burnaby	Yellow	n/a
VAN	2021-06-26	20	2400 Block	Abbotsford	Yellow	191.6
VAN	2021-06-26	20	300 Block	Vancouver	Orange	n/a
VAN	2021-06-26	20	600 Block	New Westminster	Blue	n/a
VAN	2021-06-26	20	4300 Block	Whistler	Blue	8.3
VAN	2021-06-26	20	2800 Block	Vancouver	Yellow	96.8
VAN	2021-06-26	21	8200 Block	Richmond	Yellow	14.1
VAN	2021-06-26	21	900 Block	Vancouver	Blue	n/a
VAN	2021-06-27	21	400 Block	Coquitlam	Yellow	282.8

VAN	2021-06-27 21	YUKON ST/W BROADWAY	Vancouver	Yellow	208.2
VAN	2021-06-26 22	9000 Block	Langley	Orange	9.5
VAN	2021-06-27 23	1000 Block	Vancouver	Yellow	319.5
VAN	2021-06-26 23	300 Block	New Westminster	Blue	n/a
VAN	2021-06-27 00	1000 Block	Vancouver	Yellow	n/a
VAN	2021-06-27 00	7200 Block	Vancouver	Blue	n/a
VAN	2021-06-27 00	200 Block	New Westminster	Blue	n/a
VAN	2021-06-27 08	32600 Block	Mission	Yellow	16.4
VAN	2021-06-27 08	2700 Block	Vancouver	Blue	n/a
VAN	2021-06-27 10	20300 Block	Langley	Orange	40.1
VAN	2021-06-27 10	300 Block	Vancouver	Yellow	n/a
VAN	2021-06-27 10	7200 Block	Vancouver	Orange	n/a
VAN	2021-06-27 10	1000 Block	Vancouver	Yellow	46.9
VAN	2021-06-27 10	4400 Block	Burnaby	Yellow	n/a
VAN	2021-06-27 11	100 Block	Port Moody	Yellow	n/a
VAN	2021-06-27 11	14400 Block	Surrey	Yellow	n/a
VAN	2021-06-27 11	2400 Block	Abbotsford	Yellow	11.7
VAN	2021-06-27 12	27500 Block	Abbotsford	Yellow	n/a
VAN	2021-06-27 12	7700 Block	Mission	Yellow	27.0
VAN	2021-06-27 12	3100 Block	Port Coquitlam	Orange	n/a
VAN	2021-06-27 12	500 Block	Burnaby	Yellow	40.6
VAN	2021-06-27 13	4000 Block	Burnaby	Yellow	60.5
VAN	2021-06-27 13	1200 Block	North Vancouver	Yellow	n/a
VAN	2021-06-27 13	1600 Block	Abbotsford	Orange	n/a
VAN	2021-06-27 13	20200 Block	Langley	Yellow	n/a
VAN	2021-06-27 13	800 Block	Coquitlam	Yellow	n/a
VAN	2021-06-27 13	13700 Block	Surrey	Yellow	n/a
VAN	2021-06-27 14	1100 Block	New Westminster	Yellow	33.2
VAN	2021-06-27 14	1900 Block	Coquitlam	Yellow	n/a
VAN	2021-06-27 14	THERMAL PLANT RD/BEDWELL BAY RD	Port Moody	Yellow	n/a
VAN	2021-06-27 14	8200 Block	Surrey	Yellow	n/a
VAN	2021-06-27 14	2200 Block	Vancouver	Yellow	n/a
VAN	2021-06-27 15	3200 Block	Burnaby	Blue	n/a
VAN	2021-06-27 15	7900 Block	Surrey	Yellow	n/a
VAN	2021-06-27 15	1400 Block	Vancouver	Yellow	n/a

VAN	2021-06-27 15	21200 Block	Maple Ridge	Orange	100.6
VAN	2021-06-27 16	14500 Block	Maple Ridge	Yellow	n/a
VAN	2021-06-27 16	3600 Block	North Vancouver	Orange	24.2
VAN	2021-06-27 16	4700 Block	Vancouver	Orange	37.2
VAN	2021-06-27 16	9400 Block	Chilliwack	Orange	23.8
VAN	2021-06-27 16	MARINER WAY/GLOUCESTER CRT	Coquitlam	Yellow	n/a
VAN	2021-06-27 16	17700 Block	Surrey	Yellow	n/a
VAN	2021-06-27 16	33400 Block	Abbotsford	Yellow	n/a
VAN	2021-06-27 16	1100 Block	Vancouver	Orange	107.3
VAN	2021-06-27 17	PAULSEN RD/CHILLIWACK LAKE RD	Chilliwack River Valley	Yellow	n/a
VAN	2021-06-27 17	17300 Block	Surrey	Orange	n/a
VAN	2021-06-27 17	3600 Block	Surrey	Orange	96.0
VAN	2021-06-27 18	3200 Block	Vancouver	Blue	n/a
VAN	2021-06-27 18	45900 Block	Chilliwack	Yellow	118.3
VAN	2021-06-28 18	8900 Block	Langley	Orange	406.5
VAN	2021-06-27 18	3200 Block	Vancouver	Orange	n/a
VAN	2021-06-27 18	13200 Block	Surrey	Blue	n/a
VAN	2021-06-27 18	54400 Block	Boston Bar	Yellow	n/a
VAN	2021-06-27 18	5500 Block	Delta	Orange	n/a
VAN	2021-06-27 18	1700 Block	Vancouver	Orange	n/a
VAN	2021-06-27 18	1400 Block	Gibsons	Orange	9.5
VAN	2021-06-27 19	8200 Block	Mission	Yellow	19.4
VAN	2021-06-27 19	8200 Block	Chilliwack	Orange	n/a
VAN	2021-06-27 19	8700 Block	Surrey	Orange	37.1
VAN	2021-06-27 19	33900 Block	Abbotsford	Yellow	144.8
VAN	2021-06-27 19	3100 Block	Vancouver	Orange	144.1
VAN	2021-06-27 19	5900 Block	Surrey	Orange	87.1
VAN	2021-06-27 19	15200 Block	Surrey	Orange	123.4
VAN	2021-06-27 19	45700 Block	Chilliwack	Yellow	114.9
VAN	2021-06-27 19	100 Block	North Vancouver	Red	41.3
VAN	2021-06-28 19	600 Block	Vancouver	Yellow	291.4
VAN	2021-06-27 19	7100 Block	Vancouver	Orange	211.0
VAN	2021-06-27 20	5000 Block	Langley	Orange	223.9
VAN	2021-06-27 20	11300 Block	Delta	Yellow	n/a
VAN	2021-06-27 20	8200 Block	Chilliwack	Yellow	n/a

VAN	2021-06-27 20	3200 Block	Abbotsford	Yellow	n/a	
VAN	2021-06-27 20	3200 Block	Vancouver	Orange		278.8
VAN	2021-06-27 21	5600 Block	Sechelt	Orange		14.4
VAN	2021-06-28 21	2800 Block	Vancouver	Orange		268.9
VAN	2021-06-27 21	27100 Block	Langley	Yellow	n/a	
VAN	2021-06-27 21	1400 Block	Abbotsford	Orange		43.0
VAN	2021-06-27 21	4200 Block	Richmond	Yellow	n/a	
VAN	2021-06-27 21	15500 Block	Surrey	Orange		111.3
VAN	2021-06-27 21	1000 Block	Vancouver	Yellow	n/a	
VAN	2021-06-27 21	9800 Block	Chilliwack	Blue	n/a	
VAN	2021-06-27 22	33600 Block	Abbotsford	Yellow	n/a	
VAN	2021-06-27 22	13500 Block	Surrey	Orange		76.3
VAN	2021-06-28 22	1100 Block	Vancouver	Yellow		746.3
VAN	2021-06-28 22	5400 Block	West Vancouver	Red		154.5
VAN	2021-06-27 22	100 Block	New Westminster	Orange	n/a	
VAN	2021-06-27 22	5600 Block	Vancouver	Blue	n/a	
VAN	2021-06-27 23	500 Block	Gibsons	Blue	n/a	
VAN	2021-06-27 23	16100 Block	Surrey	Orange	n/a	
VAN	2021-06-28 00	6000 Block	Richmond	Yellow	n/a	
VAN	2021-06-28 01	1000 Block	Gibsons	Blue		24.9
VAN	2021-06-28 01	13500 Block	Surrey	Yellow	n/a	
VAN	2021-06-28 02	500 Block	Vancouver	Orange	n/a	
VAN	2021-06-28 03	9200 Block	Chilliwack	Yellow		22.1
VAN	2021-06-28 04	18700 Block	Surrey	Orange		22.7
VAN	2021-06-28 05	11800 Block	Delta	Orange		22.7
VAN	2021-06-28 05	5400 Block	Langley	Yellow	n/a	
VAN	2021-06-28 05	2600 Block	Port Coquitlam	Yellow	n/a	
VAN	2021-06-28 05	3400 Block	Vancouver	Orange		106.2
VAN	2021-06-28 06	WILLIAMS ST/MARGARET AVE	Chilliwack	Blue	n/a	
VAN	2021-06-28 06	5600 Block	Langley	Yellow		312.1
VAN	2021-06-28 08	39100 Block	Abbotsford	Yellow		104.8
VAN	2021-06-28 09	6700 Block	Vancouver	Yellow	n/a	
VAN	2021-06-28 09	2900 Block	Vancouver	Yellow	n/a	
VAN	2021-06-28 10	9500 Block	Surrey	Blue	n/a	
VAN	2021-06-28 10	8600 Block	Vancouver	Yellow		364.8

VAN	2021-06-28 11	5700 Block	Sechelt	Orange	6.1
VAN	2021-06-28 11	20300 Block	Maple Ridge	Yellow	n/a
VAN	2021-06-28 11	300 Block	Vancouver	Orange	90.4
VAN	2021-06-28 11	18400 Block	Surrey	Orange	n/a
VAN	2021-06-28 12	7300 Block	Burnaby	Blue	n/a
VAN	2021-06-28 12	6800 Block	Burnaby	Yellow	n/a
VAN	2021-06-28 12	3600 Block	Vancouver	Orange	n/a
VAN	2021-06-28 12	7200 Block	Richmond	Yellow	n/a
VAN	2021-06-28 12	5900 Block	Burnaby	Yellow	n/a
VAN	2021-06-28 12	19300 Block	Surrey	Blue	n/a
VAN	2021-06-28 12	2200 Block	Abbotsford	Yellow	28.0
VAN	2021-06-28 13	100 Block	North Vancouver	Orange	39.0
VAN	2021-06-28 13	2900 Block	Coquitlam	Orange	20.8
VAN	2021-06-28 14	2200 Block	Abbotsford	Blue	n/a
VAN	2021-06-28 14	6400 Block	Langley	Orange	n/a
VAN	2021-06-28 14	20100 Block	Maple Ridge	Yellow	n/a
VAN	2021-06-28 14	RUPERT ST/KINGSWAY	Vancouver	Yellow	52.1
VAN	2021-06-28 14	7200 Block	Mission	Red	12.5
VAN	2021-06-28 14	5600 Block	Vancouver	Red	25.5
VAN	2021-06-28 15	E HASTINGS ST/MAIN ST	Vancouver	Orange	40.2
VAN	2021-06-28 15	12700 Block	Surrey	Yellow	n/a
VAN	2021-06-28 15	300 Block	New Westminster	Yellow	314.0
VAN	2021-06-28 15	7700 Block	Burnaby	Orange	n/a
VAN	2021-06-28 16	11900 Block	Maple Ridge	Yellow	n/a
VAN	2021-06-28 16	1100 Block	Coquitlam	Yellow	n/a
VAN	2021-06-28 16	2000 Block	Abbotsford	Orange	n/a
VAN	2021-06-28 16	3000 Block	Abbotsford	Orange	n/a
VAN	2021-06-28 16	1200 Block	North Vancouver	Orange	30.2
VAN	2021-06-28 16	5400 Block	Langley	Yellow	n/a
VAN	2021-06-28 16	9600 Block	Surrey	Orange	20.6
VAN	2021-06-28 16	100 Block	Vancouver	Orange	38.2
VAN	2021-06-28 16	12300 Block	Surrey	Yellow	n/a
VAN	2021-06-28 16	12900 Block	Madeira Park	Yellow	n/a
VAN	2021-06-28 16	200 Block	Vancouver	Orange	n/a
VAN	2021-06-28 17	4100 Block	Cultus Lake	Blue	n/a

VAN	2021-06-28 17	13900 Block	Surrey	Orange	n/a
VAN	2021-06-28 17	2200 Block	Langley	Orange	n/a
VAN	2021-06-28 17	4700 Block	Burnaby	Yellow	n/a
VAN	2021-06-28 17	1800 Block	Abbotsford	Orange	n/a
VAN	2021-06-28 17	14100 Block	Surrey	Orange	n/a
VAN	2021-06-28 17	700 Block	Vancouver	Orange	n/a
VAN	2021-06-28 17	1200 Block	Vancouver	Orange	37.5
VAN	2021-06-28 17	700 Block	North Vancouver	Orange	n/a
VAN	2021-06-28 17	13700 Block	Surrey	Orange	n/a
VAN	2021-06-28 17	2500 Block	Abbotsford	Orange	143.7
VAN	2021-06-28 18	5500 Block	Vancouver	Orange	n/a
VAN	2021-06-28 18	5000 Block	Vancouver	Orange	217.8
VAN	2021-06-28 18	45700 Block	Chilliwack	Blue	n/a
VAN	2021-06-28 18	13700 Block	Surrey	Orange	n/a
VAN	2021-06-28 18	4400 Block	Burnaby	Orange	n/a
VAN	2021-06-28 18	11500 Block	Delta	Yellow	n/a
VAN	2021-06-28 18	1600 Block	Vancouver	Blue	n/a
VAN	2021-06-28 18	4700 Block	Delta	Orange	n/a
VAN	2021-06-28 18	4700 Block	Burnaby	Yellow	n/a
VAN	2021-06-28 18	9200 Block	Hatzic	Blue	n/a
VAN	2021-06-28 18	33900 Block	Abbotsford	Orange	88.5
VAN	2021-06-28 19	20400 Block	Langley	Yellow	n/a
VAN	2021-06-28 19	1400 Block	Vancouver	Orange	29.8
VAN	2021-06-28 19	9000 Block	Langley	Yellow	n/a
VAN	2021-06-28 19	5500 Block	Sechelt	Blue	140.1
VAN	2021-06-28 19	3500 Block	Vancouver	Orange	n/a
VAN	2021-06-28 19	5300 Block	Vancouver	Yellow	n/a
VAN	2021-06-28 19	6300 Block	Vancouver	Orange	n/a
VAN	2021-06-29 19	20100 Block	Langley	Orange	356.3
VAN	2021-06-28 19	1900 Block	Abbotsford	Yellow	71.2
VAN	2021-06-28 19	13800 Block	Surrey	Orange	n/a
VAN	2021-06-28 19	15600 Block	Surrey	Yellow	n/a
VAN	2021-06-28 19	900 Block	Coquitlam	Orange	74.7
VAN	2021-06-28 19	7100 Block	Richmond	Orange	n/a
VAN	2021-06-28 19	2300 Block	Vancouver	Orange	n/a

VAN	2021-06-28 19	15800 Block	Surrey	Orange	132.3
VAN	2021-06-28 19	8200 Block	Surrey	Orange	n/a
VAN	2021-06-28 20	14200 Block	Surrey	Orange	n/a
VAN	2021-06-28 20	6600 Block	Richmond	Yellow	n/a
VAN	2021-06-28 20	7300 Block	Surrey	Orange	91.4
VAN	2021-06-28 20	6800 Block	Burnaby	Yellow	n/a
VAN	2021-06-28 20	6300 Block	Surrey	Orange	142.0
VAN	2021-06-28 20	2500 Block	Vancouver	Orange	n/a
VAN	2021-06-28 20	4500 Block	Burnaby	Orange	n/a
VAN	2021-06-28 20	1400 Block	Gibsons	Yellow	12.7
VAN	2021-06-29 20	2000 Block	Vancouver	Orange	439.4
VAN	2021-06-28 20	7400 Block	Vancouver	Orange	n/a
VAN	2021-06-29 20	3200 Block	Vancouver	Yellow	729.0
VAN	2021-06-28 20	2200 Block	Port Moody	Orange	n/a
VAN	2021-06-28 20	100 Block	North Vancouver	Yellow	n/a
VAN	2021-06-29 20	11600 Block	Richmond	Orange	287.1
VAN	2021-06-28 20	2200 Block	Abbotsford	Orange	44.1
VAN	2021-06-28 20	2600 Block	Abbotsford	Yellow	149.7
VAN	2021-06-28 20	1900 Block	Abbotsford	Blue	n/a
VAN	2021-06-29 21	15500 Block	Surrey	Yellow	253.4
VAN	2021-06-28 21	3000 Block	Coquitlam	Yellow	n/a
VAN	2021-06-28 21	43300 Block	Cultus Lake	Yellow	49.9
VAN	2021-06-28 21	7500 Block	Mission	Yellow	124.9
VAN	2021-06-28 21	2000 Block	Coquitlam	Orange	94.0
VAN	2021-06-28 21	0 Block	New Westminster	Orange	n/a
VAN	2021-06-28 21	1700 Block	West Vancouver	Orange	n/a
VAN	2021-06-28 21	1000 Block	New Westminster	Orange	n/a
VAN	2021-06-29 21	11300 Block	Richmond	Yellow	305.7
VAN	2021-06-28 21	7000 Block	Burnaby	Orange	n/a
VAN	2021-06-28 21	16700 Block	Surrey	Orange	n/a
VAN	2021-06-29 22	7000 Block	Vancouver	Orange	796.3
VAN	2021-06-29 22	7800 Block	Vancouver	Orange	n/a
VAN	2021-06-28 22	4600 Block	Vancouver	Orange	n/a
VAN	2021-06-28 22	13900 Block	Surrey	Orange	n/a
VAN	2021-06-28 22	5900 Block	Burnaby	Yellow	n/a

VAN	2021-06-28 22	46000 Block	Chilliwack	Orange		20.5
VAN	2021-06-28 22	6500 Block	Vancouver	Yellow	n/a	
VAN	2021-06-28 22	200 Block	Vancouver	Yellow	n/a	
VAN	2021-06-28 22	8800 Block	Langley	Orange	n/a	
VAN	2021-06-29 22	12000 Block	Surrey	Orange		103.8
VAN	2021-06-28 22	900 Block	Burnaby	Orange	n/a	
VAN	2021-06-28 22	5700 Block	Vancouver	Orange	n/a	
VAN	2021-06-28 22	3600 Block	Langley	Orange	n/a	
VAN	2021-06-29 23	5700 Block	Sechelt	Yellow		74.6
VAN	2021-06-28 23	3400 Block	Vancouver	Orange	n/a	
VAN	2021-06-29 23	6300 Block	Delta	Yellow		145.1
VAN	2021-06-28 23	45700 Block	Chilliwack	Yellow		32.8
VAN	2021-06-28 23	1900 Block	Abbotsford	Blue	n/a	
VAN	2021-06-29 23	1100 Block	Vancouver	Orange		76.7
VAN	2021-06-28 23	9600 Block	Surrey	Yellow	n/a	
VAN	2021-06-29 00	8200 Block	Vancouver	Orange		118.2
VAN	2021-06-29 00	9900 Block	Surrey	Yellow		1024.9
VAN	2021-06-29 00	700 Block	New Westminster	Orange	n/a	
VAN	2021-06-29 00	11800 Block	Delta	Yellow		142.9
VAN	2021-06-29 01	8200 Block	Surrey	Orange	n/a	
VAN	2021-06-29 01	3600 Block	Abbotsford	Orange		17.5
VAN	2021-06-29 01	4200 Block	Vancouver	Orange	n/a	
VAN	2021-06-29 02	23000 Block	Langley	Yellow	n/a	
VAN	2021-06-29 02	100 Block	Port Moody	Yellow	n/a	
VAN	2021-06-29 03	4900 Block	Vancouver	Orange		624.1
VAN	2021-06-29 03	3800 Block	Vancouver	Yellow		85.3
VAN	2021-06-29 03	7200 Block	Surrey	Orange	n/a	
VAN	2021-06-29 07	800 Block	New Westminster	Blue	n/a	
VAN	2021-06-29 07	6900 Block	Burnaby	Orange	n/a	
VAN	2021-06-29 07	11000 Block	Surrey	Orange	n/a	
VAN	2021-06-29 07	500 Block	Coquitlam	Orange		344.1
VAN	2021-06-29 07	500 Block	Coquitlam	Orange		286.5
VAN	2021-06-29 08	1000 Block	Vancouver	Yellow	n/a	
VAN	2021-06-29 08	2600 Block	Port Coquitlam	Orange	n/a	
VAN	2021-06-29 08	9000 Block	Richmond	Yellow	n/a	

VAN	2021-06-29 08	400 Block	Burnaby	Orange	n/a	
VAN	2021-06-29 08	1600 Block	Vancouver	Yellow		690.3
VAN	2021-06-29 08	100 Block	Burnaby	Orange	n/a	
VAN	2021-06-29 08	2300 Block	Langley	Orange		255.5
VAN	2021-06-29 09	3900 Block	Burnaby	Orange	n/a	
VAN	2021-06-29 09	3500 Block	North Vancouver	Red		18.8
VAN	2021-06-29 09	1900 Block	Vancouver	Yellow	n/a	
VAN	2021-06-29 09	45600 Block	Chilliwack	Yellow		33.9
VAN	2021-06-29 09	1100 Block	Vancouver	Yellow	n/a	
VAN	2021-06-29 10	200 Block	North Vancouver	Orange	n/a	
VAN	2021-06-29 10	LOUGHEED HWY/DEWDNEY TRUNK RD	Coquitlam	Orange	n/a	
VAN	2021-06-29 10	2500 Block	Abbotsford	Orange		28.8
VAN	2021-06-29 10	1200 Block	Vancouver	Orange	n/a	
VAN	2021-06-29 10	4300 Block	Burnaby	Orange		447.2
VAN	2021-06-29 10	700 Block	Coquitlam	Yellow		365.8
VAN	2021-06-29 10	1500 Block	White Rock	Yellow	n/a	
VAN	2021-06-29 10	1700 Block	Surrey	Blue	n/a	
VAN	2021-06-29 10	200 Block	New Westminster	Yellow	n/a	
VAN	2021-06-29 11	400 Block	Vancouver	Orange	n/a	
VAN	2021-06-29 11	300 Block	Vancouver	Yellow	n/a	
VAN	2021-06-29 11	600 Block	Gibsons	Yellow		12.0
VAN	2021-06-29 11	5400 Block	Langley	Orange	n/a	
VAN	2021-06-29 12	GRANVILLE ST/NELSON ST	Vancouver	Orange	n/a	
VAN	2021-06-29 12	46300 Block	Chilliwack	Orange		12.6
VAN	2021-06-29 12	1100 Block	Vancouver	Blue	n/a	
VAN	2021-06-29 12	CARRALL ST/E HASTINGS ST	Vancouver	Orange	n/a	
VAN	2021-06-29 13	10000 Block	Surrey	Orange		16.5
VAN	2021-06-29 13	2000 Block	Port Coquitlam	Yellow		462.0
VAN	2021-06-29 13	1100 Block	Vancouver	Orange	n/a	
VAN	2021-06-29 13	3600 Block	Vancouver	Blue	n/a	
VAN	2021-06-29 13	3600 Block	Vancouver	Yellow		239.6
VAN	2021-06-29 13	100 Block	Vancouver	Orange	n/a	
VAN	2021-06-29 14	3900 Block	Burnaby	Blue	n/a	
VAN	2021-06-29 14	3100 Block	Port Moody	Orange		68.3
VAN	2021-06-29 15	20000 Block	Langley	Orange		39.4

VAN	2021-06-29 15	500 Block	Vancouver	Orange	322.6
VAN	2021-06-29 15	5300 Block	Agassiz	Yellow	43.3
VAN	2021-06-29 15	8500 Block	Vancouver	Orange	n/a
VAN	2021-06-29 15	1100 Block	Coquitlam	Orange	54.6
VAN	2021-06-29 15	BEDWELL BAY RD/WHITE PINE BEACH RD	Port Moody	Orange	n/a
VAN	2021-06-29 15	1100 Block	Vancouver	Orange	n/a
VAN	2021-06-29 15	1200 Block	North Vancouver	Orange	n/a
VAN	2021-06-29 16	500 Block	Coquitlam	Orange	113.7
VAN	2021-06-29 16	108TH AVE/KING GEORGE BLVD	Surrey	Yellow	n/a
VAN	2021-06-29 17	6700 Block	West Vancouver	Orange	n/a
VAN	2021-06-29 17	N RENFREW ST/MCGILL ST	Vancouver	Blue	n/a
VAN	2021-06-29 17	5300 Block	West Vancouver	Orange	n/a
VAN	2021-06-29 17	1100 Block	Vancouver	Yellow	n/a
VAN	2021-06-29 17	200 Block	North Vancouver	Orange	52.5
VAN	2021-06-29 17	CAROLINA ST/E 8TH AVE	Vancouver	Yellow	n/a
VAN	2021-06-29 18	2200 Block	Vancouver	Yellow	n/a
VAN	2021-06-29 18	1400 Block	North Vancouver	Orange	141.8
VAN	2021-06-29 19	4100 Block	Burnaby	Orange	n/a
VAN	2021-06-29 19	2300 Block	Vancouver	Yellow	n/a
VAN	2021-06-29 19	400 Block	Vancouver	Orange	n/a
VAN	2021-06-29 19	2800 Block	Abbotsford	Orange	10.2
VAN	2021-06-29 19	400 Block	Hope	Orange	24.3
VAN	2021-06-29 19	2900 Block	Surrey	Red	8.1
VAN	2021-06-29 20	8000 Block	Surrey	Yellow	n/a
VAN	2021-06-29 20	300 Block	New Westminster	Orange	120.2
VAN	2021-06-29 21	300 Block	West Vancouver	Yellow	n/a
VAN	2021-06-29 21	2800 Block	Coquitlam	Yellow	12.3
VAN	2021-06-29 21	2800 Block	Coquitlam	Orange	n/a
VAN	2021-06-29 21	2200 Block	Vancouver	Yellow	n/a
VAN	2021-06-29 22	700 Block	Coquitlam	Yellow	n/a
VAN	2021-06-29 22	12900 Block	Surrey	Orange	41.3
VAN	2021-06-29 23	200 Block	North Vancouver	Orange	122.8
VAN	2021-06-29 23	5900 Block	Surrey	Orange	34.6
VAN	2021-06-30 00	3500 Block	Surrey	Yellow	n/a
VAN	2021-06-30 01	20900 Block	Langley	Yellow	34.2

VAN	2021-06-30 03	3100 Block	Abbotsford	Blue	n/a	
VAN	2021-06-30 09	5700 Block	Surrey	Orange		16.1
VAN	2021-06-30 10	2600 Block	Abbotsford	Yellow		33.8
VAN	2021-06-30 11	1800 Block	Port Coquitlam	Orange		19.6
VAN	2021-06-30 11	3400 Block	Vancouver	Yellow	n/a	
VAN	2021-06-30 12	1500 Block	North Vancouver	Orange		6.8
VAN	2021-06-30 12	100 Block	North Vancouver	Orange	n/a	
VAN	2021-06-30 13	45800 Block	Chilliwack	Orange		5.3
VAN	2021-06-30 14	HAWKS AVE/E PENDER ST	Vancouver	Orange		28.2
VAN	2021-06-30 14	COMMERCIAL DR/WILLIAM ST	Vancouver	Orange		88.0
VAN	2021-06-30 15	1000 Block	Vancouver	Yellow		51.3
VAN	2021-06-30 15	1500 Block	Coquitlam	Yellow	n/a	
VAN	2021-06-30 18	1000 Block	Vancouver	Orange		51.2
VAN	2021-06-30 19	6200 Block	Delta	Orange		8.1
VAN	2021-06-30 20	2300 Block	Abbotsford	Yellow		36.1
VAN	2021-06-30 20	3000 Block	North Vancouver	Yellow		78.1
VAN	2021-06-30 22	7900 Block	Langley	Yellow	n/a	
VAN	2021-07-01 00	3000 Block	North Vancouver	Yellow	n/a	
VAN	2021-07-01 09	200 Block	Vancouver	Yellow		22.4
VAN	2021-07-01 11	3600 Block	Surrey	Yellow	n/a	
VAN	2021-07-01 14	2900 Block	Abbotsford	Yellow		38.6
VAN	2021-07-01 14	7500 Block	Chilliwack	Yellow		20.9
VAN	2021-07-01 16	34000 Block	Abbotsford	Orange	n/a	

F21-1171

**From:** [Grist, Christine EHS:EX](#)  
**To:** [MacKinnon, Darlene EHS:EX](#)  
**Subject:** RE: Heat wave mortality  
**Date:** Tuesday, June 29, 2021 8:47:40 AM

---

Hi Darlene,

Absolutely will include you on further updates.

I have attached the draft REAP and DMP documents for you. They are both in different states of draft, but the DMP is extreme draft and may not be appropriate to share but will leave this to you to determine.

Yesterday we made significant addition to the dashboards with the inclusion of Dispatch specific call volume, average time to answer, SLA, etc. These are very interesting (and understandable) visual representations of our data. Look for an email from Brooks with some screen shots. I'll include the dashboard URL and login details for your quick access.

[BCEHS Dashboard](#)

s.15(1)(l)



Christine

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**From:** MacKinnon, Darlene EHS:EX <Darlene.MacKinnon@bcehs.ca>  
**Sent:** June 29, 2021 8:31 AM  
**To:** Grist, Christine EHS:EX <Christine.Grist@bcehs.ca>  
**Subject:** Fwd: Heat wave mortality

Christine,

Thanks for this info - Wilson share and I hope you can could include me on further emails please.

Could you also send me the reap plan?

I have it but would be easier to not have to dig it out. ....  
I want to share with our ceo

Begin forwarded message:

**From:** "Wan, Wilson EHS:EX" <[Wilson.Wan@bcehs.ca](#)>

**Date:** June 29, 2021 at 8:03:48 AM PDT

**To:** "MacKinnon, Darlene EHS:EX" <[Darlene.MacKinnon@bcehs.ca](mailto:Darlene.MacKinnon@bcehs.ca)>, "XT:byres, david HLTH:IN" <[david.byres@phsa.ca](mailto:david.byres@phsa.ca)>

**Subject: FW: Heat wave mortality**

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**From:** "Grist, Christine EHS:EX" <[Christine.Grist@bcehs.ca](mailto:Christine.Grist@bcehs.ca)>

**Date:** Tuesday, June 29, 2021 at 7:55 AM

**To:** Don Elzinga <[Don.Elzinga@bcehs.ca](mailto:Don.Elzinga@bcehs.ca)>, Wilson Wan <[Wilson.Wan@bcehs.ca](mailto:Wilson.Wan@bcehs.ca)>, Paul Vallely <[Paul.Vallely@bcehs.ca](mailto:Paul.Vallely@bcehs.ca)>, Lucas Hawkes-Frost <[Lucas.HawkesFrost@bcehs.ca](mailto:Lucas.HawkesFrost@bcehs.ca)>, Leon Baranowski <[Leon.Baranowski@bcehs.ca](mailto:Leon.Baranowski@bcehs.ca)>

**Cc:** "Hogya, Brooks EHS:EX" <[Brooks.Hogya@bcehs.ca](mailto:Brooks.Hogya@bcehs.ca)>

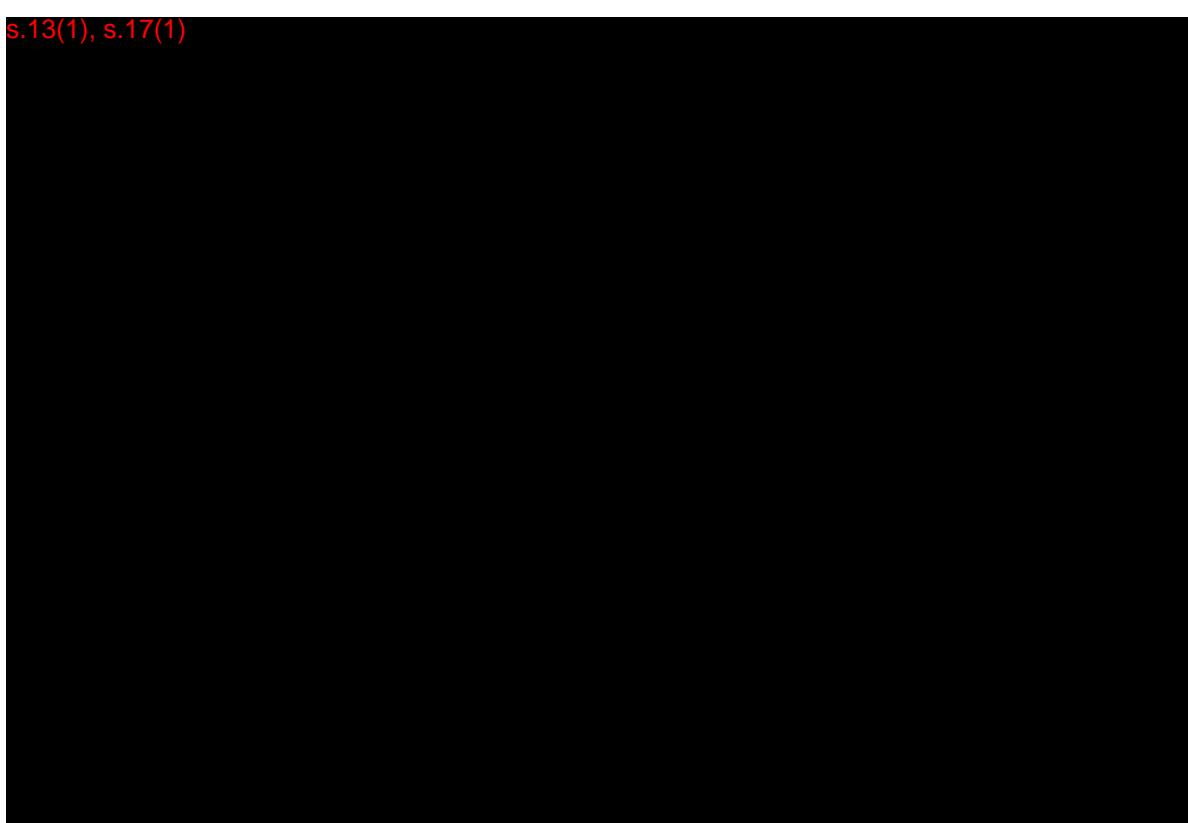
**Subject:** RE: Heat wave mortality

Hi Don,

Please see our immediate recommendations below. I have included Lucas, Leon, Wilson and Paul on my reply as they have been in contact as well this morning regarding the situation because this will be a system-wide response.

Christine

s.13(1), s.17(1)



s.13(1), s.17(1)



Christine

---

**From:** Elzinga, Don EHS:EX <[Don.Elzinga@bcehs.ca](mailto:Don.Elzinga@bcehs.ca)>  
**Sent:** June 29, 2021 1:51 AM  
**To:** Grist, Christine EHS:EX <[Christine.Grist@bcehs.ca](mailto:Christine.Grist@bcehs.ca)>; Hogya, Brooks EHS:EX <[Brooks.Hogya@bcehs.ca](mailto:Brooks.Hogya@bcehs.ca)>  
**Subject:** Fwd: Heat wave mortality

Good morning you two as soon as you are up, I need thinking caps on and assistance with what our are options/contacts for our next steps  
This email is not for sharing or redistribution please

Don

Sent from my iPhone

Begin forwarded message:

**From:** [Elzinga, Don EHS:EX](#)  
**To:** [White, Leslie EHS:EX](#); [Pritchard, Lesley EHS:EX](#); [MacKinnon, Darlene EHS:EX](#)  
**Cc:** [Valley, Paul EHS:EX](#)  
**Subject:** staff motivation  
**Date:** Tuesday, June 29, 2021 11:51:20 AM

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s.13(1)



I have asked Erin to pull valid suggestions (from the midst of the rumblings) in the recent face book posts

And I think we need to say, we have been listening, whether the answer is a yes, no, or were working on it – we have been listening

Addressing (or mentioning) these key items (from the staff):

**SUGGESTIONS from staff:**

- Allow the wearing of t-shirts -and/or - blue, moisture wicking polo that logistics get to wear.
- Allow taking water bottles into calls.
- Offer double time.
- Consider danger pay.
- Re-instate pick-your-partner, pick-your-hours.
- Make arrangements (donations?) for ice delivery to hospital ERs and/or ambulance stations
- Throw additional Logistics/Fleet resources at fixing AC in all cars where AC is not functioning properly.
- Utilize taxis for low-acuity (greens and blues) patient transfers.
- Allow working even without availability to primary station.

Re-assign 811 staff to help with BCEHS call volume; or divert more calls to 811.

- Ensure Scheduling is responsive and current with info. Some paramedics are calling and offering to work but being told there are no "double spots" available...? QUOTE; "And what about fixing scheduling which is why people aren't getting cold called? It's a decade old problem now.. phsa just doesn't work for us."
- Double the number of irreg hires. At one time it was 1 for every 4 reg spots. Now its 1 for every 8 because on call staff are less expensive.. however on call staff are less likely to work nights and weekends in large posts. This is a major contributing factor to our staffing issues. One of many.
- Hold a post-mortem after this to review/audit how everything was managed.

**QUOTES:**

**s.22(1)** : I was working last night and I go back tonight. Danger pay should be considered for these conditions. We are already dealing with the opioid crisis and covid and the dangers that come with that, now we are working in 40°+ weather. Going into houses that are hotter than 40° to help people.

Last night was insane. So many sick, dying, and dead...all likely heat related illness'. Schools are shut down today. I already suffer in 20° weather. This is insane.

**s.22(1)** : Literally witnessed people today in our uniform dry heaving, sweating, close to tears. Something has to change and soon because people that are still coming to work are at their wits end.

Today, was horrendously bad. Conditions were near unbearable. The system is collapsing and us on the street and in the tower will be left to pick up the pieces and get yelled at by patients and their families.

Management, I implore to you. Help us.

**s.22(1)** I just booked off the last half of the shift. Mentally couldn't take it anymore. Worked yet another arrest for nearly an hour. Of course, no ALS available. Sweat pooling in my boots; uniform and pants soaked. Headache and joints ache. Yet another family who lost someone too soon; starts to hit close to home. I've not heard "code 5 for code 4" so many times in this block. So many ECC and management updates during Covid, but now, just silence. Very telling.

**s.22(1)** : Maybe you can relay some of these comments back to BCEHS Operations? It sounds like many people would be willing to work if they were paid double time and could pick their partner/car/hours. And perhaps could wear a T-shirt/polo shirt in peak temperatures. It doesn't sound like many people are willing to give up their precious time off with their families during summer months, when we've all been struggling through a double pandemic for over a year, to come to work in 40+ degree heat with no incentives and no real support.

Sorry for adding more on the plate

Don

**Don Elzinga**

Director,  
Patient Transfer Services  
PTN and PTCC  
(Patient Transfer Network and Patient Transport Coordination Centre)  
[306-2955 Virtual way, Vancouver BC](http://306-2955 Virtual way, Vancouver BC)  
Cell: **s.15(1)(l)**  
Office: [604 660 2182](tel:604-660-2182)

Administrative Assistant:

Sabrina Byrne  
[Sabrina.Byrne@bcehs.ca](mailto:Sabrina.Byrne@bcehs.ca)  
Office: 604-326-3678

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PHSA FOI File #: F21-1171

Notes: Pages 7-8 severed pursuant to section 22(1) of the Act.

F21-1172

**From:** [Dr. Kamran Golmohammadi](#)  
**To:** [Gustafson, Reka \[BCCDC\]](#); [Larder, Andrew \[BCCDC\]](#); [Henderson, Sarah \[BCCDC\]](#)  
**Cc:** [McDonald, Shannon \[EXTI\]](#)  
**Subject:** RE: Request for a new agenda item for Public Health Leadership Call on Friday June 25, 2021  
**Date:** Thursday, June 24, 2021 10:31:26 AM

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Hi Reka,

Thank you very much for your email.

That is a great idea. I know that Sarah has a wealth of experience in Heat Alert and Response Systems (HARS) and knows all the provincial partners and stakeholders. I am the on-call Medical Officer for FNHA and would appreciate participation in coordination calls.

PS. Reka, Thank you very much for letting me know about the meeting. I will make adjustment on my calendar. I realize the invitation from you for the Public Health Leadership Call meeting series on Fridays is not cancelled yet.

Sincerely

Kamran

Kamran Golmohammadi MD, MSc, FRCPC

Medical Officer, First Nations Health Authority

Clinical Associate Professor, UBC Faculty of Medicine

Fax: 604-913-2081

Email: [Kamran.Golmohammadi@fnha.ca](mailto:Kamran.Golmohammadi@fnha.ca)

I respectfully aknowledge that I live and work within the ancestral, traditional, and unceded territory of the Syilx Nations.

---

**From:** Gustafson, Reka [BCCDC]

**Sent:** Thursday, June 24, 2021 10:22 AM

**To:** Dr. Kamran Golmohammadi ; Larder, Andrew [BCCDC] ; Henderson, Sarah [BCCDC]

**Cc:** Dr. Shannon McDonald

**Subject:** RE: Request for a new agenda item for Public Health Leadership Call on Friday June 25, 2021

Hi Kamran,

we don't have a public health leadership call until next Wednesday. There is an existing system for response to extreme heat events, so I am pulling Sara Henderson in, as I would expect they are preparing. Please let me know if that meets the need.

Many thanks,

Reka

---

**From:** Dr. Kamran Golmohammadi <[Kamran.Golmohammadi@fnha.ca](mailto:Kamran.Golmohammadi@fnha.ca)>

**Sent:** Thursday, June 24, 2021 10:12 AM

**To:** Gustafson, Reka [BCCDC] <[reka.gustafson@phsa.ca](mailto:reka.gustafson@phsa.ca)>; Larder, Andrew [BCCDC]

<[andrew.larder@bccdc.ca](mailto:andrew.larder@bccdc.ca)>

**Cc:** McDonald, Shannon [EXTI] <[shannon.mcdonald@fnha.ca](mailto:shannon.mcdonald@fnha.ca)>

**Subject:** Request for a new agenda item for Public Health Leadership Call on Friday June 25, 2021

**EXTERNAL SENDER.** If you suspect this message is malicious, please forward to [spam@phsa.ca](#) and **do not** open attachments or click on links.

---

Hi Reka and Andrew,

This morning, Shannon and I had a brief conversation about the expected extreme heat events in BC

that will be impacting all Health Authorities in the next few days (June 26-30, 2021). The expected situation is rare in BC where all regions are likely to be impacted simultaneously. We felt that a coordinated approach led by HEM BC with participation of all Health Authorities and BC CDC is needed. The main goal is to achieve a consistent public messaging approach across all Health Authorities. We wanted to propose this idea and ask CMHOs to link in their responsible MHOs for a timely coordinated response.

Sincerely

Kamran

Kamran Golmohammadi MD, MSc, FRCPC

Medical Officer, First Nations Health Authority

Clinical Associate Professor, UBC Faculty of Medicine

Fax: 604-913-2081

Email: [Kamran.Golmohammadi@fnha.ca](mailto:Kamran.Golmohammadi@fnha.ca)

I respectfully acknowledge that I live and work within the ancestral, traditional, and unceded territory of the Syilx Nations.

**From:** Dr. Kamran Golmohammadi  
**To:** Henderson, Sarah [BCCDC]; Gustafson, Reka [BCCDC]; Larder, Andrew [BCCDC]  
**Cc:** McDonald, Shannon [EXT1]; Kosatsky, Tom [BCCDC]; Blessin, Scott [PHSA]  
**Subject:** RE: Request for a new agenda item for Public Health Leadership Call on Friday June 25, 2021  
**Date:** Thursday, June 24, 2021 10:35:28 AM

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Hi Sarah,

Thank you very much for your prompt response.

This is very helpful. I will share the information with our team.

Sincerely

Kamran

Kamran Golmohammadi MD, MSc, FRCPC

Medical Officer, First Nations Health Authority

Clinical Associate Professor, UBC Faculty of Medicine

Fax: 604-913-2081

Email: Kamran.Golmohammadi@fnha.ca

I respectfully aknowledge that I live and work within the ancestral, traditional, and unceded territory of the Syilx Nations.

---

**From:** Henderson, Sarah [BCCDC]

**Sent:** Thursday, June 24, 2021 10:32 AM

**To:** Gustafson, Reka [BCCDC] ; Dr. Kamran Golmohammadi ; Larder, Andrew [BCCDC]

**Cc:** Dr. Shannon McDonald ; Kosatsky, Tom [BCCDC] ; Blessin, Scott [PHSA]

**Subject:** RE: Request for a new agenda item for Public Health Leadership Call on Friday June 25, 2021

Hi all –

Health Canada has issued heat warnings across most of BC based on thresholds we helped them to establish a few years ago.

The Lower Mainland heat health emergency response system has been primed and activated, which runs in addition to the Health Canada system. The thresholds for the LM system are somewhat higher, tied to evidence from the 2009 extreme heat event in the region (this is possibly the closest we have come since).

Unlike with wildfire smoke, we do not have a provincial extreme hot weather committee to ensure a coordinated response across the province. Certainly something to consider for future seasons.

If there is need for a provincial touch base today or tomorrow, Tom (cc'd) or I can likely facilitate later today or tomorrow. We did update this BCCDC resource page yesterday:

<http://www.bccdc.ca/about/news-stories/stories/2020/warm-weather-safety-in-a-time-of-covid-19>

s.13(1)

There is also this resource from last year, which is still largely relevant. I can probably get an updated version posted for tomorrow:

<http://www.bccdc.ca/Health-Info-Site/Documents/Guidance-for-Cooling-Centres-COVID-19.pdf>

Cheers,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

**#DifferentTogether**

**#InPlainSight**

I often work outside of normal business hours because it suits me. There is no expectation that you will respond outside of your working hours.

---

**From:** Gustafson, Reka [BCCDC]

**Sent:** Thursday, June 24, 2021 10:22 AM

**To:** 'Dr. Kamran Golmohammadi'; Larder, Andrew [BCCDC]; Henderson, Sarah [BCCDC]

**Cc:** McDonald, Shannon [EXT]

**Subject:** RE: Request for a new agenda item for Public Health Leadership Call on Friday June 25, 2021

Hi Kamran,

we don't have a public health leadership call until next Wednesday. There is an existing system for response to extreme heat events, so I am pulling Sara Henderson in, as I would expect they are preparing. Please let me know if that meets the need.

Many thanks,

Reka

---

**From:** Dr. Kamran Golmohammadi <[Kamran.Golmohammadi@fnha.ca](mailto:Kamran.Golmohammadi@fnha.ca)>

**Sent:** Thursday, June 24, 2021 10:12 AM

**To:** Gustafson, Reka [BCCDC] <[reka.gustafson@phsa.ca](mailto:reka.gustafson@phsa.ca)>; Larder, Andrew [BCCDC] <[andrew.larder@bccdc.ca](mailto:andrew.larder@bccdc.ca)>

**Cc:** McDonald, Shannon [EXT] <[shannon.mcdonald@fnha.ca](mailto:shannon.mcdonald@fnha.ca)>

**Subject:** Request for a new agenda item for Public Health Leadership Call on Friday June 25, 2021

**EXTERNAL SENDER.** If you suspect this message is malicious, please forward to [spam@phsa.ca](mailto:spam@phsa.ca) and **do not** open attachments or click on links.

---

Hi Reka and Andrew,

This morning, Shannon and I had a brief conversation about the expected extreme heat events in BC that will be impacting all Health Authorities in the next few days (June 26-30, 2021).

The expected situation is rare in BC where all regions are likely to be impacted simultaneously. We felt that a coordinated approach led by HEM BC with participation of all Health Authorities and BC CDC is needed. The main goal is to achieve a consistent public messaging approach across all Health Authorities. We wanted to propose this idea and ask CMHOs to link in their responsible MHOs for a timely coordinated response.

Sincerely

Kamran

Kamran Golmohammadi MD, MSc, FRCPC

Medical Officer, First Nations Health Authority

Clinical Associate Professor, UBC Faculty of Medicine

Fax: 604-913-2081

Email: [Kamran.Golmohammadi@fnha.ca](mailto:Kamran.Golmohammadi@fnha.ca)

I respectfully acknowledge that I live and work within the ancestral, traditional, and unceded territory of the Syilx Nations.

**From:** [Lysyshyn, Mark \[VCH\]](#)  
**To:** [Henderson, Sarah \[BCCDC\]](#); ["Dr. Kamran Golmohammadi"](#); [Fumerton, Raina \[NHA\]](#); [Newhouse, Emily \[FH\]](#); [Schwandt, Michael \[VCH\]](#); [Mema, Dr. Silvina \[IHA\]](#); [Stanwick, Richard \(Dr\) \[VIHA\]](#)  
**Cc:** [Kosatsky, Tom \[BCCDC\]](#)  
**Subject:** RE: Extreme heat expected throughout BC this weekend  
**Date:** Thursday, June 24, 2021 12:04:48 PM

---

Sarah

s.13(1)



Mark

**Mark Lysyshyn MD MPH FRCPC**

Deputy Chief Medical Health Officer

**Vancouver Coastal Health**

mobile 604 506 3769

office 604 675 3878

e-mail [mark.lysyshyn@vch.ca](mailto:mark.lysyshyn@vch.ca)

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**From:** Henderson, Sarah [BCCDC]

**Sent:** Thursday, June 24, 2021 10:59 AM

**To:** 'Dr. Kamran Golmohammadi' ; Fumerton, Raina [NHA] ; Newhouse, Emily [FH] ; Schwandt, Michael [VCH] ; Mema, Dr. Silvina [IHA] ; Stanwick, Richard (Dr) [VIHA] ; Lysyshyn, Mark [VCH]

**Cc:** Kosatsky, Tom [BCCDC]

**Subject:** Extreme heat expected throughout BC this weekend

Dear all –

I'm forwarding a conversation with some BCCDC resources your way, in case they are useful.  
If you think there is need for a provincial touch-base today or tomorrow on the topic of extreme hot weather and health protection, please let us know.

Cheers,

Sarah

---

Sarah B. Henderson, PhD  
Scientific Director | Environmental Health Services | BCCDC

Office: 604.707.2449

Cell: s.15(1)(l)

#DifferentTogether

#InPlainSight

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---

**From:** Henderson, Sarah [BCCDC]

**Sent:** Thursday, June 24, 2021 10:32 AM

**To:** Gustafson, Reka [BCCDC]; 'Dr. Kamran Golmohammadi'; Larder, Andrew [BCCDC]

**Cc:** McDonald, Shannon [EXT]; Kosatsky, Tom [BCCDC]; Blessin, Scott [PHSA]

**Subject:** RE: Request for a new agenda item for Public Health Leadership Call on Friday June 25, 2021

Hi all –

Health Canada has issued heat warnings across most of BC based on thresholds we helped them to establish a few years ago.

The Lower Mainland heat health emergency response system has been primed and activated, which runs in addition to the Health Canada system. The thresholds for the LM system are somewhat higher, tied to evidence from the 2009 extreme heat event in the region (this is possibly the closest we have come since).

Unlike with wildfire smoke, we do not have a provincial extreme hot weather committee to ensure a coordinated response across the province. Certainly something to consider for future seasons.

If there is need for a provincial touch base today or tomorrow, Tom (cc'd) or I can likely facilitate later today or tomorrow. We did update this BCCDC resource page yesterday:

<http://www.bccdc.ca/about/news-stories/stories/2020/warm-weather-safety-in-a-time-of-covid-19>

s.13(1)

There is also this resource from last year, which is still largely relevant. I can probably get an updated version posted for tomorrow:

<http://www.bccdc.ca/Health-Info-Site/Documents/Guidance-for-Cooling-Centres-COVID-19.pdf>

Cheers,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: s.15(1)(l)

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**Sent:** Thursday, June 24, 2021 10:22 AM  
**To:** 'Dr. Kamran Golmohammadi'; Larder, Andrew [BCCDC]; Henderson, Sarah [BCCDC]  
**Cc:** McDonald, Shannon [EXT]  
**Subject:** RE: Request for a new agenda item for Public Health Leadership Call on Friday June 25, 2021  
Hi Kamran,

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Many thanks,

Reka

---

**From:** Dr. Kamran Golmohammadi <[Kamran.Golmohammadi@fnha.ca](mailto:Kamran.Golmohammadi@fnha.ca)>  
**Sent:** Thursday, June 24, 2021 10:12 AM  
**To:** Gustafson, Reka [BCCDC] <[reka.gustafson@phsa.ca](mailto:reka.gustafson@phsa.ca)>; Larder, Andrew [BCCDC] <[andrew.larder@bccdc.ca](mailto:andrew.larder@bccdc.ca)>  
**Cc:** McDonald, Shannon [EXT] <[shannon.mcdonald@fnha.ca](mailto:shannon.mcdonald@fnha.ca)>  
**Subject:** Request for a new agenda item for Public Health Leadership Call on Friday June 25, 2021  
**EXTERNAL SENDER.** If you suspect this message is malicious, please forward to [spam@phsa.ca](mailto:spam@phsa.ca) and **do not** open attachments or click on links.

---

Hi Reka and Andrew,

This morning, Shannon and I had a brief conversation about the expected extreme heat events in BC that will be impacting all Health Authorities in the next few days (June 26-30, 2021).

The expected situation is rare in BC where all regions are likely to be impacted simultaneously. We felt that a coordinated approach led by HEM BC with participation of all Health Authorities and BC CDC is needed. The main goal is to achieve a consistent public messaging approach across all Health Authorities. We wanted to propose this idea and ask CMHOs to link in their responsible MHOs for a timely coordinated response.

Sincerely

Kamran

Kamran Golmohammadi MD, MSc, FRCPC  
Medical Officer, First Nations Health Authority  
Clinical Associate Professor, UBC Faculty of Medicine  
Fax: 604-913-2081  
Email: [Kamran.Golmohammadi@fnha.ca](mailto:Kamran.Golmohammadi@fnha.ca)

I respectfully acknowledge that I live and work within the ancestral, traditional, and unceded territory of the Syilx Nations.

**From:** [McLean, Kathleen \[BCCDC\]](#)  
**To:** [Health Heat Response LM](#)  
**Subject:** Lower Mainland heat surveillance update  
**Date:** Thursday, June 24, 2021 2:06:11 PM

---

This email is being sent to inform you that **HIGH** heat health risk is predicted for the Lower Mainland tomorrow. The risk is predicted to be **HIGH** in the Vancouver Coastal region and **HIGH** in the Abbotsford region.

For more information on heat health risk, please visit the BC Heat Impacts Prediction System (BCHIPS) at <https://internalmaps.bccdc.ca/bchips/> (for health authority users) or at <http://maps.bccdc.ca/bchips/>.

The criteria for calling an extreme heat alert **HAVE NOT** been met. The average of today's 14:00 measured temperature and tomorrow's forecast high is 24.4°C at Vancouver airport, and 28.9°C at Abbotsford airport.

**From:** [Lysyshyn, Mark \[VCH\]](#)  
**To:** [Henderson, Sarah \[BCCDC\]](#); [Kosatsky, Tom \[BCCDC\]](#); [Mema, Dr. Silvina \[IHA\]](#); [Fumerton, Raina \[NHA\]](#); [Tait, Paula \[NHA\]](#); [Benusic, Michael \[VIHA\]](#); ["Dr. Kamran Golmohammadi"](#); [Newhouse, Emily \[FH\]](#); [McVea, David \[BCCDC\]](#); [Tyler, Ingrid \[FH\]](#); [Blessin, Scott \[PHSA\]](#)  
**Subject:** RE: Provincial touch-base on extreme hot weather  
**Date:** Friday, June 25, 2021 10:24:43 AM  
**Attachments:** [Guidance for Cooling Centres During BC Restart June2021 - ML.docx](#)

---

Looks good Sarah. See attached for a few comments and edits.

**Mark Lysyshyn MD MPH FRCPC**

Deputy Chief Medical Health Officer

**Vancouver Coastal Health**

mobile 604 506 3769

office 604 675 3878

e-mail [mark.lysyshyn@vch.ca](mailto:mark.lysyshyn@vch.ca)

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The content of this e-mail is confidential and may be privileged. If you receive this e-mail in error, please contact the sender and delete it immediately.

**From:** Henderson, Sarah [BCCDC]

**Sent:** Thursday, June 24, 2021 9:22 PM

**To:** Kosatsky, Tom [BCCDC] ; Lysyshyn, Mark [VCH] ; Mema, Dr. Silvina [IHA] ; Fumerton, Raina [NHA] ; Tait, Paula [NHA] ; Benusic, Michael [VIHA] ; 'Dr. Kamran Golmohammadi' ; Newhouse, Emily [FH] ; McVea, David [BCCDC] ; Tyler, Ingrid [FH] ; Blessin, Scott [PHSA]

**Subject:** Re: Provincial touch-base on extreme hot weather

Hi all –

Please find attached an updated version of the guidance document for cooling centres with changes tracked. This version is aligned with Steps 2 and 3 of BC's Restart. For discussion tomorrow.

Cheers,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: [s.15\(1\)\(l\)](#)

[\*\*#DifferentTogether\*\*](#)

[\*\*#InPlainSight\*\*](#)

---

**From:** [Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)

**When:** 11:00 AM - 11:30 AM June 25, 2021

**Subject:** Provincial touch-base on extreme hot weather

**Location:** Zoom details within

Hi all –

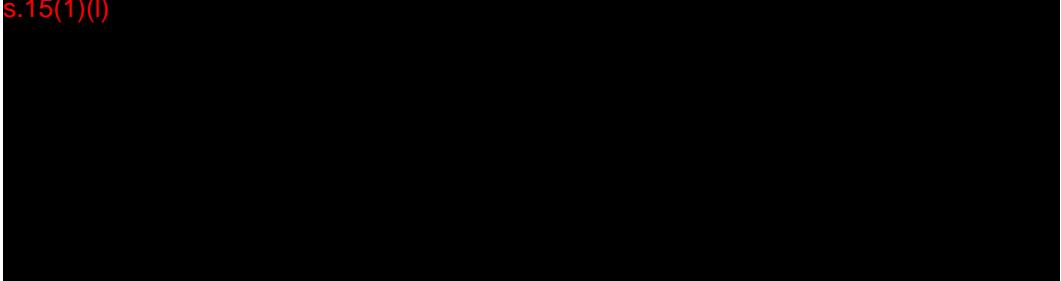
I can see some schedules, and this looks like the best time based on what's available.

Please forward as needed.

