2022 Fatal Comparison Chart (**based on preliminary report data, fatal alerts, & final reports**)

MNM Total	11	Fatal Date	Coal Total	8	Fatal Date	Total 19
Underground (UG)	3	Jan7(2), Feb14, Jun20(2)	Underground (UG)	6	Jan7(1), Feb28, Mar2, Mar20, Aug17, Aug18	9
Surface & Sur of UG	8	Jan26, Jan28, Mar4, Mar22, Jun17, Jun20(1), Jul21, Aug4	Surface & Sur of UG	2	Jan11, Jan14	10
Contractor	3	Jan28, Jun17, Jun20(1)	Contractor	2	Jan14, Feb28	5
Powered Haulage	3	Jan26, Jan28, Feb14	Powered Haulage	1	Aug17	4
Machinery	5	Mar4, Jun17, Jun20(2), Jul21, Aug4	Machinery	2	Jan7(1), Feb28	7
Roof, Rib, Highwall Fall	1	Jan7(2)	Roof, Rib, Highwall Fall	2	Mar2, Mar20	3
Electrical			Electrical			
Slip & Fall of Persons	1	Jun20(1)	Slip & Fall of Person	2	Jan14, Aug18	3
Fall & Sliding Materials	0		Fall & Sliding Materials	1	Jan11	1
Handling Materials			Handling Materials			
Inundation			Inundation			
Other	1	Mar22	Other	0		1
Supervisor/Foreman/Lead Person	1	Aug4	Supervisor/Foreman/Lead Person	1	Feb28	2
Age			**Age**			
Age 0-19	1	Jun17	Age 0-19	0		1
Age 20-29			Age 20-29			
Age 30-39	2	Feb14, Mar4	Age 30-39	3	Jan7(1), Jan11, Mar20	5
Age 40-49	3	Jan7(2), Mar22, Jul21	Age 40-49	2	Jan14, Mar2	5
Age 50-59	4	Jan26, Jan28, Jun20(1), Jun20(2)	Age 50-59	1	Feb28	5
Age 60+	1	Aug4	Age 60+	0		1
Experience			**Experience**			
Less than 1 year	3	Jun17, Jun20(2), Jul21	Less than 1 year	0		3
1-9 years	5	Jan26, Jan28, Mar4, Mar22, Jun20(1)	1-9 years	1	Jan7(1)	6
10-19 years	3	Jan7(2), Feb14, Aug4	10-19	4	Jan11, Jan14, Mar2, Mar20	7
20+			20+	1	Feb28	1
Mine Site Experience			**Mine Site Experience**			
Less than 1 year	5	Jan28, Mar4, Jun17, Jun20(2), Jul21	Less than 1 year	3	Jan14, Feb28, Mar2	8
1-9 years	3	Jan26, Mar22, Jun20(1)	1-9 years	3	Jan7(1), Jan11, Mar20	6
10-19	3	Jan7(2), Feb14, Aug4	10-19	0		3
20+			20+			
Job/Task Experience			**Job/Task Experience**			
Less than 1 year	6	Jan26, Mar4, Mar22, Jun17, Jun20(2), Jul21	Less than 1 year	2	Feb28, Mar2	8
1-9 years	3	Jan7(2), Jan28, Jun20(1)	1-9 years	3	Jan7(1), Jan14, Mar20	6
10-19	1	Feb14	10-19	1	Jan11	2
20+	1	Aug4	20+	0		1
Day of the Week:			**Day of the Week:**			
Sunday	0		Sunday	1	Mar20	1
Monday	3	Feb14, Jun20(1), Jun20(2)	Monday	1	Feb28	4
Tuesday	1	Mar22	Tuesday	1	Jan11	2
Wednesday	1	Jan26	Wednesday	2	Mar2, Aug17	3
Thursday	2	Jul21, Aug4	Thursday	1	Aug18	3
Friday	4	Jan7(2), Jan28, Mar4, Jun17	Friday	2	Jan7(1), Jan14	6
Saturday			Saturday			

Make Your Safety the Priority!

2022 Fatal Comparison Chart (**based on preliminary report data, fatal alerts, & final reports**)

2022 - Month	MNM	Coal	Totals	Difference	Totals	2021 - Month	MNM	Coal
January	3	3	6	+3	3	January	2	1
February	1	1	2	-1	3	February	3	0
March	2	2	4	+2	2	March	2	0
April	0	0	0	-2	2	April	2	0
May	0	0	0	-2	2	May	1	1
June	3	0	3	-2	5	June	3	2
July	1	0	1	-3	4	July	3	1
August	1	2	3	0	3	August	1	2
September					3	September	3	0
October					3	October	2	1
November					2	November	1	1
December					5	December	4	1
2022 Total:	**11**	**8**	**19**	**-5**	**37**	**2021 Total:**	**27**	**10**

Product	2021 Fatal Dates	2022 Total	2021 Total
Alumina			0
Barium			0
Cement	Jul21	1	1
Clay			0
Coal	Jan7(1), Jan11, Jan14, Feb28, Mar2, Mar20, Aug17, Aug18	8	10
Copper	Jan28	1	1
Gold Ore	Feb14	1	1
Granite	Jun17, Jun20(1)	2	0
Gypsum			0
Iron Ore			0
Kaolin			0
Lead Ore			1
Lime	Jun20(2)	1	0
Limestone	Jan7(2)	1	3
Marble			1
Platinum			2
Sand/ Sand & Gravel	Jan26, Mar4, Mar22, Aug4	4	10
Sandstone			0
Shale			0
Silver Ore			0
Stone			2
Titanium			0
Traprock			0
Zinc			3