Cheers,

Sarah

s.15(1)(l)



s.13(1)

s.13(1)

s.13(1)

s.13(1)

s.13(1)

s.13(1)

**From:** [Lysyshyn, Mark \[VCH\]](#)  
**To:** [Henderson, Sarah \[BCCDC\]](#)  
**Subject:** RE: Provincial touch-base on extreme hot weather  
**Date:** Friday, June 25, 2021 10:47:47 AM

---

That works for me. Thanks Sarah.

**Mark Lysyshyn MD MPH FRCPC**

Deputy Chief Medical Health Officer

**Vancouver Coastal Health**

mobile 604 506 3769

office 604 675 3878

e-mail [mark.lysyshyn@vch.ca](mailto:mark.lysyshyn@vch.ca)

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---

**From:** Henderson, Sarah [BCCDC]

**Sent:** Friday, June 25, 2021 10:45 AM

**To:** Lysyshyn, Mark [VCH]

**Subject:** Re: Provincial touch-base on extreme hot weather

Okay, thanks for the context. [s.13\(1\)](#)

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: [s.15\(1\)\(l\)](#)

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**#InPlainSight**

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---

**From:** "Lysyshyn, Mark [VCH]" <[Mark.Lysyshyn@vch.ca](mailto:Mark.Lysyshyn@vch.ca)>

**Date:** Friday, June 25, 2021 at 10:37 AM

**To:** "Henderson, Sarah [BCCDC]" <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>

**Subject:** RE: Provincial touch-base on extreme hot weather

Yes, Reka has reviewed it with the PHO. [s.13\(1\)](#)

---

**Mark Lysyshyn MD MPH FRCPC**

Deputy Chief Medical Health Officer

**Vancouver Coastal Health**

mobile 604 506 3769

office 604 675 3878

e-mail [mark.lysyshyn@vch.ca](mailto:mark.lysyshyn@vch.ca)

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---

**From:** Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>

**Sent:** Friday, June 25, 2021 10:29 AM

**To:** Lysyshyn, Mark [VCH] <[Mark.Lysyshyn@vch.ca](mailto:Mark.Lysyshyn@vch.ca)>  
**Subject:** Re: Provincial touch-base on extreme hot weather  
Thanks, Mark – much appreciated. I like the edits.  
I'm not fully up to date on status of agreed messaging. **s.13(1)**

Cheers,  
Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC  
Associate Professor (Partner) | School of Population and Public Health | UBC  
Office: 604.707.2449

Cell: **s.15(1)(l)**

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**From:** "Lysyshyn, Mark [VCH]" <[Mark.Lysyshyn@vch.ca](mailto:Mark.Lysyshyn@vch.ca)>

**Date:** Friday, June 25, 2021 at 10:24 AM

**To:** "Henderson, Sarah [BCCDC]" <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>, "Kosatsky, Tom [BCCDC]" <[Tom.Kosatsky@bccdc.ca](mailto:Tom.Kosatsky@bccdc.ca)>, "Mema, Dr. Silvina [IHA]" <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>, "Fumerton, Raina [NHA]" <[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>, "Tait, Paula [NHA]" <[Paula.Tait@northernhealth.ca](mailto:Paula.Tait@northernhealth.ca)>, "Benusic, Michael [VIHA]" <[Michael.Benusic@viha.ca](mailto:Michael.Benusic@viha.ca)>, "'Dr. Kamran Golmohammadi'" <[Kamran.Golmohammadi@fnha.ca](mailto:Kamran.Golmohammadi@fnha.ca)>, "Newhouse, Emily [FH]" <[Emily.Newhouse@fraserhealth.ca](mailto:Emily.Newhouse@fraserhealth.ca)>, David McVea <[David.McVea@bccdc.ca](mailto:David.McVea@bccdc.ca)>, "Tyler, Ingrid [FH]" <[Ingrid.tyler@fraserhealth.ca](mailto:Ingrid.tyler@fraserhealth.ca)>, "Blessin, Scott [PHSA]" <[Scott.Blessin@phsa.ca](mailto:Scott.Blessin@phsa.ca)>

**Subject:** RE: Provincial touch-base on extreme hot weather

Looks good Sarah. See attached for a few comments and edits.

**Mark Lysyshyn MD MPH FRCPC**

Deputy Chief Medical Health Officer

**Vancouver Coastal Health**

mobile 604 506 3769

office 604 675 3878

e-mail [mark.lysyshyn@vch.ca](mailto:mark.lysyshyn@vch.ca)

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**From:** Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>

**Sent:** Thursday, June 24, 2021 9:22 PM

**To:** Kosatsky, Tom [BCCDC] <[Tom.Kosatsky@bccdc.ca](mailto:Tom.Kosatsky@bccdc.ca)>; Lysyshyn, Mark [VCH] <[Mark.Lysyshyn@vch.ca](mailto:Mark.Lysyshyn@vch.ca)>; Mema, Dr. Silvina [IHA] <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>; Fumerton, Raina [NHA] <[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>; Tait, Paula [NHA] <[Paula.Tait@northernhealth.ca](mailto:Paula.Tait@northernhealth.ca)>; Benusic, Michael [VIHA] <[Michael.Benusic@viha.ca](mailto:Michael.Benusic@viha.ca)>; 'Dr. Kamran Golmohammadi' <[Kamran.Golmohammadi@fnha.ca](mailto:Kamran.Golmohammadi@fnha.ca)>; Newhouse, Emily [FH]

<[Emily.Newhouse@fraserhealth.ca](mailto:Emily.Newhouse@fraserhealth.ca)>; McVea, David [BCCDC] <[David.McVea@bccdc.ca](mailto:David.McVea@bccdc.ca)>; Tyler, Ingrid [FH] <[ingrid.tyler@fraserhealth.ca](mailto:ingrid.tyler@fraserhealth.ca)>; Blessin, Scott [PHSA] <[Scott.Blessin@phsa.ca](mailto:Scott.Blessin@phsa.ca)>

**Subject:** Re: Provincial touch-base on extreme hot weather

Hi all –

Please find attached an updated version of the guidance document for cooling centres with changes tracked. This version is aligned with Steps 2 and 3 of BC's Restart. For discussion tomorrow.

Cheers,

Sarah

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Scientific Director | Environmental Health Services | BCCDC

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Office: 604.707.2449

Cell: [s.15\(1\)\(l\)](#)

[\*\*#DifferentTogether\*\*](#)

[\*\*#InPlainSight\*\*](#)

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**When:** 11:00 AM - 11:30 AM June 25, 2021

**Subject:** Provincial touch-base on extreme hot weather

**Location:** Zoom details within

Hi all –

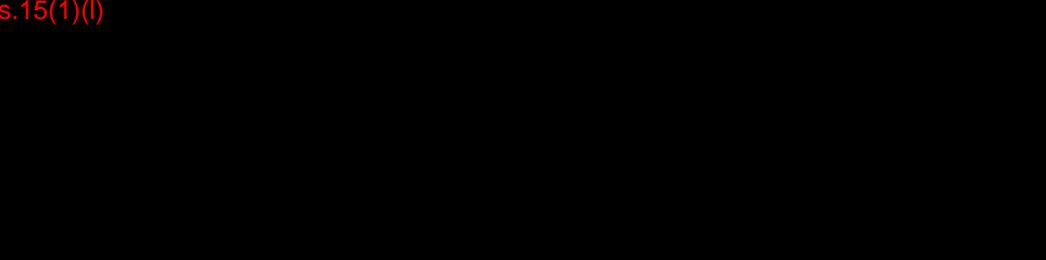
I can see some schedules, and this looks like the best time based on what's available.

Please forward as needed.

Cheers,

Sarah

[s.15\(1\)\(l\)](#)



**From:** Hyland, Ita [PHSA]  
**To:** MacNeil, Sharon [PHSA]; Elzinga, Don EHS:EX; Lilley, Neil EHS:EX; MacKinnon, Darlene EHS:EX; Good, Susan [PHSA]; Wilson, Donna [PHSA]; Tuttle, Spencer [PHSA]; Newlove, Theresa [CWBC]; Pelletier, Lynn [PHSA]; Anderson, Bradley [PHSA]; Bell, Sarah [CWBC]; Boland, Blair [PHSA]; Cooper, Todd [PHSA]; Davies, Cheryl [CWBC]; Dawkins, Laurie [PHSA]; Day, Taralyn [VCH]; Djurdjev, Ognjenka [PHSA]; Donovan, Tara [PHSA]; Esmail, Zahida [PHSA]; Findlay, Heather [BCCancer]; Flatt, Alexandra [PHSA]; Goldfarb, David [CWBC]; Gustafson, Reka [BCCDC]; Hamilton, Emily [PHSA]; Hunt, Grant [PHSA]; Ivany, Craig; Karmali, Fiona [PHSA]; Koch, Tim [VCH]; Lavery, John [PHSA]; Lun, Eric [PHSA]; Malovec, Shannon [PHSA]; Martin, Jennifer [PHSA]; Murray, Caeli [PHSA]; Mussavi Rizi, Seyed Ali [PHSA]; Park, Carol [PH]; Perlman, Shelley [PHSA]; Sauve, Laura [CWBC]; Scarr, Jennifer [CWBC]; Steegstra, Kathy [PHSA]; Whalen, Patrick [PHSA]; Whitson, Karen [PHSA]; Winnig, Ken [PHSA]; Jackson, Brenda [PBCO] [PBCL]; Al-Rawahi, Ghada [CWBC]; Wannamaker, Susan [PHSA]; Desrosiers, Nancy [PHSA]; Galanis, Eleni [BCCDC]; Boland, Blair EHS:EX; Sandhu, Jat [BCCDC]; Tsobanis, Christina [PHSA]; Esmail, Noorsallah [PHSA]; Hay, Christy [CWBC]; Abed, Vladlena [PHSA]; Tuttle, Spencer [VCH]; Gill, Prabhjot [PHSA]  
**Subject:** WEATHER ALERT: Heat Warning  
**Date:** Friday, June 25, 2021 11:48:12 AM

---

*Sent on behalf of John Lavery, Executive Director, Health Emergency Management British Columbia (HEMBC)*

## **HEMBC Alert: Environment Canada Weather Warning**

### **Heat Warning in effect for many areas of British Columbia**

A dangerous long duration heat wave will affect B.C. beginning on Saturday and lasting until Wednesday.

**Fraser Valley:** Daytime highs ranging from 32 to 39 degrees celsius combined with overnight lows of 18 to 21 degrees celsius. Humidex values during this period will reach the high 30's to possibly the low 40's.

**Metro Vancouver:** Daytime highs ranging from 29 to 38 degrees celsius combined with overnight lows of 18 to 21 degrees celsius. Humidex values during this period will reach the high 30's to possibly the low 40's. A dangerous long duration heat wave will affect B.C. beginning today and lasting until at least Wednesday.

**Find further details for your area here:** [https://weather.gc.ca/warnings/index\\_e.html?prov=bc](https://weather.gc.ca/warnings/index_e.html?prov=bc)

**Timespan:** Today to at least Wednesday.

**Remarks:** This record-breaking heat event will increase the potential for heat-related illnesses and increase the risk of wildfires due to drought conditions. Environment Canada and local Medical Health Officers expect an increase in health and safety risks from heat and are advising the public to take precautions.

These high temperatures over the coming days will likely result in an increase in heat-related illness or death and require closer monitoring of clients, residents and patients. Spending time in a cool space and drinking plenty of liquids is the best way to prevent heat-related illness for both clients and staff.

### **Extreme Heat Key Points to Remember**

1. Stay up-to date on weather forecasts and heat alerts
2. If appropriate, develop a heat response plan specific to your department
3. Keep in mind that certain members of the community are at higher risk for heat-related illness and death, including:
  - Older adults
  - Infants and young children

- People with chronic illnesses (cardiovascular disease, respiratory disease, renal disease, psychiatric illness)
  - People who live alone
  - People who are confined to bed or dependent on assistance for daily living
  - People taking certain medications, (antihypertensives, antidepressants, antipsychotics, anti-Parkinson's agents)
  - People experiencing homelessness or living in precarious housing
  - People who may be more prone to suicidal ideation
  - People who work outside or are physically active
4. Watch for symptoms of heat illness in clients, residents and patients
  5. Make sure the care environment is kept cool or that clients, residents and patients have access to cooler spaces
  6. Provide plenty of fluids to clients, residents and patients

**Consider sharing the following resources:**

- **[Staying Healthy in the Heat fact sheets](#)**
- [Extreme Heat Events Guidelines: Technical Guide for Health Care Workers](#)
- [Acute Care During Extreme Heat \(Symptoms of Heat Illness\)](#)

**From:** Lopez, Vida [CWBC] on behalf of Scarr, Jennifer [CWBC]  
**To:** Chesney, Ellen [PHSA]; Donovan, Tara [PHSA]; Gustafson, Reka [BCCDC]; Levin, Adeera [PH]; Lun, Eric [PHSA]; Pederson, Ann [CWBC]; Reedijk, Jill [BCCDC]; Schnee, Nicholas; Steegstra, Kathy [PHSA]; Arsenault, Sacha [PHSA]; Wiebe, Micheline [PHSA]; Grieves, Lorraine [PHSA]  
**Cc:** Ho, Jennifer [PHSA]; Henderson, Marianne [BCCDC]; Sewell, Pam [PH]; Dipasupil, Valentine [BCT]; McCauley, Darlene [PHSA]; Skwarok, Melinda [PHSA]; Mulani, Saloni [PHSA]  
**Subject:** FW: WEATHER ALERT: Heat Warning  
**Date:** Friday, June 25, 2021 12:02:09 PM

---

From today's Pandemic Response Coordination Team meeting:

**From:** Hyland, Ita [PHSA] <[Ita.Hyland@phsa.ca](mailto:Ita.Hyland@phsa.ca)>

**Sent:** Friday, June 25, 2021 11:48 AM

**Subject:** WEATHER ALERT: Heat Warning

*Sent on behalf of John Lavery, Executive Director, Health Emergency Management British Columbia (HEMBC)*

## **HEMBC Alert: Environment Canada Weather Warning**

### **Heat Warning in effect for many areas of British Columbia**

A dangerous long duration heat wave will affect B.C. beginning on Saturday and lasting until Wednesday.

**Fraser Valley:** Daytime highs ranging from 32 to 39 degrees celsius combined with overnight lows of 18 to 21 degrees celsius. Humidex values during this period will reach the high 30's to possibly the low 40's.

**Metro Vancouver:** Daytime highs ranging from 29 to 38 degrees celsius combined with overnight lows of 18 to 21 degrees celsius. Humidex values during this period will reach the high 30's to possibly the low 40's. A dangerous long duration heat wave will affect B.C. beginning today and lasting until at least Wednesday.

**Find further details for your area here:** [https://weather.gc.ca/warnings/index\\_e.html?prov=bc](https://weather.gc.ca/warnings/index_e.html?prov=bc)

**Timespan:** Today to at least Wednesday.

**Remarks:** This record-breaking heat event will increase the potential for heat-related illnesses and increase the risk of wildfires due to drought conditions. Environment Canada and local Medical Health Officers expect an increase in health and safety risks from heat and are advising the public to take precautions.

These high temperatures over the coming days will likely result in an increase in heat-related illness or death and require closer monitoring of clients, residents and patients. Spending time in a cool space and drinking plenty of liquids is the best way to prevent heat-related illness for both clients and staff.

### **Extreme Heat Key Points to Remember**

1. Stay up-to date on weather forecasts and heat alerts
2. If appropriate, develop a heat response plan specific to your department
3. Keep in mind that certain members of the community are at higher risk for heat-related illness and death, including:
  - Older adults
  - Infants and young children
  - People with chronic illnesses (cardiovascular disease, respiratory disease, renal

- disease, psychiatric illness)
- People who live alone
  - People who are confined to bed or dependent on assistance for daily living
  - People taking certain medications, (antihypertensives, antidepressants, antipsychotics, anti-Parkinson's agents)
  - People experiencing homelessness or living in precarious housing
  - People who may be more prone to suicidal ideation
  - People who work outside or are physically active
4. Watch for symptoms of heat illness in clients, residents and patients
  5. Make sure the care environment is kept cool or that clients, residents and patients have access to cooler spaces
  6. Provide plenty of fluids to clients, residents and patients

**Consider sharing the following resources:**

- [\*\*Staying Healthy in the Heat fact sheets\*\*](#)
- [\*\*Extreme Heat Events Guidelines: Technical Guide for Health Care Workers\*\*](#)
- [\*\*Acute Care During Extreme Heat \(Symptoms of Heat Illness\)\*\*](#)

**From:** [McLean, Kathleen \[BCCDC\]](#)  
**To:** [Lysyshyn, Mark \[VCH\]](#); [Henderson, Sarah \[BCCDC\]](#)  
**Cc:** [Choi, Alexandra \[VA\]](#); [Blessin, Scott \[PHSA\]](#)  
**Subject:** RE: Lower Mainland heat surveillance update  
**Date:** Friday, June 25, 2021 12:06:57 PM

---

I believe she was already added to the list by Scott Blessin.  
Alex – if you do not receive the heat surveillance update email today just after 2pm, please let me know.  
Cheers,  
Kathleen

---

**Kathleen McLean**

Environmental Health Scientist

Cell: **s.15(1)(l)**

This e-mail message, including any attachments, is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged and/or confidential. If you are not the intended recipient or the employee or agent responsible for delivering the communication to the intended recipient, please notify us immediately by replying to this message and then delete this message from your system. You are hereby notified that any use, dissemination, distribution and/or reproduction of this message and/or any attachments by unintended recipients is unauthorized and may be unlawful.

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**From:** Lysyshyn, Mark [VCH]  
**Sent:** Friday, June 25, 2021 11:59 AM  
**To:** McLean, Kathleen [BCCDC]; Henderson, Sarah [BCCDC]  
**Cc:** Choi, Alexandra [VA]  
**Subject:** RE: Lower Mainland heat surveillance update

Can we make sure that Alex Choi is included in these updates? She is the VCH MHO on call this weekend.

**Mark Lysyshyn MD MPH FRCPC**

Deputy Chief Medical Health Officer

**Vancouver Coastal Health**

mobile 604 506 3769

office 604 675 3878

e-mail [mark.lysyshyn@vch.ca](mailto:mark.lysyshyn@vch.ca)

I acknowledge that my place of work lies on the unceded traditional homelands of the Musqueam, Squamish and Tsleil-Waututh Nations.

The content of this e-mail is confidential and may be privileged. If you receive this e-mail in error, please contact the sender and delete it immediately.

**From:** McLean, Kathleen [BCCDC]  
**Sent:** Thursday, June 24, 2021 2:06 PM  
**To:** \_Health Heat Response LM  
**Subject:** Lower Mainland heat surveillance update

This email is being sent to inform you that **HIGH** heat health risk is predicted for the Lower Mainland tomorrow. The risk is predicted to be **HIGH** in the Vancouver Coastal region and **HIGH** in the Abbotsford region.

For more information on heat health risk, please visit the BC Heat Impacts Prediction System (BCHIPs) at <https://internalmaps.bccdc.ca/bchips/> (for health authority users) or at <http://maps.bccdc.ca/bchips/>.

The criteria for calling an extreme heat alert **HAVE NOT** been met. The average of today's 14:00 measured temperature and tomorrow's forecast high is 24.4°C at Vancouver airport, and 28.9°C at Abbotsford airport.

**From:** [Gustafson, Reka \[BCCDC\]](#)  
**To:** [Henderson, Sarah \[BCCDC\]](#); [Kosatsky, Tom \[BCCDC\]](#)  
**Cc:** [Henry, Bonnie \[EXT\]](#)  
**Subject:** Heat warnings  
**Date:** Friday, June 25, 2021 12:58:58 PM

---

Hi Sarah and Tom,

We had a discussion today about the upcoming heat warnings. The peak temperatures will occur during the days before the potential lifting of the provincial mask mandate. The effect of PPE on the risk of heat related stress is discussed on the CDC website, and there is a review that specifically addresses thermoregulation and face masks. Is this something we need to address before the weekend – public messages, reinforcement that masks are not recommended outside?

Thank you,

Reka

<https://academic.oup.com/annweh/article/56/1/102/166254?login=true>

**From:** [McLean, Kathleen \[BCCDC\]](#)  
**To:** [Henderson, Sarah \[BCCDC\]](#)  
**Subject:** FW: Lower Mainland extreme heat alert ongoing  
**Date:** Friday, June 25, 2021 2:48:20 PM

---

Hi Sarah,

Let me know if you think anything should be changed in the email below:

Thanks!

Kathleen

---

**Kathleen McLean**

Environmental Health Scientist

Cell: [s.15\(1\)\(l\)](#)

This e-mail message, including any attachments, is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged and/or confidential. If you are not the intended recipient or the employee or agent responsible for delivering the communication to the intended recipient, please notify us immediately by replying to this message and then delete this message from your system. You are hereby notified that any use, dissemination, distribution and/or reproduction of this message and/or any attachments by unintended recipients is unauthorized and may be unlawful.

**From:** McLean, Kathleen [BCCDC]

**Sent:** Friday, June 25, 2021 2:46 PM

**To:** McLean, Kathleen [BCCDC]

**Subject:** Lower Mainland extreme heat alert ongoing

The criteria for calling an **EXTREME HEAT ALERT** have been met: the average of today's 14:00 measured temperature and tomorrow's forecast high is 26.4°C at Vancouver airport, and 34.4°C at Abbotsford airport.

Please continue to communicate over email as needed while the extreme heat alert is in place.

In addition, increased heat health risk is predicted for the Lower Mainland tomorrow. The risk is predicted to be **HIGH** in the Vancouver Coastal region and **HIGH** in the Abbotsford region.

For more information on heat health risk, please visit the BC Heat Impacts Prediction System (BCHIPS) at <https://internalmaps.bccdc.ca/bchips/> (for health authority users) or at <http://maps.bccdc.ca/bchips/>.

**From:** [Kosatsky, Tom \[BCCDC\]](#)  
**To:** [Henderson, Sarah \[BCCDC\]](#)  
**Subject:** RE: URGENT: 2:15pm teleconference triggered  
**Date:** Friday, June 25, 2021 3:36:30 PM

---

Thanks for doing.

Happy to take media calls---[s.15\(1\)\(l\)](#)

t

**From:** Henderson, Sarah [BCCDC]  
**Sent:** Friday, June 25, 2021 2:42 PM  
**To:** Gustafson, Reka [BCCDC]; Henry, Bonnie [EXT]  
**Cc:** \_Health Heat Response LM; 'ec.msa-pacifique-wpm-pacific.ec@canada.ca'; ec.cpipsuperviseur-pspcsupervisor.ec [EXT]; 'Brent.Tom@fnha.ca'; 'James.Whealan@fnha.ca'; 'Shawn.Vanier@fnha.ca'  
**Subject:** FW: URGENT: 2:15pm teleconference triggered

Hi Réka, Bonnie –

Please note that the Lower Mainland has reached it's Heat Emergency Alert threshold. While the threshold has been met a few times since implemented in 2012, the region has previously decided to de-escalate based on the weather forecast. This time is different.

At the 2:15 meeting ECCC made clear that we are facing "record-breaking" and "unprecedented" heat over the region in the coming days.

A few key messages that the group agreed should be used with respect to COVID-19 and heat:

1. Extreme hot weather is a bigger health risk than COVID-19 infection over the next week
2. No one should be denied access to cooling spaces due to COVID-19 or communicable disease safety plans
3. If you having difficulty breathing in a mask, take it off and catch your breath

Cheers,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: [s.15\(1\)\(l\)](#)

[\*\*#DifferentTogether\*\*](#)

[\*\*#InPlainSight\*\*](#)

I often work outside of normal business hours because it suits me. There is no expectation that you will respond outside of your working hours.

---

**From:** "McLean, Kathleen [BCCDC]"

**Date:** Friday, June 25, 2021 at 2:08 PM

**To:** \_Health Heat Response LM , "'ec.msa-pacifique-wpm-pacific.ec@canada.ca'" , "ec.cpipsuperviseur-pspcsupervisor.ec [EXT]" , "'Brent.Tom@fnha.ca'" , "'James.Whealan@fnha.ca'" , "'Shawn.Vanier@fnha.ca'"

**Subject:** URGENT: 2:15pm teleconference triggered

The criteria for calling an **EXTREME HEAT ALERT** have been met: the average of today's 14:00 measured temperature and tomorrow's forecast high is 26.4°C at Vancouver airport, and

34.4°C at Abbotsford airport.

The details for connecting to the 2:15pm teleconference are as follows:

**Online:** s.15(1)(l), s.17(1)

**Dial in:** s.15(1)(l), s.17(1)

**Meeting ID:** s.15(1)(l), s.17(1)

**Passcode:** s.15(1)(l)

In addition, increased heat health risk is predicted for the Lower Mainland tomorrow. The risk is predicted to be **HIGH** in the Vancouver Coastal region and **HIGH** in the Abbotsford region.

For more information on heat health risk, please visit the BC Heat Impacts Prediction System (BCHIPS) at <https://internalmaps.bccdc.ca/bchips/> (for health authority users) or at <http://maps.bccdc.ca/bchips/>.

**From:** [McLean, Kathleen \[BCCDC\]](#)  
**To:** [Health Heat Response LM](#); ["ec.msa-pacifique-wpm-pacific.ec@canada.ca"](#); ["ec.cpipsuperviseur-pspcsupervisor.ec"](#)  
**[EXT]:** ["Brent.Tom@fnha.ca"](#); ["James.Whealn@fnha.ca"](#); ["Shawn.Vanier@fnha.ca"](#)  
**Subject:** Lower Mainland extreme heat alert ongoing  
**Date:** Saturday, June 26, 2021 2:06:27 PM

---

The criteria for calling an **EXTREME HEAT ALERT** have been met: the average of today's 14:00 measured temperature and tomorrow's forecast high is 30.3°C at Vancouver airport, and 38.7°C at Abbotsford airport.

Please continue to communicate over email with this distribution list as needed while the extreme heat alert is in place.

In addition, increased heat health risk is predicted for the Lower Mainland tomorrow. The risk is predicted to be **HIGH** in the Vancouver Coastal region and **HIGH** in the Abbotsford region.

For more information on heat health risk, please visit the BC Heat Impacts Prediction System (BCHIPS) at <https://internalmaps.bccdc.ca/bchips/> (for health authority users) or at <http://maps.bccdc.ca/bchips/>.

**From:** [McLean, Kathleen \[BCCDC\]](#)  
**To:** [Health Heat Response LM](#); ["ec.msa-pacifique-wpm-pacific.ec@canada.ca"](#); ["ec.cpipsuperviseur-pspcsupervisor.ec"](#)  
**[EXT]:** ["Brent.Tom@fnha.ca"](#); ["James.Whealn@fnha.ca"](#); ["Shawn.Vanier@fnha.ca"](#)  
**Subject:** Lower Mainland extreme heat alert ongoing  
**Date:** Sunday, June 27, 2021 2:06:24 PM

---

The criteria for calling an **EXTREME HEAT ALERT** have been met: the average of today's 14:00 measured temperature and tomorrow's forecast high is 31.8°C at Vancouver airport, and 41.9°C at Abbotsford airport.

Please continue to communicate over email with this distribution list as needed while the extreme heat alert is in place.

In addition, increased heat health risk is predicted for the Lower Mainland tomorrow. The risk is predicted to be **HIGH** in the Vancouver Coastal region and **HIGH** in the Abbotsford region.

For more information on heat health risk, please visit the BC Heat Impacts Prediction System (BCHIPS) at <https://internalmaps.bccdc.ca/bchips/> (for health authority users) or at <http://maps.bccdc.ca/bchips/>.

**From:** Schwandt, Michael [VCH]  
**To:** Henderson, Sarah [BCCDC]; Kosatsky, Tom [BCCDC]; Lysyshyn, Mark [VCH]; Mema, Dr. Silvina [IHA]; Fumerton, Raina [NHA]; Tait, Paula [NHA]; Benusic, Michael [VIHA]; 'Dr. Kamran Golmohammadi'; Newhouse, Emily [FH]; McVea, David [BCCDC]  
**Cc:** Tyler, Ingrid [FH]; Blessin, Scott [PHSA]; Zirul, Chelan [NHA]; \_Health Heat Response LM; 'Brent.Tom@fnha.ca'; 'James.Whelan@fnha.ca'; 'Shawn.Vanier@fnha.ca'; Gustafson, Reka [BCCDC]  
**Subject:** RE: Provincial touch-base on extreme hot weather  
**Date:** Monday, June 28, 2021 10:32:37 AM

---

Hi Sarah,

Thanks for writing on this. I would be glad to connect today, **s.13(1)**

[REDACTED]

[REDACTED]

Michael

---

**From:** Henderson, Sarah [BCCDC] <Sarah.Henderson@bccdc.ca>  
**Sent:** Monday, June 28, 2021 10:22 AM  
**To:** Kosatsky, Tom [BCCDC] <Tom.Kosatsky@bccdc.ca>; Lysyshyn, Mark [VCH] <Mark.Lysyshyn@vch.ca>; Mema, Dr. Silvina [IHA] <Silvina.Mema@interiorhealth.ca>; Fumerton, Raina [NHA] <Raina.Fumerton@northernhealth.ca>; Tait, Paula [NHA] <Paula.Tait@northernhealth.ca>; Benusic, Michael [VIHA] <Michael.Benusic@viha.ca>; 'Dr. Kamran Golmohammadi' <Kamran.Golmohammadi@fnha.ca>; Newhouse, Emily [FH] <Emily.Newhouse@fraserhealth.ca>; McVea, David [BCCDC] <David.McVea@bccdc.ca>  
**Cc:** Tyler, Ingrid [FH] <ingrid.tyler@fraserhealth.ca>; Blessin, Scott [PHSA] <Scott.Blessin@phsa.ca>; Zirul, Chelan [NHA] <Chelan.Zirul@northernhealth.ca>; \_Health Heat Response LM <Health.Heat.Response.LM@phsa.ca>; 'Brent.Tom@fnha.ca' <Brent.Tom@fnha.ca>; 'James.Whelan@fnha.ca' <James.Whelan@fnha.ca>; 'Shawn.Vanier@fnha.ca' <Shawn.Vanier@fnha.ca>; Gustafson, Reka [BCCDC] <reka.gustafson@phsa.ca>  
**Subject:** RE: Provincial touch-base on extreme hot weather

Good morning everyone –

We just wanted to check in with the health authorities to ask whether further provincial conversation is needed, and whether there's anything further BCCDC can do to assist you. We will take a look at the data we have available today and tomorrow to evaluate whether we can see any immediate impacts of this event. It generally takes about 14 days for the vital statistics data to near completion, but there may be some early signals showing now. Tom and I both noted a lot of ambulance activity in Vancouver and the Fraser Valley (I live in Mission). I'm not sure when we will receive our ambulance dispatch data for the week. If anyone has information on ED visits, we'd be happy to hear it.

A few things to consider:

- Overnight temperatures are very high, meaning that indoor temperatures are likely increasing day-over-day in residences without air conditioning. Even under careful and knowledgeable management my own house was 24 early Friday morning, 26 on Saturday, 29 on Sunday, and 31 this morning. These high indoor, residential temperatures are likely where most of the population health risk lies.
- Even when temperatures “come down” on Tuesday and Wednesday, they will still be very high compared with seasonal norms.
- It sounds as though air conditioners and fans are sold out across the region.
- Probably the most helpful thing we can do at this point is provide further information about how to stay as cool as possible at home. It might be worth posting resources such as this: <https://www.youtube.com/watch?v=4BLfYtE4Kow>

Anyhow, please let us know if we should find a time to meet today.

Cheers,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: s.15(1)(l)

**#DifferentTogether**

**#InPlainSight**

I often work outside of normal business hours because it suits me. There is no expectation that you will respond outside of your working hours.

-----Original Appointment-----

**From:** Henderson, Sarah [BCCDC]

**Sent:** Thursday, June 24, 2021 1:36 PM

**To:** Henderson, Sarah [BCCDC]; Kosatsky, Tom [BCCDC]; Lysyshyn, Mark [VCH]; Mema, Dr. Silvina [IHA]; Fumerton, Raina [NHA]; Tait, Paula [NHA]; Benusic, Michael [VIHA]; 'Dr. Kamran Golmohammadi';

Newhouse, Emily [FH]; McVea, David [BCCDC]

Cc: Tyler, Ingrid [FH]; Blessin, Scott [PHSA]; Zirul, Chelan [NHA]

**Subject:** Provincial touch-base on extreme hot weather

**When:** Friday, June 25, 2021 11:00 AM-11:30 AM (UTC-08:00) Pacific Time (US & Canada).

**Where:** Zoom details within

Hi all –

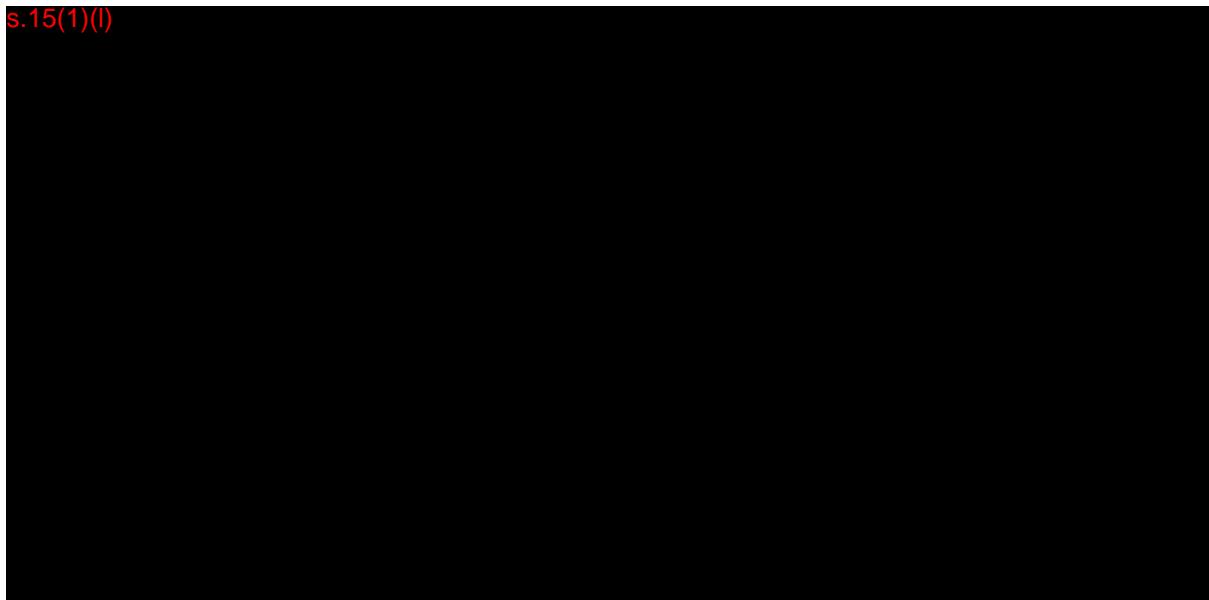
I can see some schedules, and this looks like the best time based on what's available.

Please forward as needed.

Cheers,

Sarah

s.15(1)(l)



**From:** Gustafson, Reka [BCCDC]  
**Cc:** Henderson, Sarah [BCCDC]; Emerson, Brian [EXT]  
**Subject:** Ristovski-Slijepcevic, Svetlana [BCCDC]; Lawson, Lisa [BCCDC]; Kosatsky, Tom [BCCDC]  
**Date:** RE: Masking advice for Step 3  
Monday, June 28, 2021 11:35 01 AM

Hi Sarah,

s.12(1), s.13(1)

**Dr. Réka Gustafson MD FRCPC**

Vice President, Public Health and Wellness, PHSA & Deputy Provincial Health Officer  
Provincial Health Services Authority

---

**From:** Henderson, Sarah [BCCDC]  
**Sent:** Monday, June 28, 2021 10:54 AM  
**To:** Emerson, Brian [EXT] ; Gustafson, Reka [BCCDC]  
**Cc:** Ristovski-Slijepcevic, Svetlana [BCCDC] ; Lawson, Lisa [BCCDC] ; Kosatsky, Tom [BCCDC]  
**Subject:** RE: Masking advice for Step 3

Thanks, Brian –

I am not sure whether a clear statement on masks is underway from BCCDC, but I have cc'd KT folks to check in.

Lisa: anything on the docket for a clear public health statement about masks during Step 3?

Thanks,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC  
Associate Professor (Partner) | School of Population and Public Health | UBC  
Office: 604.707.2449

Cell: **s.15(1)(i)**  
**#DifferentTogether**  
**#InPlainSight**

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**From:** Emerson, Brian P HLTH:EX <<mailto:Brian.Emerson@gov.bc.ca>>

**Sent:** Monday, June 28, 2021 9:51 AM  
**To:** Henderson, Sarah [BCCDC]; Gustafson, Reka [BCCDC]  
**Cc:** Ristovski-Slijepcevic, Svetlana [BCCDC]  
**Subject:** Masking advice for Step 3

**EXTERNAL SENDER.** If you suspect this message is malicious, please forward to [spam@phsa.ca](mailto:spam@phsa.ca) and **do not** open attachments or click on links.

s.13(1)

Brian

Dr. Brian P. Emerson, Deputy Provincial Health Officer (acting)

s.19(1)

T 250.952.1701 C **s.19(1)** F. 250.952.1713 [brian.emerson@gov.bc.ca](mailto:brian.emerson@gov.bc.ca)

---

**From:** Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>

**Sent:** June 27, 2021 9:19 AM

**To:** Gustafson, Reka HLTH:IN <[reka.gustafson@phsa.ca](mailto:reka.gustafson@phsa.ca)>; Emerson, Brian P HLTH:EX <[Brian.Emerson@gov.bc.ca](mailto:Brian.Emerson@gov.bc.ca)>

**Cc:** Ristovski-Slijepcevic, Svetlana [BCCDC] <[svetlana.ristovskis@bccdc.ca](mailto:svetlana.ristovskis@bccdc.ca)>

**Subject:** Re: Hot weather and COVID masking

**[EXTERNAL]** This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Reka –

Thanks for your note. **s.13(1)**

Cheers,  
Sarah

PS: Yes, what a stretch we're having. Unprecedented intensity, duration, and reach of extreme hot weather, potential flood risk, and a sustained air quality advisory. Let's hope we don't get any dry lightning. I suspect we might be studying this week for a while to come.

---

Sarah B. Henderson, PhD  
Scientific Director | Environmental Health Services | BCCDC  
Associate Professor (Partner) | School of Population and Public Health | UBC  
Office: 604.707 2449  
Cell: **s.15(1)(i)**  
**#DifferentTogether**  
**#InPlainSight**

---

**From:** "Gustafson, Reka [BCCDC]" <[reka.gustafson@phsa.ca](mailto:reka.gustafson@phsa.ca)>  
**Date:** Sunday, June 27, 2021 at 9:04 AM  
**To:** "Henderson, Sarah [BCCDC]" <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>, Brian Emerson <[Brian.Emerson@gov.bc.ca](mailto:Brian.Emerson@gov.bc.ca)>  
**Subject:** RE: Hot weather and COVID masking

Hi Sarah,  
Hope you are keeping cool too!

**s.13(1)**



Many thanks again for the sensible heat advice Did you hear about the flooding risk in Pemberton?  
What a weekend!

Take care,

Reka

---

**Dr. Réka Gustafson MD FRCPC**  
Vice President, Public Health and Wellness, PHSA & Deputy Provincial Health Officer  
**Provincial Health Services Authority**

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**From:** Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>  
**Sent:** Friday, June 25, 2021 9:29 PM  
**To:** Gustafson, Reka [BCCDC] <[reka.gustafson@phsa.ca](mailto:reka.gustafson@phsa.ca)>  
**Subject:** Re: Hot weather and COVID masking  
Good to know, thanks! Stay cool!!

---

Sarah B. Henderson, PhD  
Scientific Director | Environmental Health Services | BCCDC  
Associate Professor (Partner) | School of Population & Public Health | UBC  
Sent from **s.15(1)**

I often work outside of normal business hours because it suits me. There is no expectation that you will respond outside of your working hours.

On Jun 25, 2021, at 7:57 PM, Gustafson, Reka [BCCDC] <[reka.gustafson@phsa.ca](mailto:reka.gustafson@phsa.ca)> wrote:

Thank you very much Sarah—this came across very clearly in the public messages.

Sent from my iPhone

On Jun 25, 2021, at 4:41 PM, Harkness, Gordon <[Gordon.Harkness@worksafebc.com](mailto:Gordon.Harkness@worksafebc.com)> wrote:

**EXTERNAL SENDER.** If you suspect this message is malicious, please forward to [spam@phsa.ca](mailto:spam@phsa.ca) and do not open attachments or click on links.

---

Ok. Good to know, I'll pass that on.

G.  
Sent from my iPhone

On Jun 25, 2021, at 4:29 PM, Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)> wrote:

Thanks, Gord – sounds complicated.

Just FYI, in various public health meetings today there was good agreement on the follow heat + COVID messages:

1. Extreme hot weather is a bigger health risk than COVID-19 infection over the next week
2. No one should be denied access to cooling spaces due to COVID-19 or communicable disease safety plans

3. If you are having difficulty breathing in a mask, take it off and catch your breath

Cheers,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC  
Associate Professor (Partner) | School of Population and Public Health | UBC  
Office: 604.707.2449

Cell: **S.15(1)(l)**

**#DifferentTogether**

**#InPlainSight**

---

**From:** Gordon Harkness <[Gordon.Harkness@worksafebc.com](mailto:Gordon.Harkness@worksafebc.com)>

**Date:** Friday, June 25, 2021 at 4:17 PM

**To:** "Henderson, Sarah [BCCDC]" <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>, Geoffrey Clark <[Geoffrey.Clark@worksafebc.com](mailto:Geoffrey.Clark@worksafebc.com)>, "McCaskill, Darrin" <[Darrin.McCaskill@worksafebc.com](mailto:Darrin.McCaskill@worksafebc.com)>

**Cc:** "Kosatsky, Tom [BCCDC]" <[Tom.Kosatsky@bccdc.ca](mailto:Tom.Kosatsky@bccdc.ca)>, "Gustafson, Reka [BCCDC]" <[reka.gustafson@phsa.ca](mailto:reka.gustafson@phsa.ca)>

**Subject:** RE: Hot weather and COVID masking

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Hi Sarah,

Currently we are postponing the rollout phase 3 of the restart plan next week. The delay in rollout, which was originally planned for yesterday, was partly due to concerns raised over mask use in the workplace and we are awaiting guidance from the PHO to alleviate this.

We don't have the stats on heat related complaints raised by workers, however judging by previous years, I have no doubt we will be receiving them and yes we would expect masks to be an exacerbating factor.

We are inclined to wait until we have mask guidance from PHO before issuing nuanced guidance like this to stakeholders. In this way we can ensure consistency in messaging with the PHO on a topic that is very sensitive with stakeholders.

Below is an extract of what's going out about mask use on Monday morning at 9 am, hopefully?

**Are workers or members of the public required to wear masks in the workplace?**

As B.C. moves through the Restart plan, Public Health will provide guidance on the use of masks for both workplaces and public spaces. Employers are advised to follow the direction of Public Health with respect to the use of masks. This may include guidance, requirements, or recommendations for both workers and members of the public.

Employers may choose to implement mask policies for workers and/or members of the public that exceed the requirements of Public Health.

Regards,

Gordon.

**Gordon Harkness**

Director, Risk Analysis Unit  
604.214.5412 (Office)

604 813 3211 (Cell)

**WorkSafeBC**

6951 Westminster Hwy, Richmond, BC  
Canada

[worksafebc.com](http://worksafebc.com)

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---

**From:** Henderson, Sarah [BCCDC] [<mailto:Sarah.Henderson@bccdc.ca>]

**Sent:** Friday, June 25, 2021 1:48 PM

**To:** Clark, Geoffrey <[Geoffrey.Clark@worksafebc.com](mailto:Geoffrey.Clark@worksafebc.com)>; Harkness, Gordon <[Gordon.Harkness@worksafebc.com](mailto:Gordon.Harkness@worksafebc.com)>

**Cc:** Kosatsky, Tom [BCCDC] <[Tom.Kosatsky@bccdc.ca](mailto:Tom.Kosatsky@bccdc.ca)>; Gustafson, Reka [BCCDC] <[reka.gustafson@phsa.ca](mailto:reka.gustafson@phsa.ca)>

**Subject:** Hot weather and COVID masking

Hi Geoff, Gord –

Thanks for forwarding the WSBC resources about heat below.

We met with the EH MHOs this morning to talk through a few hot weather issues. The question has come up quite a lot about masks and overheating.

There is limited evidence that masks directly affect thermoregulation, but wearing a mask in high heat may increase stress that can also lead to negative outcomes.

We've recommended that now's a good time to remind people that the mask mandate covers INDOOR public spaces only, and that is safe to be outside without a mask. We've also suggested that it's better for people to remove their masks indoors if they are feeling hot and suffocated by it.

We're wondering if some messaging from WSBC might be needed, especially in this awkward moment between Step 2 and 3 of the Reopen plan. There was particular concern about people working in hot kitchens. It would really be "if you're feeling like you can't catch your breath, take a mask break for a while" or some such. Common sense, hopefully. It's not useful to have employers cracking down on masks if their employees are really suffering in the heat.

Have you gotten questions about this?

Cheers,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Office: 604.707.2449

Cell: **s.15(1)(l)**

**#DifferentTogether**

**#InPlainSight**

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**From:** Geoffrey Clark <[Geoffrey.Clark@worksafebc.com](mailto:Geoffrey.Clark@worksafebc.com)>

**Date:** Friday, June 25, 2021 at 9:42 AM

**To:** "Zimmerman, Courtney [IHA]" <[Courtney.Hesketh@interiorhealth.ca](mailto:Courtney.Hesketh@interiorhealth.ca)>

**Cc:** "Henderson, Sarah [BCCDC]" <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>

**Subject:** Re: Provincial touch-base on extreme hot weather

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Hi Courtney,

Sarah cc'd your request to me. As it turns out, we just posted the following on our web page, regarding heat stress in the upcoming hot weather:

<https://www.worksafebc.com/en/about-us/news-events/news-releases/2021/june/high-temperatures-put-workers-at-risk-of-heat-stress?origin=s&returnurl=https%3A%2F%2Fwww.worksafebc.com%2Fen%2Fsearch%23sort%3DRelevancy%26q%3Dheat%2520stress%26f%3Alanguage-facet%3D%5Benglish%5D&highlight=heat%20stress>

There are also links to our other heat stress pages and publications.

Stay cool!

- Geoff

Geoffrey A. Clark, MSc, CIH, ROH

Sr. Occupational Hygienist,

WorkSafeBC

PO Box 5350, Stn Terminal,

Vancouver, B.C. V6B 5L5

Phone (direct): 604-233-4088

Cell: 604-209-8479

Email: [Geoffrey.Clark@worksafebc.com](mailto:Geoffrey.Clark@worksafebc.com)

---

**From:** Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>

**Date:** Friday, June 25, 2021 at 9:23 AM

**To:** Zimmerman, Courtney [IHA] <[Courtney.Hesketh@interiorhealth.ca](mailto:Courtney.Hesketh@interiorhealth.ca)>, Kosatsky, Tom [BCCDC]

<[Tom.Kosatsky@bccdc.ca](mailto:Tom.Kosatsky@bccdc.ca)>

**Cc:** Mema, Dr. Silvina [IHA] <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>, Clark, Geoffrey <[Geoffrey.Clark@worksafebc.com](mailto:Geoffrey.Clark@worksafebc.com)>

**Subject:** Re: Provincial touch-base on extreme hot weather

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Hi Courtney –

Geoff Clark (cc'd) is our rep on the provincial smoke committee, and is likely to know.

Cheers,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: **s.15(1)(l)**

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**From:** "Zimmerman, Courtney" <[Courtney.Zimmerman@interiorhealth.ca](mailto:Courtney.Zimmerman@interiorhealth.ca)>

**Date:** Friday, June 25, 2021 at 9:06 AM

**To:** "Henderson, Sarah [BCCDC]" <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>, "Kosatsky, Tom [BCCDC]" <[Tom.Kosatsky@bccdc.ca](mailto:Tom.Kosatsky@bccdc.ca)>

**Cc:** "Mema, Dr. Silvina [IHA]" <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>

**Subject:** FW: Provincial touch-base on extreme hot weather

Good morning!

I am wondering who would be the best contact at WorkSafe BC to connect with about “outdoor worker heat messaging”? With the extreme heat coming – I’m hoping that WorkSafe can put out some messaging about protecting outdoor workers from heat stroke etc.

Thanks,

*Courtney Zimmerman, CPHI(C)*

Corporate Director Environmental Public Health

Interior Health Authority

Osoyoos Health Centre

4816 – 89<sup>th</sup> Street

Osoyoos, BC V0H 1V1  
Cell: 250-803-5483  
Phone: 250-495-6433 ext. 62522  
Fax: 250-495-5142

*I respectfully acknowledge the traditional territory of the Syilx First Nation where we live, learn, collaborate and work together.*

---

**From:** Mema, Dr. Silvina <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>

**Sent:** Friday, June 25, 2021 8:39 AM

**To:** IH Medical Health Officers <[IHMedicalHealthOfficers@interiorhealth.ca](mailto:IHMedicalHealthOfficers@interiorhealth.ca)>; Zimmerman, Courtney <[Courtney.Zimmerman@interiorhealth.ca](mailto:Courtney.Zimmerman@interiorhealth.ca)>

**Subject:** FW: Provincial touch-base on extreme hot weather

---

**From:** Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>

**Sent:** Thursday, June 24, 2021 9:22 PM

**To:** Kosatsky, Tom [PHSA] <[Tom.Kosatsky@bccdc.ca](mailto:Tom.Kosatsky@bccdc.ca)>; Lysyshyn, Mark [VCH] <[Mark.Lysyshyn@vch.ca](mailto:Mark.Lysyshyn@vch.ca)>; Mema, Dr. Silvina <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>; Fumerton, Raina [NHA] <[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>; Tait, Paula [NHA] <[Paula.Tait@northernhealth.ca](mailto:Paula.Tait@northernhealth.ca)>; Benusic, Michael [VIHA] <[Michael.Benusic@viha.ca](mailto:Michael.Benusic@viha.ca)>; 'Dr. Kamran Golmohammadi' <[Kamran.Golmohammadi@fnha.ca](mailto:Kamran.Golmohammadi@fnha.ca)>; Newhouse, Emily [FH] <[Emily.Newhouse@fraserhealth.ca](mailto:Emily.Newhouse@fraserhealth.ca)>; McVea, David [PHSA] <[David.McVea@bccdc.ca](mailto:David.McVea@bccdc.ca)>; Tyler, Ingrid [FH] <[Ingrid.tyler@fraserhealth.ca](mailto:Ingrid.tyler@fraserhealth.ca)>; Blessin, Scott [PHSA] <[Scott.Blessin@phsa.ca](mailto:Scott.Blessin@phsa.ca)>

**Subject:** Re: Provincial touch-base on extreme hot weather

Hi all –

Please find attached an updated version of the guidance document for cooling centres with changes tracked. This version is aligned with Steps 2 and 3 of BC's Restart. For discussion tomorrow.

Cheers,

Sarah

---

Sarah B. Henderson, PhD  
Scientific Director | Environmental Health Services | BCCDC  
Associate Professor (Partner) | School of Population and Public Health | UBC  
Office: 604.707.2449  
Cell: **s.15(1)(l)**  
[#DifferentTogether](#)  
[#InPlainSight](#)

---

**From:** [Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)

**When:** 11:00 AM - 11:30 AM June 25, 2021

**Subject:** Provincial touch-base on extreme hot weather

**Location:** Zoom details within

Hi all –

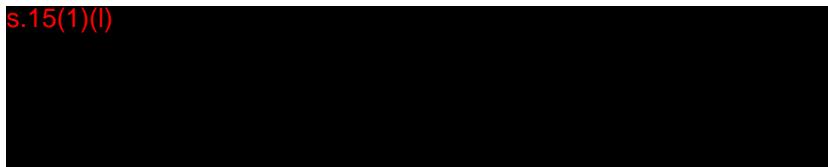
I can see some schedules, and this looks like the best time based on what's available.

Please forward as needed.

Cheers,

Sarah

**s.15(1)(l)**



As more information and resources about COVID-19 become available, we will continue to update the COVID-19 section of our website at [worksafabc.com](#). Follow us on [Facebook](#), [Twitter](#), [LinkedIn](#), [Instagram](#), and [YouTube](#) for the latest announcements, jobs, workplace health and safety resources, and news from WorkSafeBC

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**From:** Henderson, Sarah [BCCDC]  
**Sent:** Tuesday, June 29, 2021 1:13 PM  
**To:** Henry, Bonnie [EXT]  
**Cc:** Kosatsky, Tom [BCCDC]; Gustafson, Reka [BCCDC]  
**Subject:** RE: heat

Hi Bonnie --

We still don't see anything of note in the available vital statistics data, but they remain very complete at this time. We will see it in due time, I have no doubt.

Kathleen has been working with the ER data available through the COVID-19 Cohort platform, but nothing available yet. Tomorrow, for sure.

Deaths at home are not surprising -- they are the hallmark of these types of events, and indicative of those high indoor temperatures. Even though we're seeing slightly cooler conditions today, the overnight low is forecasted at 20 in Vancouver -- very warm.

s.22(1)  
[REDACTED]

Cheers,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC Associate Professor (Partner) | School of Population and Public Health | UBC  
Office: 604.707.2449  
Cell: s.15(1)(l)  
[REDACTED]

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-----Original Message-----

From: Henry, Bonnie HLTH:EX s.19(1)  
[REDACTED]  
Sent: Tuesday, June 29, 2021 1:08 PM  
To: Henderson, Sarah [BCCDC]  
Cc: Kosatsky, Tom [BCCDC]; Gustafson, Reka [BCCDC]  
Subject: Re: heat

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Any updates today? The coroner's service is reporting increased deaths at home and EMS and ED visits are up I understand Thanks

Dr Bonnie Henry  
Provincial Health Officer  
Ministry of Health

s.19(1)

On Jun 28, 2021, at 1:47 PM, Henderson, Sarah [BCCDC] <Sarah.Henderson@bccdc.ca> wrote:

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And a few additional points from Tom!

Cheers,

Sarah

From: Kosatsky, Tom [BCCDC]  
Sent: Monday, June 28, 2021 1:45 PM  
To: Henderson, Sarah [BCCDC]  
Subject: RE: heat

I'd add checking in on others, assuring that neighbours have water and a cool space, especially those with reduced cognitive function or mobility.

Hydration is important at night too given elevated indoor temperatures.

t

From: Henderson, Sarah [BCCDC]  
Sent: Monday, June 28, 2021 1:40 PM  
To: Henry, Bonnie [EXT]; Kosatsky, Tom [BCCDC]  
Cc: Gustafson, Reka [BCCDC]  
Subject: RE: heat

s.22(1) I left the library when it closed at 5pm (taking public health advice, though the place was nearly empty) and it was like stepping into a blast furnace.

Nothing obvious in the mortality data yet, but it will take time for the deaths to get registered. Patty sent a figure earlier showing sharp increase heat-related ER visits in VCH. Also note the new story below, which David McVea caught this morning.

A few key points in addition to drink plenty of water, wet yourself down and stand in a breeze, and take it easy:

- Overnight temperatures are very high, meaning that indoor temperatures are likely increasing day-over-day in residences without air conditioning. These high indoor, residential temperatures are likely where most of the population health risk lies. It is worth encouraging people to spend time at cooling shelters during the heat of the day.

- Even when temperatures "come down" on Tuesday and Wednesday, they will still be very high compared with seasonal norms.
- Probably the most helpful thing we can do at this point is provide further information about how to stay as cool as possible at home if you don't have mechanical cooling.
  - o Close your windows in the morning, before the temperature outside gets hotter than the temperature inside – trap the cooler air inside.
  - o Pull blinds, curtains, and shutters to keep the sun out
  - o Open your windows at night when the temperature outside gets cooler than the temperature outside.
  - o Point your fan(s) directly out the window at night to push hot air out of the house, which will draw cooler air in from the surrounding environment.
- It sounds as though air conditioners and fans are sold out across the region.

Hope this helps,

Sarah

"Paramedics overwhelmed

The heat wave has created an incredibly challenging situation for the province's paramedics.

Troy Clifford, provincial president of the Ambulance Paramedics of B.C., told CBC's The Early Edition<[https://can01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.cbc.ca%2Flisten%2Flive-radio%2F1-91-the-early-edition%2Fclip%2F15852127-a-heatdome&data=04%7C01%2019\(1\)7Cbde8bc9d60904bac9b8008d93a75f462%7C6fdb52003d0d4a8ab036d3685e359adc%7C0%7C0%7C637605100549440354%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBtil6lk1haWwiLCJXVCi6Mn0%3D%7C1000&sdata=CWhgJS4U1rlSfKrQM%2FcDdvbpamD1CO5Ui8OblrewEM%3D&reserved=0](https://can01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.cbc.ca%2Flisten%2Flive-radio%2F1-91-the-early-edition%2Fclip%2F15852127-a-heatdome&data=04%7C01%2019(1)7Cbde8bc9d60904bac9b8008d93a75f462%7C6fdb52003d0d4a8ab036d3685e359adc%7C0%7C0%7C637605100549440354%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBtil6lk1haWwiLCJXVCi6Mn0%3D%7C1000&sdata=CWhgJS4U1rlSfKrQM%2FcDdvbpamD1CO5Ui8OblrewEM%3D&reserved=0) on Monday that dispatchers received a record-level of calls this weekend.

"At times yesterday there was over 100, peaking at 130, calls holding between emergency and non-emergency calls," said Clifford.

Clifford said in some emergency situations, people were waiting up to two hours for an ambulance.

"Paramedics and dispatchers are absolutely, I don't know what to say, at wit's end," said Clifford.

He estimated 25 per cent of calls over the weekend were directly due to the heat and said people need to know their limitations, especially when engaging in recreational activities like hiking where rescue missions are complex and a strain on already limited resources.

Hope this helps,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: [REDACTED]

#DifferentTogether<[https://engage.gov.bc.ca/app/uploads/sites/613/2020/11/In-Plain-Sight-Full-Report.pdf](https://can01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fltgov.bc.ca%2Fwp-content%2Fuploads%2F2020%2F05%2FPledge-v3.png&data=04%7C01%[REDACTED]7Cbde8bc9d60904bac9b8008d93a75f462%7C6fdb52003d0d4a8ab036d3685e359adc%7C0%7C0%7C637605100549440354%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBtil6Ik1haWwiLCJVCI6Mn0%3D%7C1000&sdata=BVMVNHE3OJGMxTbvqkDovX69UPb%2BNOHNv9UNKSaBbXE%3D&reserved=0></a></p><p>#InPlainSight<<a href=)>

PHSAhome1.phsabc.ehcnet.ca/SHenderson7/Add-in%20Express>

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From: Henry, Bonnie HLTH:EX [REDACTED]  
Sent: Monday, June 28, 2021 12:57 PM  
To: Kosatsky, Tom [BCCDC]  
Cc: Gustafson, Reka [BCCDC]; Henderson, Sarah [BCCDC]  
Subject: RE: heat

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Thanks, that would be helpful. [REDACTED]

Dr Bonnie Henry  
Provincial Health Officer  
Office of the PHO  
Ministry of Health

[REDACTED]

I gratefully acknowledge that I live and work on the traditional unceded territory of the Lekwungen Peoples, specifically the Songhees and Esquimalt First Nations. Hay'sxw'qu Si'em

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From: Kosatsky, Tom [BCCDC] <Tom.Kosatsky@bccdc.ca>  
Sent: June 28, 2021 11:30 AM  
To: Henry, Bonnie HLTH:EX [REDACTED]  
Cc: Gustafson, Reka HLTH:IN <reka.gustafson@phsa.ca>; XT:Henderson, Sarah ENV:IN <Sarah.Henderson@bccdc.ca>  
Subject: heat

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Morning Bonnie,  
Sarah and I would be pleased to provide you with heat messaging information, as well, of course, with heat-health effect data as soon as it comes available.  
Best  
Tom

**From:** [Henderson, Sarah \[BCCDC\]](#)  
**To:** [Henry, Bonnie \[EXT\]](#)  
**Cc:** [Gustafson, Reka \[BCCDC\]](#); [Kosatsky, Tom \[BCCDC\]](#); [McLean, Kathleen \[BCCDC\]](#)  
**Subject:** FW: Dispatches  
**Date:** Tuesday, June 29, 2021 4:59:44 PM  
**Attachments:** [ambulance\\_dispatches\\_daily.png](#)

---

Hi Bonnie –

A bit more information, thanks to ambulance dispatch data we received today (we get an update weekly). Kathleen has pulled together these plots of the card codes we usually examine related to heat.

Just watched today's briefing, thanks for the shout out on heat preparedness. There is always more to learn from events like this, [§.22\(1\)](#)

This video caught my attention today, especially the ER doctor saying that that people he's been seeing are "doing all the right things". It's hard to stay safe when the indoor heat builds to 35-40C despite all your best efforts.

<https://www.cbc.ca/player/play/1915481155980>

Stay cool,  
Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: [§.15\(1\)\(i\)](#)

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[\*\*#InPlainSight\*\*](#)

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**From:** McLean, Kathleen [BCCDC]

**Sent:** Tuesday, June 29, 2021 4:46 PM

**To:** Henderson, Sarah [BCCDC]

**Subject:** Dispatches

Turns out the data we got today includes up to June 27, so I guess it's no longer a whole week behind when we receive it.

Here is a quick plot of the card numbers that looked the most interesting. I can do something else with this tomorrow (PHIDO plots?).

~K

---

**Kathleen McLean**

Environmental Health Scientist

**BC Centre for Disease Control**

**Provincial Health Services Authority**

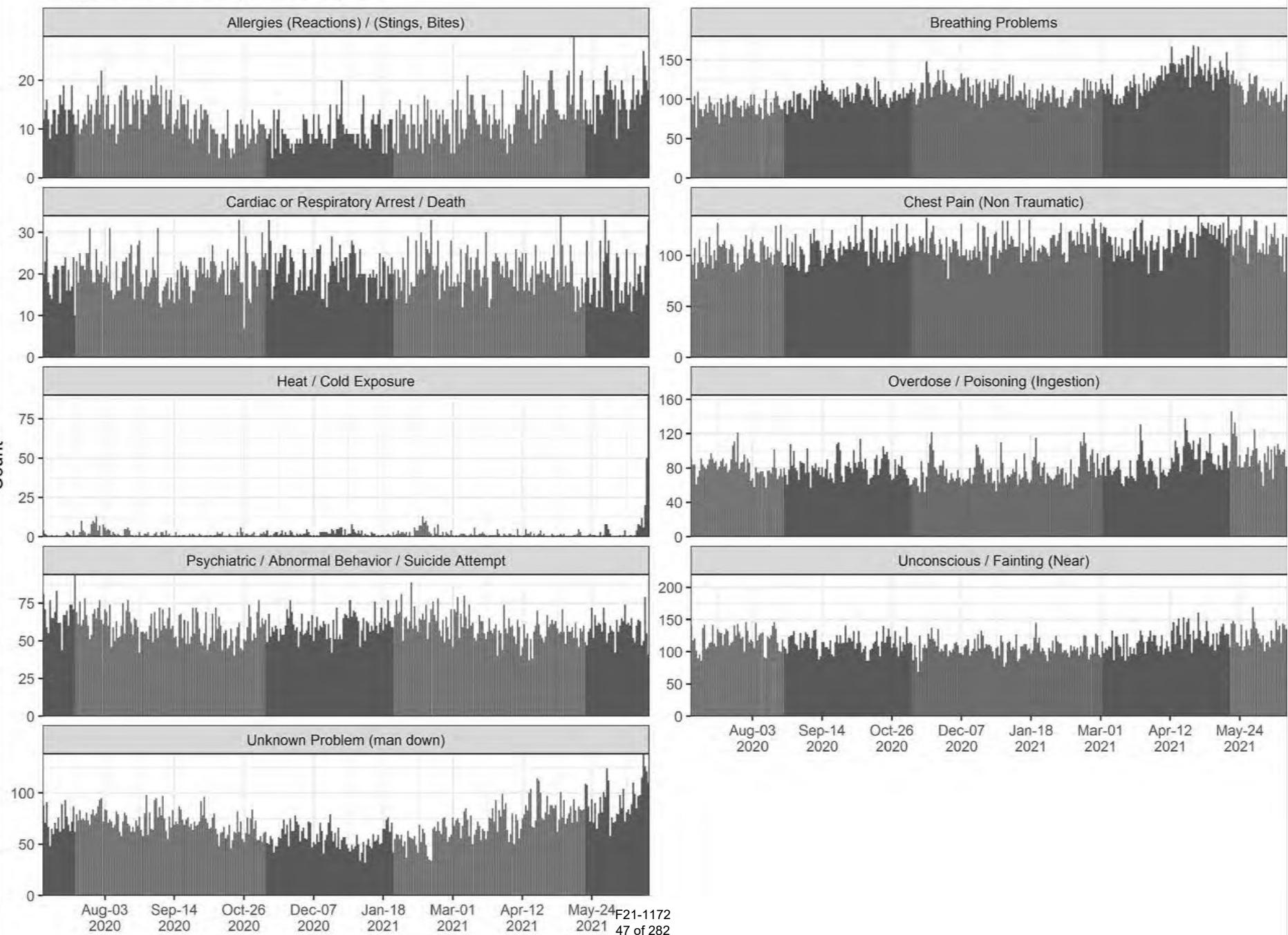
655 West 12th Avenue

Vancouver, BC, V5Z 4R4

Cell: **s.15(1)(l)**  
[kathleen.mclean@bccdc.ca](mailto:kathleen.mclean@bccdc.ca)

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## Daily ambulance dispatches by card



**From:** Schwandt, Michael [VCH]  
**To:** Tyler, Ingrid [FH]; Mema, Dr. Silvina [IHA]; Henderson, Sarah [BCCDC]; "Castellan,Armel (ECCC)"; \_Health Heat Response LM; Enns, Charmaine [VIHA]; Cheryl Bloxham; Diplock, Cole [VIHA]; Nowakowski, Craig [VIHA]; Abassi, Dominic; Luttrell, Gethsemane [VIHA]; Drexhage, Glenn; Hasselback, Paul [VIHA]; hc.heatdivision-divisiondelachaleur.sc [EXT]; Yehia, Jade [VIHA]; Parisi, Jennifer J; Fyfe, Murray W. (Dr) [VIHA]; Waters, Shannon [VIHA]; McKay, Valerie; Golmohammadi, Dr. Kamran [IHA]; Goodison, Karin [IHA]; Pollock, Dr. Sue [IHA]; EPH On Duty; PHESU [IHA]; Baytalan, Greg [IHA]; hc.heatdivision-divisiondelachaleur.sc [EXT]; HBE; Deegan, Heather [IHA]; Speer, Jennifer [IHA]; Hadley, Pam [IHA]; El Kurdi, Sylvia [IHA]; Kurc, Andrew [NHA]; Quibell, Doug [NHA]; Gray, Andrew [NHA]; Kim, Jong [NHA]; Fumerton, Raina [NHA]; Kling, Rakel [NHA]; hc.heatdivision-divisiondelachaleur.sc [EXT]; Harder, Kari [NHA]; Northern Health Emergency Management; \_\_IH Medical Health Officers  
**Cc:** EC.F MSA-Pacifique / WPM-Pacific F.EC; ec.cpipsuperviseur-pspcsupervisor.ec [EXT]; MacDonald,Melissa (ECCC); Crabtree, Alexis [VCH]  
**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave  
**Date:** Wednesday, June 30, 2021 9:09:24 AM  
**Attachments:** [image001.png](#)

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Agreed.

**S.13(1)**



Talk later today,

Michael

**Michael Schwandt, MD MPH FRCPC**

**Medical Health Officer, Vancouver Coastal Health**

601 West Broadway, Suite 800

Vancouver, BC V5T 4C2

Phone: 604-675-3915 | Fax: 604-731-2756 | Email: [michael.schwandt@vch.ca](mailto:michael.schwandt@vch.ca)

Administrative Assistant: Ryan Chan ([ryan.chan@vch.ca](mailto:ryan.chan@vch.ca), p. 604-875-5600 x54375)

*I recognize that my place of work and the facilities of Vancouver Coastal Health lie on the traditional homelands of the fourteen First Nation communities of Heiltsuk, Kitasoo-Xai'xais, Lilwat, Musqueam, N'Quatqua, Nuxalk, Samahquam, Sechelt, Skatin, Squamish, Tla'amin, Tsleil-Waututh, Wuikinuxv, and Xa'xtsa.*

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**From:** Tyler, Ingrid [FH]

**Sent:** Tuesday, June 29, 2021 2:15 PM

**To:** Mema, Dr. Silvina [IHA] ; Henderson, Sarah [BCCDC] ; 'Castellan,Armel (ECCC)' ; \_Health Heat Response LM ; Enns, Charmaine [VIHA] ; Cheryl Bloxham ; Diplock, Cole [VIHA] ; Nowakowski, Craig [VIHA] ; Abassi, Dominic ; Luttrell, Gethsemane [VIHA] ; Drexhage, Glenn ; Hasselback, Paul [VIHA] ; hc.heatdivision-divisiondelachaleur.sc [EXT] ; Yehia, Jade [VIHA] ; Parisi, Jennifer J ; Fyfe, Murray W. (Dr) [VIHA] ; Waters, Shannon [VIHA] ; McKay, Valerie ; Golmohammadi, Dr. Kamran [IHA] ; Goodison, Karin [IHA] ; Pollock, Dr. Sue [IHA] ; EPH On Duty ; PHESU [IHA] ; Baytalan, Greg [IHA] ; hc.heatdivision-divisiondelachaleur.sc [EXT] ; HBE ; Deegan, Heather [IHA] ; Speer, Jennifer [IHA] ; Hadley, Pam [IHA] ; El Kurdi, Sylvia [IHA] ; Kurc, Andrew [NHA] ; Quibell, Doug [NHA] ; Gray, Andrew [NHA] ; Kim, Jong [NHA] ; Fumerton, Raina [NHA] ; Kling, Rakel [NHA] ; hc.heatdivision-divisiondelachaleur.sc [EXT] ; Harder, Kari [NHA] ; Northern Health Emergency Management ; \_\_IH Medical Health Officers

**Cc:** EC.F MSA-Pacifique / WPM-Pacific F.EC ; ec.cpipsuperviseur-pspcsupervisor.ec [EXT] ; MacDonald,Melissa (ECCC)

**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave

Agree – with both points below.

ingrid

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**From:** Mema, Dr. Silvina <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>

**Sent:** Tuesday, June 29, 2021 1:43 PM

**To:** Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>; 'Castellan,Armel (ECCC)' <[Armel.Castellan@ec.gc.ca](mailto:Armel.Castellan@ec.gc.ca)>; \_Health Heat Response LM <[Health.Heat.Response.LM@phsa.ca](mailto:Health.Heat.Response.LM@phsa.ca)>; Enns, Charmaine <[Charmaine.Enns@viha.ca](mailto:Charmaine.Enns@viha.ca)>; Cheryl Bloxham <[Cheryll.Bloxham@viha.ca](mailto:Cheryll.Bloxham@viha.ca)>; Diplock, Cole <[Cole.Diplock@viha.ca](mailto:Cole.Diplock@viha.ca)>; Nowakowski, Craig <[Craig.Nowakowski@viha.ca](mailto:Craig.Nowakowski@viha.ca)>; Abassi, Dominic <[Dominic.Abassi@VIHA.CA](mailto:Dominic.Abassi@VIHA.CA)>; Luttrell, Gethsemane <[Gethsemane.Luttrell@VIHA.CA](mailto:Gethsemane.Luttrell@VIHA.CA)>; Drexhage, Glenn <[Glenn.Drexhage@VIHA.CA](mailto:Glenn.Drexhage@VIHA.CA)>; Hasselback, Paul (Dr) <[Paul.Hasselback@VIHA.CA](mailto:Paul.Hasselback@VIHA.CA)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Yehia, Jade <[Jade.Yehia@viha.ca](mailto:Jade.Yehia@viha.ca)>; Parisi, Jennifer J <[Jennifer.Parisi@VIHA.CA](mailto:Jennifer.Parisi@VIHA.CA)>; Fyfe, Murray W. (Dr) <[Murray.Fyfe@viha.ca](mailto:Murray.Fyfe@viha.ca)>; Waters, Shannon (Dr) <[Shannon.Waters@VIHA.CA](mailto:Shannon.Waters@VIHA.CA)>; McKay, Valerie

<[Valerie.Mckay@VIHA.CA](mailto:Valerie.Mckay@VIHA.CA)>; Golmohammadi, Dr. Kamran <[Kamran.Golmohammadi@interiorhealth.ca](mailto:Kamran.Golmohammadi@interiorhealth.ca)>; Goodison, Karin <[Karin.Goodison@interiorhealth.ca](mailto:Karin.Goodison@interiorhealth.ca)>; Pollock, Dr. Sue <[Sue.Pollock@interiorhealth.ca](mailto:Sue.Pollock@interiorhealth.ca)>; EPH On Duty <[EPHonduty@interiorhealth.ca](mailto:EPHonduty@interiorhealth.ca)>; Population Health-Epidemiology and Surveillance Unit <[PHESU@interiorhealth.ca](mailto:PHESU@interiorhealth.ca)>; Baytalan, Greg <[Greg.Baytalan@interiorhealth.ca](mailto:Greg.Baytalan@interiorhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; HBE <[HBE@interiorhealth.ca](mailto:HBE@interiorhealth.ca)>; Deegan, Heather <[Heather.Deegan@interiorhealth.ca](mailto:Heather.Deegan@interiorhealth.ca)>; Speer, Jennifer <[Jennifer.Speer@interiorhealth.ca](mailto:Jennifer.Speer@interiorhealth.ca)>; Hadley, Pam <[Pam.Hadley@interiorhealth.ca](mailto:Pam.Hadley@interiorhealth.ca)>; El Kurdi, Sylvia <[Sylvia.ElKurdi@interiorhealth.ca](mailto:Sylvia.ElKurdi@interiorhealth.ca)>; Kurn, Andrew [NH] <[Andrew.Kurn@northernhealth.ca](mailto:Andrew.Kurn@northernhealth.ca)>; Quibell, Doug [NH] <[Doug.Quibell@northernhealth.ca](mailto:Doug.Quibell@northernhealth.ca)>; Gray, Andrew [NH] <[Andrew.Gray@northernhealth.ca](mailto:Andrew.Gray@northernhealth.ca)>; Kim, Jong [NH] <[Jong.Kim@northernhealth.ca](mailto:Jong.Kim@northernhealth.ca)>; Fumerton, Raina [NH] <[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>; Kling, Rakel [NH] <[Rakel.Kling@northernhealth.ca](mailto:Rakel.Kling@northernhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Harder, Kari [NH] <[Kari.Harder@northernhealth.ca](mailto:Kari.Harder@northernhealth.ca)>; Northern Health Emergency Management <[HEMBC@northernhealth.ca](mailto:HEMBC@northernhealth.ca)>; IH Medical Health Officers <[IHMedicalHealthOfficers@interiorhealth.ca](mailto:IHMedicalHealthOfficers@interiorhealth.ca)>

**Cc:** EC.F MSA-Pacific / WPM-Pacific F.EC <[ec.msa-pacifique-wpm-pacific.ec@canada.ca](mailto:ec.msa-pacifique-wpm-pacific.ec@canada.ca)>; ec.cpipsuperviseur-pspcsupervisor.ec [EXT] <[ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca](mailto:ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca)>; MacDonald, Melissa (ECCC) <[Melissa.MacDonald@ec.gc.ca](mailto:Melissa.MacDonald@ec.gc.ca)>

**Subject:** RE: Heat Warning from ECC as we enter the end of this extreme heat wave

Agree with Sarah below. Also, with the heat warning in place we have been able to mobilize many communities across the Interior Region to provide heat relief for marginalized/vulnerable folks. These resources will likely be discontinued when the heat alert is discontinued so I would err on the side continuing it if we are on the fence.

Thanks,

**Silvina Mema MD MSc FRCPC**

Medical Health Officer | Interior Health  
505 Doyle Ave | Kelowna, British Columbia, V1Y 6V8  
Cell 250 215-5779 | Fax 250 868-7826  
Email: [Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)

Administrative assistant:

Simone Zakall [Simone.Zakall@interiorhealth.ca](mailto:Simone.Zakall@interiorhealth.ca)

Phone: 250 315-7651

***I respectfully acknowledge that my workplace is within the ancestral, traditional and unceded territory of the Syilx Nation***

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**From:** Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>

**Sent:** Tuesday, June 29, 2021 1:31 PM

**To:** 'Castellan,Armel (ECCC)' <[Armel.Castellan@ec.gc.ca](mailto:Armel.Castellan@ec.gc.ca)>; \_Health Heat Response LM <[Health.Heat.Response.LM@phsa.ca](mailto:Health.Heat.Response.LM@phsa.ca)>; Enns, Charmaine [VIHA] <[Charmaine.Enns@viha.ca](mailto:Charmaine.Enns@viha.ca)>; Cheryl Bloxham <[Cheryll.Bloxham@viha.ca](mailto:Cheryll.Bloxham@viha.ca)>; Diplock, Cole [VIHA] <[Cole.Diplock@viha.ca](mailto:Cole.Diplock@viha.ca)>; Nowakowski, Craig [VIHA] <[Craig.Nowakowski@viha.ca](mailto:Craig.Nowakowski@viha.ca)>; Dominic Abassi <[Dominic.Abassi@viha.ca](mailto:Dominic.Abassi@viha.ca)>; Luttrell, Gethsemane [VIHA] <[Gethsemane.Luttrell@viha.ca](mailto:Gethsemane.Luttrell@viha.ca)>; Glenn Drexhage <[Glenn.Drexhage@VIHA.CA](mailto:Glenn.Drexhage@VIHA.CA)>; Hasselback, Paul [VIHA] <[Paul.Hasselback@viha.ca](mailto:Paul.Hasselback@viha.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Yehia, Jade [VIHA] <[Jade.Yehia@viha.ca](mailto:Jade.Yehia@viha.ca)>; Jennifer Parisi <[Jennifer.Parisi@viha.ca](mailto:Jennifer.Parisi@viha.ca)>; Fyfe, Murray W. (Dr) [VIHA] <[Murray.Fyfe@viha.ca](mailto:Murray.Fyfe@viha.ca)>; Waters, Shannon [VIHA] <[shannon.waters@viha.ca](mailto:shannon.waters@viha.ca)>; Valerie Mckay <[Valerie.Mckay@viha.ca](mailto:Valerie.Mckay@viha.ca)>; Golmohammadi, Dr. Kamran <[Kamran.Golmohammadi@interiorhealth.ca](mailto:Kamran.Golmohammadi@interiorhealth.ca)>; Goodison, Karin <[Karin.Goodison@interiorhealth.ca](mailto:Karin.Goodison@interiorhealth.ca)>; Mema, Dr. Silvina <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>; Pollock, Dr. Sue <[Sue.Pollock@interiorhealth.ca](mailto:Sue.Pollock@interiorhealth.ca)>; EPH On Duty <[EPHonduty@interiorhealth.ca](mailto:EPHonduty@interiorhealth.ca)>; Population Health-Epidemiology and Surveillance Unit <[PHESU@interiorhealth.ca](mailto:PHESU@interiorhealth.ca)>; Baytalan, Greg <[Greg.Baytalan@interiorhealth.ca](mailto:Greg.Baytalan@interiorhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; HBE <[HBE@interiorhealth.ca](mailto:HBE@interiorhealth.ca)>; Deegan, Heather <[Heather.Deegan@interiorhealth.ca](mailto:Heather.Deegan@interiorhealth.ca)>; Speer, Jennifer <[Jennifer.Speer@interiorhealth.ca](mailto:Jennifer.Speer@interiorhealth.ca)>;

Hadley, Pam <[Pam.Hadley@interiorhealth.ca](mailto:Pam.Hadley@interiorhealth.ca)>; El Kurdi, Sylvia <[Sylvia.ElKurdi@interiorhealth.ca](mailto:Sylvia.ElKurdi@interiorhealth.ca)>; Kurn, Andrew [NHA] <[Andrew.Kurn@northernhealth.ca](mailto:Andrew.Kurn@northernhealth.ca)>; Quibell, Doug [NHA] <[Doug.Quibell@northernhealth.ca](mailto:Doug.Quibell@northernhealth.ca)>; Gray, Andrew [NHA] <[Andrew.Gray@northernhealth.ca](mailto:Andrew.Gray@northernhealth.ca)>; Kim, Jong [NHA] <[Jong.Kim@northernhealth.ca](mailto:Jong.Kim@northernhealth.ca)>; Fumerton, Raina [NHA] <[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>; Kling, Rakel [NHA] <[Rakel.Kling@northernhealth.ca](mailto:Rakel.Kling@northernhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Harder, Kari [NHA] <[Kari.Harder@northernhealth.ca](mailto:Kari.Harder@northernhealth.ca)>; Northern Health Emergency Management <[HEMBC@northernhealth.ca](mailto:HEMBC@northernhealth.ca)>  
**Cc:** EC.F MSA-Pacific / WPM-Pacific F.EC <[ec.msa-pacifique-wpm-pacific.ec@canada.ca](mailto:ec.msa-pacifique-wpm-pacific.ec@canada.ca)>; ec.cpipsuperviseur-pspcsupervisor.ec [EXT] <[ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca](mailto:ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca)>; MacDonald,Melissa (ECCC) <[Melissa.MacDonald@ec.gc.ca](mailto:Melissa.MacDonald@ec.gc.ca)>

**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave

Hi folks –

I really think we need to base this decision on the overnight lows at this time, rather than the high/low criteria. Until the overnight lows come down past the threshold, I think the warning should stay in effect. My two cents, which may be worth more or less depending on your perspective.

Cheers,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: [s.15\(1\)\(i\)](#)

[\*\*#DifferentTogether\*\*](#)

[\*\*#InPlainSight\*\*](#)

I often work outside of normal business hours because it suits me. There is no expectation that you will respond outside of your working hours.

---

**From:** Castellan,Armel (ECCC) [<mailto:Armel.Castellan@ec.gc.ca>]

**Sent:** Tuesday, June 29, 2021 1:21 PM

**To:** \_Health Heat Response LM; Enns, Charmaine [VIHA]; Cheryl Bloxham; Diplock, Cole [VIHA]; Nowakowski, Craig [VIHA]; Dominic Abassi; Luttrell, Gethsemane [VIHA]; Glenn Drexhage; Hasselback, Paul [VIHA]; hc.heatdivision-divisiondelachaleur.sc [EXT]; Yehia, Jade [VIHA]; Jennifer Parisi; Fyfe, Murray W. (Dr) [VIHA]; Waters, Shannon [VIHA]; Valerie McKay; Golmohammadi, Dr. Kamran [IHA]; Goodison, Karin [IHA]; Mema, Dr. Silvina [IHA]; Pollock, Dr. Sue [IHA]; EPH Emergency Response; PHESU [IHA]; Baytalan, Greg [IHA]; hc.heatdivision-divisiondelachaleur.sc [EXT]; Health Communities Program; Deegan, Heather [IHA]; Speer, Jennifer [IHA]; Hadley, Pam [IHA]; El Kurdi, Sylvia [IHA]; Kurn, Andrew [NHA]; Quibell, Doug [NHA]; Gray, Andrew [NHA]; Kim, Jong [NHA]; Fumerton, Raina [NHA]; Kling, Rakel [NHA]; hc.heatdivision-divisiondelachaleur.sc [EXT]; Harder, Kari [NHA]; Northern Health Emergency Management

**Cc:** EC.F MSA-Pacific / WPM-Pacific F.EC; ec.cpipsuperviseur-pspcsupervisor.ec [EXT]; MacDonald,Melissa (ECCC)

**Subject:** Heat Warning from ECCC as we enter the end of this extreme heat wave

**EXTERNAL SENDER.** If you suspect this message is malicious, please forward to [spam@phsa.ca](mailto:spam@phsa.ca) and **do not** open attachments or click on links.

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Hi Health Partners across the Province,

As the marine air influences the south coast of BC, the temperatures are going to ease from historic to simply warmer than seasonal averages from Wednesday onward and eventually in the interior as well (this weekend). Strictly speaking the thresholds for the onset of a regular heat warning will not continue to be reached as the high pressure "heat dome" shifts east into AB.

Metrovancouver/Victoria/VI/Sunshine coast need a 29C daytime temp and 16C overnight low, for the Fraser Valley of 33C and 17C respectively, 35 and 18 for the south interior of BC and so on.

We understand that the worst of the health implications (mortalities) have up to 3-4 day lag time from the peak heat.

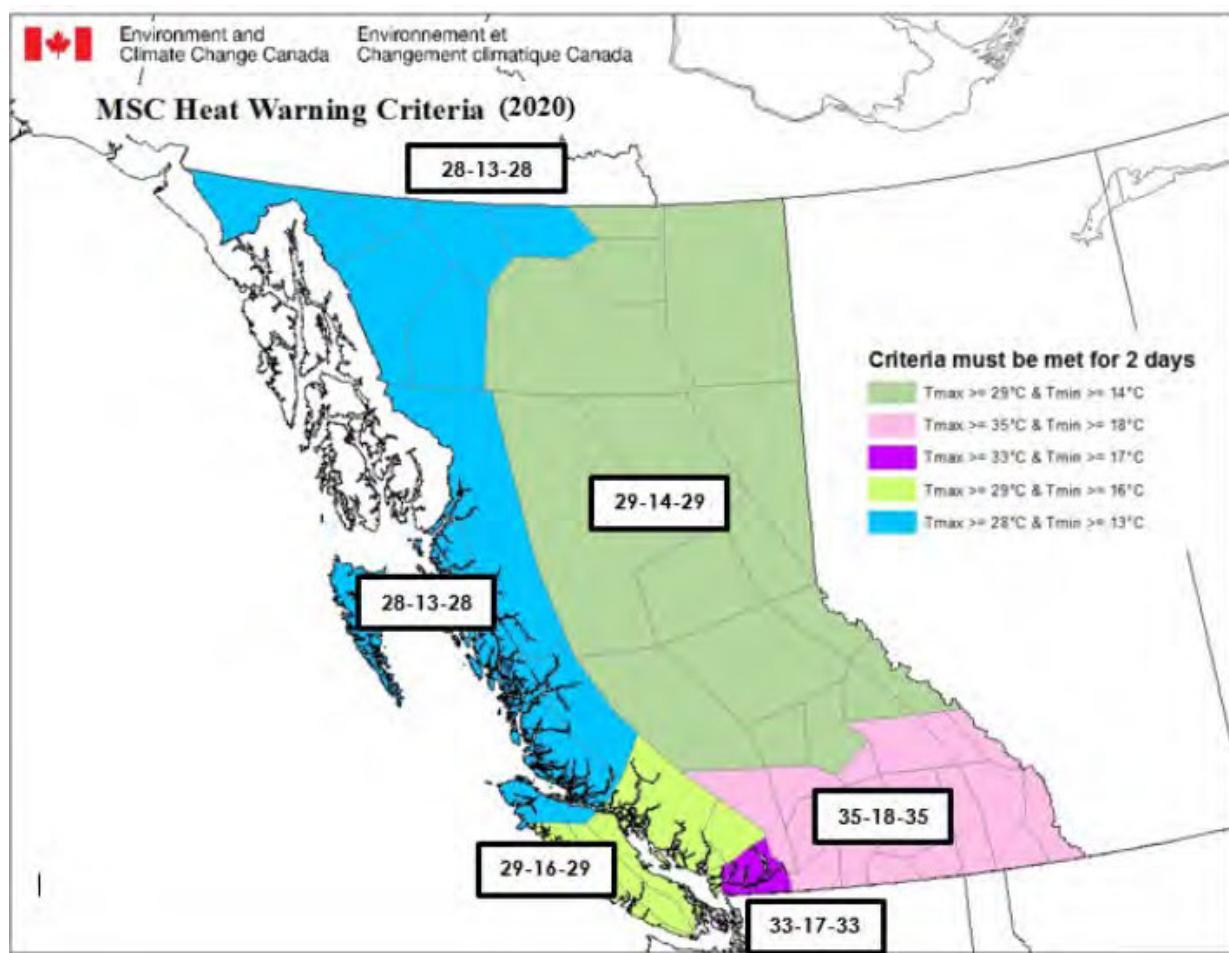
Our question to you collectively, and I appreciate we can't deliberate this for days in a proper forum, is this:

**Does it make sense to keep the heat warning if temperatures are only one degree below criteria?**

Does it help keep the attention from the public to the continued need to stay vigilant with respect to the heat illnesses?

thank you very much for your quick thoughts

Armel



**From:** Schwandt, Michael [VCH]  
**To:** Henderson, Sarah [BCCDC]; Kling, Rakel [NHA]; Swinkels, Helena [FNHA]; Goodison, Karin [IHA]; Waters, Shannon [VIHA]; 'Castellan,Armel (ECCC)'; \_Health Heat Response LM; Enns, Charmaine [VIHA]; 'Cheryl Bloxham'; Diplock, Cole [VIHA]; Nowakowski, Craig [VIHA]; 'Abassi, Dominic'; Luttrell, Gethsemane [VIHA]; 'Drexhage, Glenn'; Hasselback, Paul [VIHA]; hc.heatdivision-divisiondelachaleur.sc [EXT]; Yehia, Jade [VIHA]; 'Parisi, Jennifer J'; Fyfe, Murray W. (Dr) [VIHA]; 'McKay, Valerie'; Golmohammadi, Dr. Kamran [IHA]; Mema, Dr. Silvina [IHA]; Pollock, Dr. Sue [IHA]; 'EPH On Duty'; PHESU [IHA]; Baytalan, Greg [IHA]; hc.heatdivision-divisiondelachaleur.sc [EXT]; 'HBE'; Deegan, Heather [IHA]; Speer, Jennifer [IHA]; Hadley, Pam [IHA]; El Kurdi, Sylvia [IHA]; Kurn, Andrew [NHA]; Quibell, Doug [NHA]; Gray, Andrew [NHA]; Kim, Jong [NHA]; Fumerton, Raina [NHA]; hc.heatdivision-divisiondelachaleur.sc [EXT]; Harder, Kari [NHA]; HEMBC, North  
**Cc:** "EC.F MSA-Pacifique / WPM-Pacific F.EC"; ec.cpipsuperviseur-pspcsupervisor.ec [EXT]; 'MacDonald,Melissa (ECCC)'; Crabtree, Alexis [VCH]  
**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave  
**Date:** Wednesday, June 30, 2021 11:47:33 AM  
**Attachments:** [image001.png](#)

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**s.13(1)**

Thank you for working closely with all of us under the pressure of time (and heat).

Michael

**From:** Henderson, Sarah [BCCDC]

**Sent:** Wednesday, June 30, 2021 10:59 AM

**To:** Kling, Rakel [NHA] ; Schwandt, Michael [VCH] ; Swinkels, Helena [FNHA] ; Goodison, Karin [IHA] ; Waters, Shannon [VIHA] ; 'Castellan,Armel (ECCC)' ; \_Health Heat Response LM ; Enns, Charmaine [VIHA] ; 'Cheryl Bloxham' ; Diplock, Cole [VIHA] ; Nowakowski, Craig [VIHA] ; 'Abassi, Dominic' ; Luttrell, Gethsemane [VIHA] ; 'Drexhage, Glenn' ; Hasselback, Paul [VIHA] ; hc.heatdivision-divisiondelachaleur.sc [EXT] ; Yehia, Jade [VIHA] ; 'Parisi, Jennifer J' ; Fyfe, Murray W. (Dr) [VIHA] ; 'McKay, Valerie' ; Golmohammadi, Dr. Kamran [IHA] ; Mema, Dr. Silvina [IHA] ; Pollock, Dr. Sue [IHA] ; 'EPH On Duty' ; PHESU [IHA] ; Baytalan, Greg [IHA] ; hc.heatdivision-divisiondelachaleur.sc [EXT] ; 'HBE' ; Deegan, Heather [IHA] ; Speer, Jennifer [IHA] ; Hadley, Pam [IHA] ; El Kurdi, Sylvia [IHA] ; Kurn, Andrew [NHA] ; Quibell, Doug [NHA] ; Gray, Andrew [NHA] ; Kim, Jong [NHA] ; Fumerton, Raina [NHA] ; hc.heatdivision-divisiondelachaleur.sc [EXT] ; Harder, Kari [NHA] ; HEMBC, North

**Cc:** 'EC.F MSA-Pacifique / WPM-Pacific F.EC' ; ec.cpipsuperviseur-pspcsupervisor.ec [EXT] ; 'MacDonald,Melissa (ECCC)' ; Crabtree, Alexis [VCH]

**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave

Hi all, sorry to keep filling up inboxes, but I want to make sure we get it right. This is what I am hearing:

**s.13(1)**



Does this make sense to all?

Cheers,  
Sarah

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Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: **s.15(1)(i)**

**#DifferentTogether**

**#InPlainSight**

I often work outside of normal business hours because it suits me. There is no expectation that you will respond outside of your working hours.

---

**From:** Kling, Rakel [NH] [mailto:[Rakel.Kling@northernhealth.ca](mailto:Rakel.Kling@northernhealth.ca)]  
**Sent:** Wednesday, June 30, 2021 10:40 AM  
**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave  
Agree with Michael's further qualification, just because it has reached a threshold low overnight it will still take time for temperatures to cool inside. I would suggest one or two nights.  
Rakel

---

**From:** Schwandt, Michael [VCH] <[michael.schwandt@vch.ca](mailto:michael.schwandt@vch.ca)>  
**Sent:** Wednesday, June 30, 2021 10:06 AM  
**To:** Swinkels, Helena [FNHA] <[Helena.Swinkels@fnha.ca](mailto:Helena.Swinkels@fnha.ca)>; Goodison, Karin <[Karin.Goodison@interiorhealth.ca](mailto:Karin.Goodison@interiorhealth.ca)>;  
Henderson, Sarah <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>; Waters, Shannon [VIHA] <[shannon.waters@viha.ca](mailto:shannon.waters@viha.ca)>;  
'Castellan,Armel (ECCC)' <[Armel.Castellan@ec.gc.ca](mailto:Armel.Castellan@ec.gc.ca)>; \_ Health Heat Response LM  
<[Health.Heat.Response.LM@phsa.ca](mailto:Health.Heat.Response.LM@phsa.ca)>; Enns, Charmaine [VIHA] <[Charmaine.Enns@viha.ca](mailto:Charmaine.Enns@viha.ca)>; 'Cheryl Bloxham'  
<[Cheryll.Bloxham@viha.ca](mailto:Cheryll.Bloxham@viha.ca)>; Diplock, Cole [VIHA] <[Cole.Diplock@viha.ca](mailto:Cole.Diplock@viha.ca)>; Nowakowski, Craig [VIHA]  
<[Craig.Nowakowski@viha.ca](mailto:Craig.Nowakowski@viha.ca)>; 'Abassi, Dominic' <[Dominic.Abassi@VIHA.CA](mailto:Dominic.Abassi@VIHA.CA)>; Luttrell, Gethsemene [VIHA]  
<[Gethsemene.Luttrell@viha.ca](mailto:Gethsemene.Luttrell@viha.ca)>; 'Drexhage, Glenn' <[Glenn.Drexhage@VIHA.CA](mailto:Glenn.Drexhage@VIHA.CA)>; Hasselback, Paul [VIHA]  
<[Paul.Hasselback@viha.ca](mailto:Paul.Hasselback@viha.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Yehia, Jade [VIHA] <[Jade.Yehia@viha.ca](mailto:Jade.Yehia@viha.ca)>; 'Parisi, Jennifer J'  
<[Jennifer.Parisi@VIHA.CA](mailto:Jennifer.Parisi@VIHA.CA)>; Fyfe, Murray W. (Dr) [VIHA] <[Murray.Fyfe@viha.ca](mailto:Murray.Fyfe@viha.ca)>; 'McKay, Valerie'  
<[Valerie.Mckay@VIHA.CA](mailto:Valerie.Mckay@VIHA.CA)>; Golmohammadi, Dr. Kamran <[Kamran.Golmohammadi@interiorhealth.ca](mailto:Kamran.Golmohammadi@interiorhealth.ca)>; Mema, Dr.  
Silvina <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>; Pollock, Dr. Sue <[Sue.Pollock@interiorhealth.ca](mailto:Sue.Pollock@interiorhealth.ca)>; 'EPH On Duty'  
<[EPHondustry@interiorhealth.ca](mailto:EPHondustry@interiorhealth.ca)>; PHEsU [IHA] <[PHESU@interiorhealth.ca](mailto:PHESU@interiorhealth.ca)>; Baytalan, Greg  
<[Greg.Baytalan@interiorhealth.ca](mailto:Greg.Baytalan@interiorhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; 'HBE' <[HBE@interiorhealth.ca](mailto:HBE@interiorhealth.ca)>; Deegan, Heather  
<[Heather.Deegan@interiorhealth.ca](mailto:Heather.Deegan@interiorhealth.ca)>; Speer, Jennifer [IHA] <[Jennifer.Speer@interiorhealth.ca](mailto:Jennifer.Speer@interiorhealth.ca)>; Hadley, Pam  
<[Pam.Hadley@interiorhealth.ca](mailto:Pam.Hadley@interiorhealth.ca)>; El Kurdi, Sylvia <[Sylvia.ElKurdi@interiorhealth.ca](mailto:Sylvia.ElKurdi@interiorhealth.ca)>; Kurc, Andrew [NH]  
<[Andrew.Kurc@northernhealth.ca](mailto:Andrew.Kurc@northernhealth.ca)>; Quibell, Doug [NH] <[Doug.Quibell@northernhealth.ca](mailto:Doug.Quibell@northernhealth.ca)>; Gray, Andrew [NH]  
<[Andrew.Gray@northernhealth.ca](mailto:Andrew.Gray@northernhealth.ca)>; Kim, Jong [NH] <[Jong.Kim@northernhealth.ca](mailto:Jong.Kim@northernhealth.ca)>; Fumerton, Raina [NH]  
<[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>; Kling, Rakel [NH] <[Rakel.Kling@northernhealth.ca](mailto:Rakel.Kling@northernhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Harder, Kari [NH]  
<[Kari.Harder@northernhealth.ca](mailto:Kari.Harder@northernhealth.ca)>; HEMBC, North <[HEMBC@northernhealth.ca](mailto:HEMBC@northernhealth.ca)>  
**Cc:** 'EC.F MSA-Pacifique / WPM-Pacific F.EC' <[ec.msa-pacifique-wpm-pacific.ec@canada.ca](mailto:ec.msa-pacifique-wpm-pacific.ec@canada.ca)>; ec.cpipsuperviseur-pspcsupervisor.ec [EXT] <[ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca](mailto:ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca)>; 'MacDonald,Melissa (ECCC)'  
<[Melissa.MacDonald@ec.gc.ca](mailto:Melissa.MacDonald@ec.gc.ca)>; Crabtree, Alexis [VCH] <[Alexis.Crabtree@vch.ca](mailto:Alexis.Crabtree@vch.ca)>  
**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave  
Further, s.13(1)

Michael

---

**From:** Dr.Helena Swinkels <[Helena.Swinkels@fnha.ca](mailto:Helena.Swinkels@fnha.ca)>  
**Sent:** Wednesday, June 30, 2021 9:52 AM  
**To:** Schwandt, Michael [VCH] <[michael.schwandt@vch.ca](mailto:michael.schwandt@vch.ca)>; Goodison, Karin [IHA]  
<[Karin.Goodison@interiorhealth.ca](mailto:Karin.Goodison@interiorhealth.ca)>; Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>; Waters, Shannon [VIHA] <[shannon.waters@viha.ca](mailto:shannon.waters@viha.ca)>; 'Castellan,Armel (ECCC)' <[Armel.Castellan@ec.gc.ca](mailto:Armel.Castellan@ec.gc.ca)>; \_ Health Heat Response LM  
<[Health.Heat.Response.LM@phsa.ca](mailto:Health.Heat.Response.LM@phsa.ca)>; Enns, Charmaine [VIHA] <[Charmaine.Enns@viha.ca](mailto:Charmaine.Enns@viha.ca)>; 'Cheryl Bloxham'  
<[Cheryll.Bloxham@viha.ca](mailto:Cheryll.Bloxham@viha.ca)>; Diplock, Cole [VIHA] <[Cole.Diplock@viha.ca](mailto:Cole.Diplock@viha.ca)>; Nowakowski, Craig [VIHA]  
<[Craig.Nowakowski@viha.ca](mailto:Craig.Nowakowski@viha.ca)>; 'Abassi, Dominic' <[Dominic.Abassi@VIHA.CA](mailto:Dominic.Abassi@VIHA.CA)>; Luttrell, Gethsemene [VIHA]  
<[Gethsemene.Luttrell@viha.ca](mailto:Gethsemene.Luttrell@viha.ca)>; 'Drexhage, Glenn' <[Glenn.Drexhage@VIHA.CA](mailto:Glenn.Drexhage@VIHA.CA)>; Hasselback, Paul [VIHA]  
<[Paul.Hasselback@viha.ca](mailto:Paul.Hasselback@viha.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Yehia, Jade [VIHA] <[Jade.Yehia@viha.ca](mailto:Jade.Yehia@viha.ca)>; 'Parisi, Jennifer J'  
<[Jennifer.Parisi@VIHA.CA](mailto:Jennifer.Parisi@VIHA.CA)>; Fyfe, Murray W. (Dr) [VIHA] <[Murray.Fyfe@viha.ca](mailto:Murray.Fyfe@viha.ca)>; 'McKay, Valerie'  
<[Valerie.Mckay@VIHA.CA](mailto:Valerie.Mckay@VIHA.CA)>; Golmohammadi, Dr. Kamran [IHA] <[Kamran.Golmohammadi@interiorhealth.ca](mailto:Kamran.Golmohammadi@interiorhealth.ca)>;  
Mema, Dr. Silvina [IHA] <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>; Pollock, Dr. Sue [IHA] <[Sue.Pollock@interiorhealth.ca](mailto:Sue.Pollock@interiorhealth.ca)>;  
'EPH On Duty' <[EPHondustry@interiorhealth.ca](mailto:EPHondustry@interiorhealth.ca)>; PHEsU [IHA] <[PHESU@interiorhealth.ca](mailto:PHESU@interiorhealth.ca)>; Baytalan, Greg [IHA]

<[Greg.Baytalan@interiorhealth.ca](mailto:Greg.Baytalan@interiorhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; 'HBE' <[HBE@interiorhealth.ca](mailto:HBE@interiorhealth.ca)>; Deegan, Heather [IHA]  
<[Heather.Deegan@interiorhealth.ca](mailto:Heather.Deegan@interiorhealth.ca)>; Speer, Jennifer [IHA] <[Jennifer.Speer@interiorhealth.ca](mailto:Jennifer.Speer@interiorhealth.ca)>; Hadley, Pam [IHA]  
<[Pam.Hadley@interiorhealth.ca](mailto:Pam.Hadley@interiorhealth.ca)>; El Kurdi, Sylvia [IHA] <[Sylvia.ElKurdi@interiorhealth.ca](mailto:Sylvia.ElKurdi@interiorhealth.ca)>; Kurc, Andrew [NHA]  
<[Andrew.Kurc@northernhealth.ca](mailto:Andrew.Kurc@northernhealth.ca)>; Quibell, Doug [NHA] <[Doug.Quibell@northernhealth.ca](mailto:Doug.Quibell@northernhealth.ca)>; Gray, Andrew [NHA]  
<[Andrew.Gray@northernhealth.ca](mailto:Andrew.Gray@northernhealth.ca)>; Kim, Jong [NHA] <[Jong.Kim@northernhealth.ca](mailto:Jong.Kim@northernhealth.ca)>; Fumerton, Raina [NHA]  
<[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>; Kling, Rakel [NHA] <[Rakel.Kling@northernhealth.ca](mailto:Rakel.Kling@northernhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Harder, Kari [NHA]  
<[Kari.Harder@northernhealth.ca](mailto:Kari.Harder@northernhealth.ca)>; 'Northern Health Emergency Management' <[HEMBC@northernhealth.ca](mailto:HEMBC@northernhealth.ca)>  
**Cc:** 'EC.F MSA-Pacific / WPM-Pacific F.EC' <[ec.msa-pacifique-wpm-pacific.ec@canada.ca](mailto:ec.msa-pacifique-wpm-pacific.ec@canada.ca)>; ec.cpipsuperviseur-pspcsupervisor.ec [EXT] <[ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca](mailto:ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca)>; 'MacDonald,Melissa (ECCC)'  
<[Melissa.MacDonald@ec.gc.ca](mailto:Melissa.MacDonald@ec.gc.ca)>; Crabtree, Alexis [VCH] <[Alexis.Crabtree@vch.ca](mailto:Alexis.Crabtree@vch.ca)>

**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave

**EXTERNAL SENDER.** If you suspect this message is malicious, please forward to [spam@phsa.ca](mailto:spam@phsa.ca) and **do not** open attachments or click on links.

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### s.13(1)

Helena

Helena Swinkels MD MHSc FCFP FRCPC Phone: 604-661-3819| Fax: 604-913-2081|Cell: [s.15\(1\)\(l\)](#)

"Resilience may not lie within individuals, but between individuals" @DrMattWalton

**From:** Schwandt, Michael [VCH] <[michael.schwandt@vch.ca](mailto:michael.schwandt@vch.ca)>

**Sent:** Wednesday, June 30, 2021 9:50 AM

**To:** Goodison, Karin [IHA] <[Karin.Goodison@interiorhealth.ca](mailto:Karin.Goodison@interiorhealth.ca)>; Henderson, Sarah [BCCDC]  
<[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>; Waters, Shannon [VIHA] <[shannon.waters@viha.ca](mailto:shannon.waters@viha.ca)>; 'Castellan,Armel (ECCC)'  
<[Armel.Castellan@ec.gc.ca](mailto:Armel.Castellan@ec.gc.ca)>; \_Health Heat Response LM <[Health.Heat.Response.LM@phsa.ca](mailto:Health.Heat.Response.LM@phsa.ca)>; Enns, Charmaine  
[VIHA] <[Charmaine.Enns@viha.ca](mailto:Charmaine.Enns@viha.ca)>; Cheryl Bloxham <[Cherryl.Bloxham@viha.ca](mailto:Cherryl.Bloxham@viha.ca)>; Diplock, Cole [VIHA]  
<[Cole.Diplock@viha.ca](mailto:Cole.Diplock@viha.ca)>; Nowakowski, Craig [VIHA] <[Craig.Nowakowski@viha.ca](mailto:Craig.Nowakowski@viha.ca)>; Abassi, Dominic  
<[Dominic.Abassi@VIHA.CA](mailto:Dominic.Abassi@VIHA.CA)>; Luttrell, Gethsemane [VIHA] <[Gethsemane.Luttrell@viha.ca](mailto:Gethsemane.Luttrell@viha.ca)>; Drexhage, Glenn  
<[Glenn.Drexhage@VIHA.CA](mailto:Glenn.Drexhage@VIHA.CA)>; Hasselback, Paul [VIHA] <[Paul.Hasselback@viha.ca](mailto:Paul.Hasselback@viha.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Yehia, Jade [VIHA]  
<[Jade.Yehia@viha.ca](mailto:Jade.Yehia@viha.ca)>; Parisi, Jennifer J <[Jennifer.Parisi@VIHA.CA](mailto:Jennifer.Parisi@VIHA.CA)>; Fyfe, Murray W. (Dr) [VIHA]  
<[Murray.Fyfe@viha.ca](mailto:Murray.Fyfe@viha.ca)>; McKay, Valerie <[Valerie.Mckay@VIHA.CA](mailto:Valerie.Mckay@VIHA.CA)>; Golmohammadi, Dr. Kamran [IHA]  
<[Kamran.Golmohammadi@interiorhealth.ca](mailto:Kamran.Golmohammadi@interiorhealth.ca)>; Mema, Dr. Silvina [IHA] <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>; Pollock,  
Dr. Sue [IHA] <[Sue.Pollock@interiorhealth.ca](mailto:Sue.Pollock@interiorhealth.ca)>; EPH On Duty <[EPHonduty@interiorhealth.ca](mailto:EPHonduty@interiorhealth.ca)>; PHESU [IHA]  
<[PHESU@interiorhealth.ca](mailto:PHESU@interiorhealth.ca)>; Baytalan, Greg [IHA] <[Greg.Baytalan@interiorhealth.ca](mailto:Greg.Baytalan@interiorhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; HBE <[HBE@interiorhealth.ca](mailto:HBE@interiorhealth.ca)>;  
Deegan, Heather [IHA] <[Heather.Deegan@interiorhealth.ca](mailto:Heather.Deegan@interiorhealth.ca)>; Speer, Jennifer [IHA]  
<[Jennifer.Speer@interiorhealth.ca](mailto:Jennifer.Speer@interiorhealth.ca)>; Hadley, Pam [IHA] <[Pam.Hadley@interiorhealth.ca](mailto:Pam.Hadley@interiorhealth.ca)>; El Kurdi, Sylvia [IHA]  
<[Sylvia.ElKurdi@interiorhealth.ca](mailto:Sylvia.ElKurdi@interiorhealth.ca)>; Kurc, Andrew [NHA] <[Andrew.Kurc@northernhealth.ca](mailto:Andrew.Kurc@northernhealth.ca)>; Quibell, Doug [NHA]  
<[Doug.Quibell@northernhealth.ca](mailto:Doug.Quibell@northernhealth.ca)>; Gray, Andrew [NHA] <[Andrew.Gray@northernhealth.ca](mailto:Andrew.Gray@northernhealth.ca)>; Kim, Jong [NHA]  
<[Jong.Kim@northernhealth.ca](mailto:Jong.Kim@northernhealth.ca)>; Fumerton, Raina [NHA] <[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>; Kling, Rakel [NHA]  
<[Rakel.Kling@northernhealth.ca](mailto:Rakel.Kling@northernhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Harder, Kari [NHA] <[Kari.Harder@northernhealth.ca](mailto:Kari.Harder@northernhealth.ca)>; Northern Health  
Emergency Management <[HEMBC@northernhealth.ca](mailto:HEMBC@northernhealth.ca)>

**Cc:** EC.F MSA-Pacific / WPM-Pacific F.EC <[ec.msa-pacifique-wpm-pacific.ec@canada.ca](mailto:ec.msa-pacifique-wpm-pacific.ec@canada.ca)>; ec.cpipsuperviseur-pspcsupervisor.ec [EXT] <[ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca](mailto:ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca)>; MacDonald,Melissa (ECCC)  
<[Melissa.MacDonald@ec.gc.ca](mailto:Melissa.MacDonald@ec.gc.ca)>; Crabtree, Alexis [VCH] <[Alexis.Crabtree@vch.ca](mailto:Alexis.Crabtree@vch.ca)>

**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave

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### s.13(1)

Michael

**From:** Goodison, Karin <[Karin.Goodison@interiorhealth.ca](mailto:Karin.Goodison@interiorhealth.ca)>

**Sent:** Wednesday, June 30, 2021 9:33 AM

**To:** Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>; Waters, Shannon [VIHA] <[shannon.waters@viha.ca](mailto:shannon.waters@viha.ca)>; Schwandt, Michael [VCH] <[michael.schwandt@vch.ca](mailto:michael.schwandt@vch.ca)>; 'Castellan,Armel (ECCC)' <[Armel.Castellan@ec.gc.ca](mailto:Armel.Castellan@ec.gc.ca)>; \_Health Heat Response LM <[Health.Heat.Response.LM@phsa.ca](mailto:Health.Heat.Response.LM@phsa.ca)>; Enns, Charmaine [VIHA] <[Charmaine.Enns@viha.ca](mailto:Charmaine.Enns@viha.ca)>; Cheryl Bloxham <[Cheryll.Bloxham@viha.ca](mailto:Cheryll.Bloxham@viha.ca)>; Diplock, Cole [VIHA] <[Cole.Diplock@viha.ca](mailto:Cole.Diplock@viha.ca)>; Nowakowski, Craig [VIHA] <[Craig.Nowakowski@viha.ca](mailto:Craig.Nowakowski@viha.ca)>; Abassi, Dominic <[Dominic.Abassi@VIHA.CA](mailto:Dominic.Abassi@VIHA.CA)>; Luttrell, Gethsemane [VIHA] <[Gethsemane.Luttrell@viha.ca](mailto:Gethsemane.Luttrell@viha.ca)>; Drexhage, Glenn <[Glenn.Drexhage@VIHA.CA](mailto:Glenn.Drexhage@VIHA.CA)>; Hasselback, Paul [VIHA] <[Paul.Hasselback@viha.ca](mailto:Paul.Hasselback@viha.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Yehia, Jade [VIHA] <[Jade.Yehia@viha.ca](mailto:Jade.Yehia@viha.ca)>; Parisi, Jennifer J <[Jennifer.Parisi@VIHA.CA](mailto:Jennifer.Parisi@VIHA.CA)>; Fyfe, Murray W. (Dr) [VIHA] <[Murray.Fyfe@viha.ca](mailto:Murray.Fyfe@viha.ca)>; McKay, Valerie <[Valerie.Mckay@VIHA.CA](mailto:Valerie.Mckay@VIHA.CA)>; Golmohammadi, Dr. Kamran [IHA] <[Kamran.Golmohammadi@interiorhealth.ca](mailto:Kamran.Golmohammadi@interiorhealth.ca)>; Mema, Dr. Silvina [IHA] <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>; Pollock, Dr. Sue [IHA] <[Sue.Pollock@interiorhealth.ca](mailto:Sue.Pollock@interiorhealth.ca)>; EPH On Duty <[EPHonDuty@interiorhealth.ca](mailto:EPHonDuty@interiorhealth.ca)>; PHESU [IHA] <[PHESU@interiorhealth.ca](mailto:PHESU@interiorhealth.ca)>; Baytalan, Greg [IHA] <[Greg.Baytalan@interiorhealth.ca](mailto:Greg.Baytalan@interiorhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; HBE <[HBE@interiorhealth.ca](mailto:HBE@interiorhealth.ca)>; Deegan, Heather [IHA] <[Heather.Deegan@interiorhealth.ca](mailto:Heather.Deegan@interiorhealth.ca)>; Speer, Jennifer [IHA] <[Jennifer.Speer@interiorhealth.ca](mailto:Jennifer.Speer@interiorhealth.ca)>; Hadley, Pam [IHA] <[Pam.Hadley@interiorhealth.ca](mailto:Pam.Hadley@interiorhealth.ca)>; El Kurdi, Sylvia [IHA] <[Sylvia.ElKurdi@interiorhealth.ca](mailto:Sylvia.ElKurdi@interiorhealth.ca)>; Kurn, Andrew [NHA] <[Andrew.Kurn@northernhealth.ca](mailto:Andrew.Kurn@northernhealth.ca)>; Quibell, Doug [NHA] <[Doug.Quibell@northernhealth.ca](mailto:Doug.Quibell@northernhealth.ca)>; Gray, Andrew [NHA] <[Andrew.Gray@northernhealth.ca](mailto:Andrew.Gray@northernhealth.ca)>; Kim, Jong [NHA] <[Jong.Kim@northernhealth.ca](mailto:Jong.Kim@northernhealth.ca)>; Fumerton, Raina [NHA] <[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>; Kling, Rakel [NHA] <[Rakel.Kling@northernhealth.ca](mailto:Rakel.Kling@northernhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Harder, Kari [NHA] <[Kari.Harder@northernhealth.ca](mailto:Kari.Harder@northernhealth.ca)>; Northern Health Emergency Management <[HEMBC@northernhealth.ca](mailto:HEMBC@northernhealth.ca)>

**Cc:** EC.F MSA-Pacific / WPM-Pacific F.EC <[ec.msa-pacifique-wpm-pacific.ec@canada.ca](mailto:ec.msa-pacifique-wpm-pacific.ec@canada.ca)>; ec.cpipsuperviseur-pspcsupervisor.ec [EXT] <[ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca](mailto:ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca)>; MacDonald,Melissa (ECCC) <[Melissa.MacDonald@ec.gc.ca](mailto:Melissa.MacDonald@ec.gc.ca)>; Crabtree, Alexis [VCH] <[Alexis.Crabtree@vch.ca](mailto:Alexis.Crabtree@vch.ca)>

**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave

**S.13(1)**

Karin

---

**From:** Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>

**Sent:** Wednesday, June 30, 2021 9:21 AM

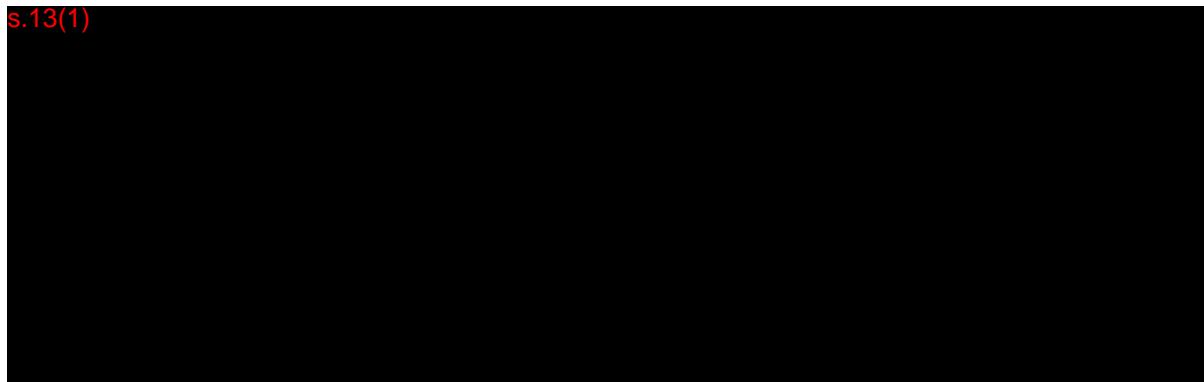
**To:** Waters, Shannon [VIHA] <[shannon.waters@viha.ca](mailto:shannon.waters@viha.ca)>; Schwandt, Michael [VCH] <[michael.schwandt@vch.ca](mailto:michael.schwandt@vch.ca)>; 'Castellan,Armel (ECCC)' <[Armel.Castellan@ec.gc.ca](mailto:Armel.Castellan@ec.gc.ca)>; \_Health Heat Response LM <[Health.Heat.Response.LM@phsa.ca](mailto:Health.Heat.Response.LM@phsa.ca)>; Enns, Charmaine [VIHA] <[Charmaine.Enns@viha.ca](mailto:Charmaine.Enns@viha.ca)>; Cheryl Bloxham <[Cheryll.Bloxham@viha.ca](mailto:Cheryll.Bloxham@viha.ca)>; Diplock, Cole [VIHA] <[Cole.Diplock@viha.ca](mailto:Cole.Diplock@viha.ca)>; Nowakowski, Craig [VIHA] <[Craig.Nowakowski@viha.ca](mailto:Craig.Nowakowski@viha.ca)>; Abassi, Dominic <[Dominic.Abassi@VIHA.CA](mailto:Dominic.Abassi@VIHA.CA)>; Luttrell, Gethsemane [VIHA] <[Gethsemane.Luttrell@viha.ca](mailto:Gethsemane.Luttrell@viha.ca)>; Drexhage, Glenn <[Glenn.Drexhage@VIHA.CA](mailto:Glenn.Drexhage@VIHA.CA)>; Hasselback, Paul [VIHA] <[Paul.Hasselback@viha.ca](mailto:Paul.Hasselback@viha.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Yehia, Jade [VIHA] <[Jade.Yehia@viha.ca](mailto:Jade.Yehia@viha.ca)>; Parisi, Jennifer J <[Jennifer.Parisi@VIHA.CA](mailto:Jennifer.Parisi@VIHA.CA)>; Fyfe, Murray W. (Dr) [VIHA] <[Murray.Fyfe@viha.ca](mailto:Murray.Fyfe@viha.ca)>; McKay, Valerie <[Valerie.Mckay@VIHA.CA](mailto:Valerie.Mckay@VIHA.CA)>; Golmohammadi, Dr. Kamran <[Kamran.Golmohammadi@interiorhealth.ca](mailto:Kamran.Golmohammadi@interiorhealth.ca)>; Goodison, Karin <[Karin.Goodison@interiorhealth.ca](mailto:Karin.Goodison@interiorhealth.ca)>; Mema, Dr. Silvina <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>; Pollock, Dr. Sue <[Sue.Pollock@interiorhealth.ca](mailto:Sue.Pollock@interiorhealth.ca)>; EPH On Duty <[EPHonDuty@interiorhealth.ca](mailto:EPHonDuty@interiorhealth.ca)>; Population Health-Epidemiology and Surveillance Unit <[PHESU@interiorhealth.ca](mailto:PHESU@interiorhealth.ca)>; Baytalan, Greg <[Greg.Baytalan@interiorhealth.ca](mailto:Greg.Baytalan@interiorhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; HBE <[HBE@interiorhealth.ca](mailto:HBE@interiorhealth.ca)>; Deegan, Heather <[Heather.Deegan@interiorhealth.ca](mailto:Heather.Deegan@interiorhealth.ca)>; Speer, Jennifer <[Jennifer.Speer@interiorhealth.ca](mailto:Jennifer.Speer@interiorhealth.ca)>; Hadley, Pam <[Pam.Hadley@interiorhealth.ca](mailto:Pam.Hadley@interiorhealth.ca)>; El Kurdi, Sylvia <[Sylvia.ElKurdi@interiorhealth.ca](mailto:Sylvia.ElKurdi@interiorhealth.ca)>; Kurn, Andrew [NHA] <[Andrew.Kurn@northernhealth.ca](mailto:Andrew.Kurn@northernhealth.ca)>; Quibell, Doug [NHA] <[Doug.Quibell@northernhealth.ca](mailto:Doug.Quibell@northernhealth.ca)>; Gray, Andrew [NHA] <[Andrew.Gray@northernhealth.ca](mailto:Andrew.Gray@northernhealth.ca)>; Kim, Jong [NHA] <[Jong.Kim@northernhealth.ca](mailto:Jong.Kim@northernhealth.ca)>; Fumerton, Raina [NHA] <[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>; Kling, Rakel [NHA] <[Rakel.Kling@northernhealth.ca](mailto:Rakel.Kling@northernhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Harder, Kari [NHA] <[Kari.Harder@northernhealth.ca](mailto:Kari.Harder@northernhealth.ca)>; Northern Health Emergency Management <[HEMBC@northernhealth.ca](mailto:HEMBC@northernhealth.ca)>

**Cc:** EC.F MSA-Pacific / WPM-Pacific F.EC <[ec.msa-pacifique-wpm-pacific.ec@canada.ca](mailto:ec.msa-pacifique-wpm-pacific.ec@canada.ca)>; ec.cpipsuperviseur-pspcsupervisor.ec [EXT] <[ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca](mailto:ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca)>; MacDonald,Melissa (ECCC) <[Melissa.MacDonald@ec.gc.ca](mailto:Melissa.MacDonald@ec.gc.ca)>; Crabtree, Alexis [VCH] <[Alexis.Crabtree@vch.ca](mailto:Alexis.Crabtree@vch.ca)>

**Subject:** Re: Heat Warning from ECCC as we enter the end of this extreme heat wave

Hi all –

s.13(1)



Happy to meet to discuss later today, or to continue the conversation by email.

Cheers,

Sarah

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Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: s.15(1)(l)

[#DifferentTogether](#)

[#InPlainSight](#)

---

**From:** "Waters, Shannon (Dr)" <[Shannon.Waters@VIHA.CA](mailto:Shannon.Waters@VIHA.CA)>

**Date:** Wednesday, June 30, 2021 at 9:13 AM

**To:** "Schwandt, Michael [VCH]" <[michael.schwandt@vch.ca](mailto:michael.schwandt@vch.ca)>, "Henderson, Sarah [BCCDC]" <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>, "Castellan,Armel (ECCC)" <[Armel.Castellan@ec.gc.ca](mailto:Armel.Castellan@ec.gc.ca)>, \_Health Heat Response LM <[Health.Heat.Response.LM@phsa.ca](mailto:Health.Heat.Response.LM@phsa.ca)>, "Enns, Charmaine [VIHA]" <[Charmaine.Enns@viha.ca](mailto:Charmaine.Enns@viha.ca)>, Cheryl Bloxham <[Cheryll.Bloxham@viha.ca](mailto:Cheryll.Bloxham@viha.ca)>, "Diplock, Cole [VIHA]" <[Cole.Diplock@viha.ca](mailto:Cole.Diplock@viha.ca)>, "Nowakowski, Craig [VIHA]" <[Craig.Nowakowski@viha.ca](mailto:Craig.Nowakowski@viha.ca)>, "Abassi, Dominic" <[Dominic.Abassi@VIHA.CA](mailto:Dominic.Abassi@VIHA.CA)>, "Luttrell, Gethsemane [VIHA]" <[Gethsemane.Luttrell@viha.ca](mailto:Gethsemane.Luttrell@viha.ca)>, "Drexhage, Glenn" <[Glenn.Drexhage@VIHA.CA](mailto:Glenn.Drexhage@VIHA.CA)>, "Hasselback, Paul [VIHA]" <[Paul.Hasselback@viha.ca](mailto:Paul.Hasselback@viha.ca)>, "hc heatdivision-divisiondelachaleur.sc [EXT]" <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>, "Yehia, Jade [VIHA]" <[Jade.Yehia@viha.ca](mailto:Jade.Yehia@viha.ca)>, "Parisi, Jennifer J" <[Jennifer.Parisi@VIHA.CA](mailto:Jennifer.Parisi@VIHA.CA)>, "Fyfe, Murray W. (Dr) [VIHA]" <[Murray.Fyfe@viha.ca](mailto:Murray.Fyfe@viha.ca)>, "McKay, Valerie" <[Valerie.Mckay@VIHA.CA](mailto:Valerie.Mckay@VIHA.CA)>, "Golmohammadi, Dr. Kamran [IHA]" <[Kamran.Golmohammadi@interiorhealth.ca](mailto:Kamran.Golmohammadi@interiorhealth.ca)>, "Goodison, Karin [IHA]" <[Karin.Goodison@interiorhealth.ca](mailto:Karin.Goodison@interiorhealth.ca)>, "Mema, Dr. Silvina [IHA]" <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>, "Pollock, Dr. Sue [IHA]" <[Sue.Pollock@interiorhealth.ca](mailto:Sue.Pollock@interiorhealth.ca)>, EPH Emergency Response <[EPHEmergencyResponse@interiorhealth.ca](mailto:EPHEmergencyResponse@interiorhealth.ca)>, "PHESU [IHA]" <[PHESU@interiorhealth.ca](mailto:PHESU@interiorhealth.ca)>, "Baytalan, Greg [IHA]" <[Greg.Baytalan@interiorhealth.ca](mailto:Greg.Baytalan@interiorhealth.ca)>, "hc.heatdivision-divisiondelachaleur.sc [EXT]" <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>, Health Communities Program <[hbe@interiorhealth.ca](mailto:hbe@interiorhealth.ca)>, "Deegan, Heather [IHA]" <[Heather.Deegan@interiorhealth.ca](mailto:Heather.Deegan@interiorhealth.ca)>, "Speer, Jennifer [IHA]" <[Jennifer.Speer@interiorhealth.ca](mailto:Jennifer.Speer@interiorhealth.ca)>, "Hadley, Pam [IHA]" <[Pam.Hadley@interiorhealth.ca](mailto:Pam.Hadley@interiorhealth.ca)>, "El Kurdi, Sylvia [IHA]" <[Sylvia.ElKurdi@interiorhealth.ca](mailto:Sylvia.ElKurdi@interiorhealth.ca)>, "Kurc, Andrew [NHA]" <[Andrew.Kurc@northernhealth.ca](mailto:Andrew.Kurc@northernhealth.ca)>, "Quibell, Doug [NHA]" <[Doug.Quibell@northernhealth.ca](mailto:Doug.Quibell@northernhealth.ca)>, "Gray, Andrew [NHA]" <[Andrew.Gray@northernhealth.ca](mailto:Andrew.Gray@northernhealth.ca)>, "Kim, Jong [NHA]" <[Jong.Kim@northernhealth.ca](mailto:Jong.Kim@northernhealth.ca)>, "Fumerton, Raina [NHA]" <[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>, "Kling, Rakel [NHA]" <[Rakel.Kling@northernhealth.ca](mailto:Rakel.Kling@northernhealth.ca)>, "hc heatdivision-divisiondelachaleur.sc [EXT]" <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>

[divisiondelachaleur.sc@canada.ca](mailto:divisiondelachaleur.sc@canada.ca), "Harder, Kari [NHA]" <[Kari.Harder@northernhealth.ca](mailto:Kari.Harder@northernhealth.ca)>, Northern Health Emergency Management <[HEMBC@northernhealth.ca](mailto:HEMBC@northernhealth.ca)>

**Cc:** "EC.F MSA-Pacific / WPM-Pacific F.EC" <[ec.msa-pacifique-wpm-pacific.ec@canada.ca](mailto:ec.msa-pacifique-wpm-pacific.ec@canada.ca)>, "ec.cpipsuperviseur-pspcsupervisor.ec [EXT]" <[ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca](mailto:ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca)>, "MacDonald,Melissa (ECCC)" <[Melissa.MacDonald@ec.gc.ca](mailto:Melissa.MacDonald@ec.gc.ca)>, "Crabtree, Alexis [VCH]" <[Alexis.Crabtree@vch.ca](mailto:Alexis.Crabtree@vch.ca)>

**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave

s.13(1)

**From:** Schwandt, Michael [VCH] <[michael.schwandt@vch.ca](mailto:michael.schwandt@vch.ca)>

**Sent:** Wednesday, June 30, 2021 9:09 AM

**To:** Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>; 'Castellan,Armel (ECCC)' <[Armel.Castellan@ec.gc.ca](mailto:Armel.Castellan@ec.gc.ca)>; \_Health Heat Response LM <[Health.Heat.Response.LM@phsa.ca](mailto:Health.Heat.Response.LM@phsa.ca)>; Enns, Charmaine <[Charmaine.Enns@viha.ca](mailto:Charmaine.Enns@viha.ca)>; Cheryl Bloxham <[Cheryll.Bloxham@viha.ca](mailto:Cheryll.Bloxham@viha.ca)>; Diplock, Cole <[Cole.Diplock@viha.ca](mailto:Cole.Diplock@viha.ca)>; Nowakowski, Craig <[Craig.Nowakowski@viha.ca](mailto:Craig.Nowakowski@viha.ca)>; Abassi, Dominic <[Dominic.Abassi@VIHA.CA](mailto:Dominic.Abassi@VIHA.CA)>; Luttrell, Gethsemane <[Gethsemane.Luttrell@VIHA.CA](mailto:Gethsemane.Luttrell@VIHA.CA)>; Drexhage, Glenn <[Glenn.Drexhage@VIHA.CA](mailto:Glenn.Drexhage@VIHA.CA)>; Hasselback, Paul (Dr) <[Paul.Hasselback@VIHA.CA](mailto:Paul.Hasselback@VIHA.CA)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Yehia, Jade <[Jade.Yehia@viha.ca](mailto:Jade.Yehia@viha.ca)>; Parisi, Jennifer J <[Jennifer.Parisi@VIHA.CA](mailto:Jennifer.Parisi@VIHA.CA)>; Fyfe, Murray W. (Dr) <[Murray.Fyfe@viha.ca](mailto:Murray.Fyfe@viha.ca)>; Waters, Shannon (Dr) <[Shannon.Waters@VIHA.CA](mailto:Shannon.Waters@VIHA.CA)>; McKay, Valerie <[Valerie.Mckay@VIHA.CA](mailto:Valerie.Mckay@VIHA.CA)>; Golmohammadi, Dr. Kamran [IHA] <[Kamran.Golmohammadi@interiorhealth.ca](mailto:Kamran.Golmohammadi@interiorhealth.ca)>; Goodison, Karin [IHA] <[Karin.Goodison@interiorhealth.ca](mailto:Karin.Goodison@interiorhealth.ca)>; Mema, Dr. Silvina [IHA] <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>; Pollock, Dr. Sue [IHA] <[Sue.Pollock@interiorhealth.ca](mailto:Sue.Pollock@interiorhealth.ca)>; EPH Emergency Response <[EPHEmergencyResponse@interiorhealth.ca](mailto:EPHEmergencyResponse@interiorhealth.ca)>; PHESU [IHA] <[PHESU@interiorhealth.ca](mailto:PHESU@interiorhealth.ca)>; Baytalan, Greg [IHA] <[Greg.Baytalan@interiorhealth.ca](mailto:Greg.Baytalan@interiorhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Health Communities Program <[hbe@interiorhealth.ca](mailto:hbe@interiorhealth.ca)>; Deegan, Heather [IHA] <[Heather.Deegan@interiorhealth.ca](mailto:Heather.Deegan@interiorhealth.ca)>; Speer, Jennifer [IHA] <[Jennifer.Speer@interiorhealth.ca](mailto:Jennifer.Speer@interiorhealth.ca)>; Hadley, Pam [IHA] <[Pam.Hadley@interiorhealth.ca](mailto:Pam.Hadley@interiorhealth.ca)>; El Kurdi, Sylvia [IHA] <[Sylvia.ElKurdi@interiorhealth.ca](mailto:Sylvia.ElKurdi@interiorhealth.ca)>; Kurc, Andrew [NHA] <[Andrew.Kurc@northernhealth.ca](mailto:Andrew.Kurc@northernhealth.ca)>; Quibell, Doug [NHA] <[Doug.Quibell@northernhealth.ca](mailto:Doug.Quibell@northernhealth.ca)>; Gray, Andrew [NHA] <[Andrew.Gray@northernhealth.ca](mailto:Andrew.Gray@northernhealth.ca)>; Kim, Jong [NHA] <[Jong.Kim@northernhealth.ca](mailto:Jong.Kim@northernhealth.ca)>; Fumerton, Raina [NHA] <[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>; Kling, Rakel [NHA] <[Rakel.Kling@northernhealth.ca](mailto:Rakel.Kling@northernhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Harder, Kari [NHA] <[Kari.Harder@northernhealth.ca](mailto:Kari.Harder@northernhealth.ca)>; Northern Health Emergency Management <[HEMBC@northernhealth.ca](mailto:HEMBC@northernhealth.ca)>

**Cc:** EC.F MSA-Pacific / WPM-Pacific F.EC <[ec.msa-pacifique-wpm-pacific.ec@canada.ca](mailto:ec.msa-pacifique-wpm-pacific.ec@canada.ca)>; ec.cpipsuperviseur-pspcsupervisor.ec [EXT] <[ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca](mailto:ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca)>; MacDonald,Melissa (ECCC) <[Melissa.MacDonald@ec.gc.ca](mailto:Melissa.MacDonald@ec.gc.ca)>; Crabtree, Alexis [VCH] <[Alexis.Crabtree@vch.ca](mailto:Alexis.Crabtree@vch.ca)>

**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave

Thanks very much for the discussion, Armel and Sarah.

s.13(1)

Talk later today,

Michael

**Michael Schwandt, MD MPH FRCPC**

**Medical Health Officer, Vancouver Coastal Health**

601 West Broadway, Suite 800

Vancouver, BC V5T 4C2

Phone: 604-675-3915 | Fax: 604-731-2756 | Email: [michael.schwandt@vch.ca](mailto:michael.schwandt@vch.ca)

Administrative Assistant: Ryan Chan ([ryan.chan@vch.ca](mailto:ryan.chan@vch.ca), p. 604-875-5600 x54375)

***I recognize that my place of work and the facilities of Vancouver Coastal Health lie on the traditional homelands of the fourteen First Nation communities of Heiltsuk, Kitasoo-Xai'xais, Lilwat, Musqueam, N'Quatqua, Nuxalk, Samahquam, Sechelt, Skatin, Squamish, Tla'amin, Tsleil-Waututh, Wuikinuxv, and Xa'xtsa.***

**From:** Henderson, Sarah [BCCDC] <[Sarah.Henderson@bccdc.ca](mailto:Sarah.Henderson@bccdc.ca)>

**Sent:** Tuesday, June 29, 2021 1:31 PM

**To:** 'Castellan,Armel (ECCC)' <[Armel.Castellan@ec.gc.ca](mailto:Armel.Castellan@ec.gc.ca)>; \_Health Heat Response LM <[Health.Heat.Response.LM@phsa.ca](mailto:Health.Heat.Response.LM@phsa.ca)>; Enns, Charmaine [VIHA] <[Charmaine.Enns@viha.ca](mailto:Charmaine.Enns@viha.ca)>; Cheryl Bloxham <[Cheryll.Bloxham@viha.ca](mailto:Cheryll.Bloxham@viha.ca)>; Diplock, Cole [VIHA] <[Cole.Diplock@viha.ca](mailto:Cole.Diplock@viha.ca)>; Nowakowski, Craig [VIHA] <[Craig.Nowakowski@viha.ca](mailto:Craig.Nowakowski@viha.ca)>; Dominic Abassi <[Dominic.Abassi@viha.ca](mailto:Dominic.Abassi@viha.ca)>; Luttrell, Gethsemane [VIHA] <[Gethsemane.Luttrell@viha.ca](mailto:Gethsemane.Luttrell@viha.ca)>; Glenn Drexhage <[Glenn.Drexhage@VIHA.CA](mailto:Glenn.Drexhage@VIHA.CA)>; Hasselback, Paul [VIHA] <[Paul.Hasselback@viha.ca](mailto:Paul.Hasselback@viha.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Yehia, Jade [VIHA] <[Jade.Yehia@viha.ca](mailto:Jade.Yehia@viha.ca)>; Jennifer Parisi <[Jennifer.Parisi@viha.ca](mailto:Jennifer.Parisi@viha.ca)>; Fyfe, Murray W. (Dr) [VIHA] <[Murray.Fyfe@viha.ca](mailto:Murray.Fyfe@viha.ca)>; Waters, Shannon [VIHA] <[shannon.waters@viha.ca](mailto:shannon.waters@viha.ca)>; Valerie Mckay <[Valerie.Mckay@viha.ca](mailto:Valerie.Mckay@viha.ca)>; Golmohammadi, Dr. Kamran [IHA] <[Kamran.Golmohammadi@interiorhealth.ca](mailto:Kamran.Golmohammadi@interiorhealth.ca)>; Goodison, Karin [IHA] <[Karin.Goodison@interiorhealth.ca](mailto:Karin.Goodison@interiorhealth.ca)>; Mema, Dr. Silvina [IHA] <[Silvina.Mema@interiorhealth.ca](mailto:Silvina.Mema@interiorhealth.ca)>; Pollock, Dr. Sue [IHA] <[Sue.Pollock@interiorhealth.ca](mailto:Sue.Pollock@interiorhealth.ca)>; EPH Emergency Response <[EPHEmergencyResponse@interiorhealth.ca](mailto:EPHEmergencyResponse@interiorhealth.ca)>; PHESU [IHA] <[PHESU@interiorhealth.ca](mailto:PHESU@interiorhealth.ca)>; Baytalan, Greg [IHA] <[Greg.Baytalan@interiorhealth.ca](mailto:Greg.Baytalan@interiorhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Health Communities Program <[hbe@interiorhealth.ca](mailto:hbe@interiorhealth.ca)>; Deegan, Heather [IHA] <[Heather.Deegan@interiorhealth.ca](mailto:Heather.Deegan@interiorhealth.ca)>; Speer, Jennifer [IHA] <[Jennifer.Speer@interiorhealth.ca](mailto:Jennifer.Speer@interiorhealth.ca)>; Hadley, Pam [IHA] <[Pam.Hadley@interiorhealth.ca](mailto:Pam.Hadley@interiorhealth.ca)>; El Kurdi, Sylvia [IHA] <[Sylvia.ElKurdi@interiorhealth.ca](mailto:Sylvia.ElKurdi@interiorhealth.ca)>; Kurn, Andrew [NHA] <[Andrew.Kurn@northernhealth.ca](mailto:Andrew.Kurn@northernhealth.ca)>; Quibell, Doug [NHA] <[Doug.Quibell@northernhealth.ca](mailto:Doug.Quibell@northernhealth.ca)>; Gray, Andrew [NHA] <[Andrew.Gray@northernhealth.ca](mailto:Andrew.Gray@northernhealth.ca)>; Kim, Jong [NHA] <[Jong.Kim@northernhealth.ca](mailto:Jong.Kim@northernhealth.ca)>; Fumerton, Raina [NHA] <[Raina.Fumerton@northernhealth.ca](mailto:Raina.Fumerton@northernhealth.ca)>; Kling, Rakel [NHA] <[Rakel.Kling@northernhealth.ca](mailto:Rakel.Kling@northernhealth.ca)>; hc.heatdivision-divisiondelachaleur.sc [EXT] <[hc.heatdivision-divisiondelachaleur.sc@canada.ca](mailto:hc.heatdivision-divisiondelachaleur.sc@canada.ca)>; Harder, Kari [NHA] <[Kari.Harder@northernhealth.ca](mailto:Kari.Harder@northernhealth.ca)>; Northern Health Emergency Management <[HEMBC@northernhealth.ca](mailto:HEMBC@northernhealth.ca)>

**Cc:** EC.F MSA-Pacific / WPM-Pacific F.EC <[ec.msa-pacifique-wpm-pacific.ec@canada.ca](mailto:ec.msa-pacifique-wpm-pacific.ec@canada.ca)>; ec.cpipsuperviseur-pspcsupervisor.ec [EXT] <[ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca](mailto:ec.cpipsuperviseur-pspcsupervisor.ec@canada.ca)>; MacDonald,Melissa (ECCC) <[Melissa.MacDonald@ec.gc.ca](mailto:Melissa.MacDonald@ec.gc.ca)>

**Subject:** RE: Heat Warning from ECCC as we enter the end of this extreme heat wave

Hi folks –

I really think we need to base this decision on the overnight lows at this time, rather than the high/low criteria. Until the overnight lows come down past the threshold, I think the warning should stay in effect.

My two cents, which may be worth more or less depending on your perspective.

Cheers,

Sarah

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Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: §.15(1)(l)

#DifferentTogether

#InPlainSight

I often work outside of normal business hours because it suits me. There is no expectation that you will respond outside of your working hours.

---

**From:** Castellan,Armel (ECCC) [[mailto:Armel.Castellan@ec.gc.ca](mailto:mailto:Armel.Castellan@ec.gc.ca)]

**Sent:** Tuesday, June 29, 2021 1:21 PM

**To:** \_Health Heat Response LM; Enns, Charmaine [VIHA]; Cheryl Bloxham; Diplock, Cole [VIHA]; Nowakowski, Craig [VIHA]; Dominic Abassi; Luttrell, Gethsemane [VIHA]; Glenn Drexhage; Hasselback, Paul [VIHA]; hc.heatdivision-divisiondelachaleur.sc [EXT]; Yehia, Jade [VIHA]; Jennifer Parisi; Fyfe, Murray W. (Dr) [VIHA]; Waters, Shannon [VIHA]; Valerie Mckay; Golmohammadi, Dr. Kamran [IHA]; Goodison, Karin [IHA]; Mema, Dr. Silvina [IHA]; Pollock, Dr. Sue [IHA]; EPH Emergency Response; PHESU [IHA]; Baytalan, Greg [IHA]; hc.heatdivision-divisiondelachaleur.sc [EXT]; Health Communities Program; Deegan, Heather [IHA]; Speer, Jennifer [IHA]; Hadley, Pam [IHA]; El Kurdi, Sylvia [IHA]; Kurn, Andrew [NHA]; Quibell, Doug [NHA]; Gray, Andrew [NHA]; Kim, Jong [NHA]; Fumerton, Raina [NHA]; Kling, Rakel

[NHA]; hc.heatdivision-divisiondelachaleur.sc [EXT]; Harder, Kari [NHA]; Northern Health Emergency Management  
Cc: EC.F MSA-Pacific / WPM-Pacific F.EC; ec.cpipsuperviseur-pspcsupervisor.ec [EXT]; MacDonald,Melissa (ECCC)  
**Subject:** Heat Warning from ECCC as we enter the end of this extreme heat wave  
**EXTERNAL SENDER.** If you suspect this message is malicious, please forward to [spam@phsa.ca](mailto:spam@phsa.ca) and **do not** open attachments or click on links.

Hi Health Partners across the Province,  
As the marine air influences the south coast of BC, the temperatures are going to ease from historic to simply warmer than seasonal averages from Wednesday onward and eventually in the interior as well (this weekend). Strictly speaking the thresholds for the onset of a regular heat warning will not continue to be reached as the high pressure "heat dome" shifts east into AB.

Metrovancouver/Victoria/VI/Sunshine coast need a 29C daytime temp and 16C overnight low, for the Fraser Valley of 33C and 17C respectively, 35 and 18 for the south interior of BC and so on.

We understand that the worst of the health implications (mortalities) have up to 3-4 day lag time from the peak heat.

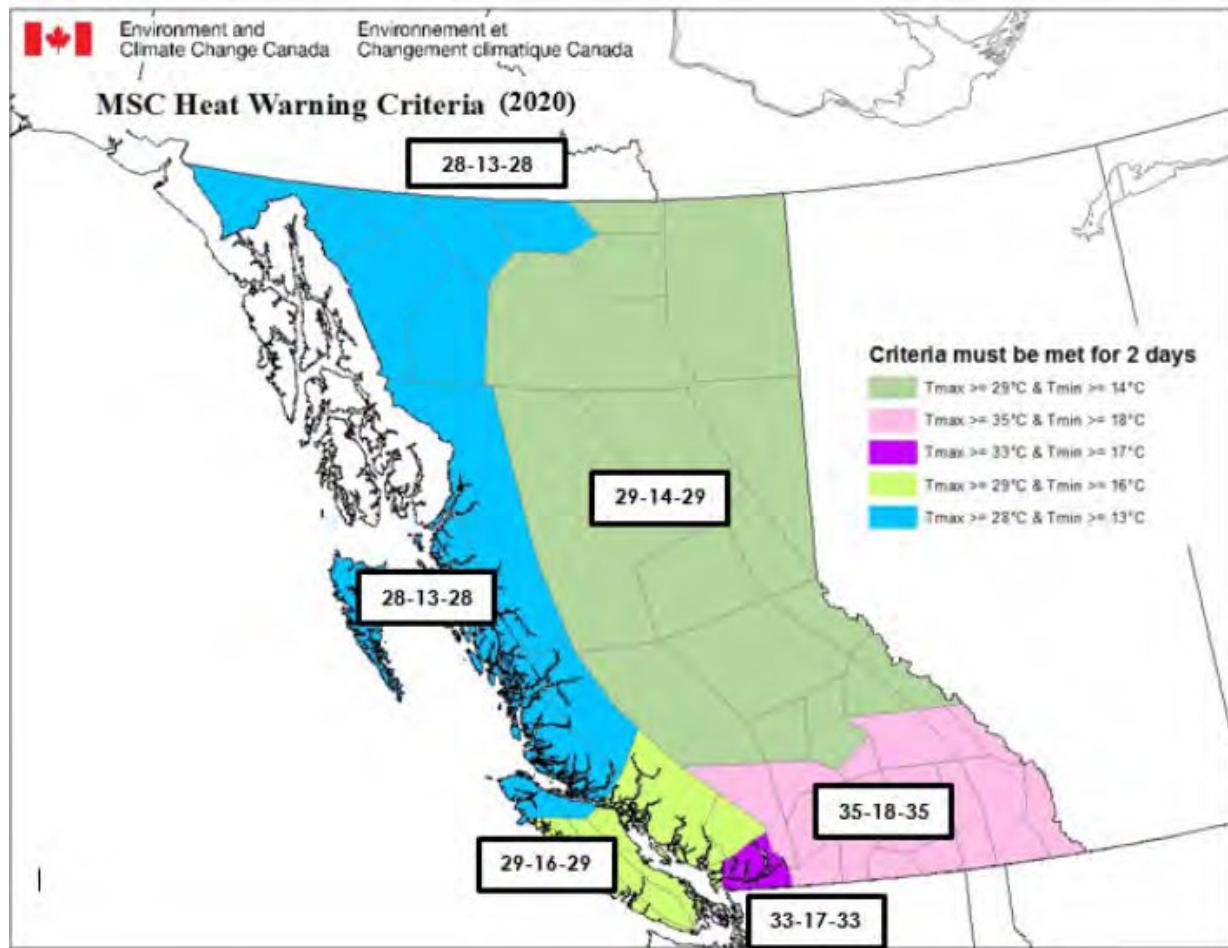
Our question to you collectively, and I appreciate we can't deliberate this for days in a proper forum, is this:

**Does it make sense to keep the heat warning if temperatures are only one degree below criteria?**

Does it help keep the attention from the public to the continued need to stay vigilant with respect to the heat illnesses?

thank you very much for your quick thoughts

Armel



**From:** Henderson, Sarah [BCCDC]  
**Sent:** Thursday, July 01, 2021 9:47 AM  
**To:** Henry, Bonnie [EXT]  
**Cc:** Gustafson, Reka [BCCDC]; Kosatsky, Tom [BCCDC]  
**Subject:** Re: Full epidemiologic investigation of extreme hot weather mortality

Hi Bonnie --

I agree that it would be ideal for environmental epidemiologists to work with the Coroners service on this. We need to understand both community-level and individual-level risk factors, and the latter really requires review of all deaths (or at least all deaths at home, though I think we will find that some made it to acute care) -- preferably with contextual information from those who knew the deceased and their circumstances. It is very difficult to ascertain some information from administrative data alone. For example, the floor of a building someone lived on, its age, the direction their unit faced, or whether someone was checking in with them regularly. These are the types of investigations that have been conducted after severe heat events elsewhere. A few examples below, in case they are useful to Lisa.

<https://www.nejm.org/doi/full/10.1056/NEJM199607113350203>

<https://academic.oup.com/eurpub/article/16/6/583/587693?login=true>

Our team has a lot of expertise in this area, particularly Tom who has been working on the issue of extreme heat mortality for decades. Please let Lisa know that we are here to help.

Thanks,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC Associate Professor (Partner) | School of Population and Public Health | UBC  
Office: 604.707.2449  
Cell: s.15(1)(i)

#DifferentTogether <<https://ltgov.bc.ca/wp-content/uploads/2020/05/Pledge-v3.png>>  
#InPlainSight <<https://engage.gov.bc.ca/app/uploads/sites/613/2020/11/In-Plain-Sight-Summary-Report.pdf>>

I often work outside of normal business hours because it suits me. There is no expectation that you will respond outside of your working hours.

On 2021-07-01, 8:46 AM, "Henry, Bonnie HLTH:EX" s.19(1) wrote:

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I agree with you that we need a review and to determine if there are patterns, areas of communities where deaths were more common and a review of measures taken when. But in terms of death reviews that is the coroner's area and Lisa is committed to a review. I will send her a note and what would be ideal is us to work with her office in this.

Bonnie

Dr Bonnie Henry  
Provincial Health Officer  
Ministry of Health

s.19(1)

On Jun 30, 2021, at 12:43 PM, Henderson, Sarah [BCCDC] <Sarah.Henderson@bccdc.ca> wrote:

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Bonnie, Reka –

We will not know the full mortality impacts of this event for another couple of weeks, but some of the early indicators are alarming. I don't want to jump to conclusions until the data are in, but I think we have to be prepared for a significant death toll provincially.

If our instincts are correct, Tom and I agree that a full epidemiologic investigation of the deaths during this period would be warranted to help us learn for the next time. This would mean collecting information from those who knew the deceased and the circumstances of their death, accessing death certificates, linking to administrative health information, and linking to environmental information. It's not a small undertaking, nor something we can do off the sides of our desks. It would require a significant funding commitment, primarily for human resources to conduct the work. To cover the entire province (or at least places where heat warning were in effect, which is most of the province) I'm estimating that we would need to investigate approximately 1000 deaths total (~700 expected and ~300 excess, if we apply some back-of-the envelope risk estimates that may not hold true).

I'd expect it would need an investment of about \$500,000 to do quickly and well. If we are going to pursue something like this, we'd want to start as soon as possible – there would be considerable start-up needed with respect to survey design and ethics applications. Similar work has been conducted in QC after prior hot weather events, so we could certainly lean on these efforts rather than re-inventing the wheel.

Applying to CIHR or other competitive funding doesn't seem like the right thing here. We would never get funded on the first try, it would be at least a year before we could get started. So, we're writing to ask whether you think there might be some way to access provincial support for such an effort. And, if so, how do we approach this.

Thanks so much,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC  
Associate Professor (Partner) | School of Population and Public Health | UBC  
Office: 604.707.2449  
Cell: s.15(1)(l)

#DifferentTogether<[#InPlainSight<<https://engage.gov.bc.ca/app/uploads/sites/613/2020/11/In-Plain-Sight-Full-Report.pdf>](https://can01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fltgov.bc.ca%2Fwp-content%2Fuploads%2F2020%2F05%2FPledge-v3.png&data=04%7C01%7Cs.19(1)7C8c73eee2c4b0489c3cf408d93bff4c1d%7C6fdb52003d0d4a8ab036d3685e359adc%7C0%7C0%7C637606789941629798%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBtil6lk1haWwiLCJVCI6Mn0%3D%7C1000&sdata=Xwwh%2BQg1fr%2BehqYqi7FWoPaXi645yWRsGlpzX7EiHs%3D&reserved=0></a></p></div><div data-bbox=)

I often work outside of normal business hours because it suits me. There is no expectation that you will respond outside of your working hours.

**From:** [Henderson, Sarah \[BCCDC\]](#)  
**To:** [McVea, David \[BCCDC\]](#)  
**Cc:** [Kosatsky, Tom \[BCCDC\]](#); [Gustafson, Reka \[BCCDC\]](#)  
**Subject:** Re: CBC News : Heat wave cause of 719 sudden deaths, BC Coroners Service reports  
**Date:** Friday, July 02, 2021 3:58:20 PM

---

Yes, of course. Plus, they slowed during COVID considerably, weekends are always slow, and holiday weekends are slowest. Still, we don't see ANY indication of these impacts in the vital statistics data yet.

The corner is reporting about 500 excess sudden deaths over the past week. I'd expect about 1000 per week under normal circumstances, so at least a 50% increase, and likely higher. We were able to see the 40% increase in the lower mainland quite early in the registrations in 2009, but not this time.

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC  
Associate Professor (Partner) | School of Population & Public Health | UBC  
Sent from [§ 15\(1\)\(l\)](#)

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> On Jul 2, 2021, at 3:43 PM, McVea, David [BCCDC] <David.McVea@bccdc.ca> wrote:  
>  
> Thanks -  
> Might the large volume slow registrations more than usual?  
>  
> -----Original Message-----  
> From: Henderson, Sarah [BCCDC] <Sarah.Henderson@bccdc.ca>  
> Sent: Friday, July 02, 2021 3:41 PM  
> To: McVea, David [BCCDC] <David.McVea@bccdc.ca>; Kosatsky, Tom [BCCDC]  
<Tom.Kosatsky@bccdc.ca>; Gustafson, Reka [BCCDC] <reka.gustafson@phsa.ca>  
> Subject: CBC News : Heat wave cause of 719 sudden deaths, BC Coroners Service reports  
>  
> This is sudden deaths attended by corners at this point, mostly not including those wfh made it to acute care via very busy emergency services.  
>  
> It's probably a large fraction of the total excess mortality, but not all. Maddeningly, I still can't see signs of this impact in the vital statistics data. The registrations are coming in slowly.  
>  
> Sarah  
>  
> <https://www.cbc.ca/news/canada/british-columbia/heat-wave-719-deaths-1.6088793>  
>  
>  
> \_\_\_\_\_  
> Sarah B. Henderson, PhD  
>  
> Scientific Director | Environmental Health Services | BCCDC Associate Professor (Partner) | School of Population & Public Health | UBC Sent from [§ 15\(1\)\(l\)](#)  
>  
> I often work outside of normal business hours because it suits me. There is no expectation that you will respond outside of your working hours.

**From:** Henderson, Sarah [BCCDC]  
**To:** Henry, Bonnie [EXT]; Lapointe, Lisa PSSG:EX  
**Cc:** Baidwan, Jatinder PSSG:EX; tej.sidhu@gov.bc.ca [EXT]; Gustafson, Reka [BCCDC]; Laurel.Thompson@gov.bc.ca [EXT]; Kosatsky, Tom [BCCDC]; Tsui, Gigi [BCCDC]  
**Subject:** Re: Heat wave deaths  
**Date:** Friday, July 02, 2021 7:57:58 PM

---

Hi all --

I read the updated report with sadness, but not surprise. David also forwarded the note sent to the College of Physicians and Surgeons. Thank you all for your hard work on this event.

Lisa, Taj, and Tej: can you forward administrative contacts so we can find a time to meet next week? Gigi can then work with them and Laurel to coordinate.

Thanks,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC  
Associate Professor (Partner) | School of Population and Public Health | UBC  
Office: 604.707.2449  
Cell: s.15(1)(l)

#DifferentTogether <<https://ltgov.bc.ca/wp-content/uploads/2020/05/Pledge-v3.png>>  
#InPlainSight <<https://engage.gov.bc.ca/app/uploads/sites/613/2020/11/In-Plain-Sight-Summary-Report.pdf>>

I often work outside of normal business hours because it suits me. There is no expectation that you will respond outside of your working hours.

On 2021-07-01, 9:45 AM, "Henry, Bonnie HLTH:EX" s.19(1) wrote:

-----  
EXTERNAL SENDER. If you suspect this message is malicious, please forward to spam@phsa.ca and do not open attachments or click on links.

Yes, we have some preliminary ED data as well. I have copied Reka, Tom and Sarah from the BCCDC who we should include as well. And Laurel to help us set up a call.

Hope you have a quiet day as well.  
B

Dr Bonnie Henry  
Provincial Health Officer  
Ministry of Health  
s.19(1)

> On Jul 1, 2021, at 9:25 AM, Lapointe, Lisa PSSG:EX <Lisa.Lapointe@gov.bc.ca> wrote:  
>

> Hi Bonnie, thanks for your note. The number of people severely or fatally impacted by the heat was completely unexpected and we're keen to identify patterns and risk factors to support future responses and prevent similar outcomes.

>

> Partnering for a fulsome review will be valuable. We're continuing to assess the full impact of the heatwave with reports of associated deaths still coming in and the coroners catching up with entering information into our system.

>

> I've cc'd Taj and Tej on this note. Let's meet for a call next week and discuss first steps in planning for a review. We may want to consider a staged approach so that we can provide as much preliminary information as possible while we do a more detailed analysis.

>

> Thanks for reaching out Bonnie. I look forward to getting together next week.

> I hope you can enjoy some rest time today.

> Lisa

>

>

>

> Sent from my iPhone

>

>> On Jul 1, 2021, at 8:51 AM, Henry, Bonnie HLTH:EX **s.19(1)** [REDACTED] wrote:

>>

>> Hi Lisa,

>>

>> I am reaching out around the need for us to do a review of the heat related deaths over this past weekend. As you are likely aware we have a process and a plan for public health working with municipalities to put in place measures including distributing water, checking on vulnerable and opening cooling centres etc. We also have a ongoing surveillance system for heat related and air quality wildfire smoke related health effects. We had set up our provincial heat response committee on Friday to get things in place but the sheer numbers of people affected was a surprise.

>>

>> We would like to do a full review including understanding the epidemiology of the illness and deaths so we can better target response for the future. I know you will be doing a full review as well. Could we partner on this and combine our resources to get a fuller picture and hopefully a stronger plan for the inevitable future heat events.

>>

>> My best,

>> Bonnie

>>

>> Dr Bonnie Henry

>> Provincial Health Officer

>> Ministry of Health

>> **s.19(1)** [REDACTED]

>

**From:** [Henderson, Sarah \[BCCDC\]](#)  
**To:** [Henry, Bonnie \[EXT\]](#); [McVea, David \[BCCDC\]](#)  
**Cc:** [van Baarsen, Amanda HLTH:EX](#); [Laurel.Thompson@gov.bc.ca](mailto:Laurel.Thompson@gov.bc.ca) [EXT]  
**Subject:** RE: half hour meeting on heat  
**Date:** Monday, July 05, 2021 11:05:14 AM

---

Hi Bonnie –

Yes, we able to pull together information for the Minister – no problem.

What time tomorrow?

Cheers,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: [s.15\(1\)\(i\)](#)

[\*\*#DifferentTogether\*\*](#)

[\*\*#InPlainSight\*\*](#)

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---

**From:** Henry, Bonnie HLTH:EX [s.19\(1\)](#)

**Sent:** Monday, July 05, 2021 10:58 AM

**To:** Henderson, Sarah [BCCDC]; McVea, David [BCCDC]

**Cc:** van Baarsen, Amanda HLTH:EX; [Laurel.Thompson@gov.bc.ca](mailto:Laurel.Thompson@gov.bc.ca) [EXT]

**Subject:** half hour meeting on heat

**EXTERNAL SENDER.** If you suspect this message is malicious, please forward to [spam@phsa.ca](mailto:spam@phsa.ca) and **do not** open attachments or click on links.

---

Hi Sarah and David,

The Minister has asked for a briefing of what we have in place for heat in BC. I shared some of the work you have been leading around heat alerts and monitoring of excess deaths etc.

Would you be able to put together a short presentation that we could give to him tomorrow?

We are discussing what we can do to better support seniors and others with mobility issues at home over the summer given we are likely to see more very hot days in the coming months.

So your thoughts on what we could do on that would be good as well.

Copying Amanda so you are in the loop and Laurel to help schedule.

Thanks!

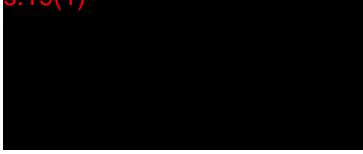
Bonnie

*Dr Bonnie Henry  
Provincial Health Officer  
Office of the PHO  
Ministry of Health*

[s.19\(1\)](#)



**s.19(1)**



*I gratefully acknowledge that I live and work on the traditional unceded territory of the Lekwungen Peoples, specifically the Songhees and Esquimalt First Nations. Hay'sxw'qu Si'ems*

*Warning: This email is intended only for the use of the individual or organization to whom it is addressed. It may contain information that is privileged or confidential. Any distribution, disclosure, copying, or other use by anyone else is strictly prohibited. If you have received this in error, please telephone or e-mail the sender immediately and delete the message.*

**From:** [Henderson, Sarah \[BCCDC\]](#)  
**To:** ["Lapointe, Lisa PSSG:EX"](#); [Henry, Bonnie \[EXT\]](#)  
**Cc:** [Baidwan, Jatinder PSSG:EX](#); [tej.sidhu@gov.bc.ca \[EXT\]](#); [Gustafson, Reka \[BCCDC\]](#); [Laurel.Thompson@gov.bc.ca \[EXT\]](#); [Kosatsky, Tom \[BCCDC\]](#); [McVea, David \[BCCDC\]](#); [Smallwood, Susan PSSG:EX](#)  
**Subject:** RE: Heat wave deaths  
**Date:** Monday, July 05, 2021 5:39:18 PM  
**Attachments:** [image002.png](#)

---

Thank you Lisa, much appreciated.

We are starting to see the impacts now in the Vital Statistics data as well, especially for Fraser Health Authority which tends to have faster registrations than Vancouver Coastal. It will still be some days before these data are complete enough for us to estimate total excess mortality. Likewise, we will keep you posted on this work.

We are keen to discuss collaborative analyses when the Service has capacity.

Thanks again,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Associate Professor (Partner) | School of Population and Public Health | UBC

Office: 604.707.2449

Cell: [s.15\(1\)\(l\)](#)

[\*\*#DifferentTogether\*\*](#)

[\*\*#InPlainSight\*\*](#)

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---

**From:** Lapointe, Lisa PSSG:EX [mailto:[Lisa.Lapointe@gov.bc.ca](mailto:Lisa.Lapointe@gov.bc.ca)]  
**Sent:** Monday, July 05, 2021 5:30 PM  
**To:** Henderson, Sarah [BCCDC]; Henry, Bonnie [EXT]  
**Cc:** Baidwan, Jatinder PSSG:EX; [tej.sidhu@gov.bc.ca \[EXT\]](#); Gustafson, Reka [BCCDC]; [Laurel.Thompson@gov.bc.ca \[EXT\]](#); Kosatsky, Tom [BCCDC]; McVea, David [BCCDC]; Smallwood, Susan PSSG:EX  
**Subject:** RE: Heat wave deaths  
**EXTERNAL SENDER.** If you suspect this message is malicious, please forward to [spam@phsa.ca](mailto:spam@phsa.ca) and **do not** open attachments or click on links.

---

Hello all,

I'm forwarding a link to a table with the number of deaths reported to the Coroners Service in the 7 days between June 25 - July 1, by health authority and compared to previous years. As noted, this data is preliminary and subject to change.

Our coroners are gathering information for each death and our Service is still very much in response mode given the volume of deaths reported. We look forward to meeting in the next couple of weeks to discuss opportunities to collaborate on analysis.

[Coroner Responded Deaths in B.C., June 25-July 1, 2016-2021 - Province of British Columbia \(gov.bc.ca\)](#)

Lisa

*Lisa Lapointe*

*Chief Coroner, British Columbia Coroners Service*

*Ministry of Public Safety and Solicitor General*

*5th floor, 910 Government Street*

*Victoria, BC V8W 1X3*

*778-974-5110*

*I acknowledge with gratitude that I work on the traditional territories of the Songhees and Esquimalt First Nations*

*[lisa.lapointe@gov.bc.ca](mailto:lisa.lapointe@gov.bc.ca)*

*<http://www.gov.bc.ca/coroners>*



*This electronic mail message is from the B.C. Coroners Service and is intended only for the person or entity named in the addressee field. This message may contain information that is privileged, confidential or exempt from disclosure under applicable law. If you are not the addressee or an employee or agent responsible for delivering this message to the addressee, please notify the sender immediately and destroy any copies you may have. Any unauthorized distribution, copying or disclosure is strictly prohibited.*

**From:** Henderson, Sarah [BCCDC]

**Sent:** Thursday, July 1, 2021 9:53 AM

**To:** Henry, Bonnie HLTH:EX ; Lapointe, Lisa PSSG:EX

**Cc:** Baidwan, Jatinder PSSG:EX ; Sidhu, Tej PSSG:EX ; Gustafson, Reka HLTH:IN ; Thompson, Laurel HLTH:EX ; XT:HLTH Kosatsky, Tom ; McVea, David [BCCDC]

**Subject:** Re: Heat wave deaths

**[EXTERNAL]** This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi all --

I am looping our EH physician Dr. McVea into this conversation as well, given that s.22(1)

for a couple of weeks. Below (in red) is the text of a message I just sent to Dr. Henry before this one arrived.

I agree that it would be ideal for environmental epidemiologists to work with the Coroners service on this. We need to understand both community-level and individual-level risk factors, and the latter really requires review of all deaths (or at least all deaths at home, though I think we will find that some made it to acute care) -- preferably with contextual information from those who knew the deceased and their circumstances. It is very difficult to ascertain some information from administrative data alone. For example, the floor of a building someone lived on, its age, the direction their unit faced, or whether someone was checking in with them regularly. These are the types of investigations that have been conducted after severe heat events elsewhere. A few examples below, in case they are useful to Lisa.

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<https://academic.oup.com/eurpub/article/16/6/583/587693?login=true>

Our team has a lot of expertise in this area, particularly Tom who has been working on the issue of extreme heat mortality for decades. Please let Lisa know that we are here to help.

I look forward to further conversation.

Thanks,

Sarah

---

Sarah B. Henderson, PhD

Scientific Director | Environmental Health Services | BCCDC

Office: 604.707.2449

Cell: **s.15(1)(l)**

#DifferentTogether <<https://ltgov.bc.ca/wp-content/uploads/2020/05/Pledge-v3.png>>

#InPlainSight <<https://engage.gov.bc.ca/app/uploads/sites/613/2020/11/In-Plain-Sight-Summary-Report.pdf>>

I often work outside of normal business hours because it suits me. There is no expectation that you will respond outside of your working hours.

On 2021-07-01, 9:45 AM, "Henry, Bonnie HLTH:EX" **s.19(1)** wrote:

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---

Yes, we have some preliminary ED data as well. I have copied Reka, Tom and Sarah from the BCCDC who we should include as well. And Laurel to help us set up a call.

Hope you have a quiet day as well.

B

Dr Bonnie Henry  
Provincial Health Officer  
Ministry of Health

**s.19(1)**

> On Jul 1, 2021, at 9:25 AM, Lapointe, Lisa PSSG:EX <[Lisa.Lapointe@gov.bc.ca](mailto:Lisa.Lapointe@gov.bc.ca)> wrote:

>

> Hi Bonnie, thanks for your note. The number of people severely or fatally impacted by the heat was completely unexpected and we're keen to identify patterns and risk factors to support future responses and prevent similar outcomes.

>

> Partnering for a fulsome review will be valuable. We're continuing to assess the full impact of the heatwave with reports of associated deaths still coming in and the coroners catching up with entering information into our system.

>

> I've cc'd Taj and Tej on this note. Let's meet for a call next week and discuss first steps in planning for a review. We may want to consider a staged approach so that we can provide as much preliminary information as possible while we do a more detailed analysis.

>

> Thanks for reaching out Bonnie. I look forward to getting together next week.

> I hope you can enjoy some rest time today.

> Lisa

>

>

>

> Sent from my iPhone

>

>> On Jul 1, 2021, at 8:51 AM, Henry, Bonnie HLTH:EX **s.19(1)** wrote:

>>

>> Hi Lisa,

>>

>> I am reaching out around the need for us to do a review of the heat related deaths over this past weekend. As you are likely aware we have a process and a plan for public health working with municipalities to put in place measures including distributing water, checking on vulnerable and opening cooling centres etc. We also have a ongoing surveillance system for heat related and air quality wildfire smoke related health effects. We had set up our provincial heat response committee on Friday to get things in place but the sheer numbers of people affected was a surprise.

>>

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>>

>> My best,

>> Bonnie

>>

>> Dr Bonnie Henry

>> Provincial Health Officer

>> Ministry of Health

s.19(1)



**From:** [Sandhu, Jat \[BCCDC\]](#)  
**To:** [Gustafson, Reka \[BCCDC\]](#)  
**Subject:** Heat Related Deaths  
**Date:** Monday, July 05, 2021 6:07:56 PM  
**Attachments:** [3108472.pdf](#)  
[afp20110601p1325.pdf](#)  
[c016p133.pdf](#)  
[annurev.publhealth.29.020907.090843.pdf](#)

---

Hi Reka,

Further to our discussion, attached are a couple of interesting articles that could guide the investigation.

The attached first paper on the 1995 Chicago heat wave really captures the issue in the title – this investigation is about a **social autopsy** of why these deaths occurred.

The other papers are also good reads but represent a very selective and limited search at this point.

Jat

**Jat Sandhu MPH MSc PhD MBA**  
Senior Executive Director  
Innovation, Partnerships and Population Health Management  
British Columbia Centre for Disease Control  
Provincial Health Services Authority  
Clinical Associate Professor  
School of Population and Public Health  
University of British Columbia

C: **s.15(1)(l)**

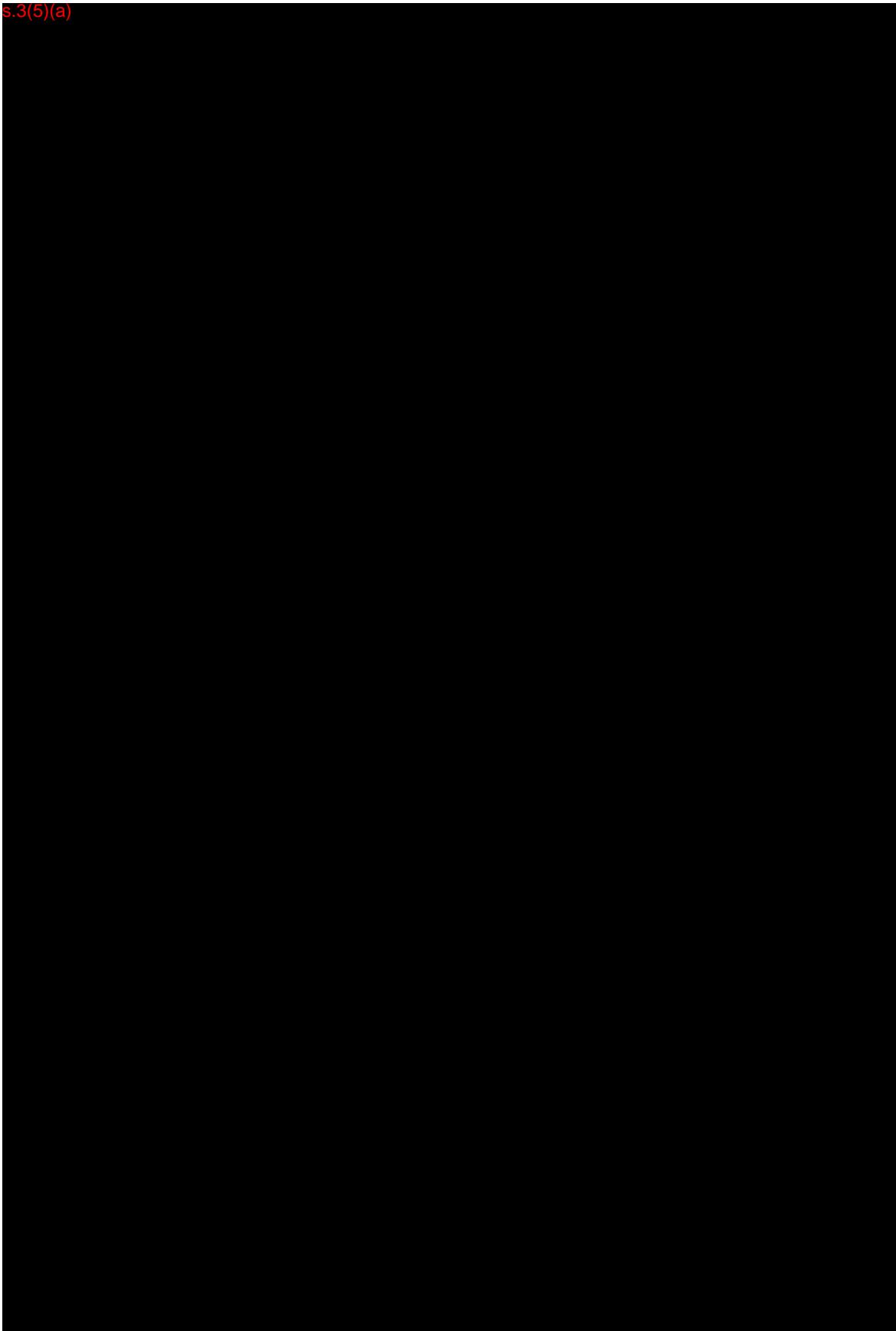
E: [jat.sandhu@bccdc.ca](mailto:jat.sandhu@bccdc.ca)

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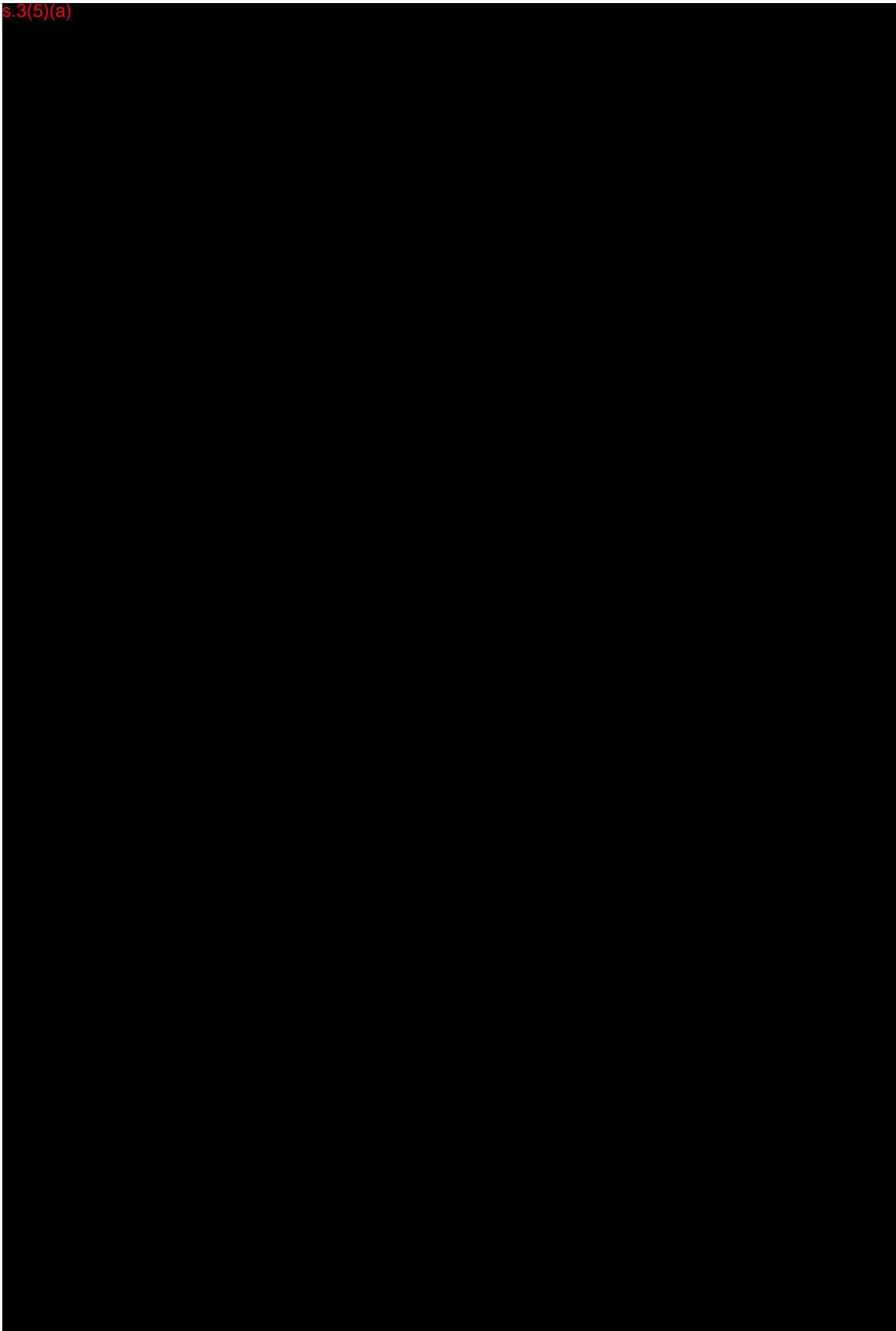
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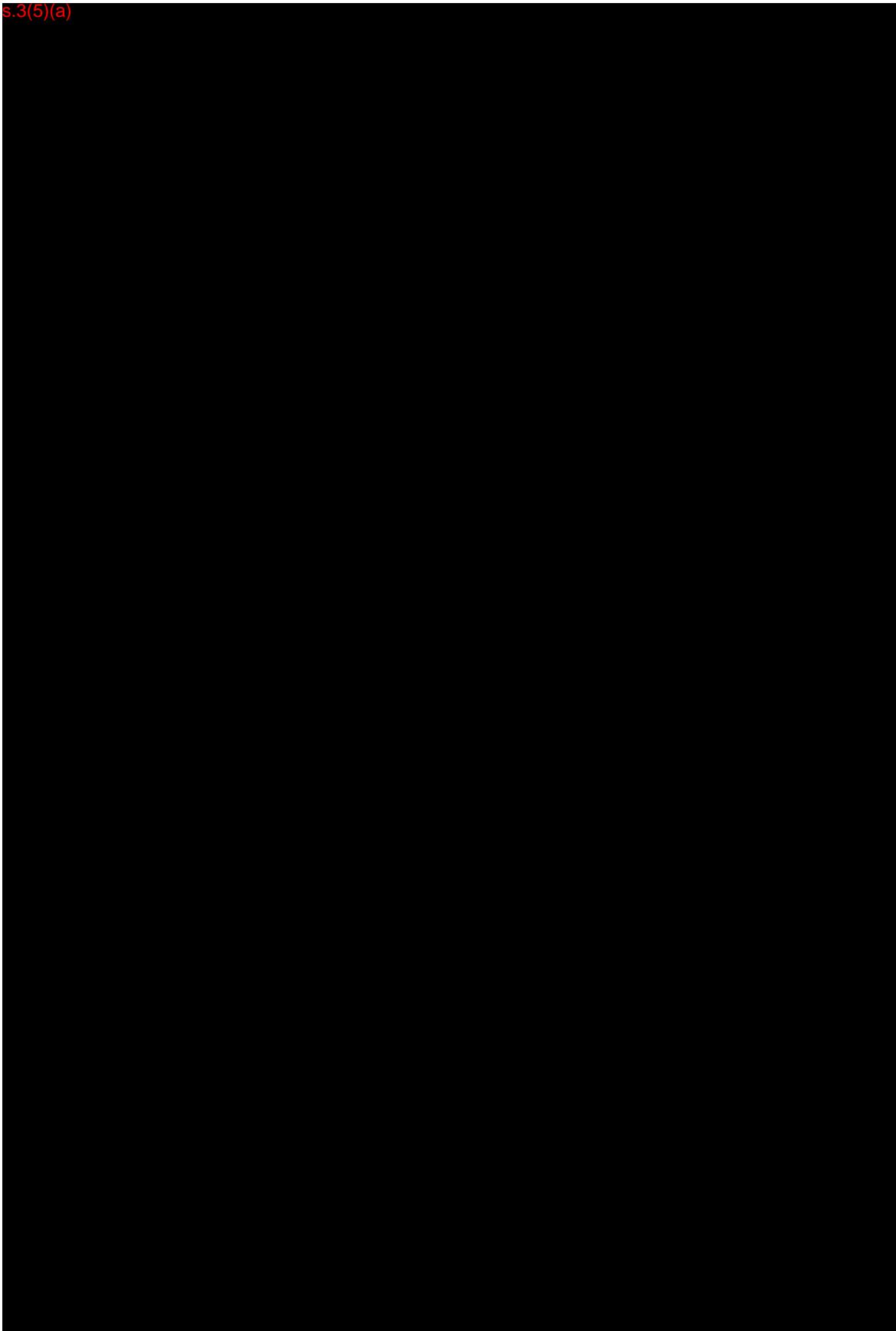
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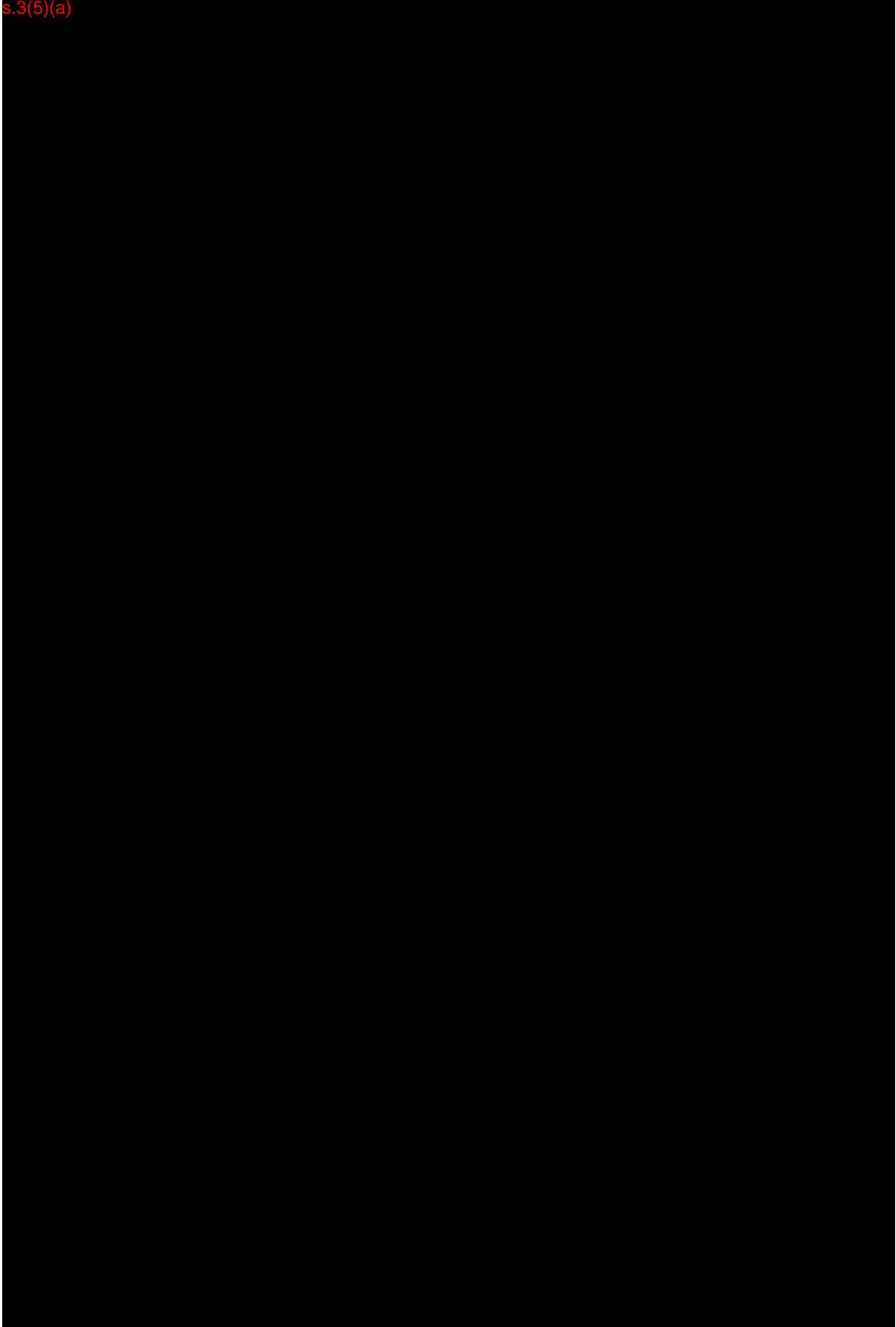
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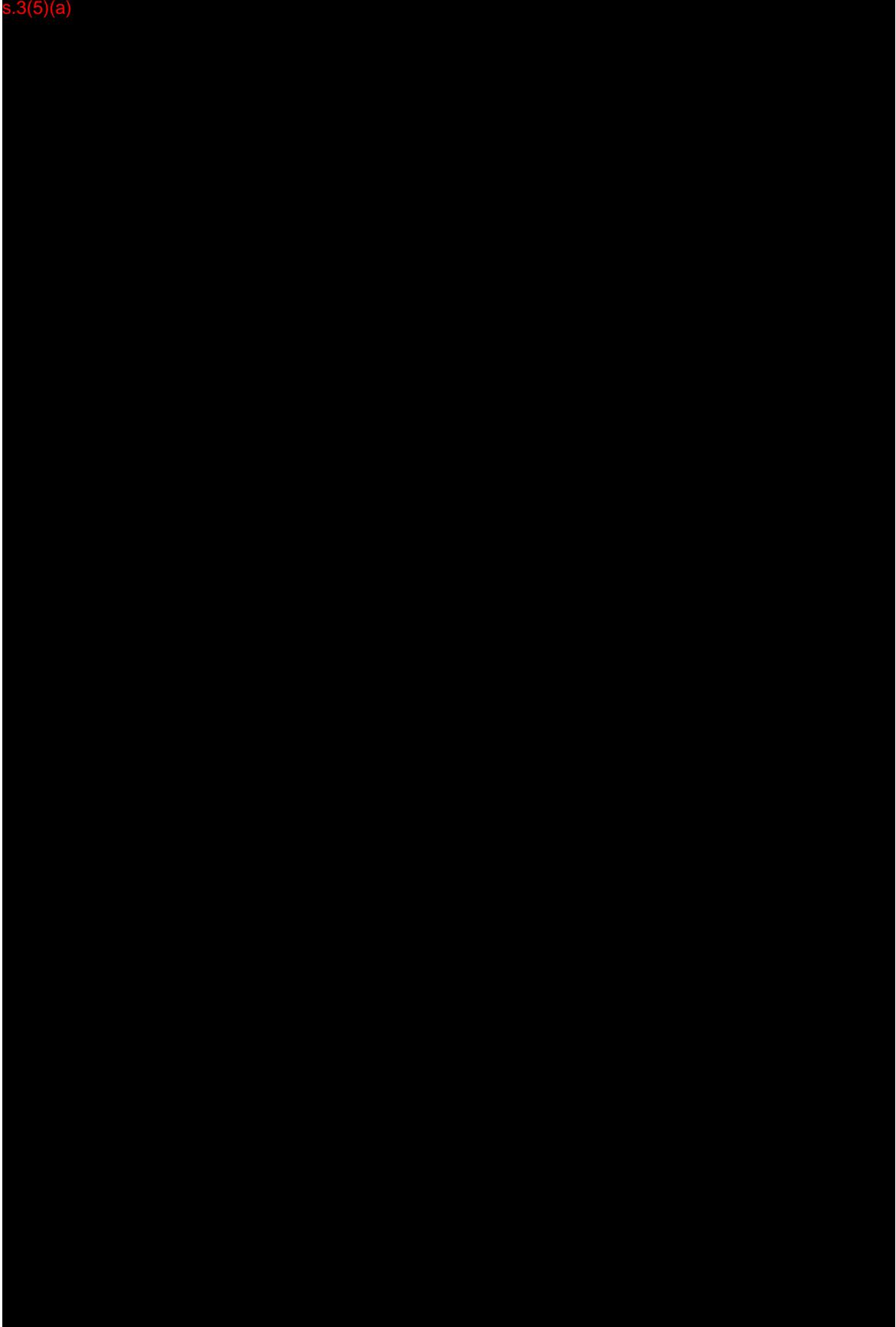
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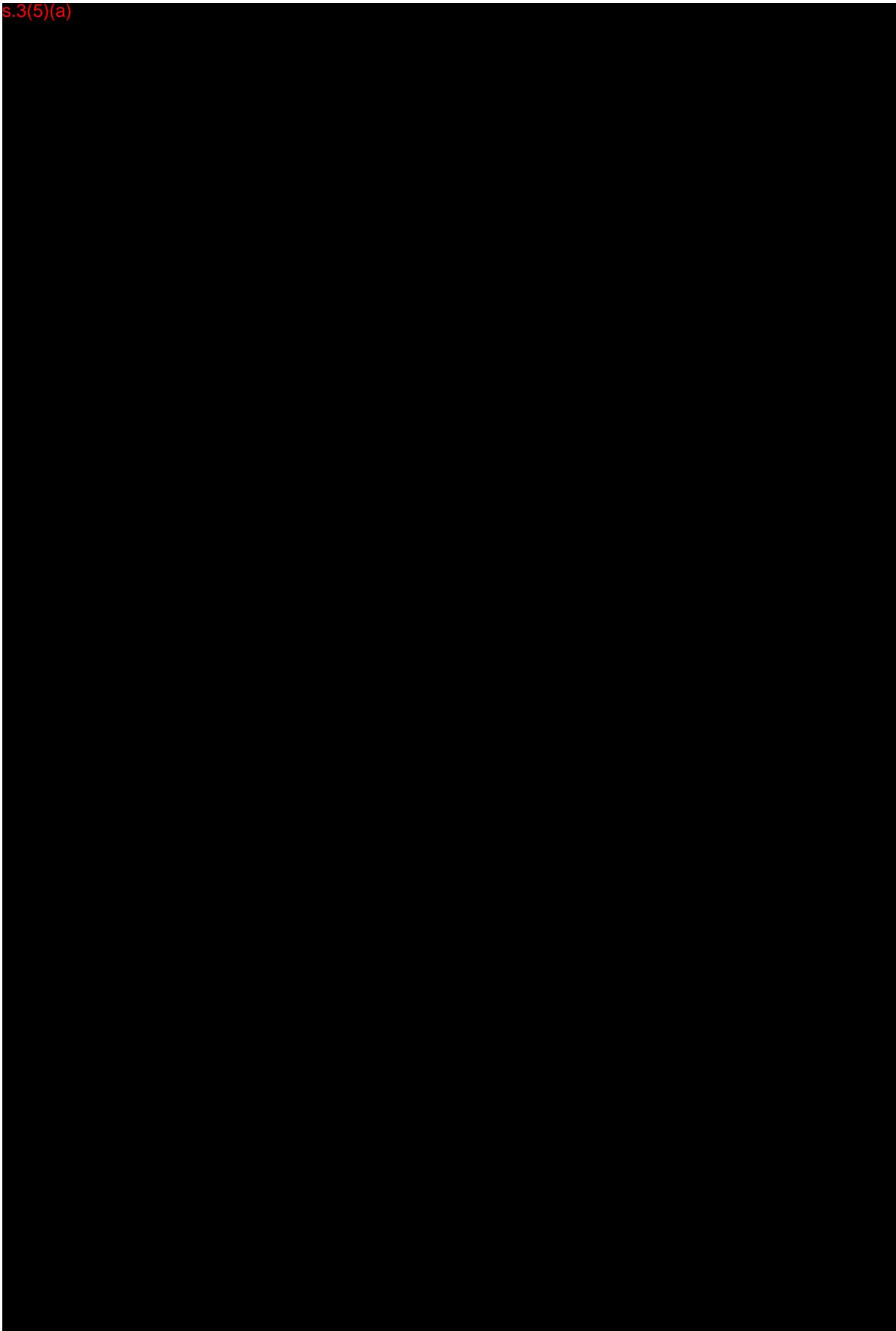
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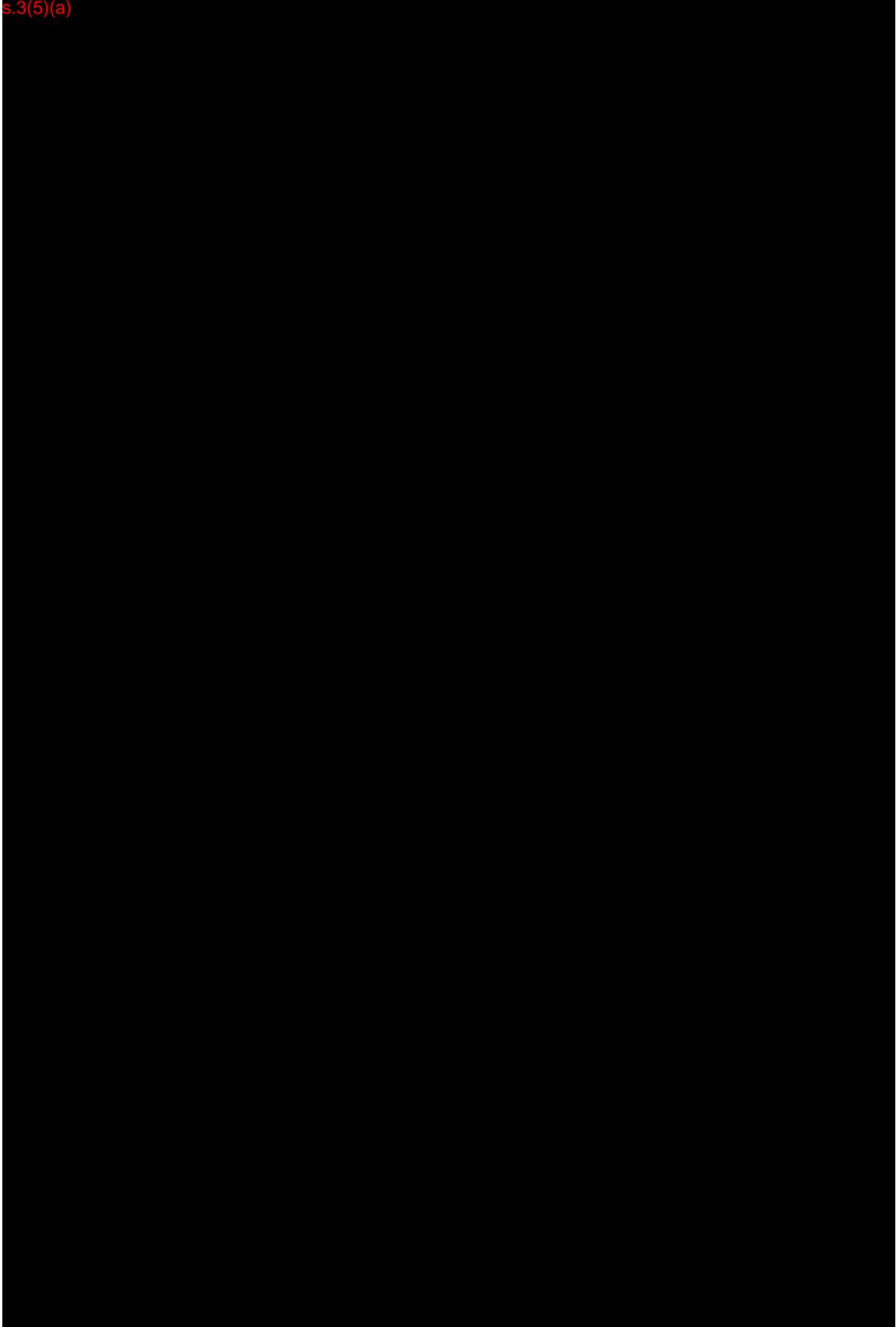
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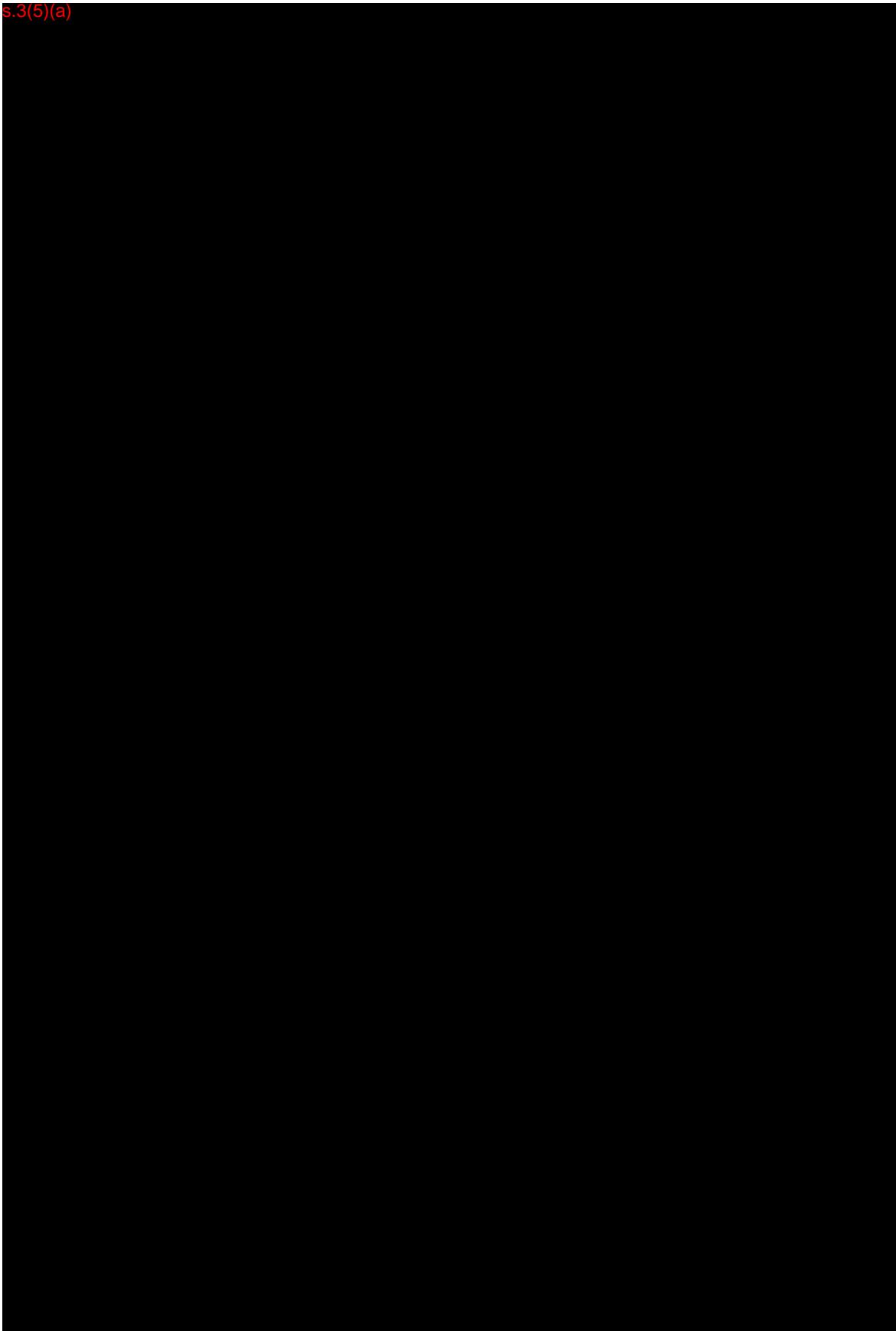
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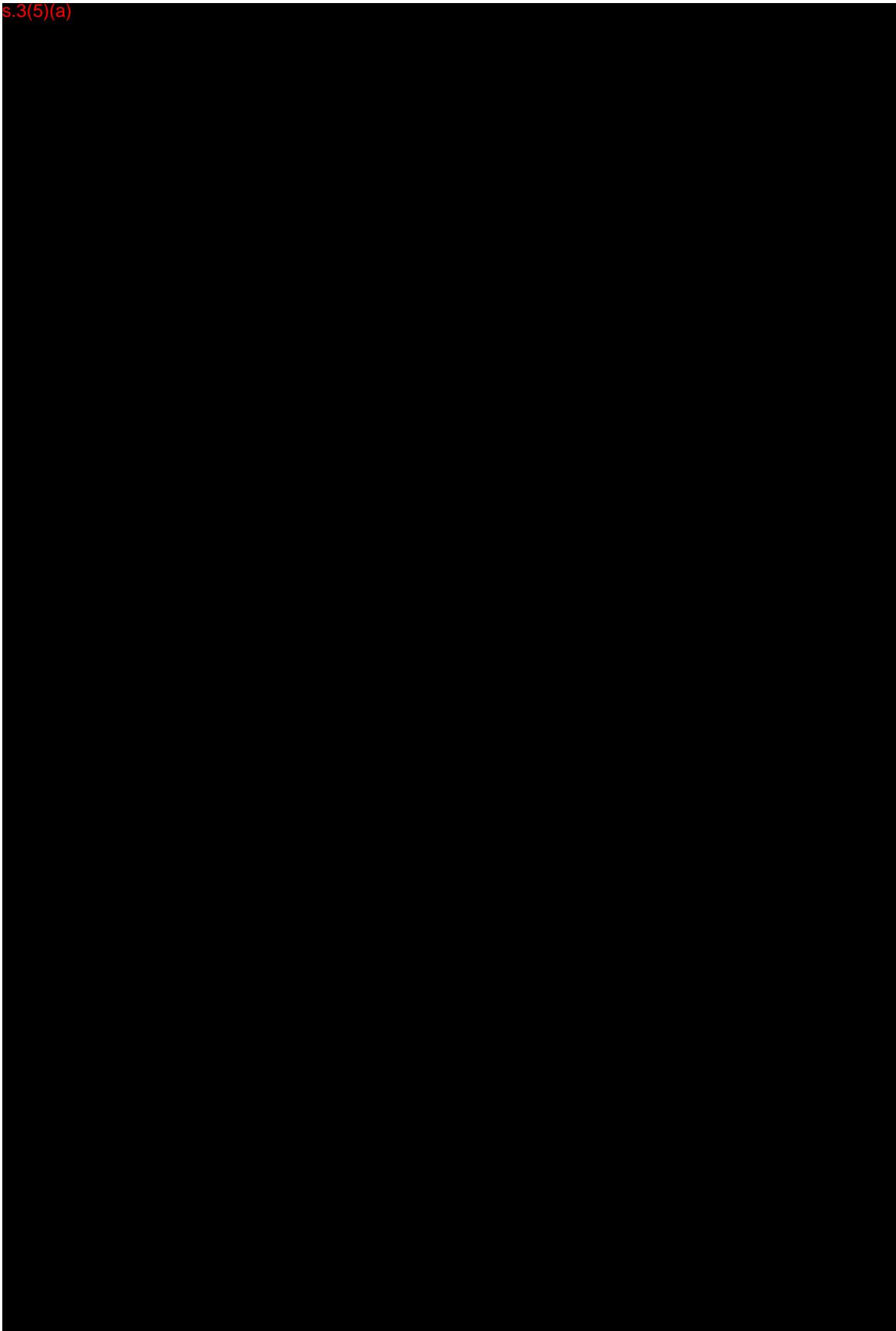
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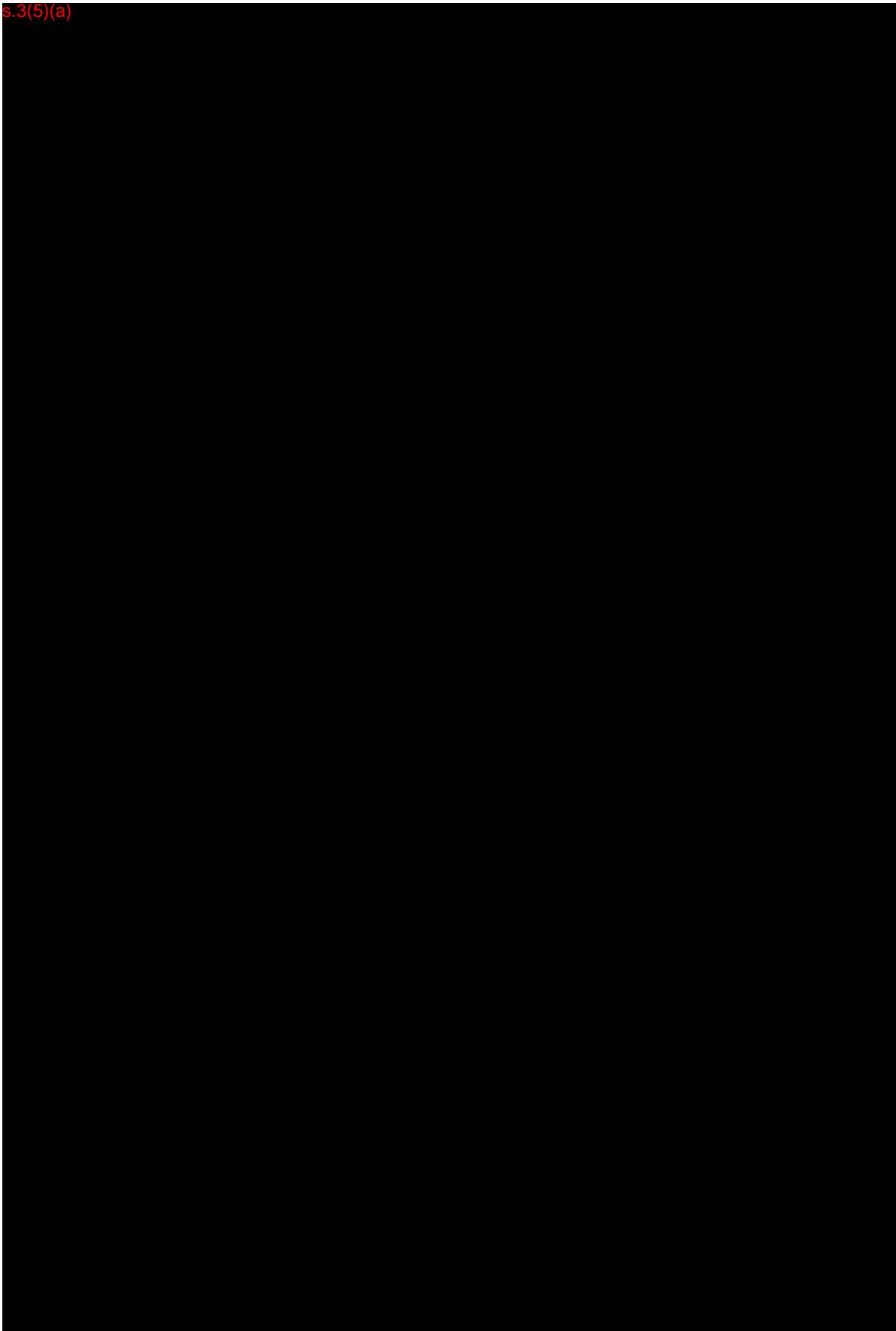
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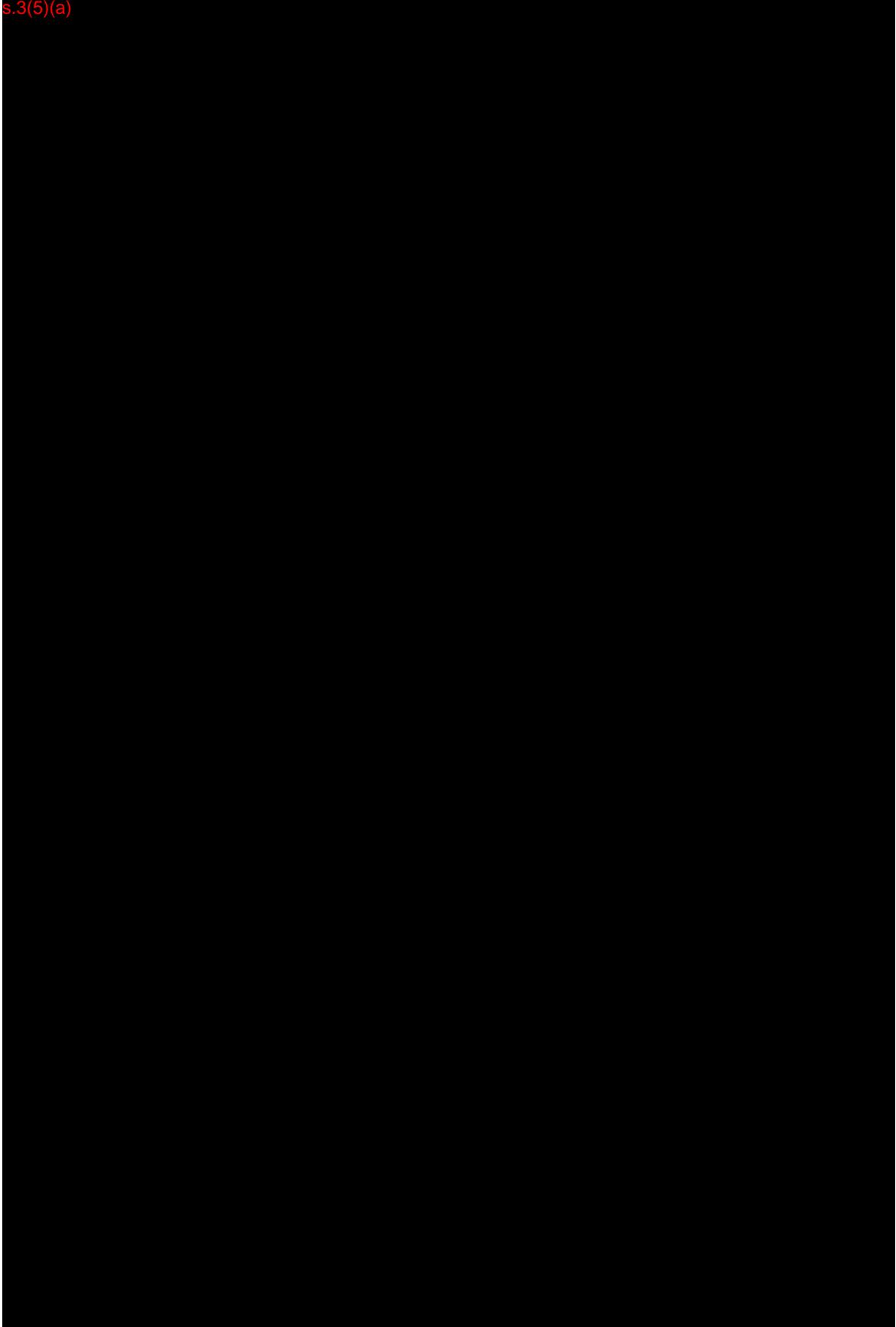
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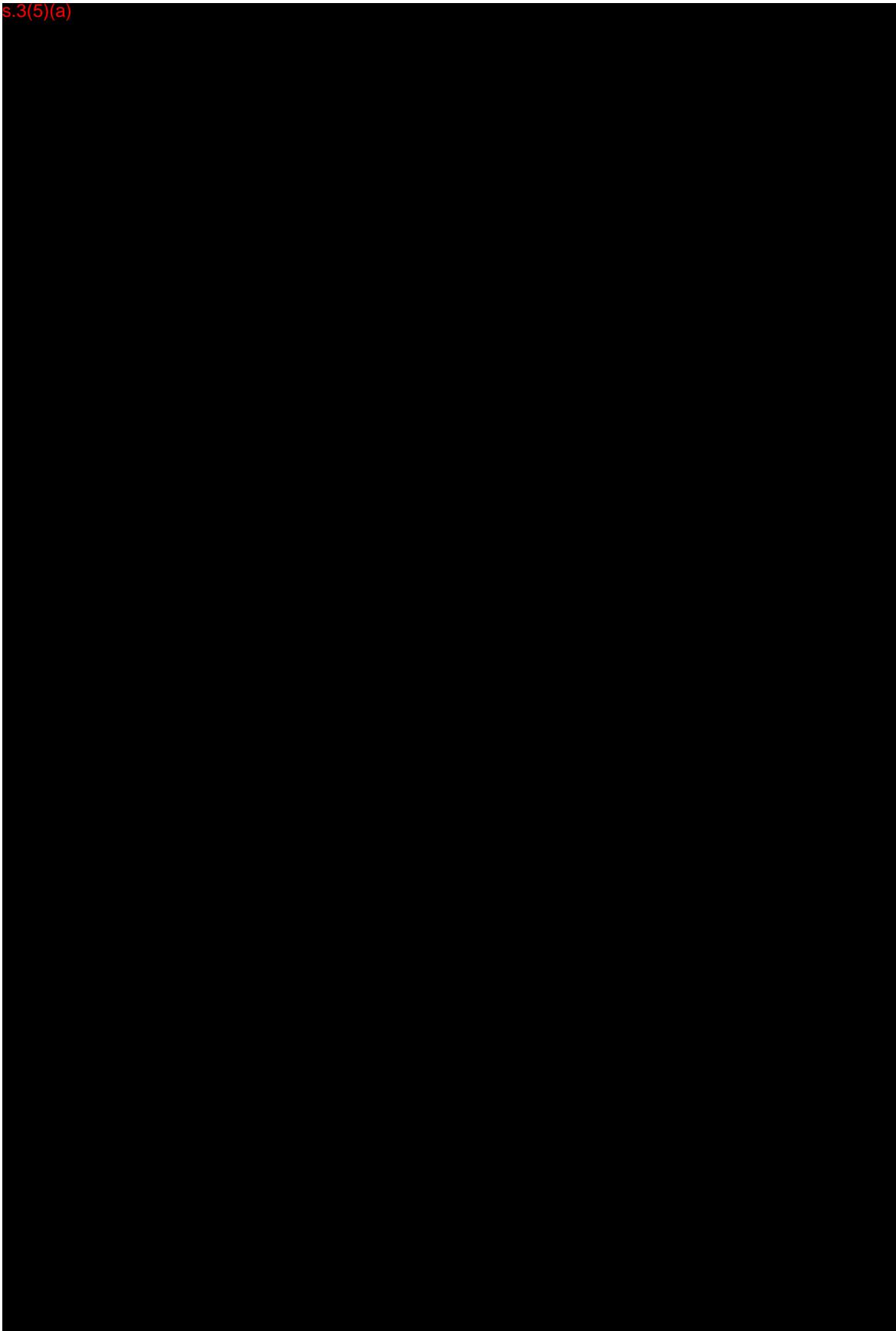
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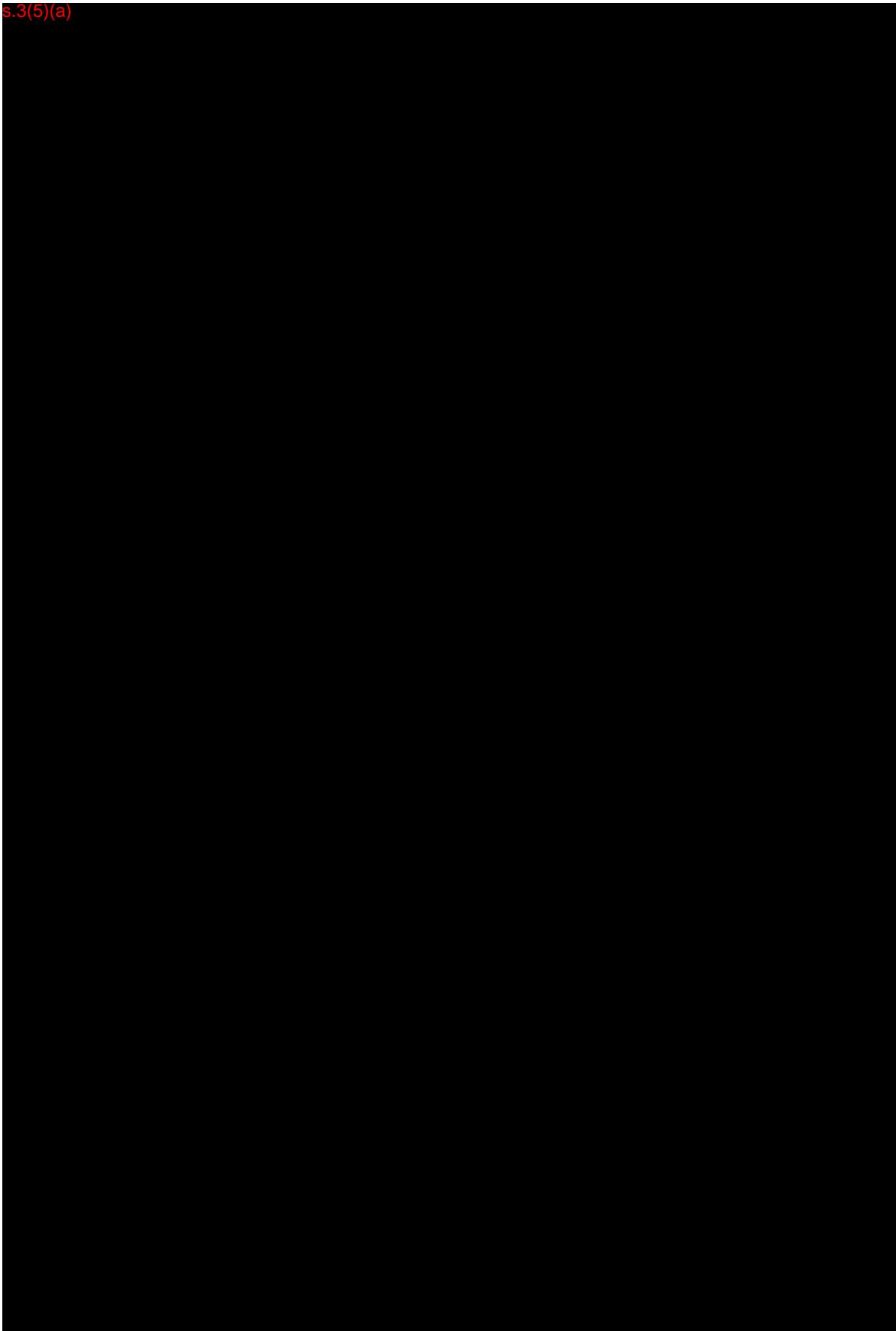
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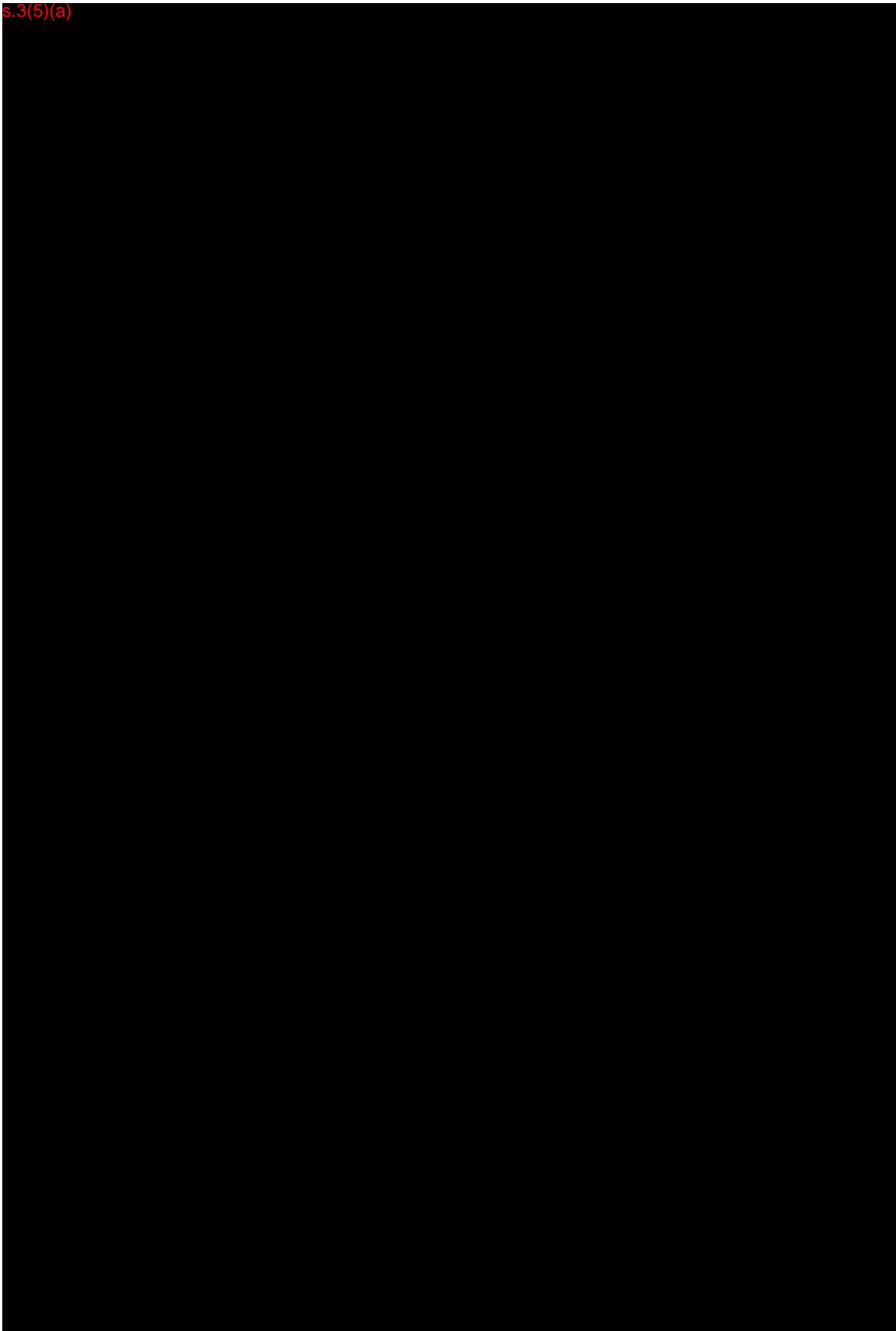
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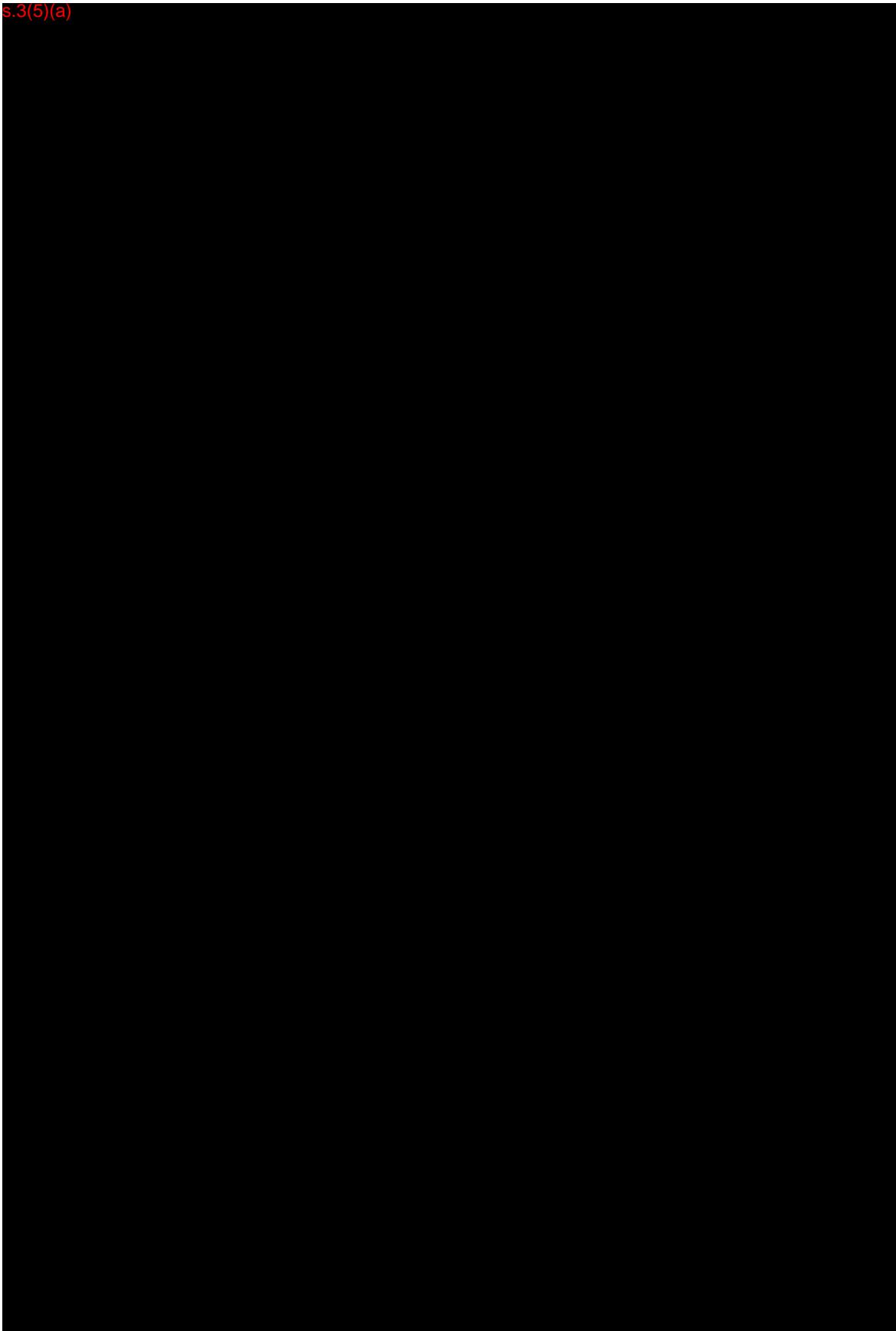
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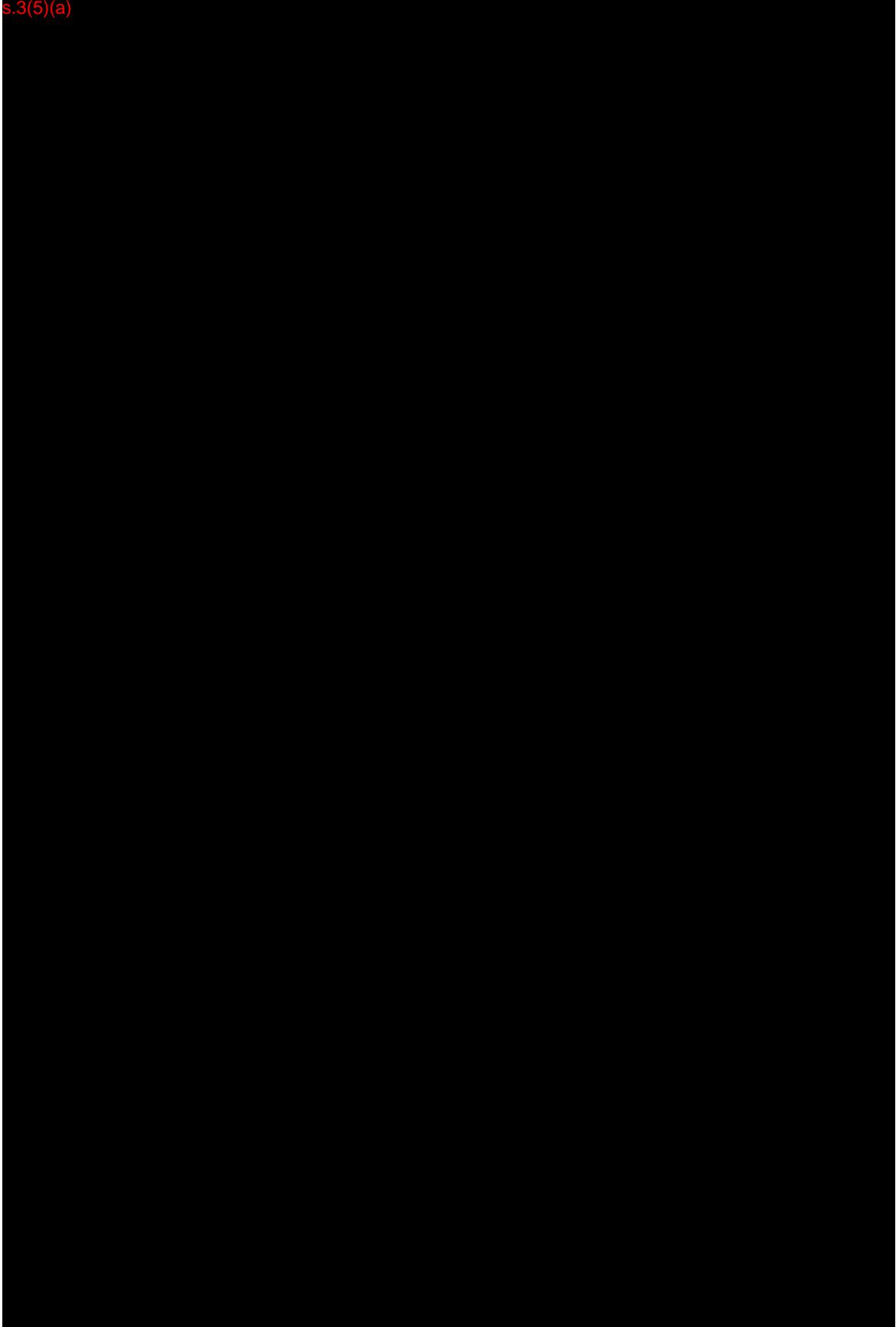
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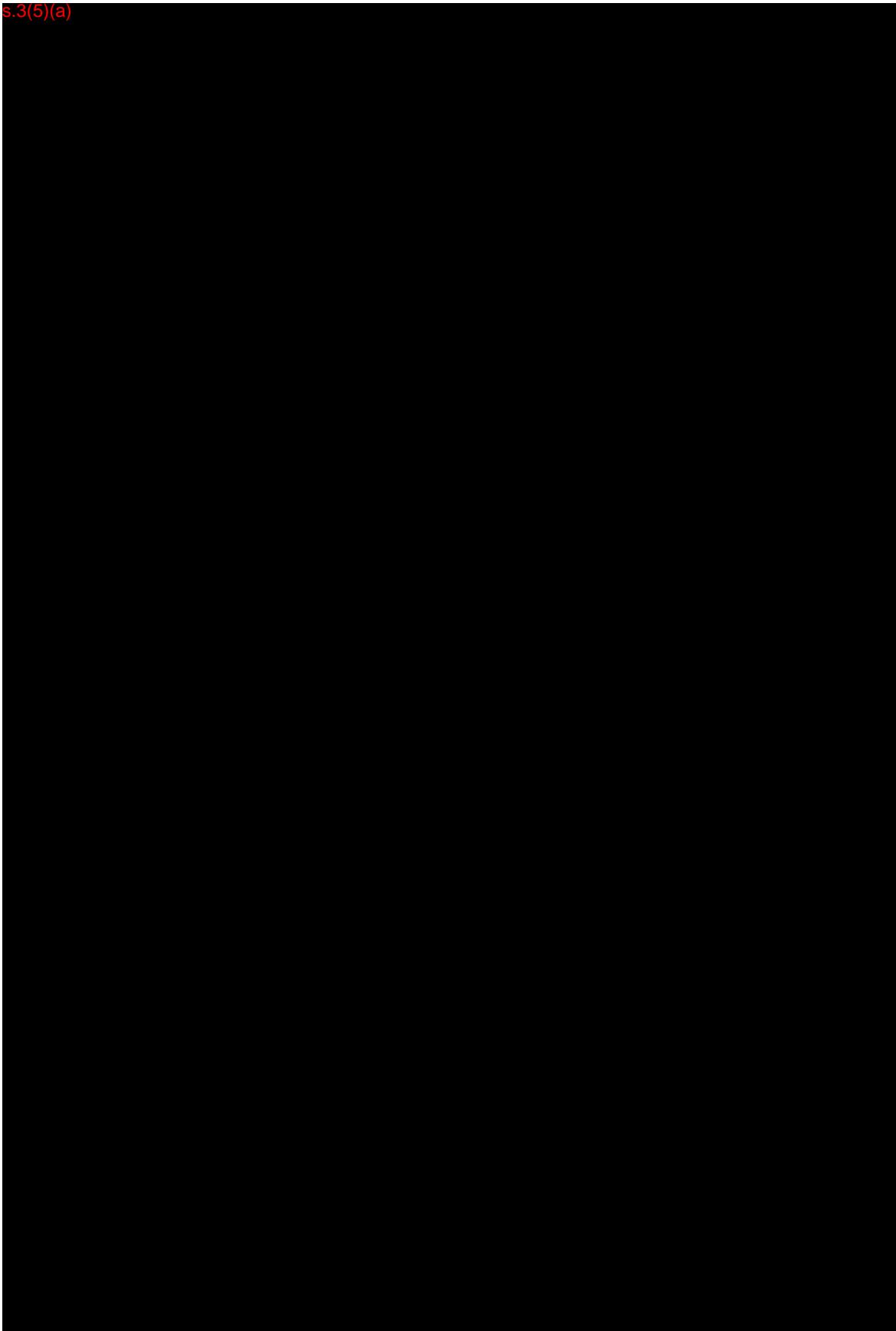
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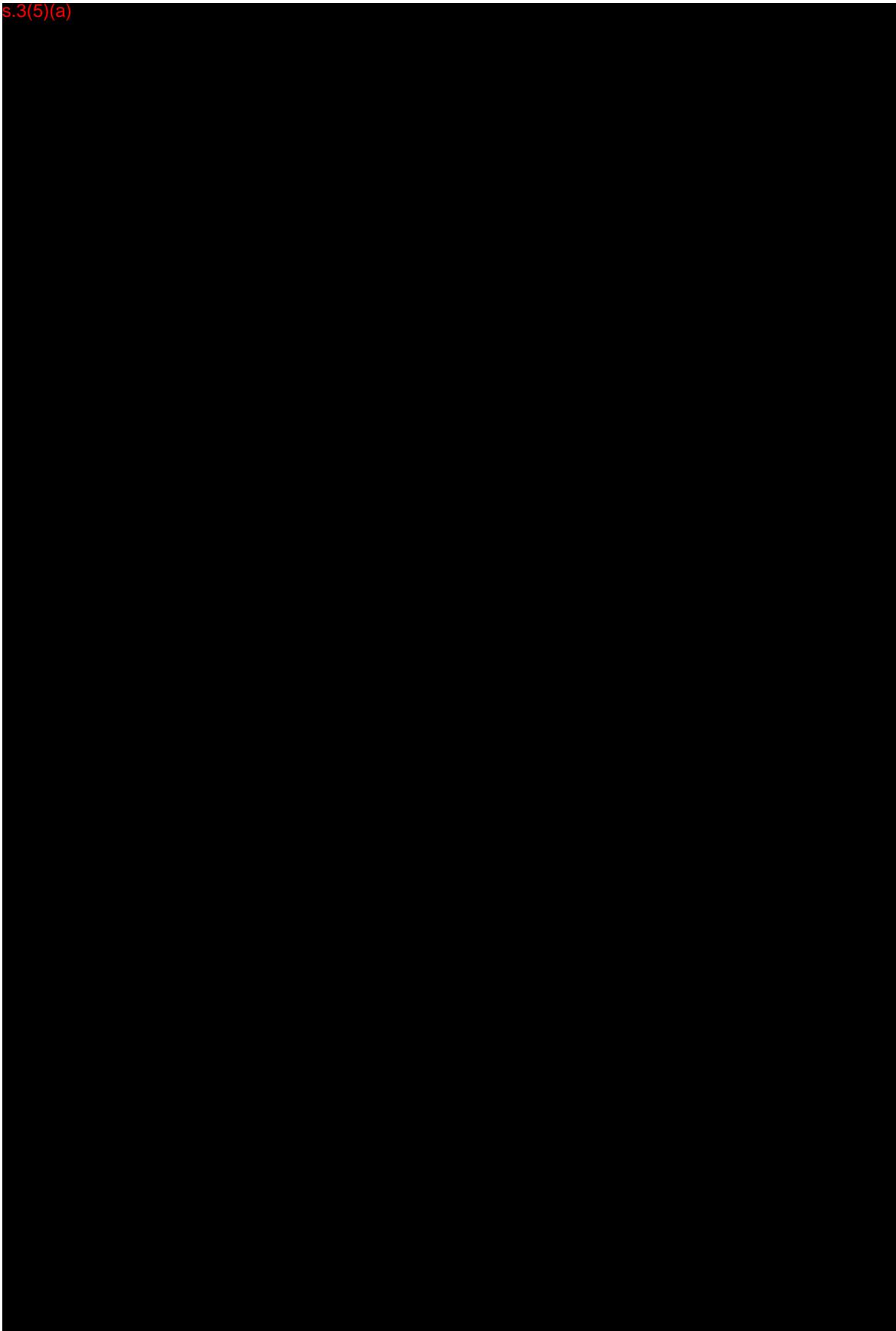
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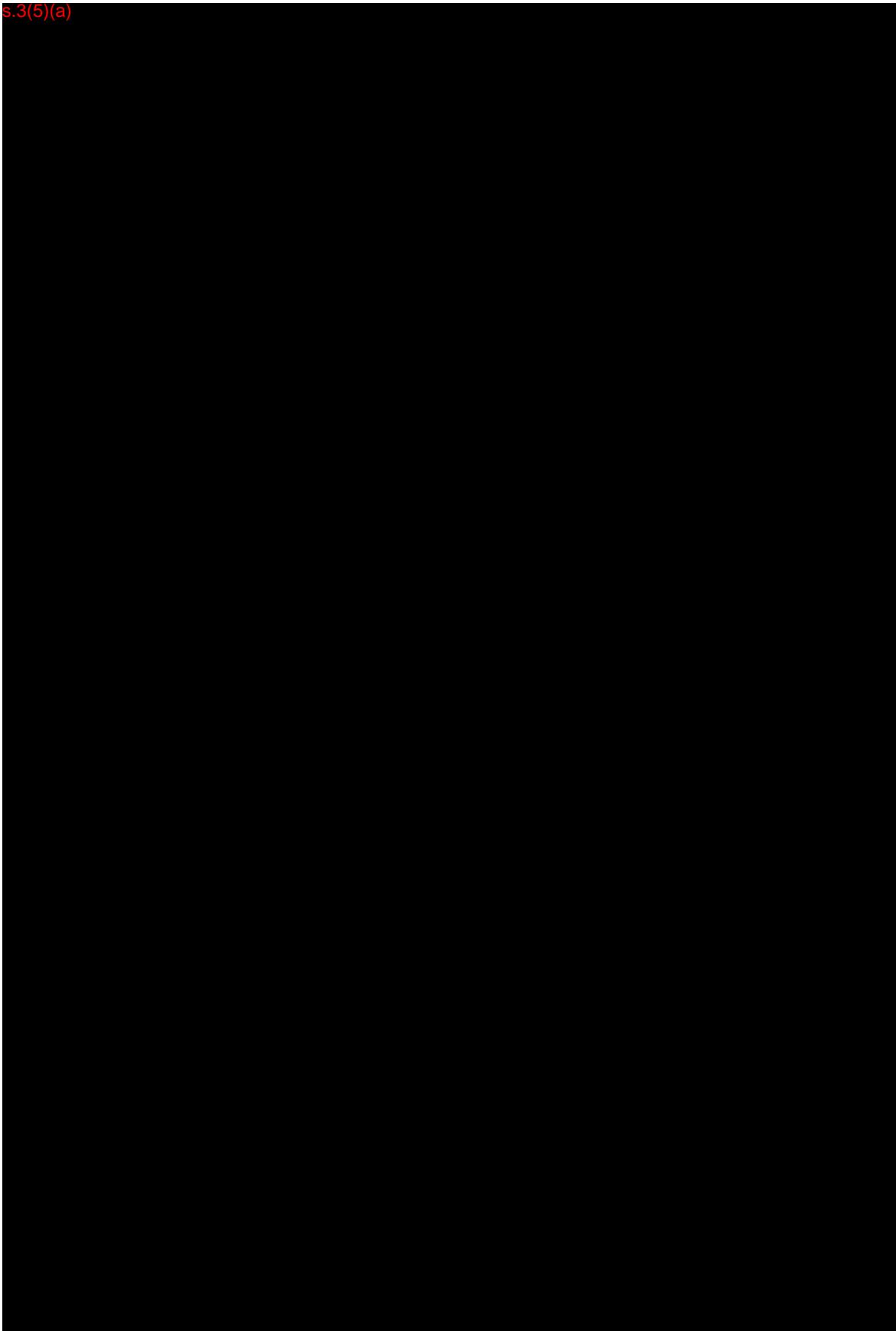
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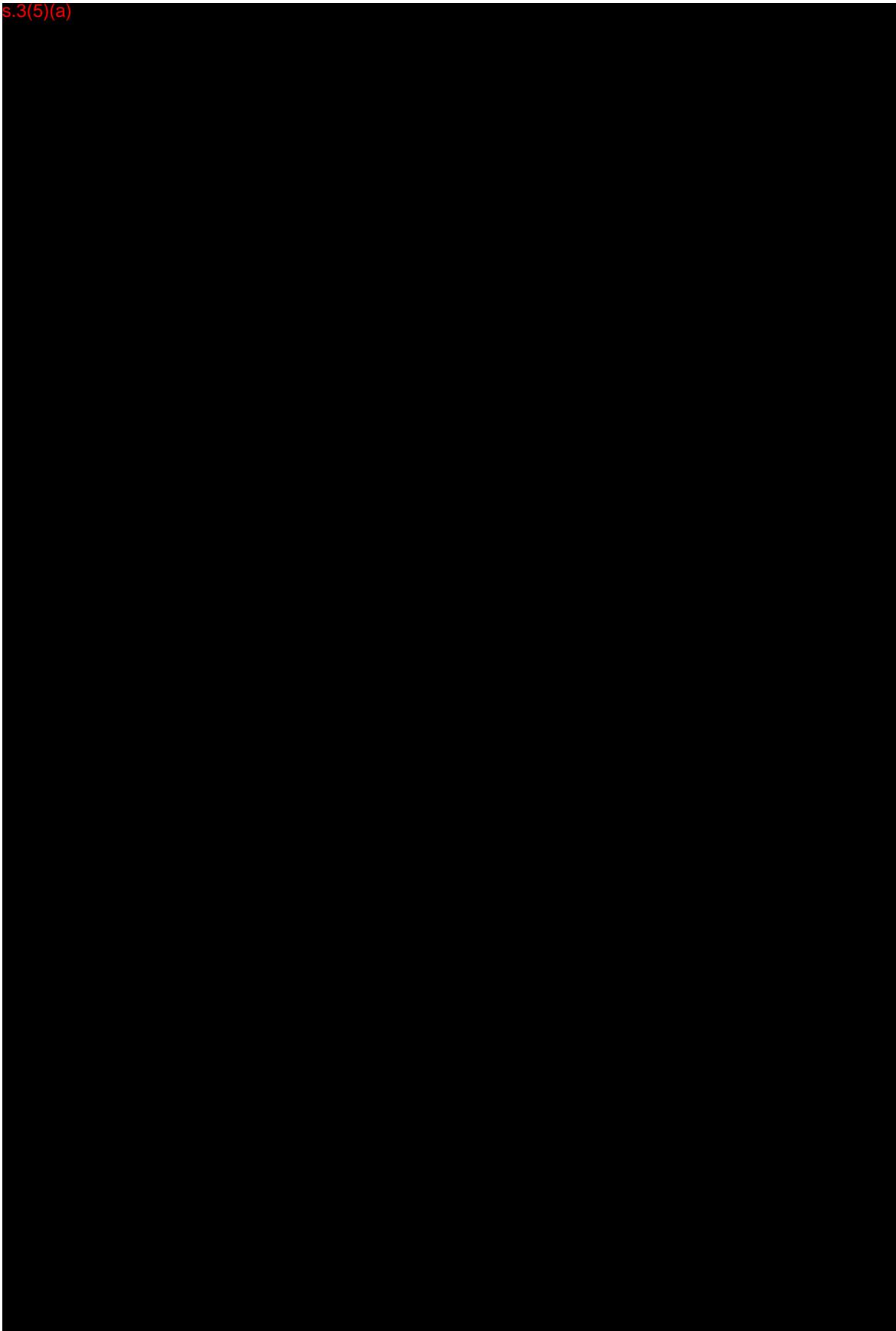
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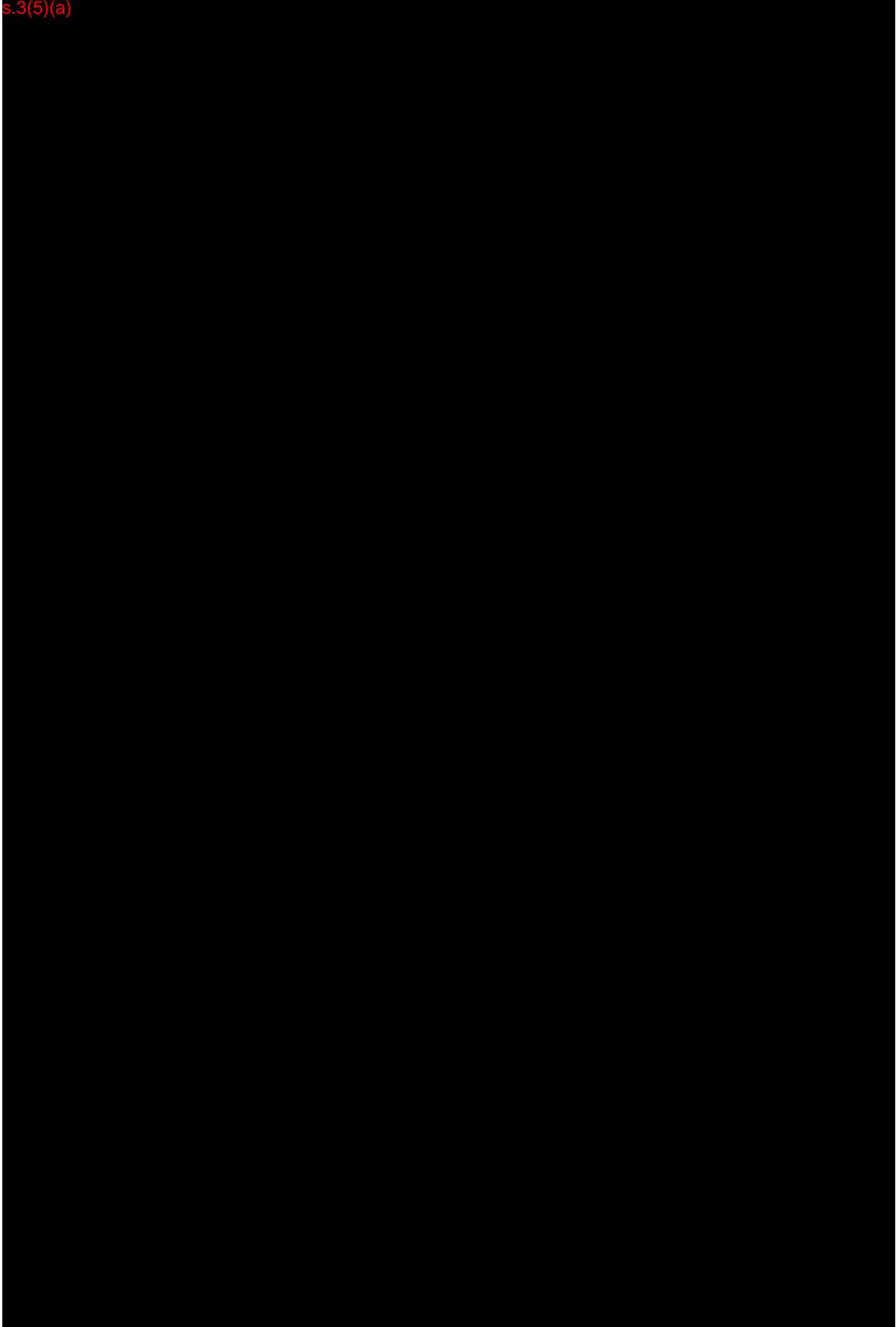
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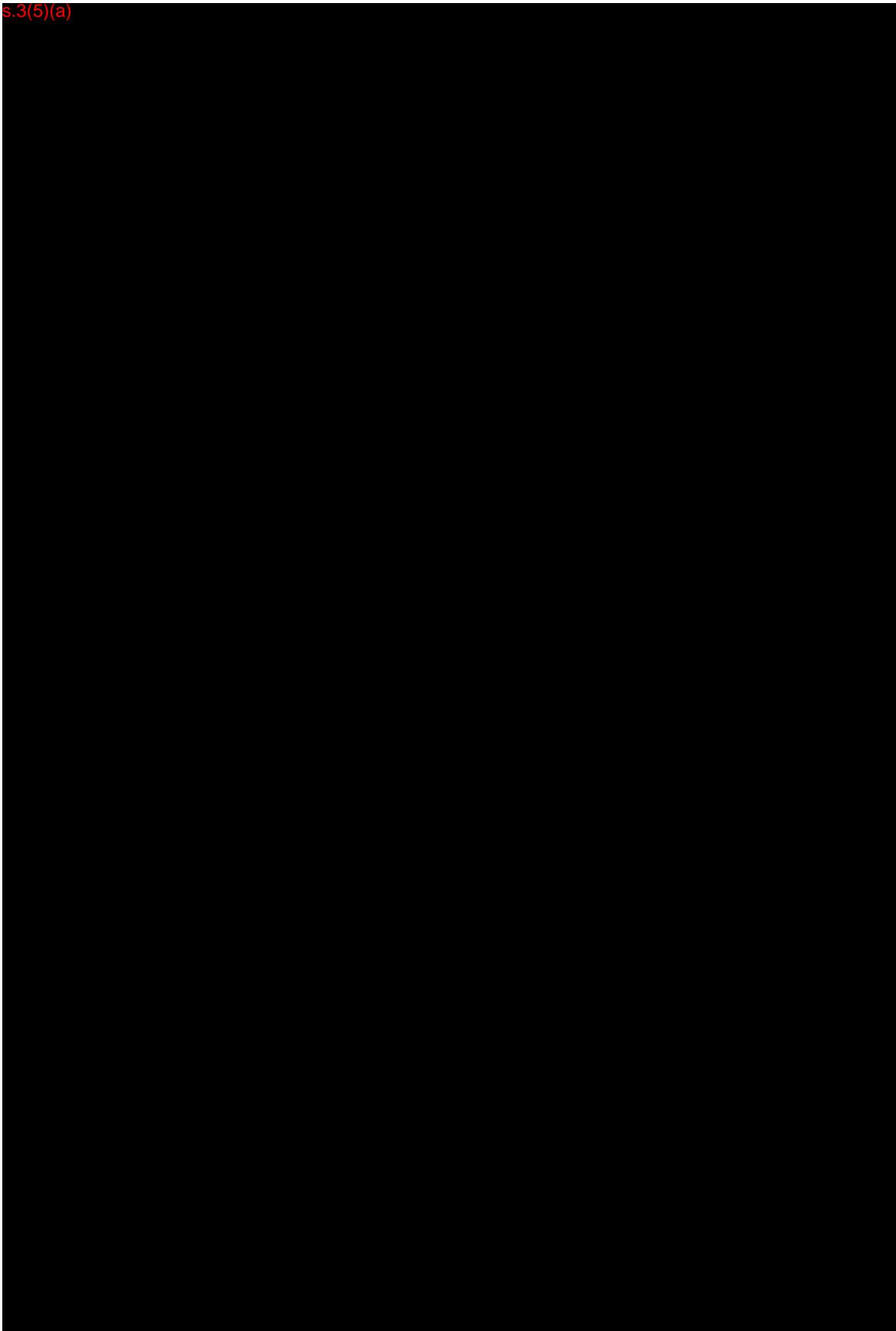
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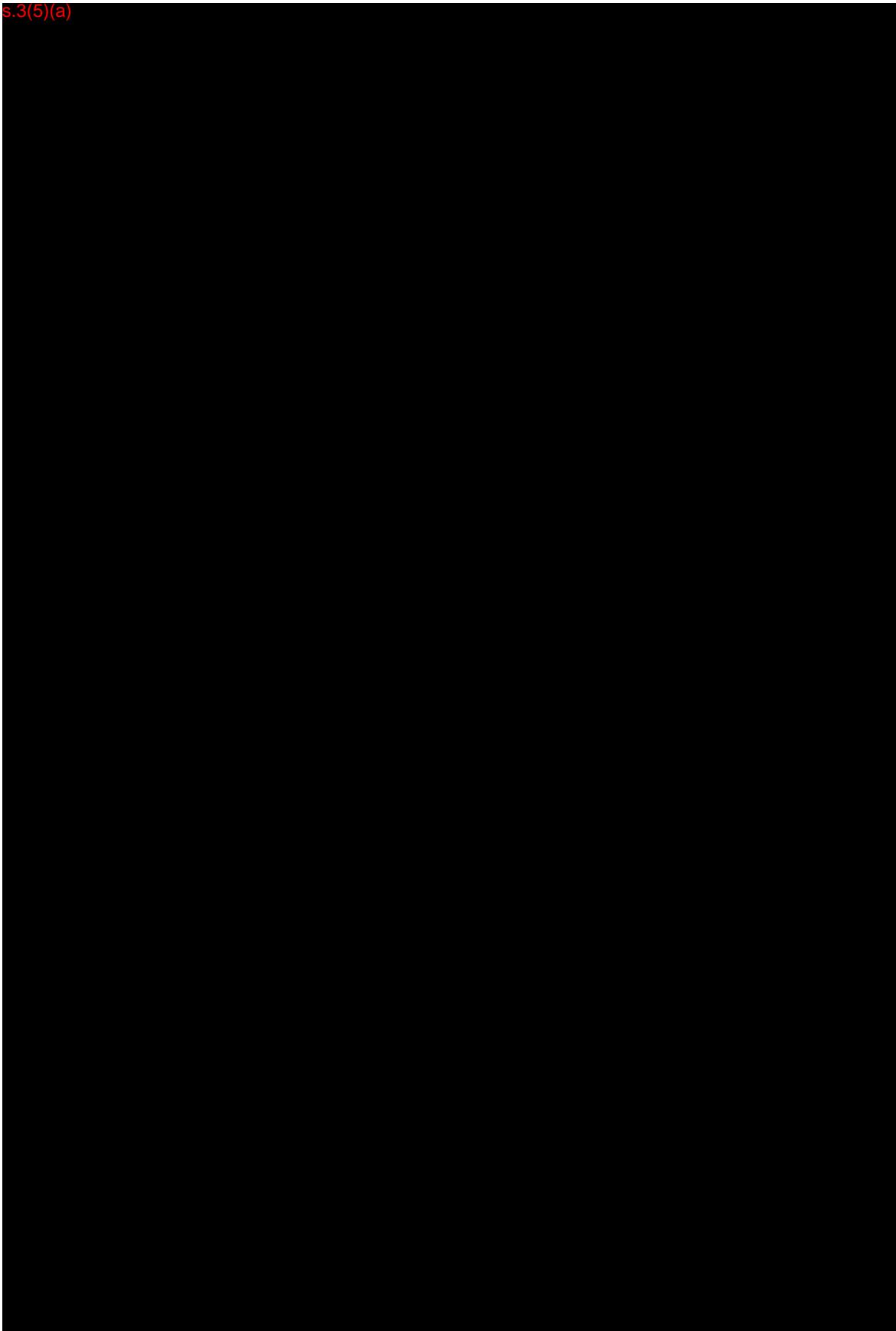
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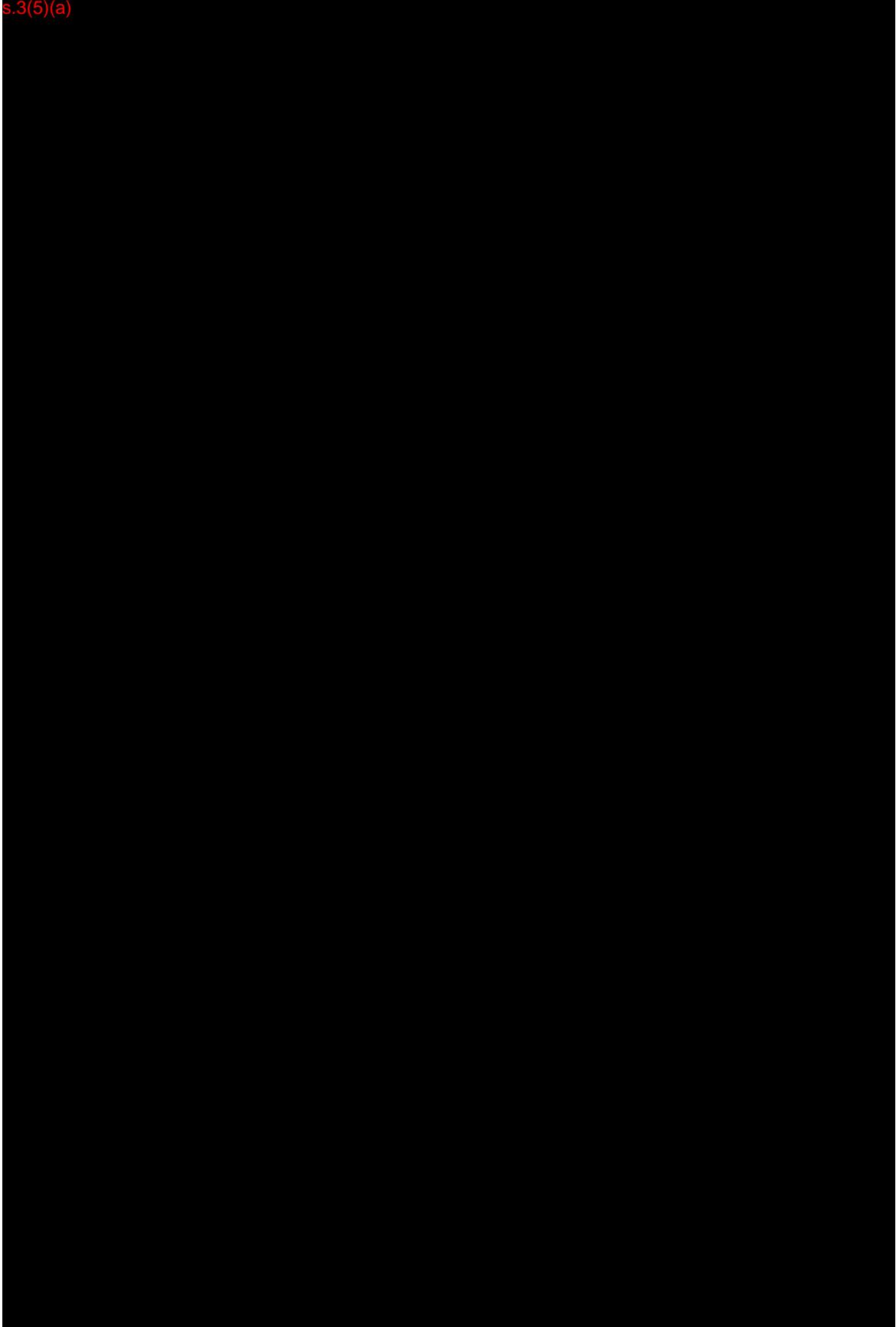
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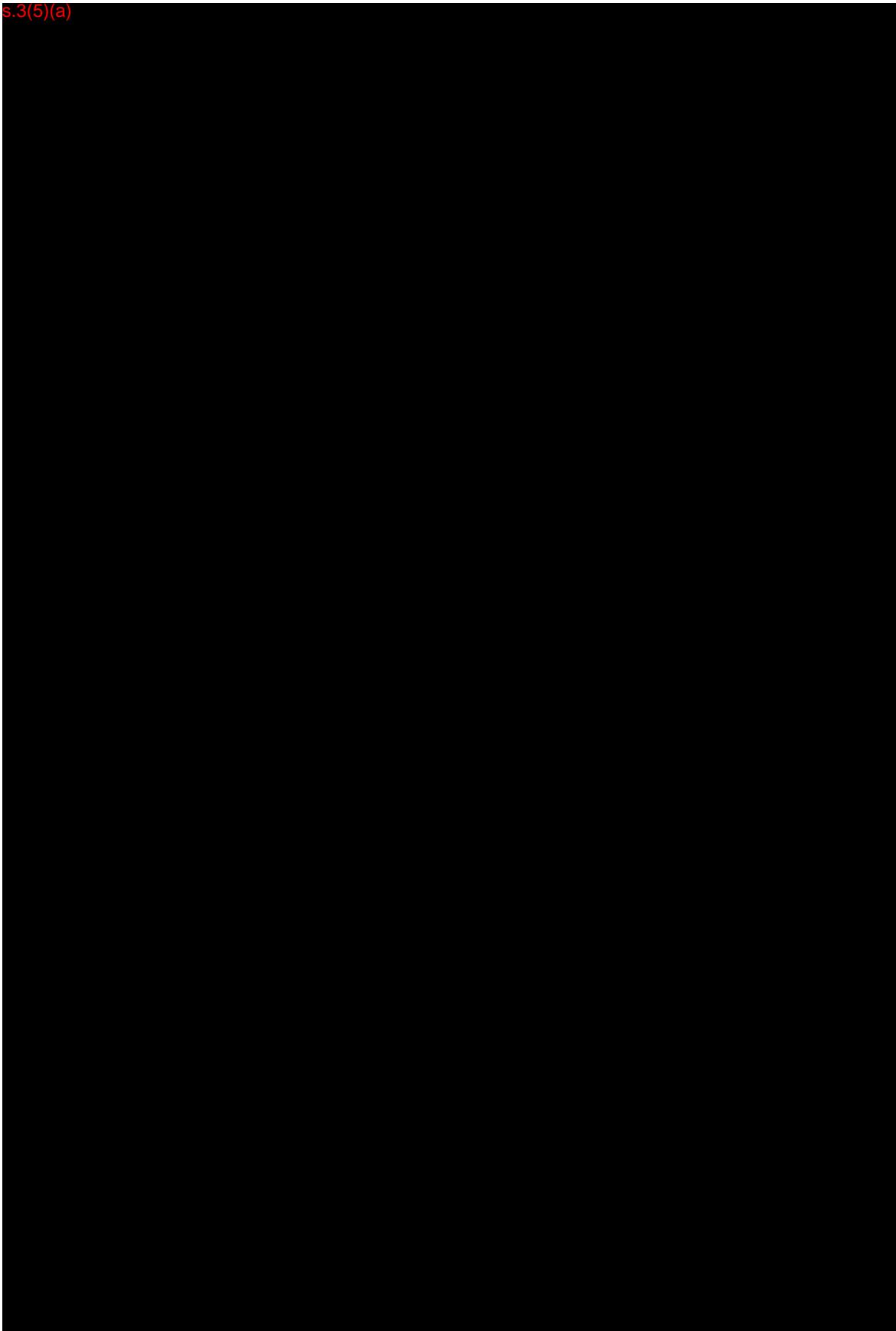
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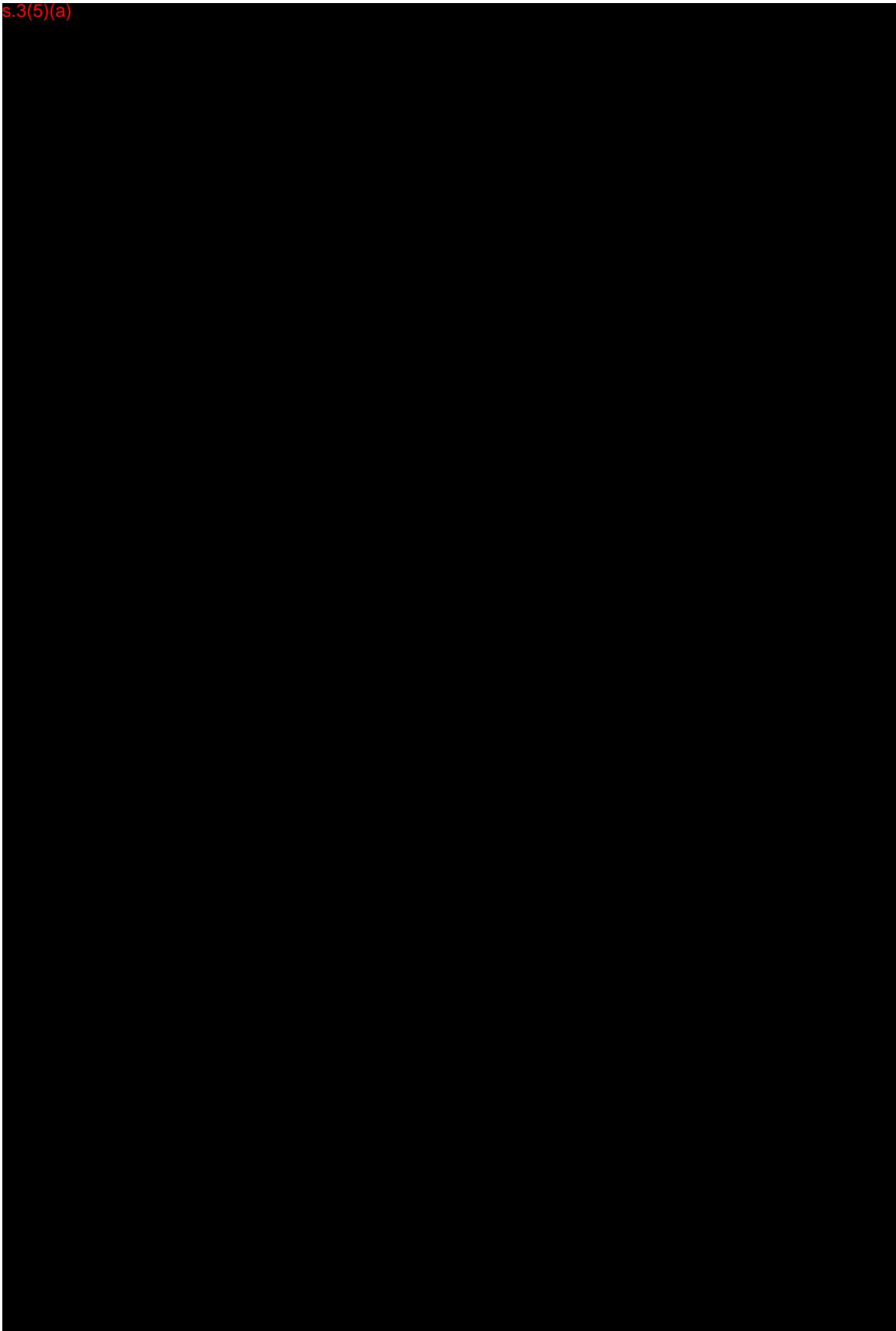
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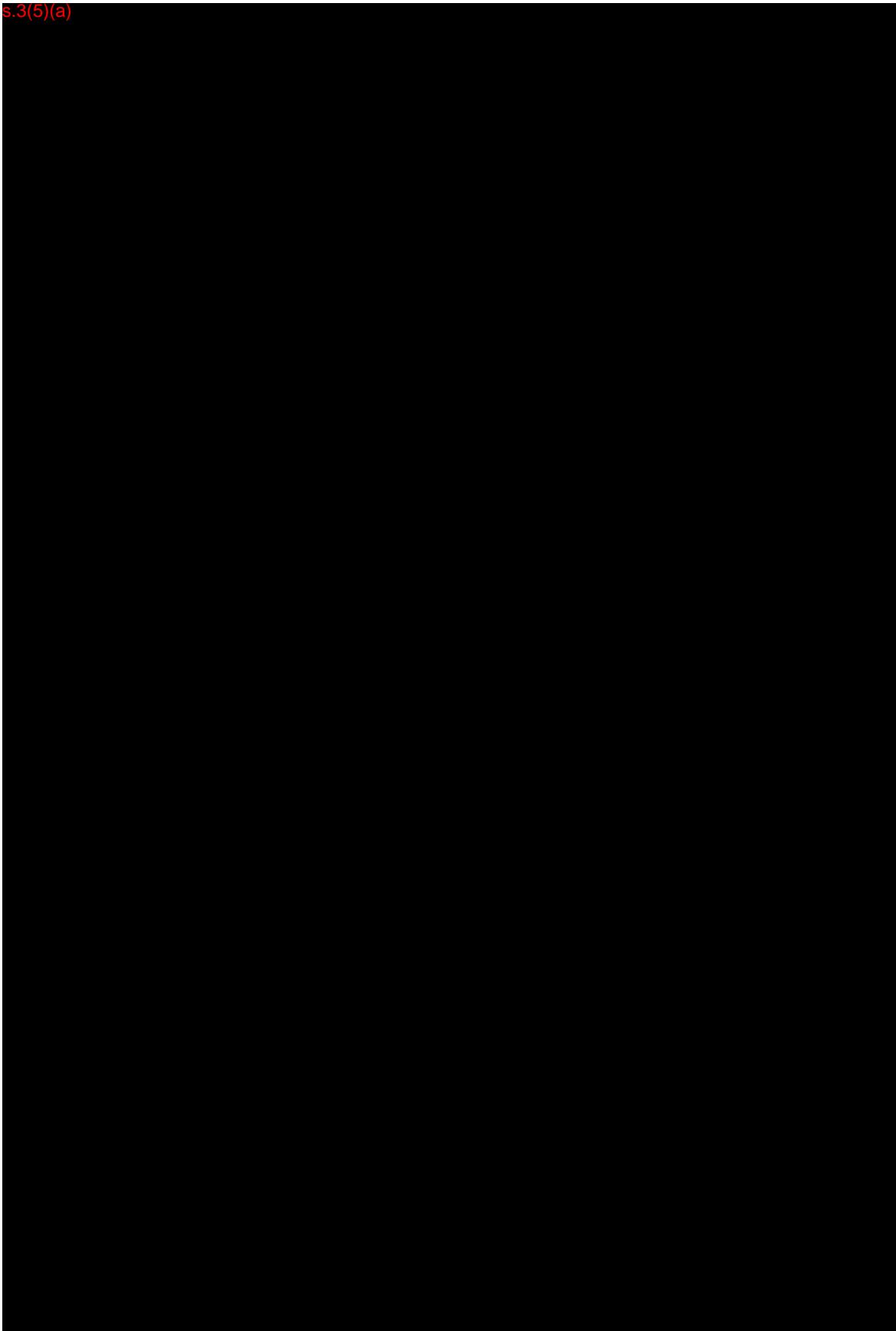
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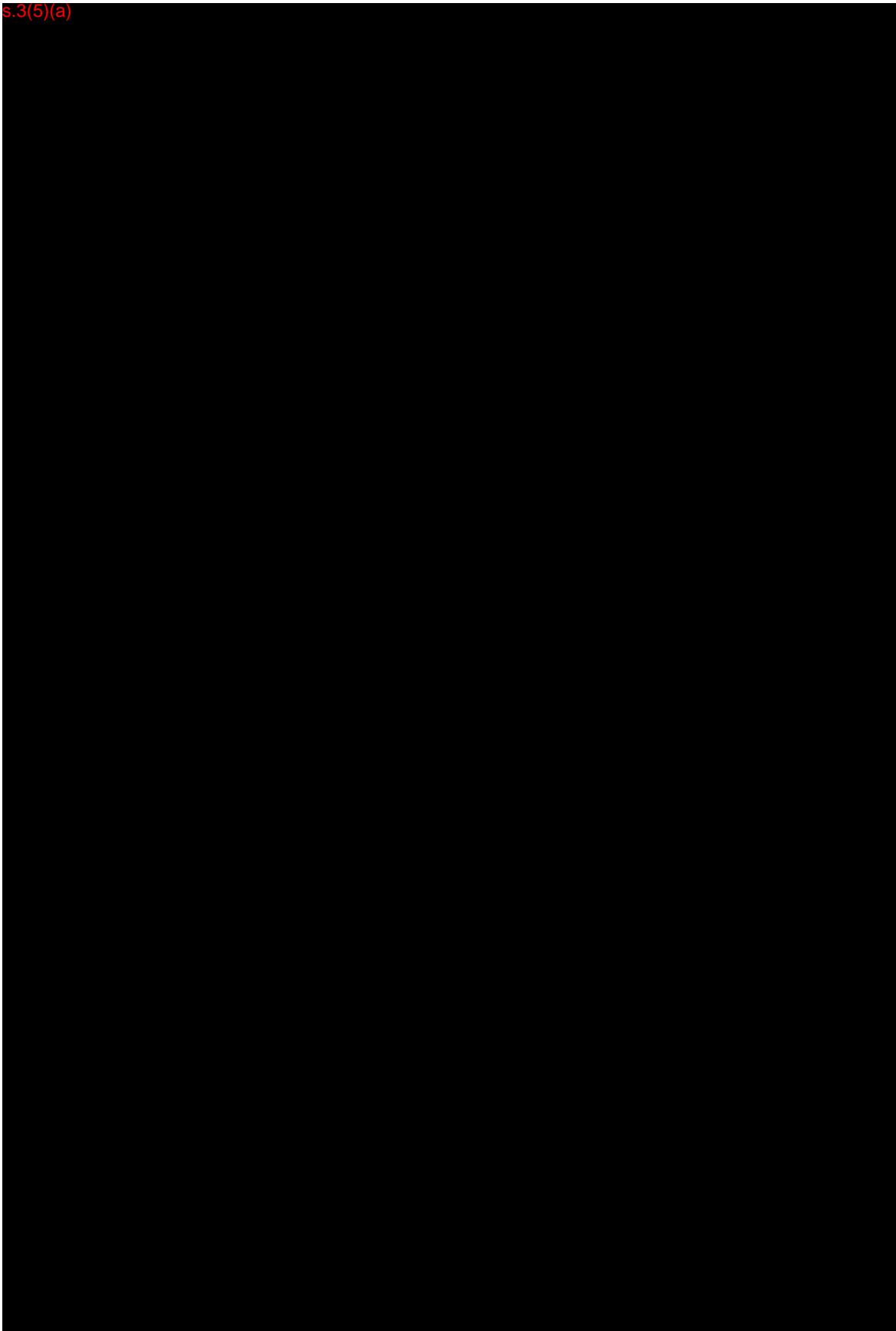
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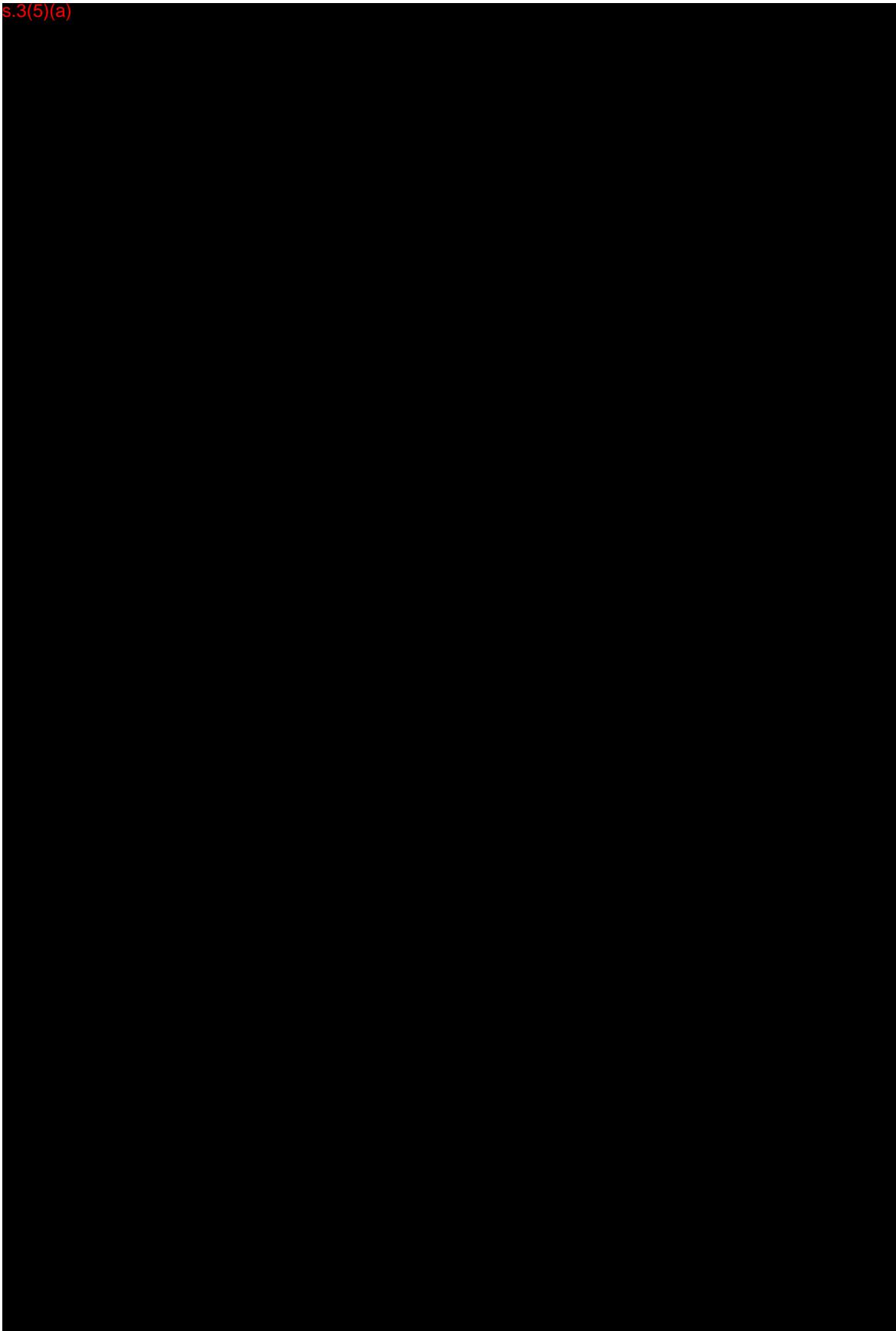
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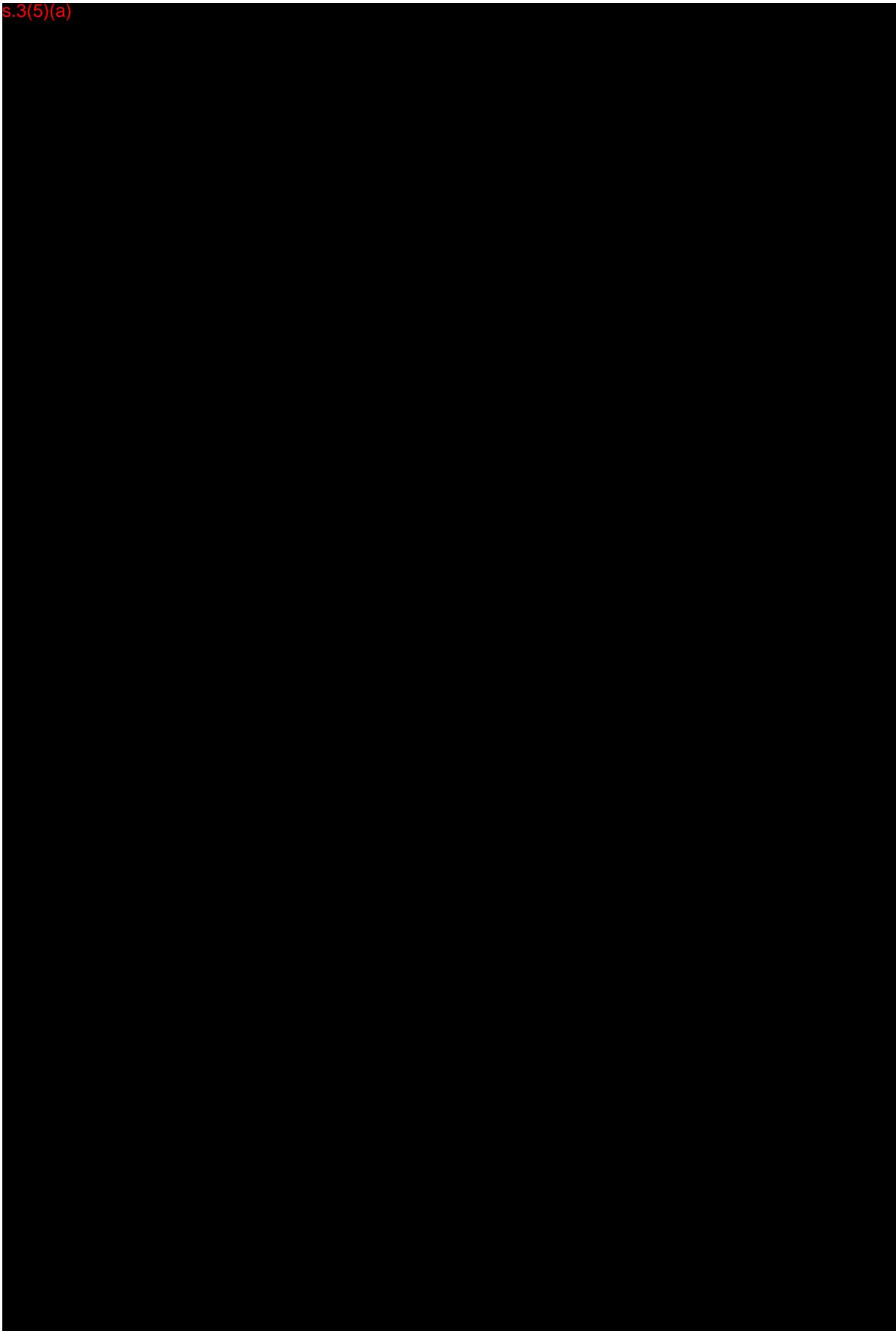
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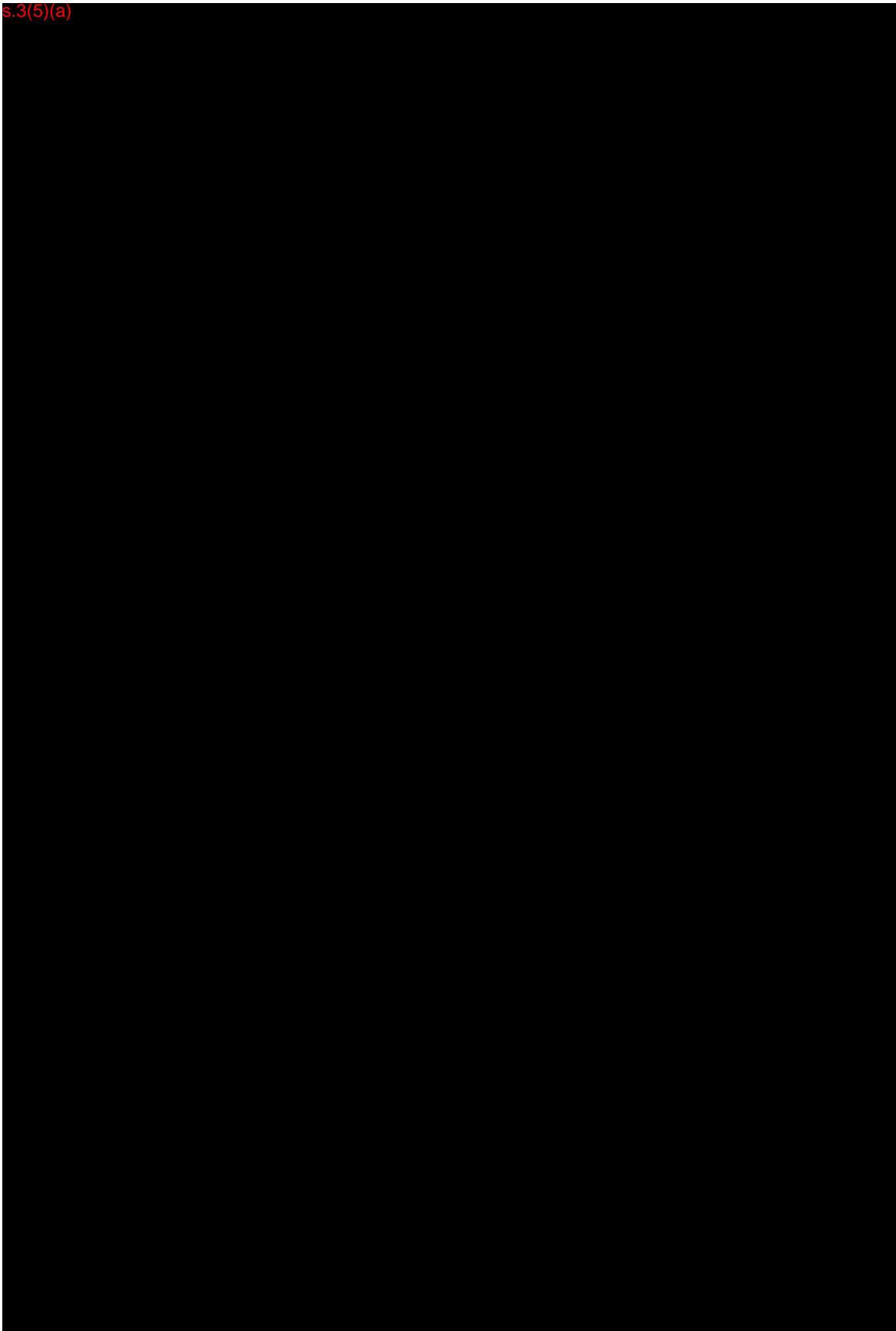
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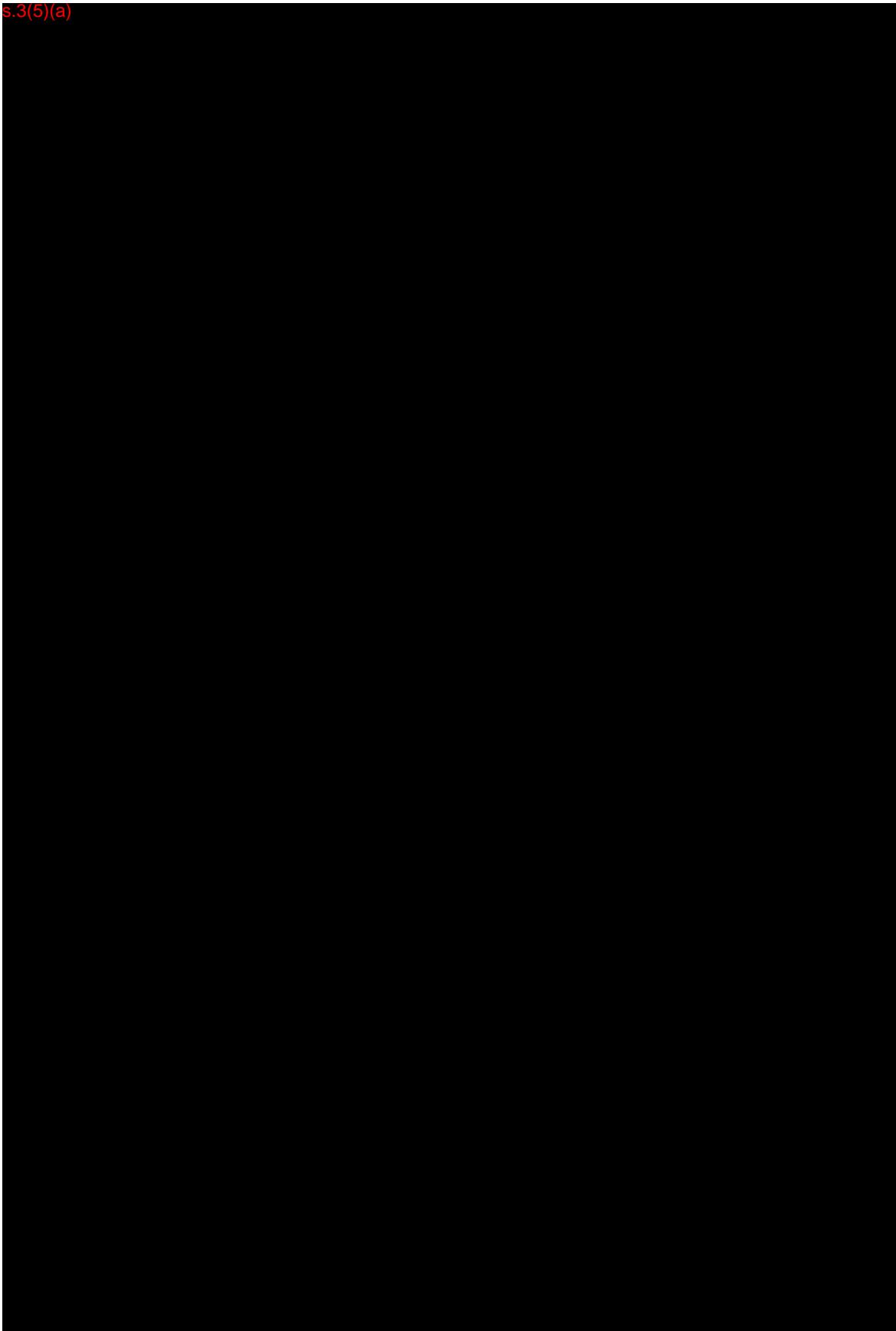
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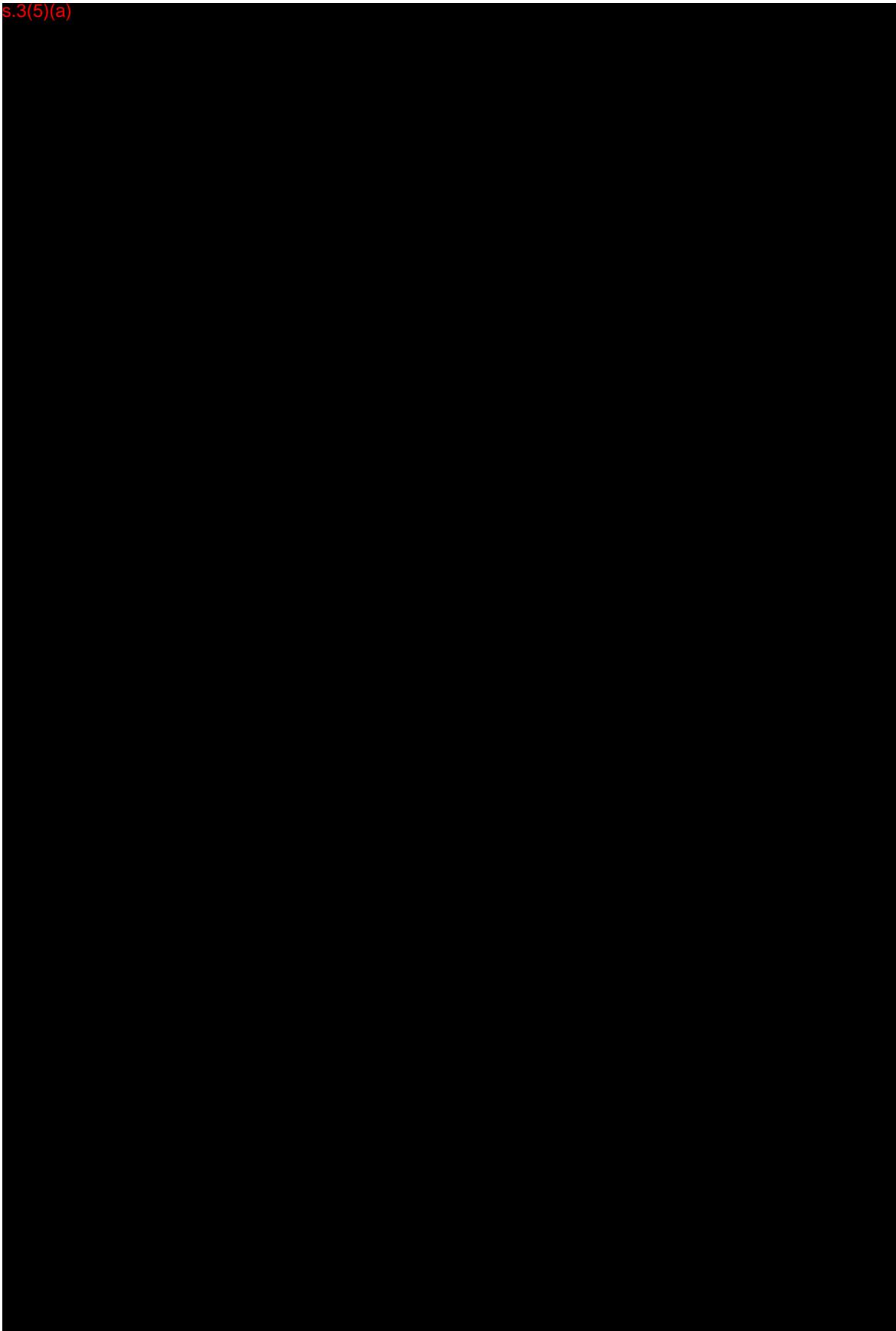
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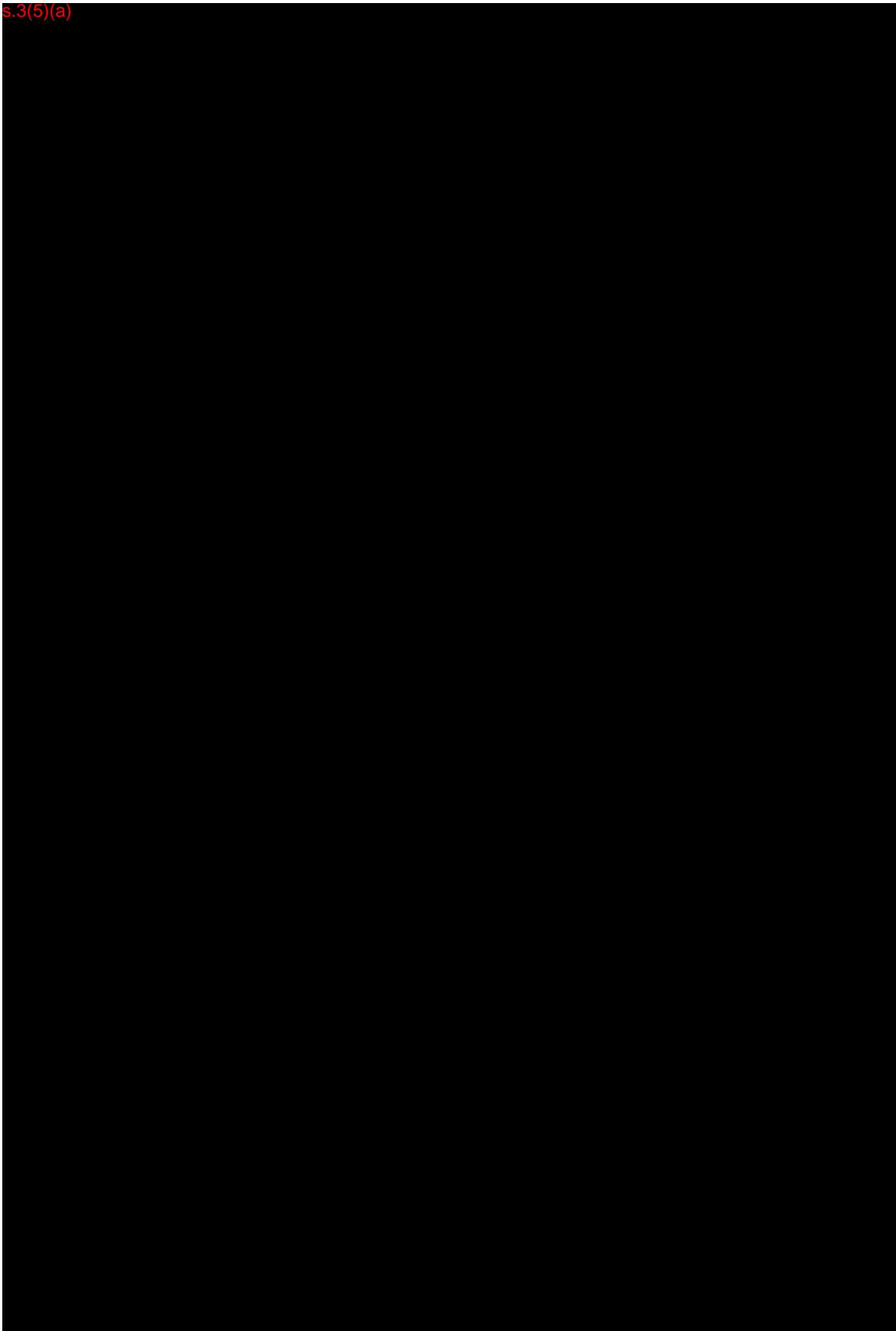
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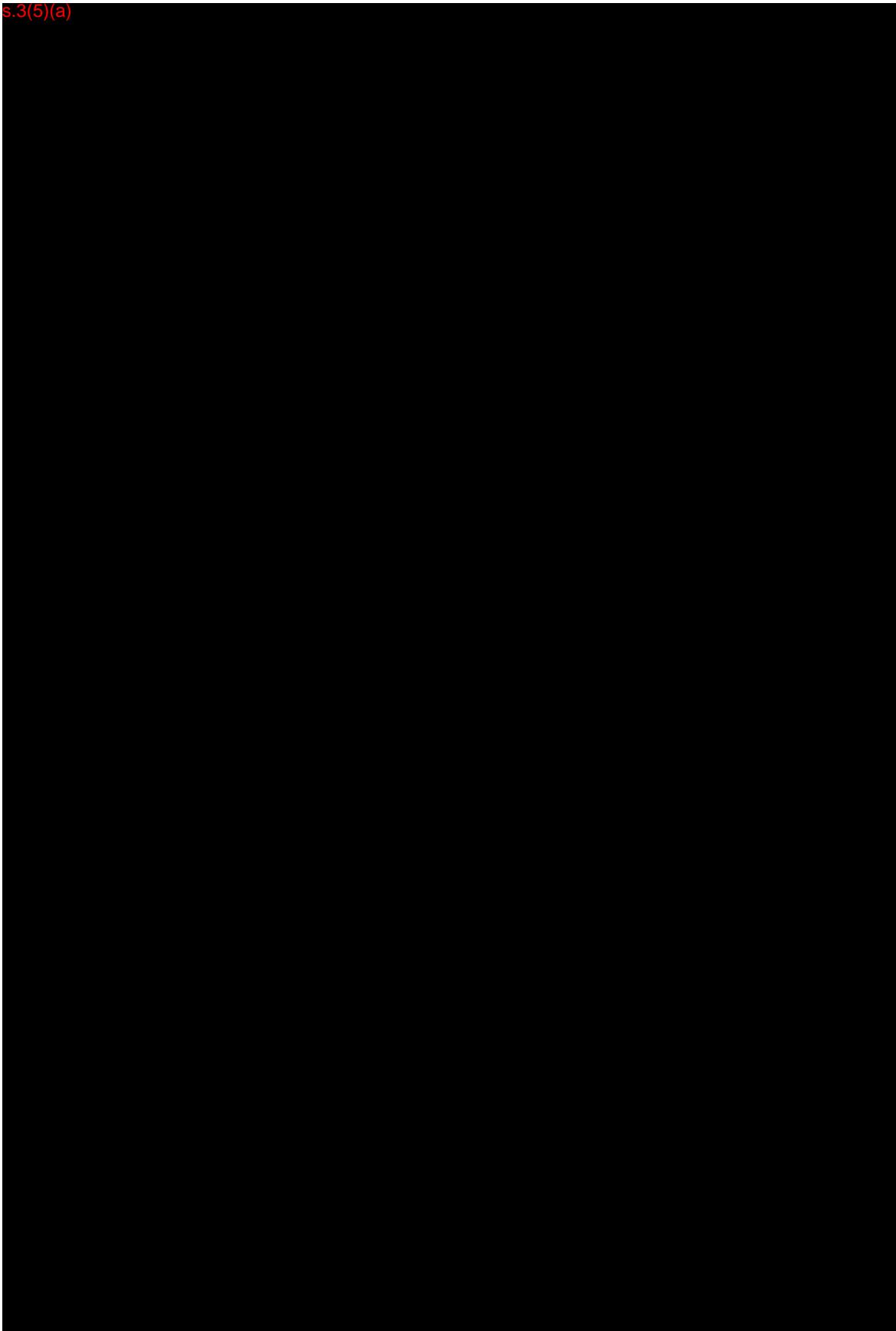
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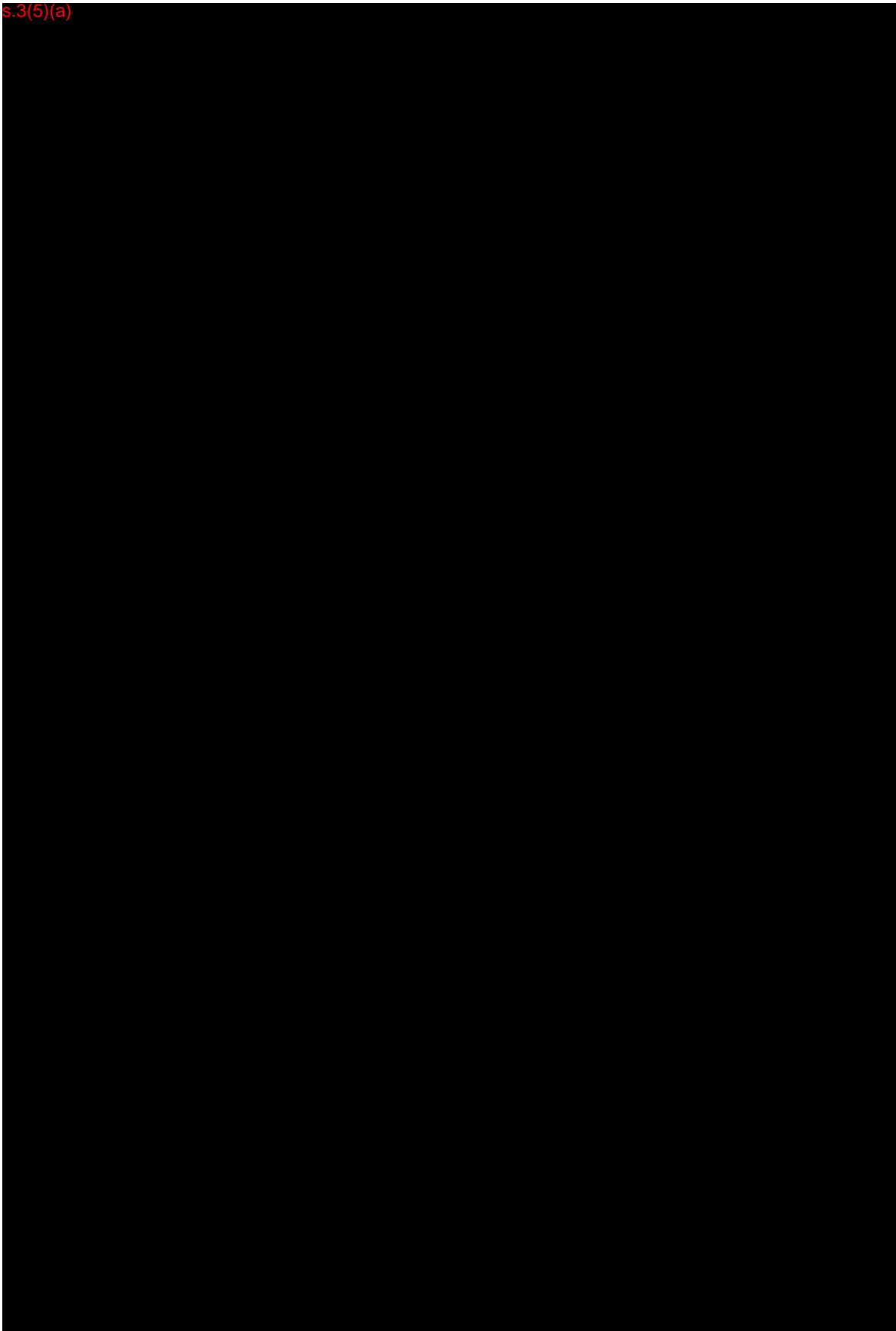
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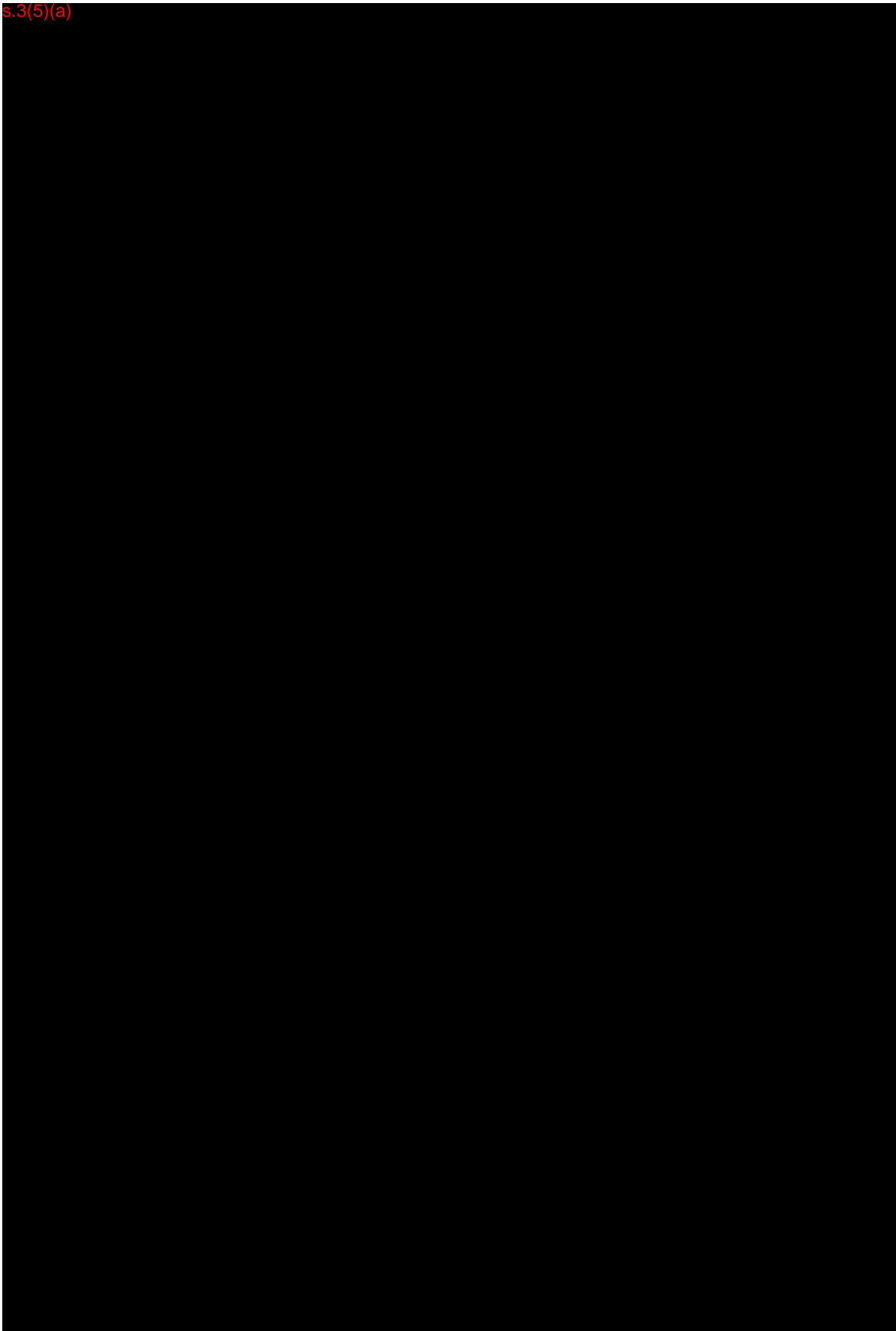
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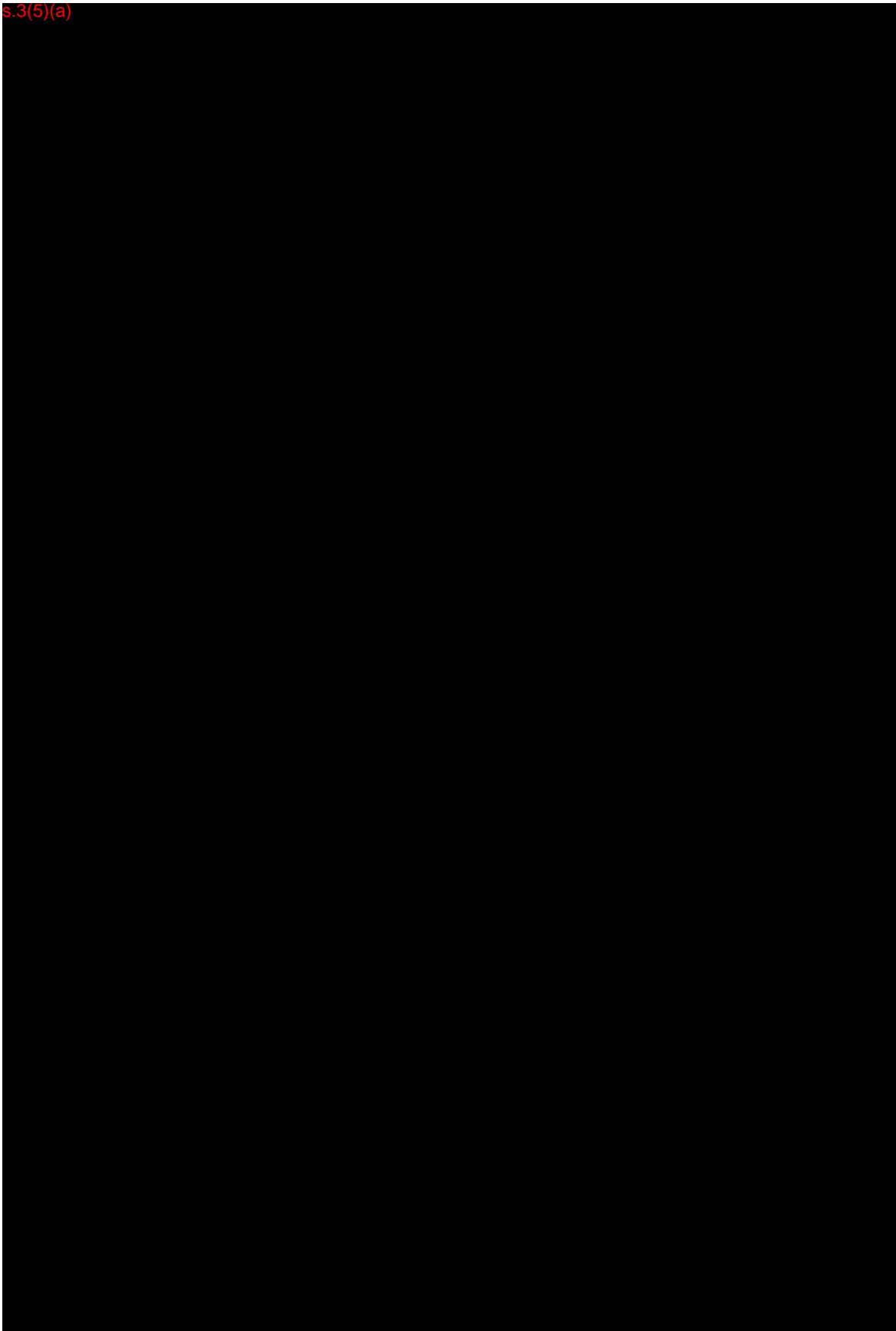
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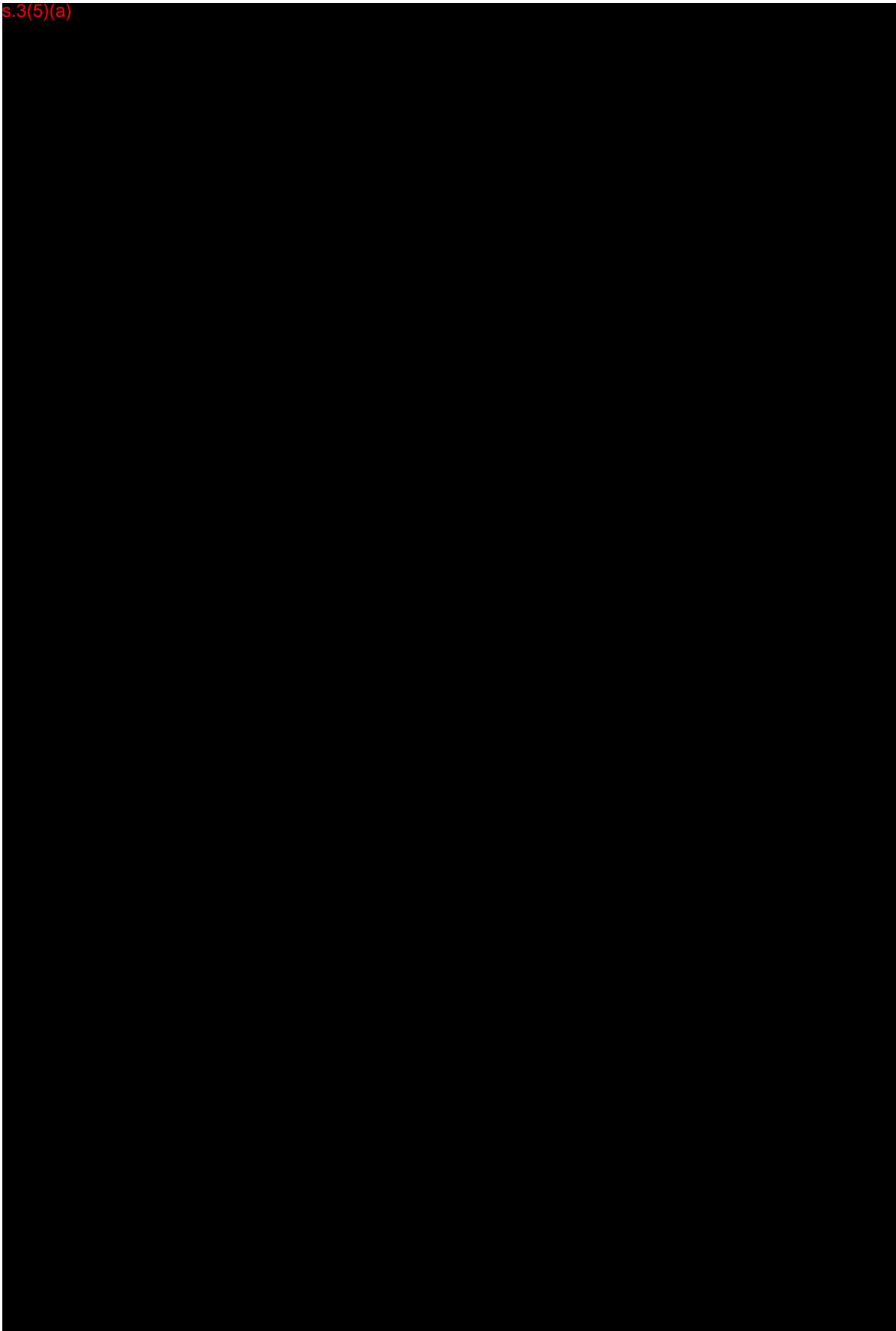
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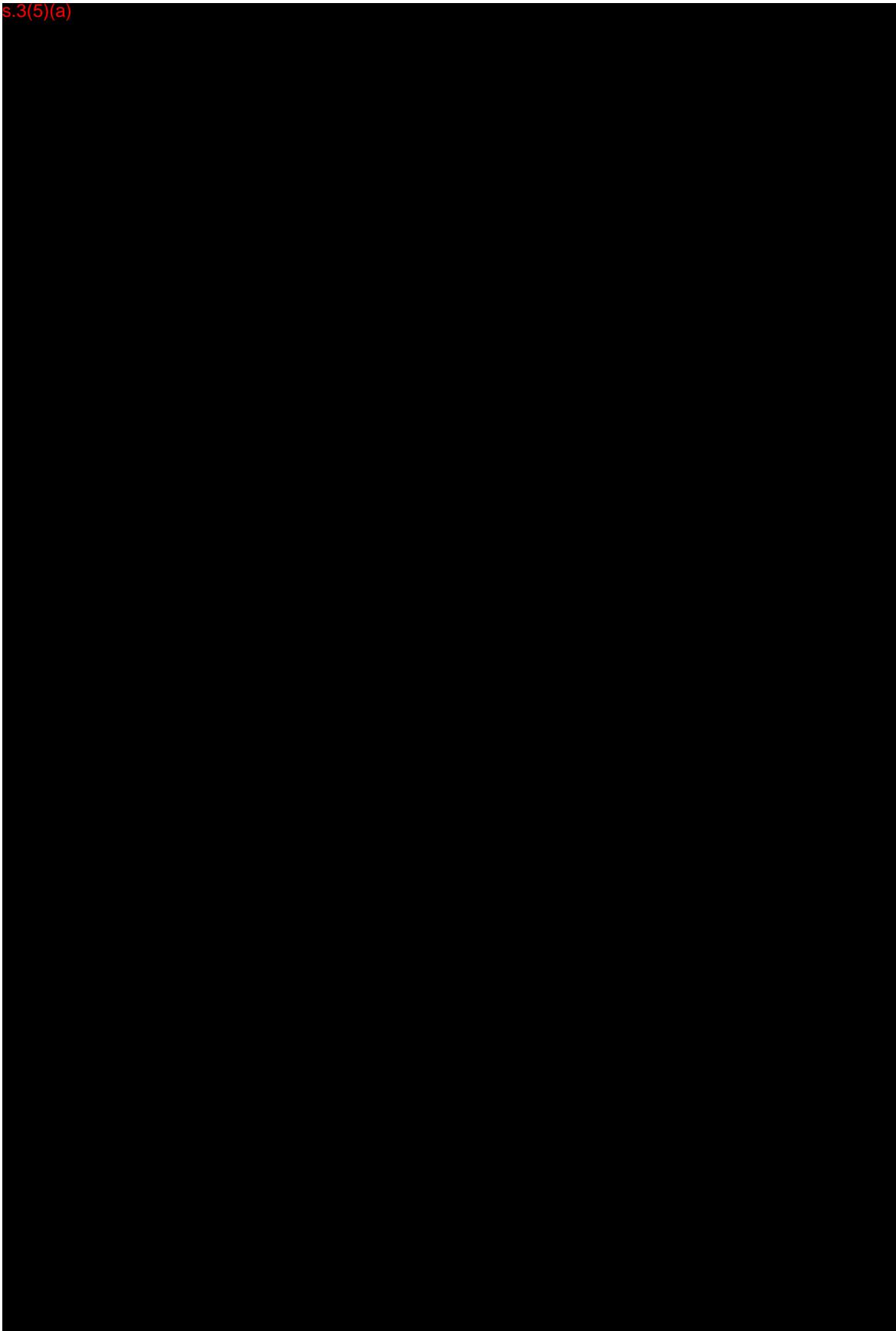
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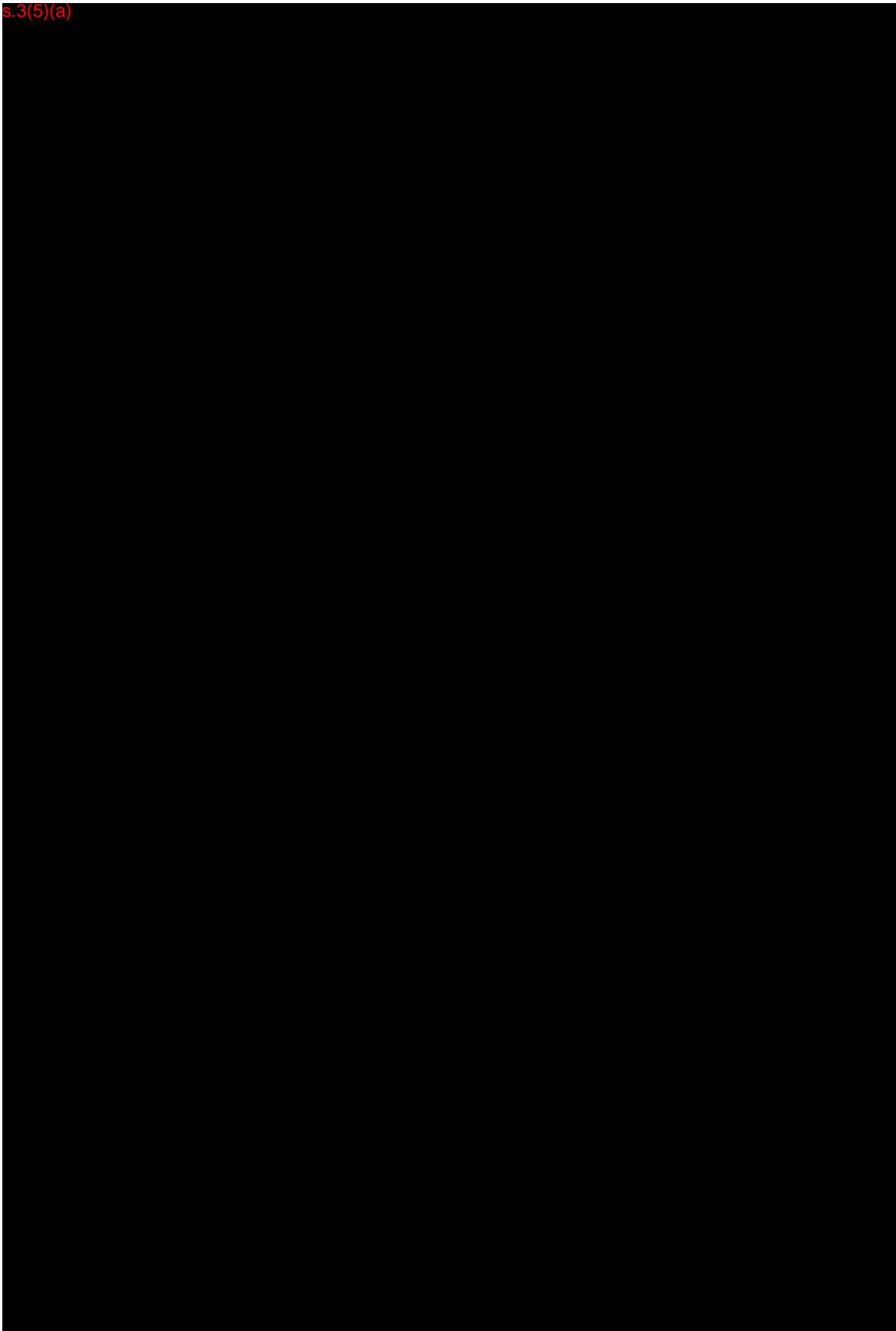
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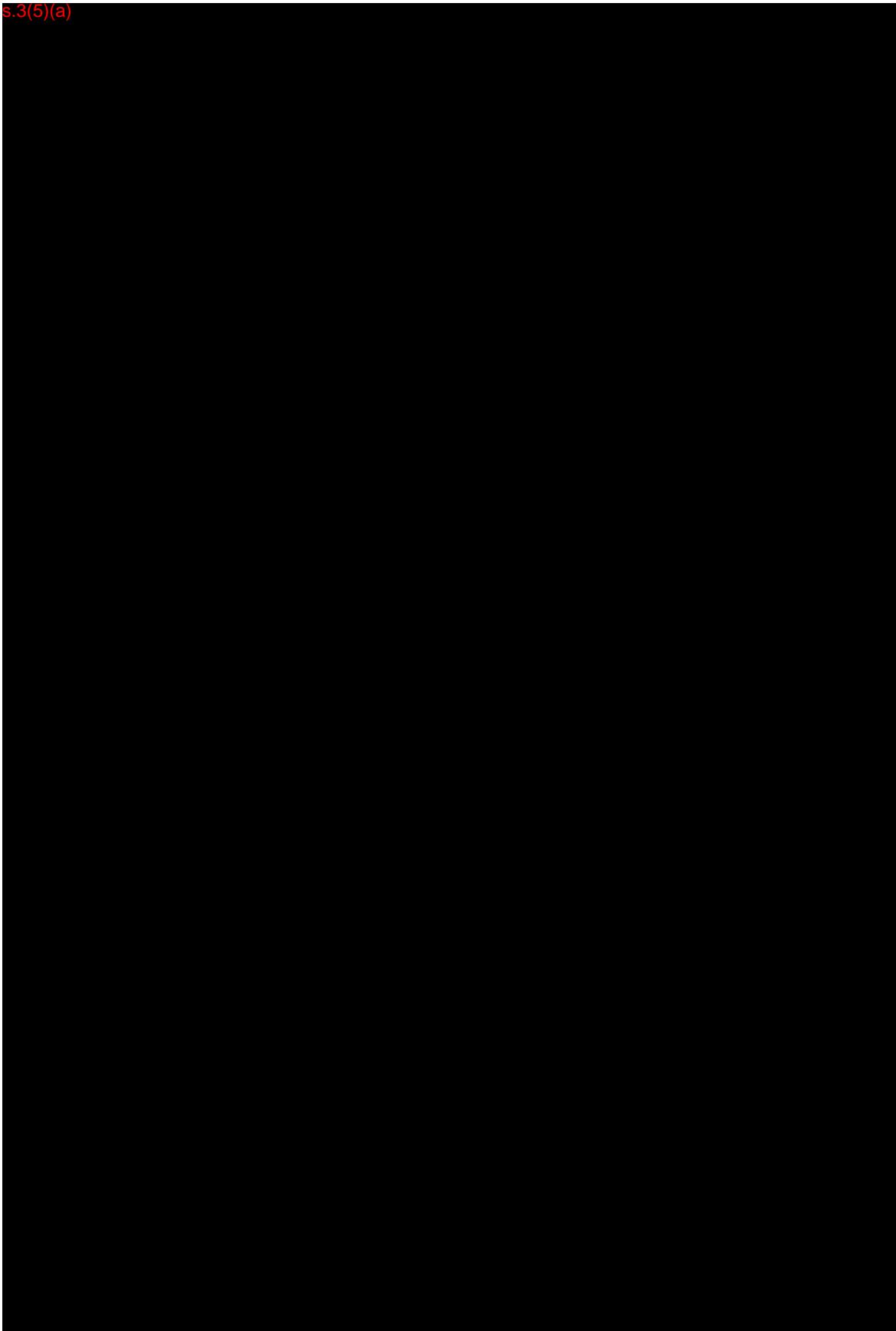
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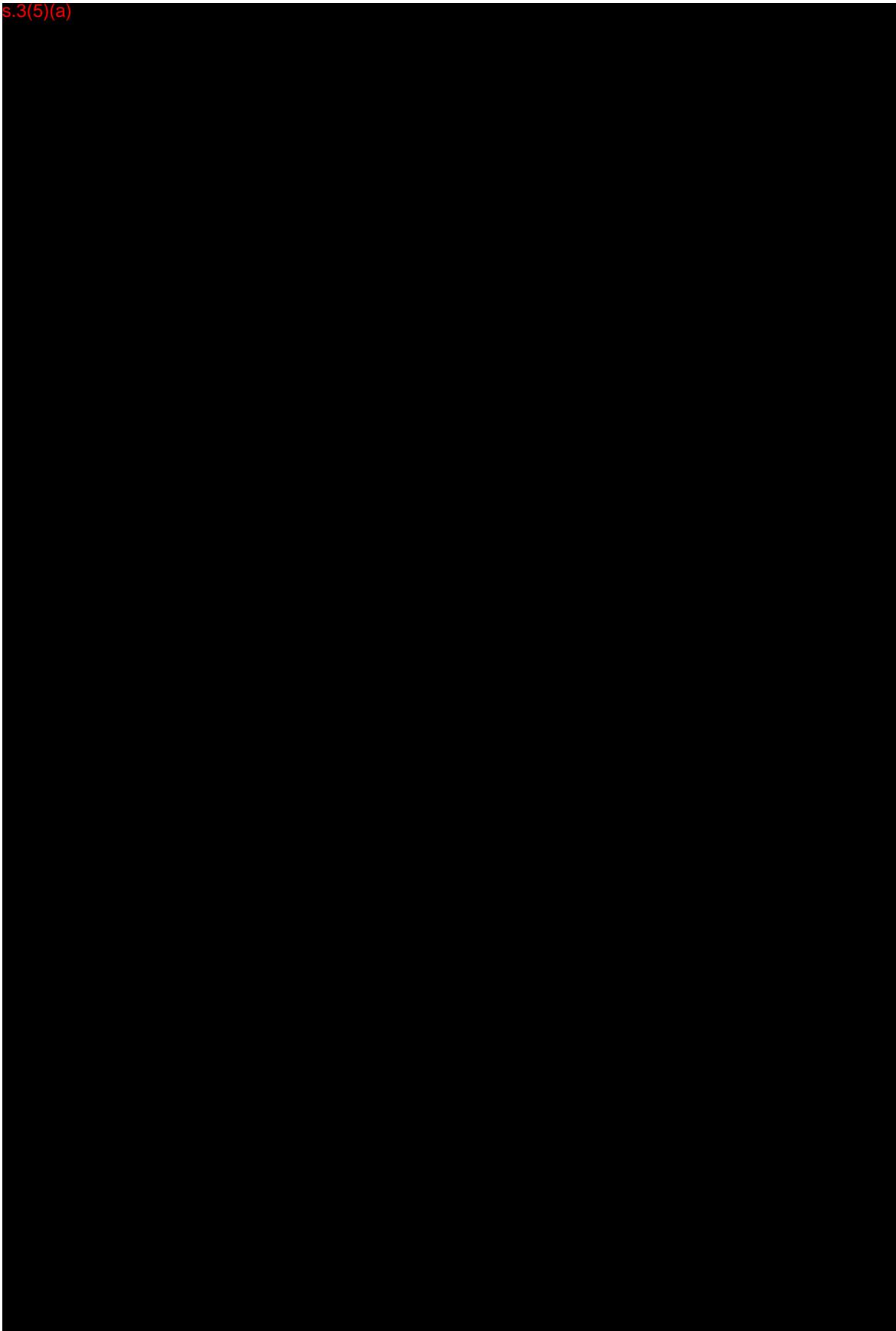
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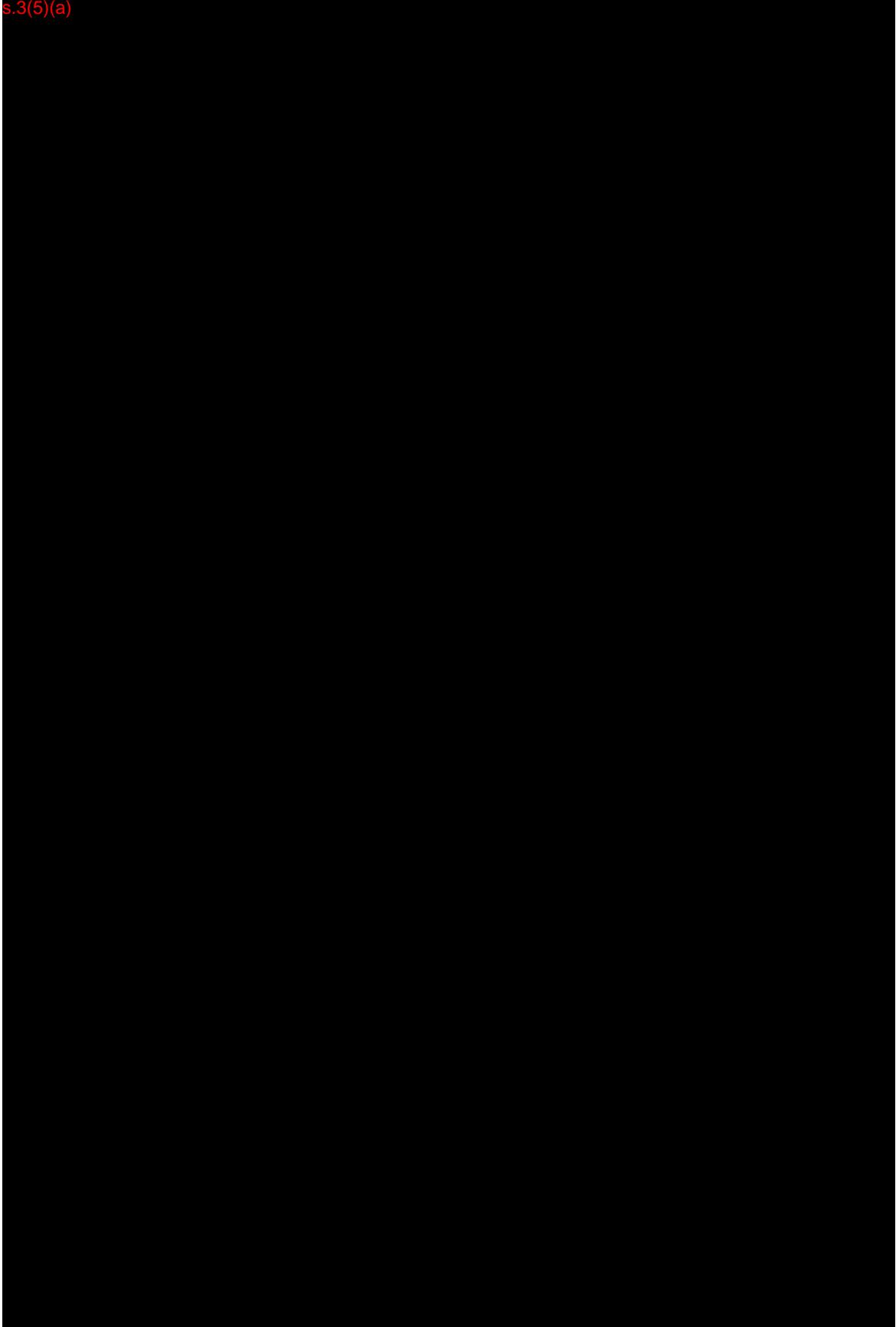
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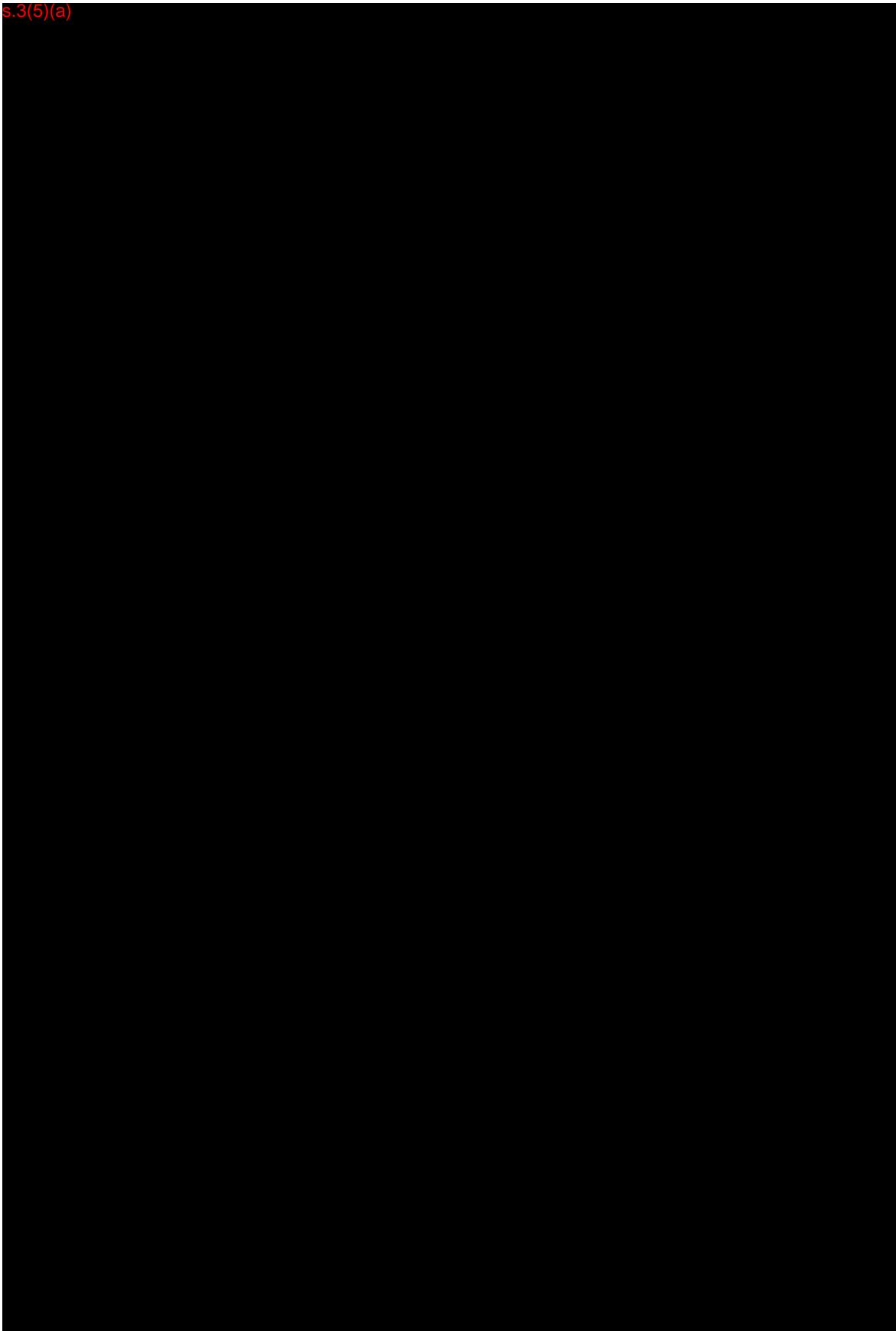
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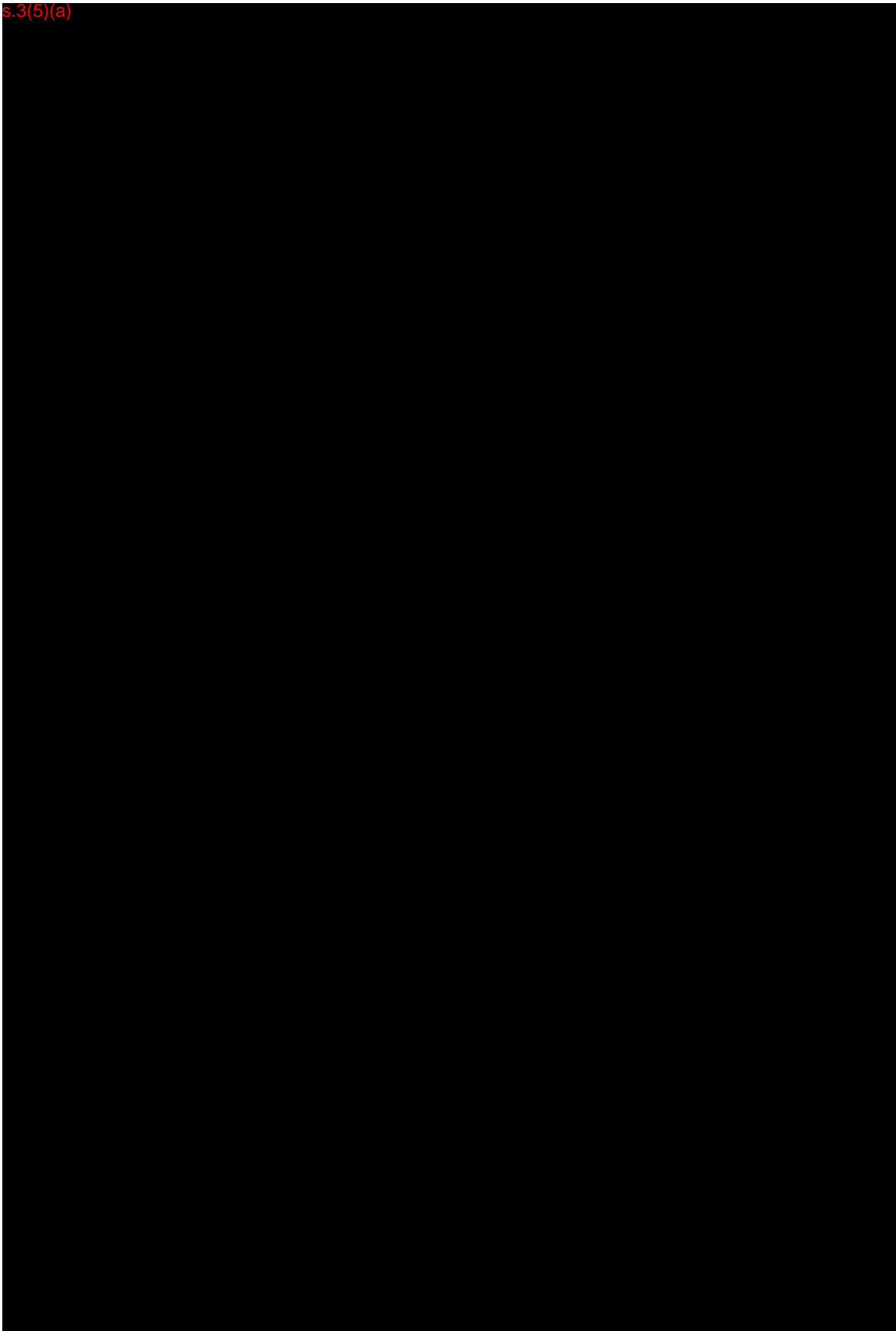
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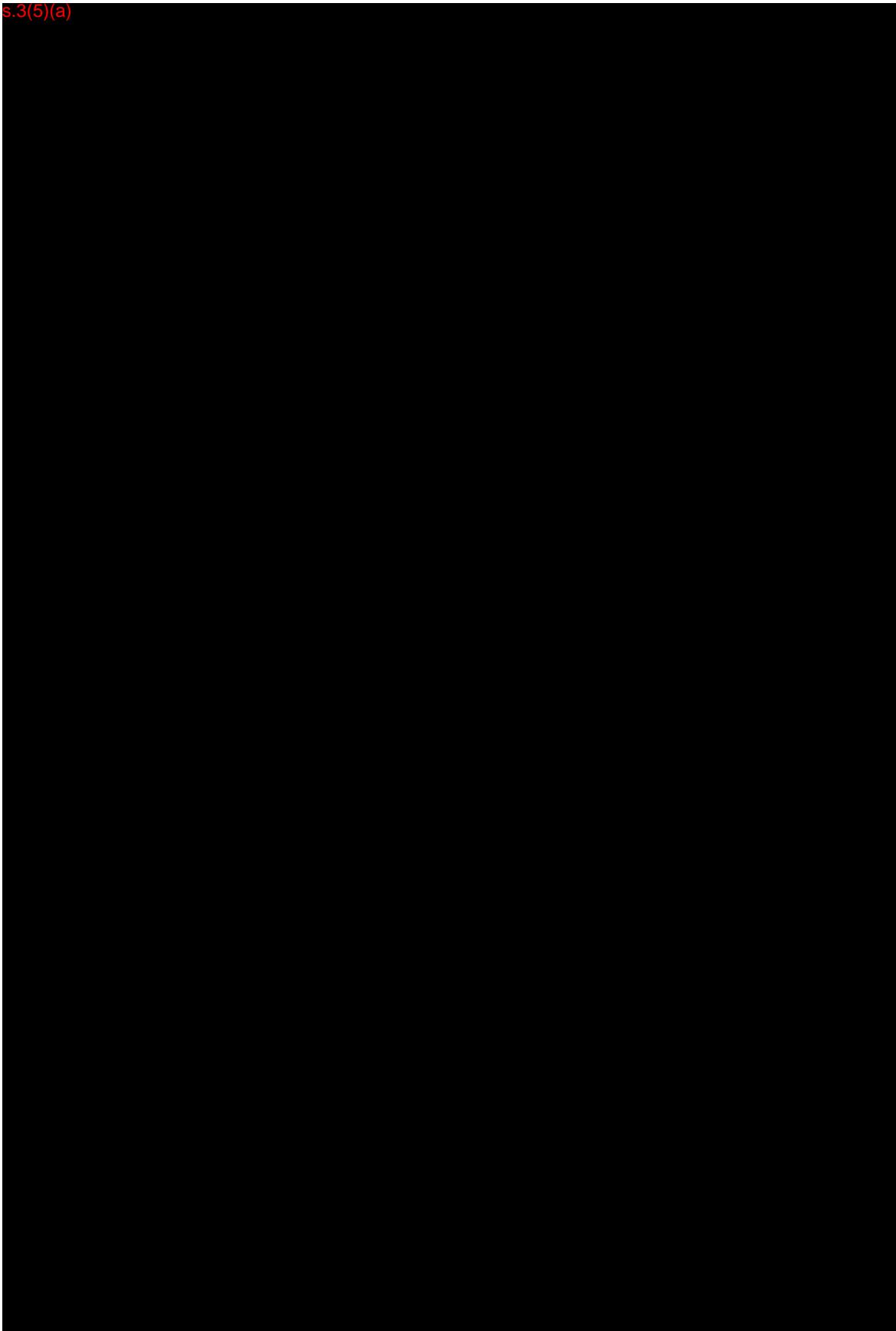
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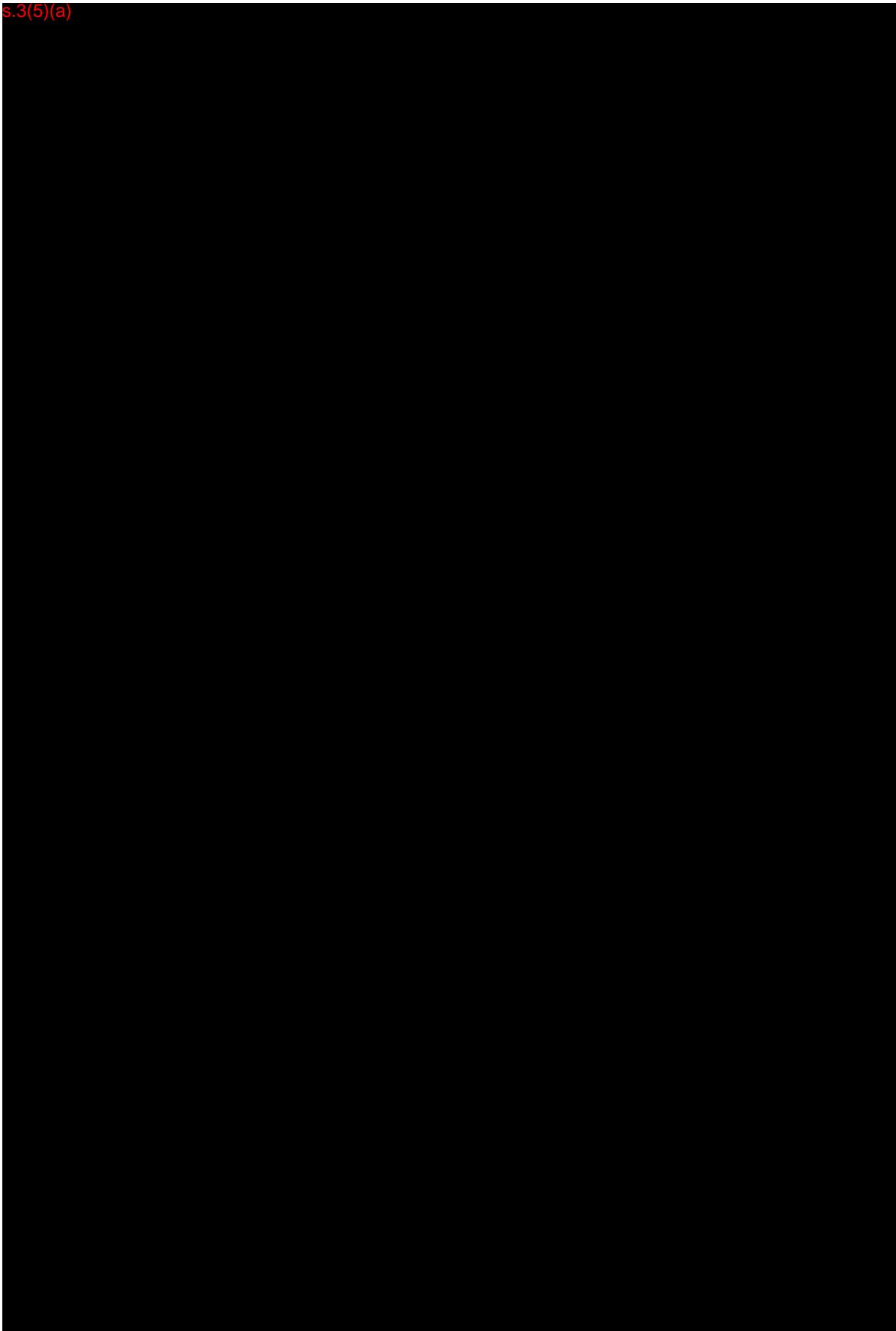
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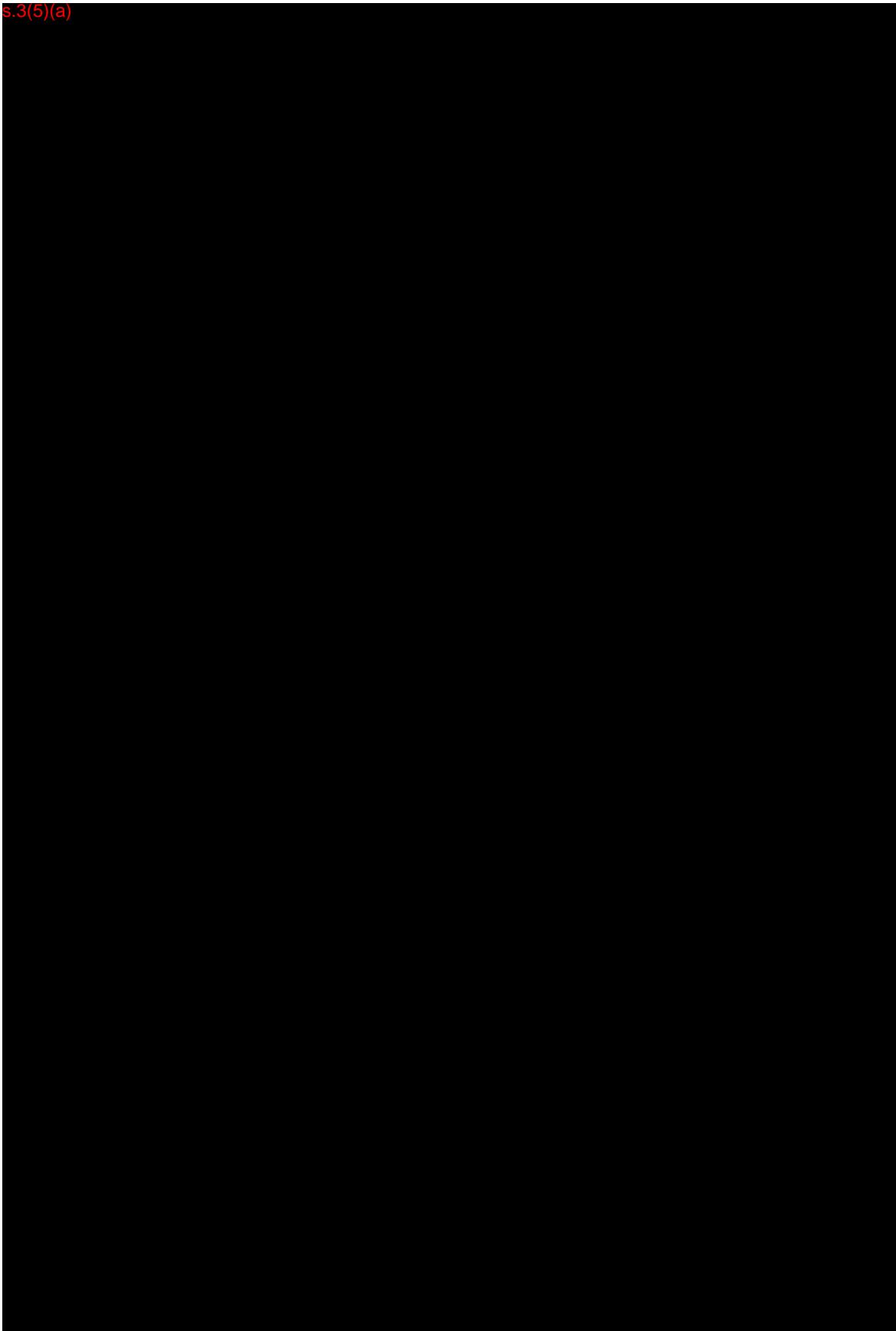
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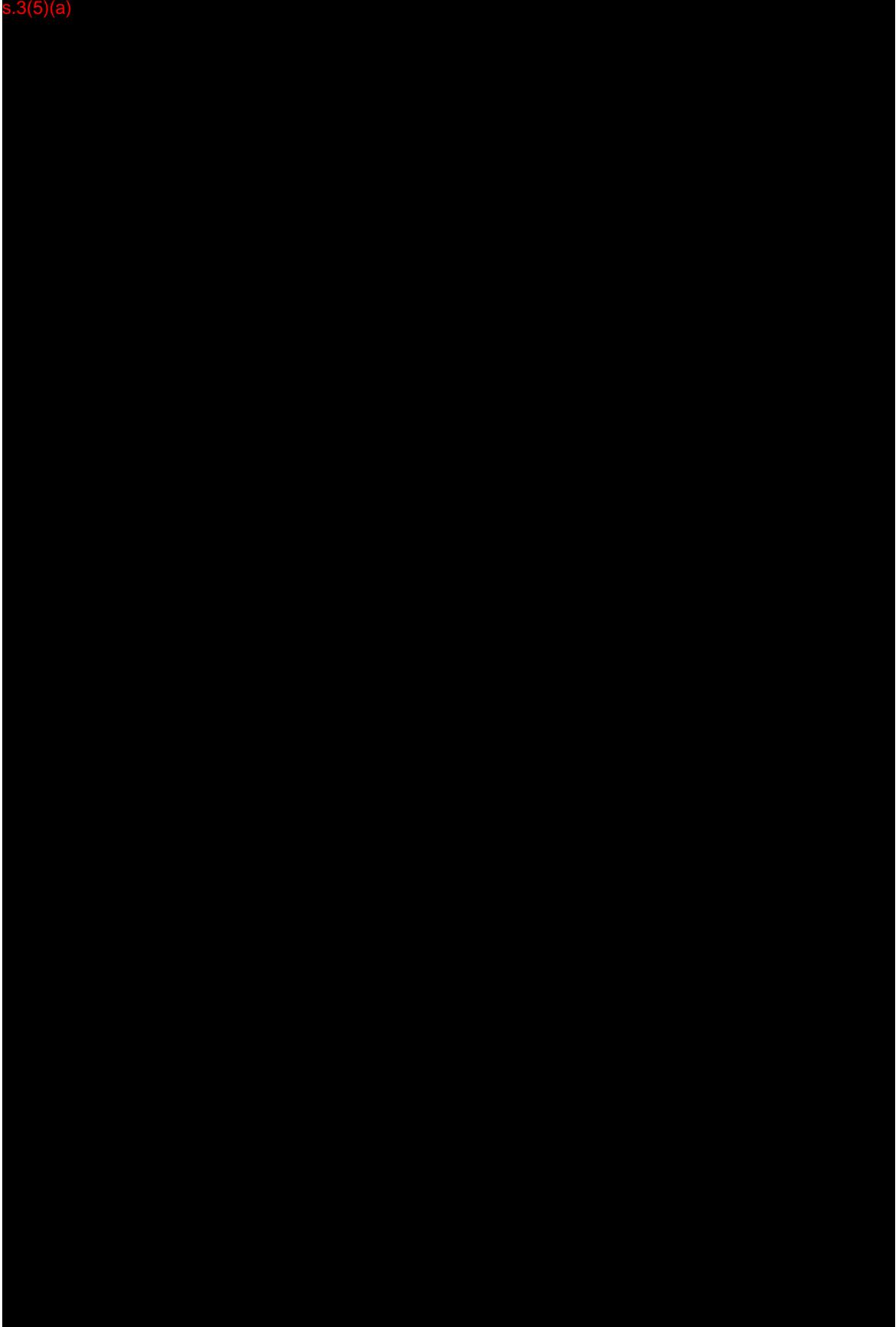
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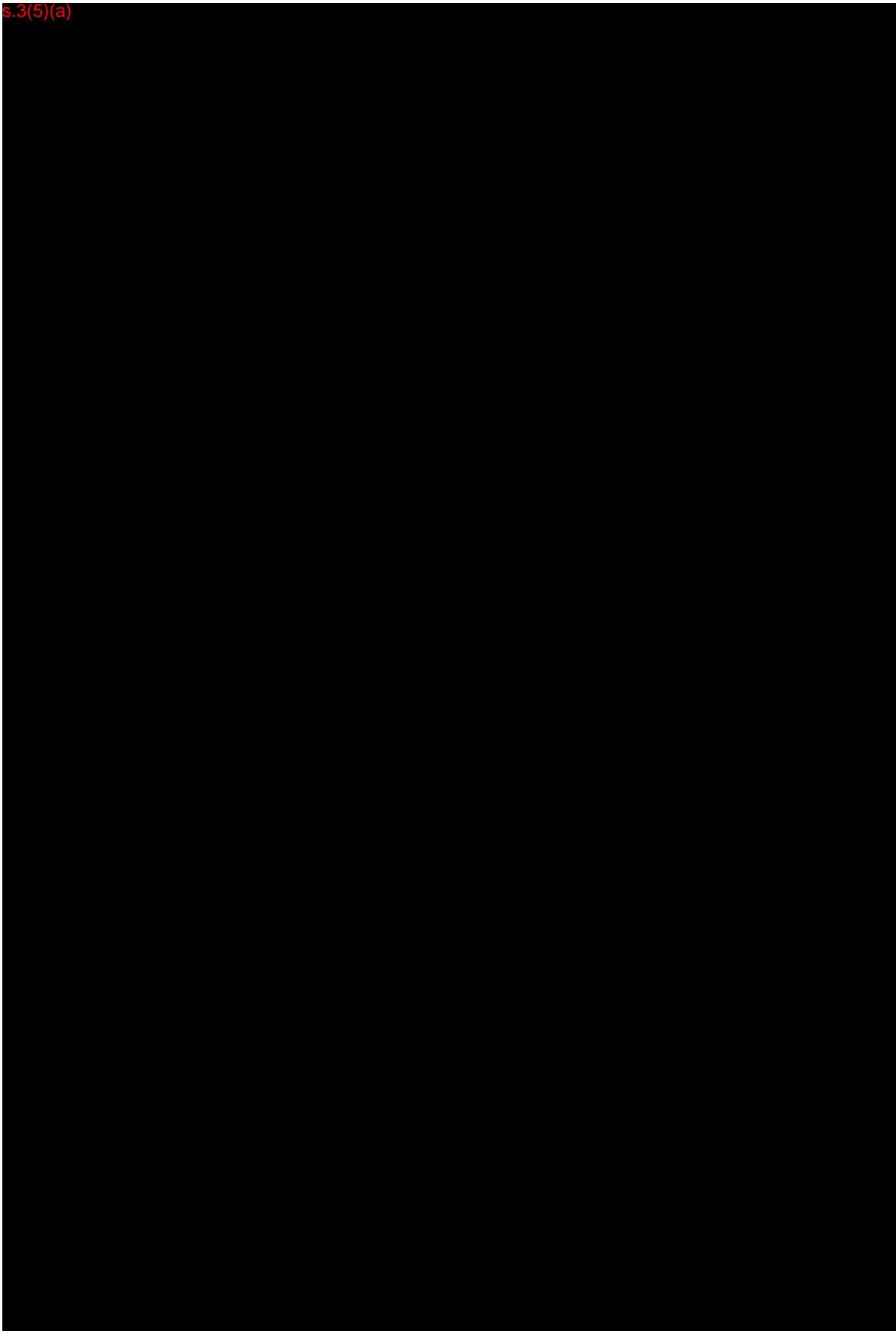
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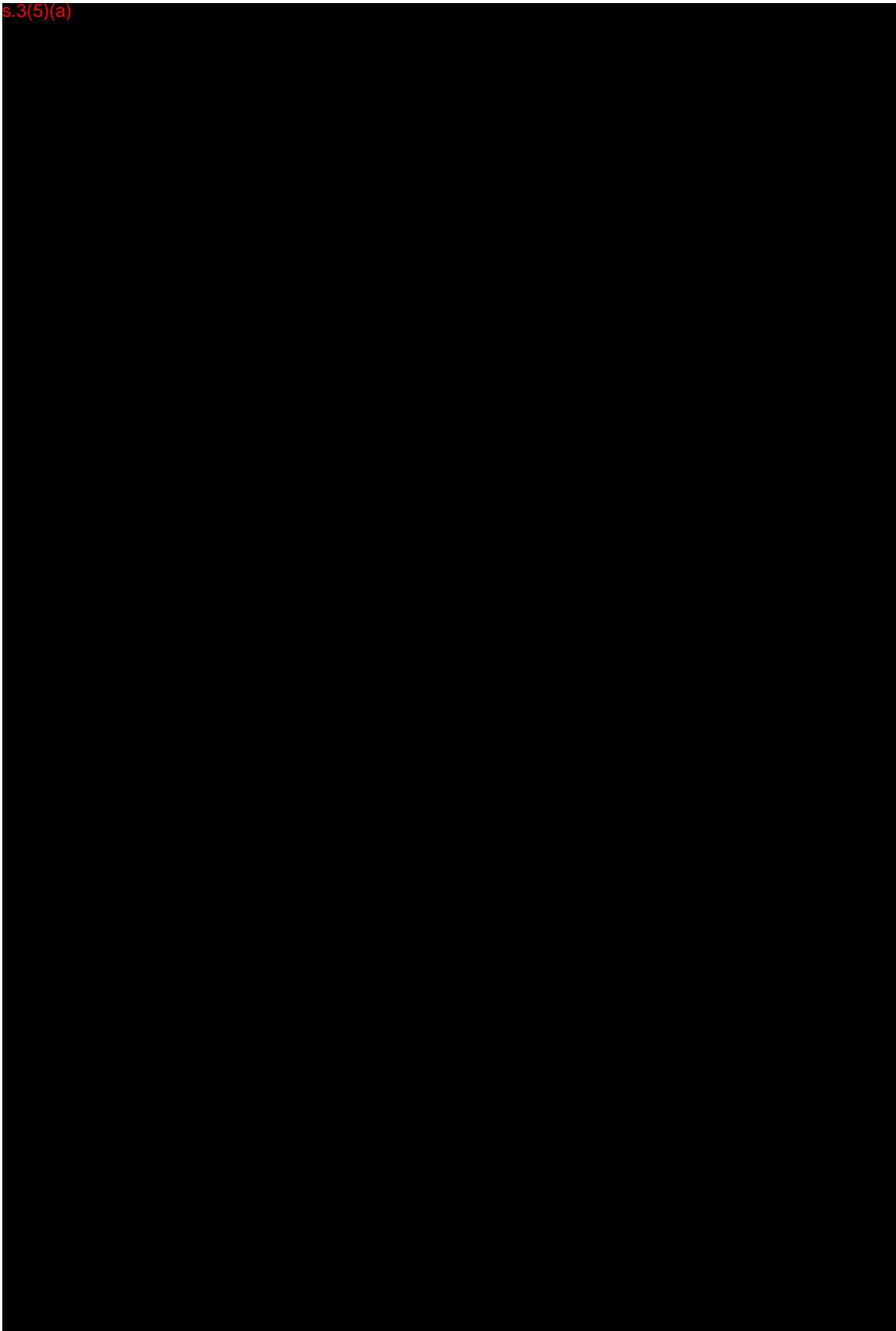
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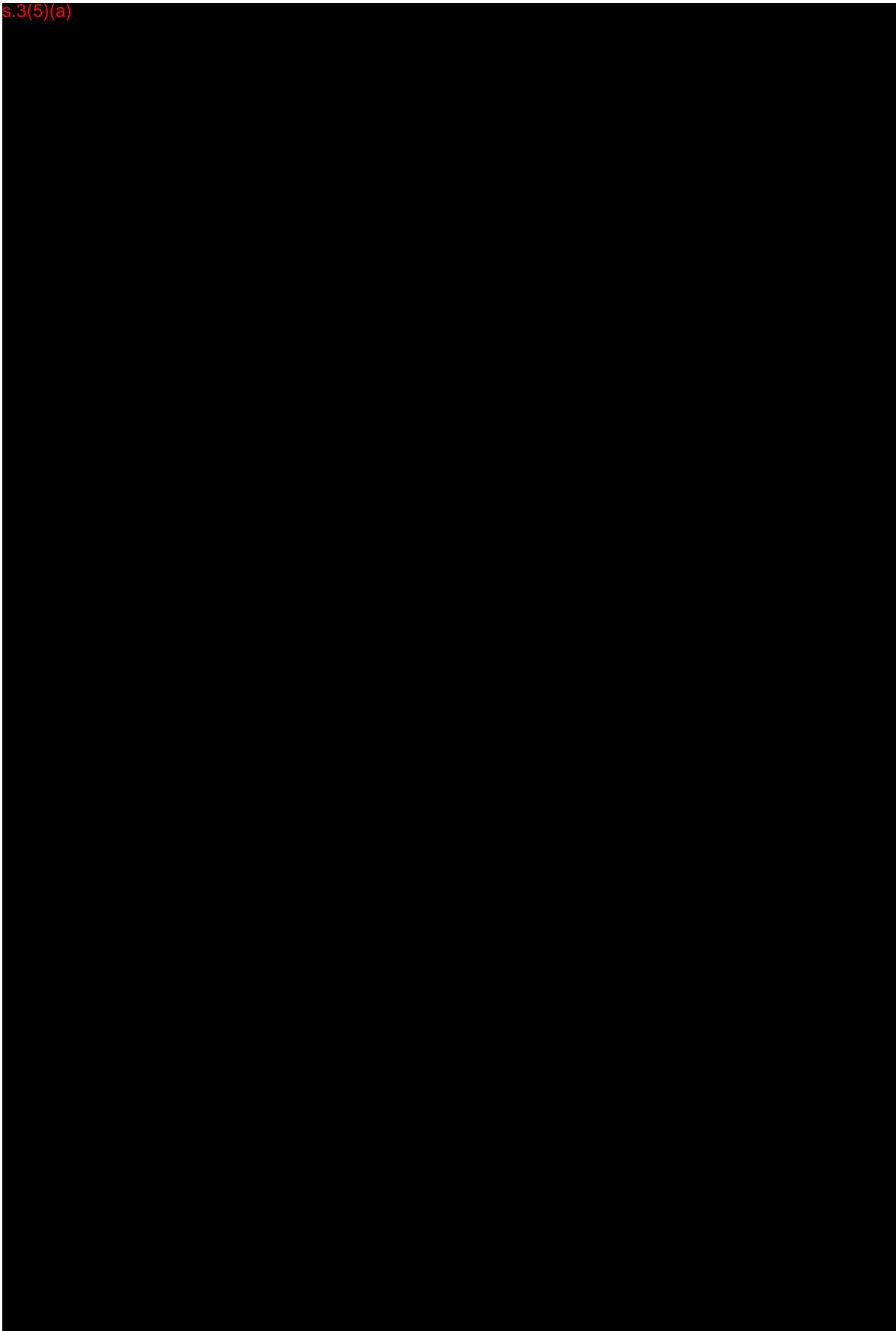
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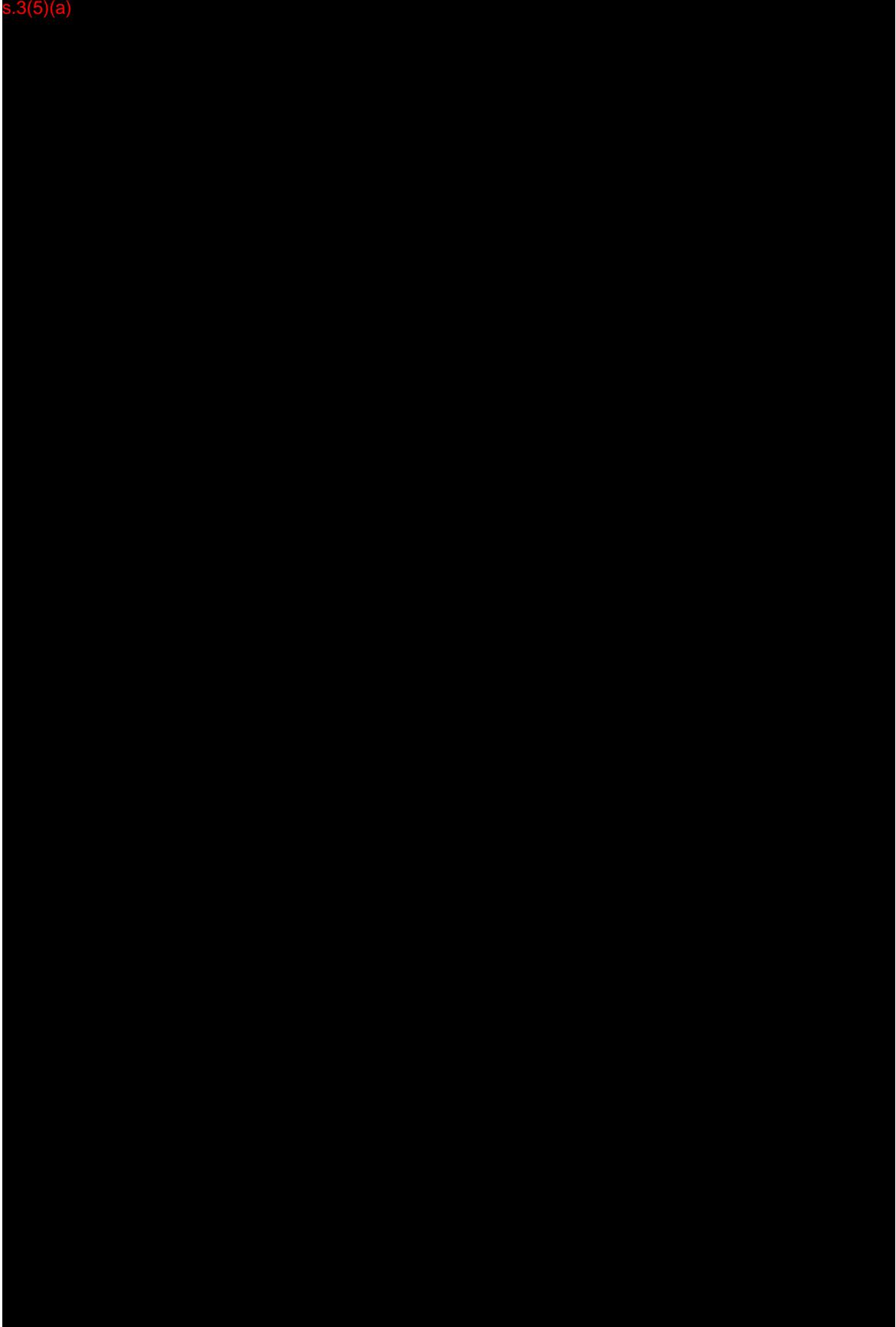
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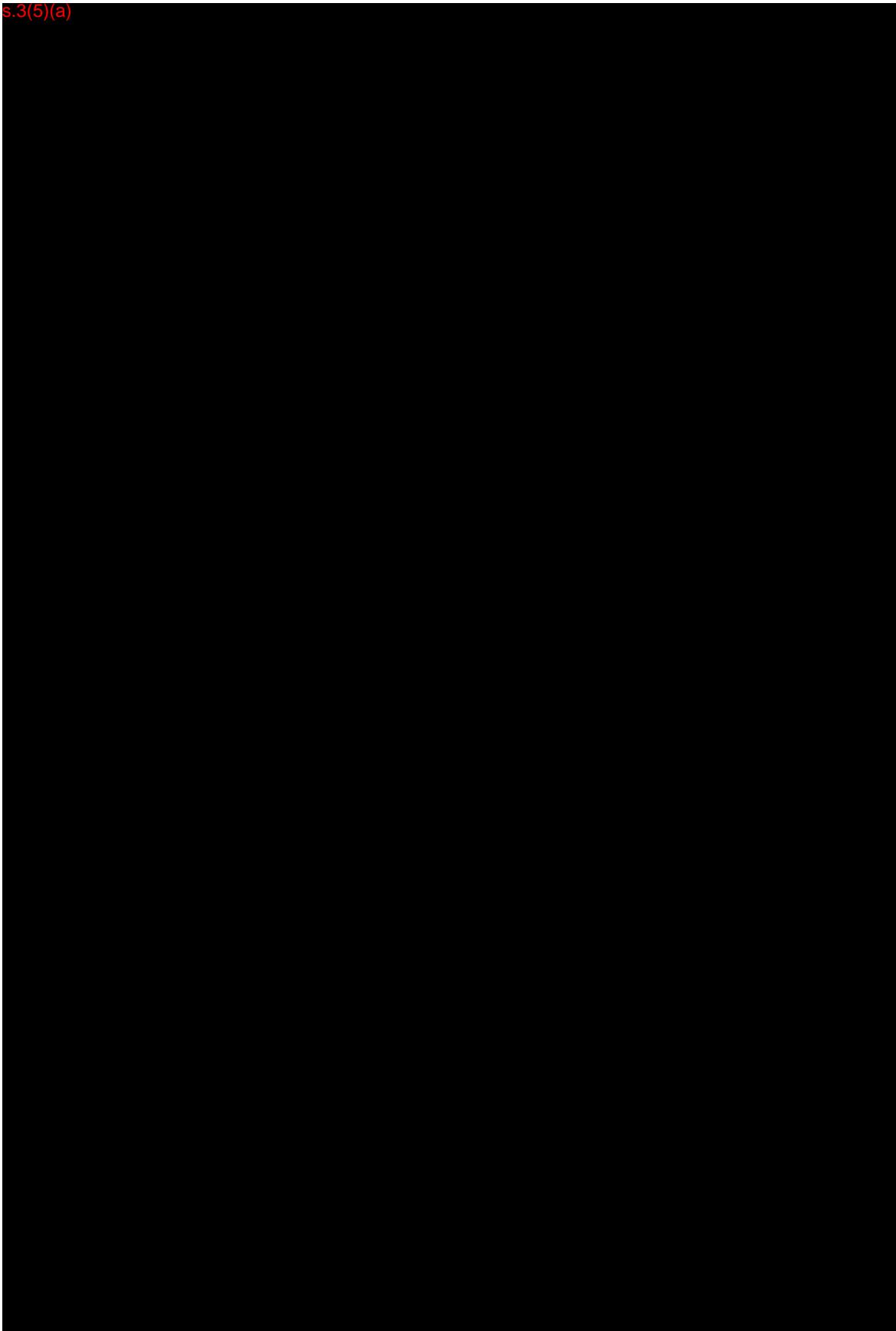
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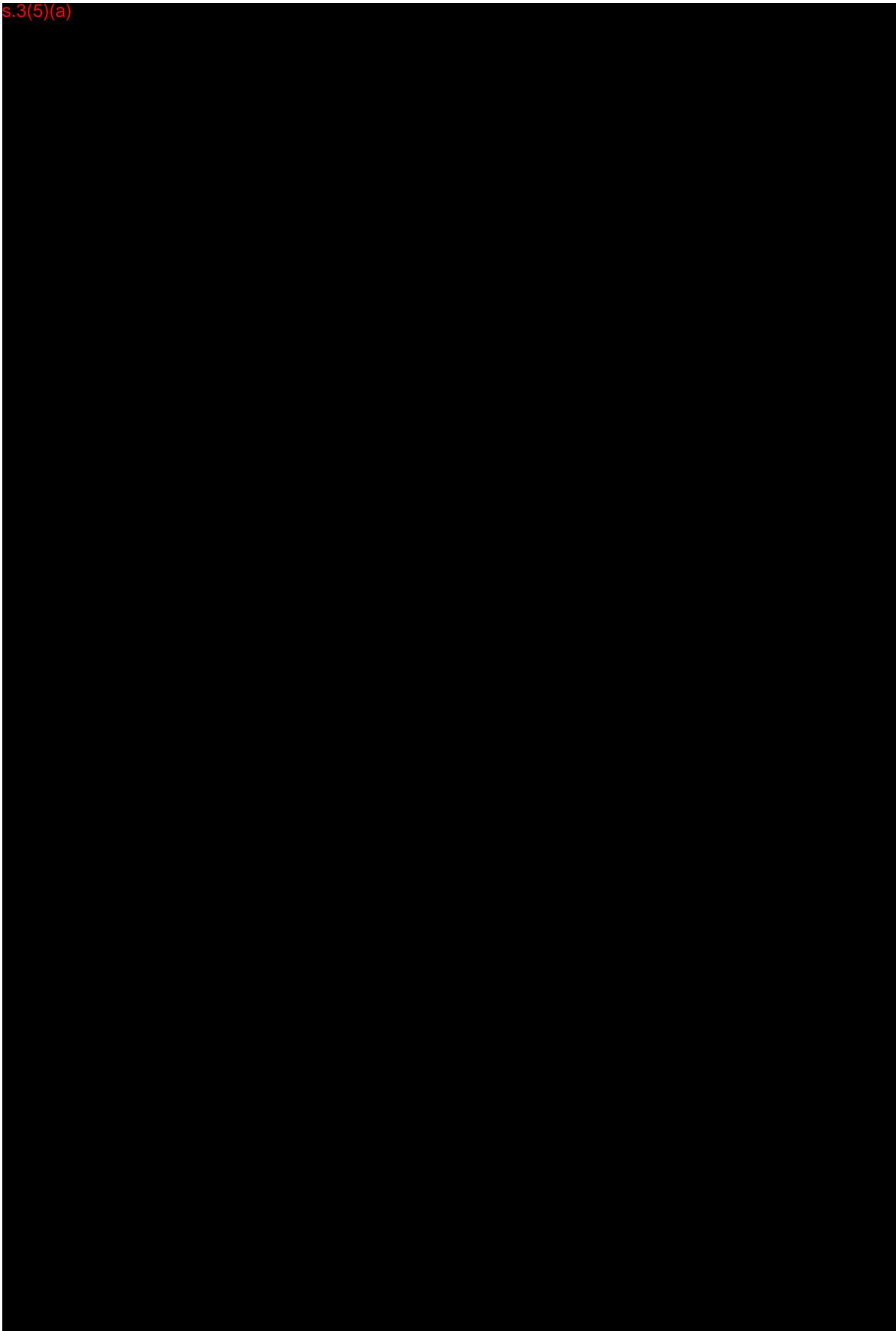
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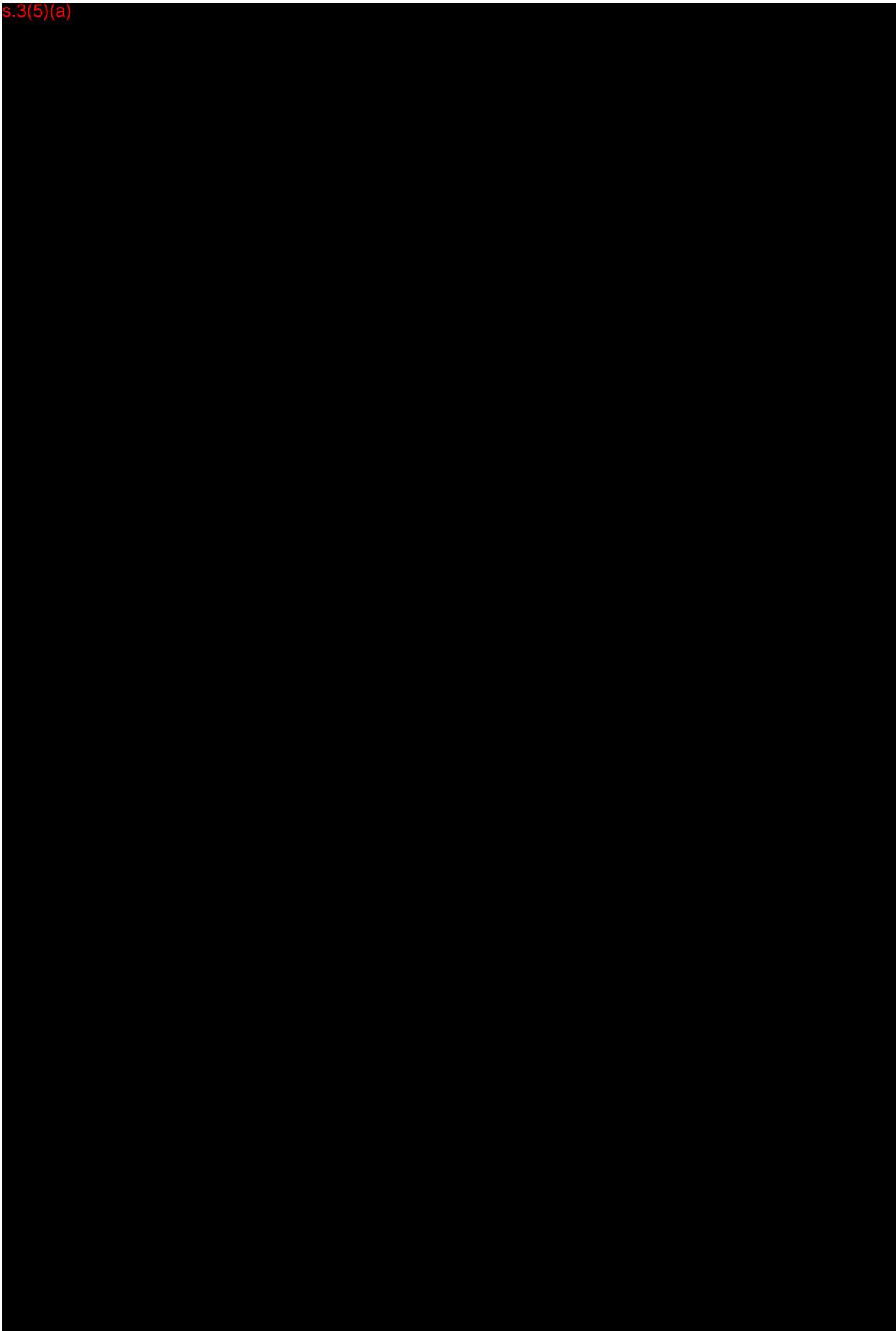
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# Heat-Related Illness

JONATHAN A. BECKER, MD, and LYNSEY K. STEWART, MD, *University of Louisville, Louisville, Kentucky*

Heat-related illness is a set of preventable conditions ranging from mild forms (e.g., heat exhaustion, heat cramps) to potentially fatal heat stroke. Hot and humid conditions challenge cardiovascular compensatory mechanisms. Once core temperature reaches 104°F (40°C), cellular damage occurs, initiating a cascade of events that may lead to organ failure and death. Early recognition of symptoms and accurate measurement of core temperature are crucial to rapid diagnosis. Milder forms of heat-related illness are manifested by symptoms such as headache, weakness, dizziness, and an inability to continue activity. These are managed by supportive measures including hydration and moving the patient to a cool place. Hyperthermia and central nervous system symptoms should prompt an evaluation for heat stroke. Initial treatments should focus on lowering core temperature through cold water immersion. Applying ice packs to the head, neck, axilla, and groin is an alternative. Additional measures include transporting the patient to a cool environment, removing excess clothing, and intravenous hydration. Delayed access to cooling is the leading cause of morbidity and mortality in persons with heat stroke. Identification of at-risk groups can help physicians and community health agencies provide preventive measures. (*Am Fam Physician*. 2011;83(11):1325-1330. Copyright © 2011 American Academy of Family Physicians.)

► **Patient information:**  
A handout on this topic is available at <http://familydoctor.org/088.xml>.

**H**eat-related illness represents a continuum of pathologic states and affects a diverse population. Over a 23-year period, it accounted for nearly 5,000 deaths in the United States.<sup>1</sup> When the heat index is higher than 95°F (35°C), mortality increases in relation to elevation of temperature and duration of the heat wave.<sup>2</sup> In most cases, these fatalities are preventable. Populations at risk include older persons, children, and persons who perform strenuous outdoor activities. Persons with heart and lung diseases, those with chronic mental disorders, and those taking medications that interfere with salt and water balance are also at increased risk.<sup>3</sup> Early recognition of symptoms and rapid cooling are crucial, because heat stroke is a medical emergency.<sup>4,5</sup>

## Definitions

Milder forms of heat-related illness are associated with a core temperature less than 104°F (40°C) and no central nervous system symptoms.<sup>6</sup> Heat exhaustion is the inability to continue activity because of environmental conditions, and is postulated to be caused by a central mechanism that protects the body in times of overexertion.<sup>7</sup>

Heat stroke is characterized by an elevated core temperature of 104°F or above and central nervous system disturbances. Classic heat stroke often develops slowly over days. It predominantly occurs in older persons and those with chronic illness.<sup>3,5</sup> Exertional heat stroke has a more rapid onset and is associated with higher core temperatures. It generally occurs in young, healthy persons and is characterized by hot skin with or without sweating and central nervous system alterations.<sup>6</sup> Early recognition of the differences between heat stroke and milder forms of heat-related illness is crucial to avoid morbidity and mortality (*Table 1*).<sup>5-8</sup>

## Thermoregulation

Conduction, evaporation, radiation, and convection play an integral part in cooling the body and maintaining normothermia.

The direct transfer of heat from a warmer surface to a cooler surface is accomplished by conduction.<sup>6,8</sup> The degree of conduction is dependent on the temperature gradient, the conductive properties of the object contacting the body, and what percentage of surface area is in contact.<sup>9</sup> In the setting of heat-related illness, this concept becomes important when treating a patient with

## Heat-Related Illness

SORT: KEY RECOMMENDATIONS FOR PRACTICE		
Clinical recommendation	Evidence rating	References
Rectal temperature is the most reliable way to assess core temperature and differentiate between heat stroke and milder forms of heat-related illness.	C	9, 14
Cold water immersion is the preferred method for cooling in exertional heat stroke.	C	9, 10, 21-23
Rapid access to cooling is the most effective method to prevent heat stroke fatalities.	C	9, 14, 23

A = consistent, good-quality patient-oriented evidence; B = inconsistent or limited-quality patient-oriented evidence; C = consensus, disease-oriented evidence, usual practice, expert opinion, or case series. For information about the SORT evidence rating system, go to <http://www.aafp.org/afpsort.xml>.

cold water immersion. As more body surface area is immersed, there is more conductive potential and treatment becomes more effective.<sup>10</sup>

Perspiration is an evaporative mechanism that is dependent on sweat production and water vapor pressure gradient. In high ambient temperatures, heat loss is almost solely based on the rate of sweating. As humidity increases, evaporation becomes increasingly ineffective, thus perspiration serves as the most effective way humans release heat.<sup>6,8</sup>

Radiation is the process by which the body gains or loses heat without direct contact. Radiant energy is resorbed or reflected, which is why light-colored clothing can prevent heat-related illness by absorbing less heat.<sup>6</sup>

The body exchanges heat with the surrounding air by way of convection. The body gains heat from hot air, which comes in contact with the skin. Convective heat exchange increases with increasing air speed and larger

gradient between air and skin temperature. Air circulation can be increased by use of air-conditioning or fans. Clothing that is more permeable to air or loose fitting also increases convective heat loss.<sup>5</sup>

Several acute physiologic alterations take place when the body is exposed to heat stress. Thermoregulation is coordinated by central nervous system centers in the hypothalamus and spinal cord, as well as peripheral centers in the skin and organs. Peripheral vasodilatation occurs to augment dermal blood flow, which allows convective heat loss into the surrounding air.<sup>6</sup> In an effort to preserve central perfusion, there is vasoconstriction of the peripheral vasculature creating hypoperfusion.<sup>8</sup> When a person's core temperature is 104°F or greater, cellular damage occurs. There is a systemic inflammatory response, and increased cell wall permeability allows the release of endotoxins. These disruptions of homeostasis initiate a cascade of events that include tissue hypoxia, metabolic acidosis, and severe organ dysfunction.<sup>3,11-13</sup>

Successive increments of increased exposure in a hot environment are necessary for persons to work safely at levels of heat that were previously intolerable or life threatening. Physiologic adaptations, such as improved sodium retention, increased glomerular filtration rate, and enhanced cardiovascular performance, can take several weeks.<sup>5</sup> Heat shock proteins also assist cells in tolerating the heat.<sup>3,5</sup> It may take athletes as long as 10 to 14 days of exercise training before the body can start adapting to large temperature fluctuations.<sup>8,9</sup>

Children are particularly prone to heat-related illness because of their greater surface area to body mass ratio compared with adults. This permits more heat

**Table 1. Types of Heat-Related Illness**

Type	Symptoms	Signs	Initial treatment
Mild illness (e.g., cramps, exhaustion)	Diarrhea, dizziness, headache, irritability, loss of coordination, nausea/vomiting, syncope, weakness	Core temperature < 104°F (40°C), normal mentation, goose flesh, pallor, tachycardia, hypotension	Move to a cool location, hydration, rest, sodium ingestion
Heat stroke	Confusion, dizziness, hallucination, headache, nausea/vomiting, syncope	Core temperature ≥ 104°F, altered mental status, hot skin with or without perspiration, hypotension, seizure, tachycardia	Initiate on-site cooling, intravenous hydration, transport for emergency care

Information from references 5 through 8.

transfer from the environment to the body. They also have a diminished ability to dissipate heat because of slower sweat rates, a higher temperature threshold for the initiation of sweating, and production of a more diluted sweat. Furthermore, they are slower to acclimatize to the heat and have less of a thirst response.<sup>8</sup>

### Risk Factors

Conditions and medications (*Tables 2 and 3*<sup>1,3,6,14,15</sup>) that increase the risk of heat-related illness negatively affect the body's ability to dissipate heat, acclimatize to the weather, or obtain adequate hydration.<sup>1,3</sup> Older persons are at risk because of higher rates of medication use, immobility, and volume depletion. They have diminished cardiovascular compensation and an age-related loss of heat shock proteins that impart further intolerance to extreme conditions.<sup>5</sup> Medications impart risks,

such as blunting cardiac output in times of stress, interfering with hydration, and inhibiting sweat.<sup>1,3</sup>

Young, healthy persons who perform strenuous activity in hot and humid environments, such as athletes, military personnel, and persons who work outdoors, are at increased risk.<sup>1,6,14</sup> Among high school athletes, persons who play football have a 10-fold increased risk of heat-related illness over persons playing any other sport, especially during preseason conditioning in the month of August.<sup>16</sup> Persons who work outdoors have a 20-fold increased rate of heat-related death compared with persons in other forms of employment.<sup>17</sup>

### Mild Heat-Related Illness

Mild forms of heat-related illness include cramps, edema, syncope, and exhaustion. If mental status is normal, these conditions can only be differentiated from early signs of heat stroke by obtaining an accurate measure of core temperature. A rectal temperature is the most reliable measurement because alternatives, including oral, tympanic, axillary, and skin temperatures, are less accurate.<sup>9,14</sup> Core temperature and the presence or absence of central nervous system symptoms will help guide diagnosis and treatment (*Figure 1*). In the absence of hyperthermia, the presence of central nervous system symptoms should prompt investigation for an alternative diagnosis.

### HEAT EXHAUSTION

Common symptoms of heat exhaustion include headache, weakness, dizziness, goose flesh, nausea, vomiting, diarrhea, irritability, and loss of coordination. The skin may appear pale or ashen, with associated tachycardia or hypotension. Normal mentation is maintained. Patients with heat exhaustion should remove excess clothing and be moved to a shaded, cool environment. They should be placed in a supine position, preferably with their legs elevated. Oral fluids are preferred over intravenous fluids for rehydration in those who are conscious, able to swallow, and not losing fluids secondary to vomiting or diarrhea.<sup>9</sup> Vital signs should be monitored, with transport to an emergency facility if symptoms do not improve after 20 to 30 minutes.<sup>3,6,9</sup>

### HEAT CRAMPS

Heat cramps, or exercise-associated muscle cramps, can occur in any setting, but are more common when exercising in hot and humid environments. Dehydration, depletion of electrolytes, and sodium losses from sweat all accelerate in this type of environment, especially in those who sweat profusely.<sup>18</sup> Treatment includes rest,

**Table 2. Risk Factors for Heat-Related Illness**

Age older than 65 years or younger than 15 years
Cognitive impairment
Heart and lung diseases
Limited access to air-conditioning
Mental illness
Obesity
Physical disabilities/impaired mobility
Poor fitness level
Sickle cell trait
Strenuous outdoor activity during hottest daytime hours
Urban residence or living on higher floors

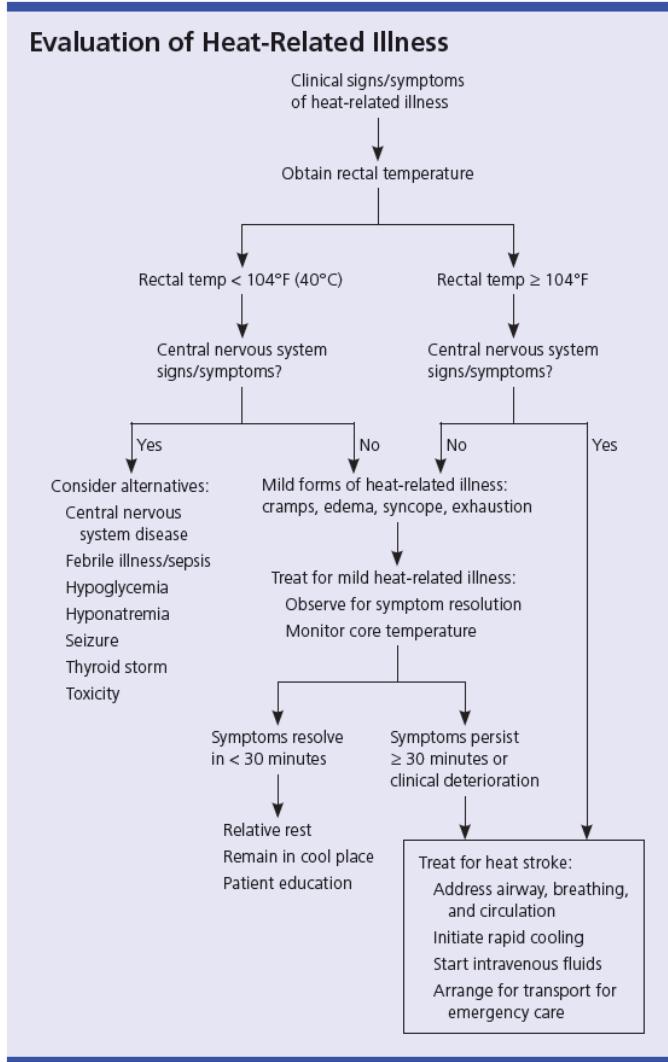
Information from references 1, 3, 6, 14, and 15.

**Table 3. Medications and Substances that Contribute to Heat-Related Illness**

Alcohol	Diuretics
Alpha-adrenergic agonists	Ephedra-containing supplements
Amphetamines	Laxatives
Anticholinergics	Neuroleptics
Antihistamines	Phenothiazines
Benzodiazepines	Stimulants
Beta blockers	Thyroid receptor agonists
Calcium channel blockers	Tricyclic antidepressants
Cocaine	

Information from references 1, 3, 6, 14, and 15.

## Heat-Related Illness



**Figure 1.** Algorithm for the initial evaluation of a patient with suspected heat-related illness.

prolonged stretching of affected muscle groups, and oral sodium ingestion. Intravenous normal saline may be used for more rapid relief, especially for severe, diffuse cramping or when oral repletion is not possible.<sup>19</sup>

### Heat Stroke

Heat stroke is a true emergency that requires immediate recognition and treatment. It is defined by a pathologic elevation of core temperature of 104°F or greater and associated central nervous system disturbances.<sup>6,8,9,13,20</sup> Physicians considering the diagnosis of heat stroke

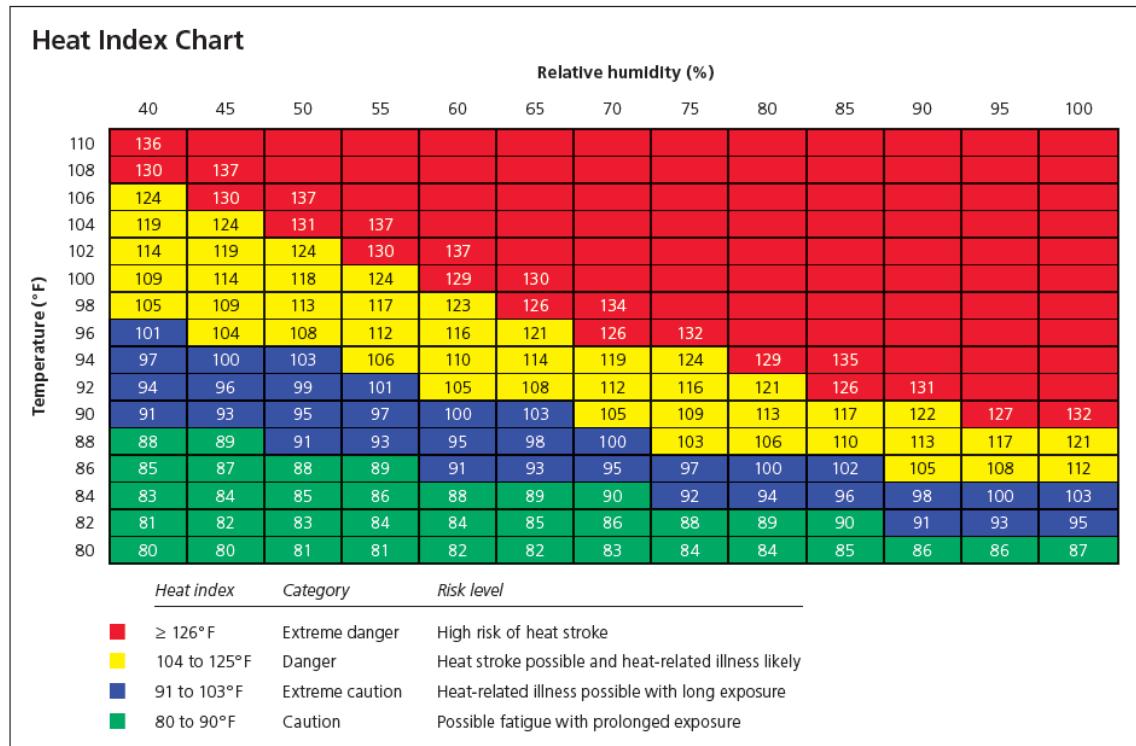
should obtain a rectal temperature as soon as possible. Although anhidrosis can occur in classic heat stroke, affected patients may continue to perspire.<sup>9,10,20</sup> A broad constellation of clinical signs and symptoms can be observed in both forms of heat stroke.

Treatment begins with stabilizing the patient's airway, breathing, and circulation. Morbidity is greatly reduced with rapid cooling. If there are no other life-threatening complications, on-site cooling before transfer to the emergency department is preferred.<sup>8,9</sup> Cold water immersion is the treatment of choice when available. It is associated with the lowest morbidity and mortality rates, and patients with exertional heat stroke treated with cold water immersion have a survival rate of almost 100 percent.<sup>10,21,22</sup> Large cooling tanks are often used at outdoor activities (e.g., football practice) or mass participation events. Although the cooling rates for cold water immersion have been shown to be superior, applying ice packs or cold, wet towels to the head, neck, axilla, and groin is an alternative option. Rapid air movement with a fan, in combination with spraying a moderate-temperature mist of water, encourages evaporative and convective cooling and is also effective.<sup>10</sup> Intravenous hydration should be initiated as soon as possible to protect renal blood flow and avoid complications such as rhabdomyolysis. Patients evaluated in the community setting should be moved to a cool, shaded environment and have excess clothing removed while an ambulance is called.<sup>10,22</sup>

It is rare for a person to succumb within a few hours after heat stroke has ensued, but the action taken in this time may determine the degree of cell damage that portends recovery or progression to organ failure. Within 24 hours, those with heat stroke typically display evidence of muscle, kidney, and cardiac injury. Delayed or improper treatment is the likely cause of fatalities associated with hyperthermia.<sup>10,11</sup>

### Prevention

Regardless of the patient factors or method of cooling employed, rapid access to cooling is the most effective method to prevent heat stroke fatalities.<sup>9,14,23</sup> Physicians

**Figure 2.** Heat index chart.

Adapted from the NOAA's National Weather Service. Heat: A major killer. <http://www.nws.noaa.gov/os/heat/index.shtml>. Accessed September 1, 2010.

can work with community leaders to identify older patients with chronic medical disease or physical disabilities who lack access to air-conditioning, and make cool facilities available during heat advisories. Spending time in air-conditioned areas is among the strongest factors in preventing heat-related deaths. Fans do not provide the same benefit.<sup>24</sup>

Athletic events should be held during cooler periods of the day and scheduled to avoid hot, humid months. Athletes, coaches, and parents should be educated about the early signs of heat-related illness, hydration, and initial treatments.<sup>6,9</sup> Heat acclimatization is the best protection against heat-related illness. This involves a gradual progression of duration and intensity of exercise over 10 to 14 days.<sup>9</sup> Proper hydration, lightweight and light-colored clothing, shaded rest areas, and rule adjustments to allow for frequent substitutions can also help protect young athletes.<sup>8</sup>

The Wet Bulb Globe Temperature, which takes into account temperature, humidity, and radiant thermal energy, is the preferred method for assessing weather conditions that precipitate heat-related illness; however,

it may not be readily available. The heat index is the relationship between air temperature plus relative humidity and how a person's body feels in that specific environment. A heat index chart (Figure 2<sup>25</sup>) may serve as a substitute in assessing the risk of heat-related illness on a given day.<sup>4</sup>

**Data Sources:** A search was completed in UpToDate, Essential Evidence Plus, Cochrane Database of Systematic Reviews, and Medline using the key terms acute heat illness, heat exhaustion, heat stroke, and hyperthermia. Search date: August 2010.

## The Authors

JONATHAN A. BECKER, MD, is an assistant professor in the Department of Family and Geriatric Medicine at the University of Louisville (Ky.). He is also director of the University of Louisville and Jewish Hospital Primary Care Sports Medicine Fellowship.

LYNSEY K. STEWART, MD, is a fellow in the University of Louisville and Jewish Hospital Primary Care Sports Medicine Fellowship.

Address correspondence to Jonathan A. Becker, MD, University of Louisville, 201 Abraham Flexner Way, Ste. 690, Louisville, KY 40202 (e-mail: [jon.becker@louisville.edu](mailto:jon.becker@louisville.edu)). Reprints are not available from the authors.

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# An empirical mechanistic framework for heat-related illness

Nathan Y. Chan<sup>1</sup>, Mark T. Stacey<sup>2</sup>, Anne E. Smith<sup>3</sup>, Kristie L. Ebi<sup>4,\*</sup>,  
Thomas F. Wilson<sup>4</sup>

<sup>1</sup>Talus Solutions Inc., 650 Castro Street, Suite 300, Mountain View, California 94041, USA

<sup>2</sup>Department of Civil and Environmental Engineering, 631 Davis Hall, University of California, Berkeley, California 94720, USA

<sup>3</sup>Charles River Associates Inc., 1201 F Street NW, Suite 700, Washington, DC 20004, USA

<sup>4</sup>EPRI, 3412 Hillview Ave., Palo Alto, California 94304-1395, USA

**ABSTRACT:** A physiologically based, mechanistic framework was developed to understand key risk factors associated with adverse health effects from heat waves. The framework consists of a number of integrated transdisciplinary modules. Environmental conditions and behavioral responses link to a physiological model, which predicts core temperature. Core temperature over time is then converted into a time-at-temperature metric. The output of the framework is a heat-related health effects index (HEI), reflecting the potential relative severity of the heat stress on health. The framework is flexible, allowing the individual models to be adapted to conditions at specific locations and to be updated as new information becomes available. Scenario analyses are easily accommodated, enabling the framework to evaluate issues such as intervention strategies and the possible effects of global climate change on heat-related illnesses. The framework and an initial set of component models were applied to conditions during the 1995 Chicago event and the results compared with published studies. For individuals, there was reasonably good agreement between HEI ratios and actual mortality risk ratios when comparing indoor versus outdoor environments. When aggregating across populations, predicted HEI ratios were significantly smaller than actual mortality ratios when comparing healthy versus compromised populations, supporting the notion that mortality may not be the best indicator of heat stress effects. Future work should include refinement of the initial models and application to other cities and heat events.

**KEY WORDS:** Heat stress · Chicago heat wave · Risk factors · Physiological model · Integrated modeling approach

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## 1. INTRODUCTION

There is increasing interest in understanding the health impacts of heat waves, in part because it has been suggested that global climate change might increase the frequency and duration of hot day occurrences (Kattenberg et al. 1996). Most previous analyses of heat events used epidemiological and statistical techniques to infer patterns in heat-related morbidity

and mortality and to identify subpopulations with increased susceptibility to heat illness.

This paper presents a modeling framework for analyzing the potential health impacts of extreme temperatures. In contrast to purely statistical methods, this proposed framework is a linked series of modules, each representing a particular component, relationship, or driver in the onset of heat-related adverse health effects. In this paper, the term 'heat stress' will refer to the ambient environmental that can impact an individual's physiology; the term 'heat strain' will refer to the physiological response, including core tempera-

\*Corresponding author. E-mail: krisebi@epri.com

ture and adverse health impacts. The modules are linked to reflect a step-by-step, mechanistic view of the physiological process of heat strain, driven by environmental conditions and physiological predisposition. The individual models and modules within the framework are based on empirical and statistical information. The model's output is a 'health effects index' (HEI) calculated for each specific combination of exposure and physiology. Demographic information is used to calculate population-wide HEIs using weighted averages.

The objective of this framework is to provide a structured skeleton on which may be placed modeling results from multiple disciplines. This structure allows the relationships to be examined independently and refined in light of new information. In this paper, we present preliminary models for each of the key steps in the framework, derived from a variety of sources. We exercise this framework and these models on a historical event. In July 1995, the midwestern United States was struck with an extreme heat wave. In Chicago, the maximum temperatures occurred on July 13 and 14, when maximum outdoor dry bulb temperatures exceeded 100°F (37.7°C) for 2 consecutive days and remained above 80°F (26.6°C) overnight. The Centers for Disease Control and Prevention (1995) reported 465 heat-related deaths over a 17 d period. Literature published on this event includes meteorological studies of environmental factors, sociological and demographic studies of the victims, and policy studies addressing interventions such as the availability of cooling centers and a heat impact warning system (Centers for Disease Control and Prevention 1995, Japsen & Moore 1995, NOAA 1996, Voelke 1995, Changnon et al. 1996, Kunkel et al. 1996, Semenza et al. 1996). The meteorological conditions, adaptive responses, and population segmentation were developed for this scenario to calculate the resulting HEI values for different subpopulations. This is only a first effort; much additional work is required to determine which links are the most sensitive or uncertain, to refine the corresponding modules, and to test the framework and models against other historical events.

## 2. FRAMEWORK FOR MODELING HEAT STRAIN

The framework is shown in Fig. 1 as a linked set of modules. Inputs to the framework include ambient conditions, physical activity, and adaptive behavior. Each of these is described by a set of scenarios. Any number of scenarios can be accommodated, as long as

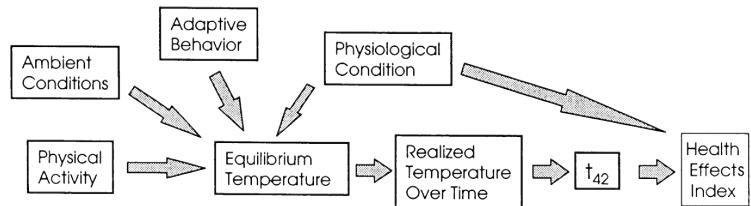


Fig. 1. Block diagram for heat strain framework and component models

they are well defined, mutually exclusive, collectively exhaustive, and can be assigned a probability of occurrence or a demographic fraction. These input modules drive a core temperature physiological module that predicts changes in body temperature over time. As heat stress and strain increase, different subpopulations may have differing abilities or options to adapt to or modify their exposure to ambient conditions (e.g., reducing activity or going to cooling centers). These adaptive behaviors change the exposure conditions and thus feed back to modify body temperature over time. Core temperature is a primary measure of heat effects, but by itself is insufficient to describe heat strain, because time is an important determinant of deleterious effects. A short time at a high core temperature has less serious potential consequences than an extended time at the same temperature. Therefore, an 'equivalent time at temperature' module converts the time-varying trajectory of core temperature to a unidimensional quantity (designated as  $t_{42}$ ) representing potential heat strain. Then, the final module takes this time-at-temperature and converts it to an adverse HEI, which ranges from 0 to 100.

The subsequent sections describe the relationships used in each module. The models and relationships shown are a first effort to integrate information from various disciplines into an overall framework. The models should be refined as additional information becomes available to validate assumptions and reduce uncertainties.

### 2.1. Ambient conditions

Exposure of an individual to ambient environmental conditions is the starting point for the framework. Dry-bulb temperature and relative humidity on an hourly basis are used to describe the ambient exposure conditions. The ambient conditions are not necessarily the same as outdoor conditions, because people may be indoors in conditions which can either alleviate or exacerbate heat exposure. For the Chicago analyses, we defined 4 different environments: indoor unventilated; indoor ventilated (windows open); outdoor; and