State (2022)	Total	MNM	Coal	Fatal Date
Alaska				
Arkansas	**3**	3	0	**Jan26, Jun20(1), Aug4**
Arizona	**1**	1	0	**Jan28**
Georgia	**1**	1	0	**Jun17**
Idaho				
Indiana	**1**	0	1	**Jan7(1)**
Kentucky	**2**	0	2	**Jan11, Mar20**
Missouri				
Montana				
Nebraska				
Nevada	**2**	2	0	**Feb14, Mar4**
New Mexico				
New York				
Ohio				
Pennsylvania	**2**	1	1	**Jan7(2), Mar2**
South Carolina	**1**	1	0	**Jul21**
Texas				
Utah	**1**	0	1	**Aug18**
Virginia	**1**	1	0	**Jun20(2)**
Wisconsin	**1**	1	0	**Mar22**
West Virginia	**3**	0	3	**Jan14, Feb28, Aug17**
Part 48 = 12				**Part 46 = 7**
All Coal = 8				Non Metal SUR = 7
MNM: UG = 3				
Metal: SUR = 1				

Month	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	TOTAL	AVG
January	6	3	2	2	1	2	3	5	1	3	2	**30**	**2.73**
February	2	3	3	0	2	3	1	1	5	5	3	**28**	**2.55**
March	4	2	0	3	3	3	3	5	2	3	5	**33**	**3**
April	0	2	0	0	1	0	2	0	6	3	2	**16**	**1.45**
May	0	2	2	3	1	2	2	4	**6**	1	5	**28**	**2.55**
June	3	5	3	2	3	3	4	3	6	3	2	**37**	**3.36**
July	1	4	3	3	1	4	2	2	2	4	4	**30**	**2.73**
August	3	3	3	5	2	2	1	4	3	3	2	**31**	**2.82**
September		3	2	2	1	3	3	2	3	3	5	**27**	**2.7**
October		3	5	0	6	4	1	0	3	5	1	**28**	**2.8**
November		2	3	2	2	0	0	0	6	5	4	**24**	**2.4**
December		5	3	2	4	2	3	3	3	4	1	**30**	**3**
Total:	**19**	**37**	**24**	**27**	**28**	**25**	**29**	**46**	**42**	**36**	**36**	**342**	**2.67/mo**

Average over past 10 years (2012-2021) = 33 per year

Average over past 5 years (2017-2021) = 29 per year

Make Your Safety the Priority!

2022 – Combined Coal and MNM Fatals

Jan 7(1) Machinery Indiana

MSHA Fatality #1 - On Friday, January 7, 2022, a 35-year-old continuous mining machine operator with 9 years mining experience died when he was pinned between the continuous mining machine and a coal rib.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Operate equipment from a safe location. Stay out of "Red Zone" areas including pinch points, the CMM turning radius, and areas close to the ribs.
- Maintain proximity detection systems (PDS) in the approved operating condition.
- Perform the manufacturer's recommended static and dynamic tests to assure the PDS is functioning properly. Verify that the shutdown zones are at sufficient distances to stop the CMM before contacting a miner.
- Wear miner wearable components in accordance with PDS manufacturer's recommendations, so warning lights and sounds can be seen and heard.
- Develop and implement procedures for tramming, repositioning, cable handling and moving remote controlled CMMs safely.
- Train miners on the function of PDS.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Jan 7(2) Fall of Roof Pennsylvania

MSHA Fatality #2 - On Friday, January 7, 2022, a 49-year-old loader operator with 15 years mining experience died when a large rock fell from the mine roof and crushed the cab of the front-end loader that he was using to load material from a recently blasted shot.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Scale the back and ribs before performing work in an area.
- Conduct examinations of the back, face, and ribs where miners work and travel.
- Install suitable ground support where conditions warrant.
- Use geologic hazard mapping to identify adverse conditions and be aware of changing ground conditions.
- Train miners to identify workplace hazards and take action to correct them.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Jan 11 Falling Material Kentucky

MSHA Fatality #3 - On Tuesday, January 11, 2022, a 32-year-old blaster with about 10 years mining experience died when a tree fell from the highwall adjacent to the mine road and struck the cab of the pickup truck that he was driving.

Cited Regulations: 77.1000 and 77.1713(a)

Root Cause:

- The mine operator did not follow their Ground Control Plan that required all trees be removed a safe distance from the top of the highwall.
- The mine operator did not conduct adequate examinations of all roadways and highwalls.

Best Practices:

- Remove all trees near the highwall edge.
- Conduct adequate examinations of all roadways and highwalls.
- Examine highwalls frequently and from as many perspectives as possible (bottom, sides, and top/crest). Look for signs of instability such as cracks, sloughing, loose ground, and for fall of material hazards such as large trees and rocks.
- Train all miners to recognize hazardous highwall conditions.
- Conduct additional examinations as conditions warrant, especially during periods of changing weather conditions.
- Clear loose or potentially hazardous material from near the edge of highwalls and slopes, especially when persons will work or travel below.
- Develop and follow a ground control plan that addresses all potential hazards.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Jan 14 Slip/Fall of Person West Virginia

MSHA Fatality #4 - On Friday, January 14, 2022, a 44-year-old contract laborer with 13 years experience received fatal injuries when he fell 27 feet to a concrete surface. At the time of the accident, the contractor was on a belt conveyor in a preparation plant and was working to replace a belt conveyor roller.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Establish and follow safety policies and procedures, when working at heights.
- Train miners to use fall protection when a fall hazard exists.
- Ensure fall protection is available and properly maintained.
- Provide identifiable and secure anchor points to attach lanyards and lifelines.
- Provide mobile or stationary platforms—or scaffolding—where there is a risk of falling.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Jan 26 Powered Haulage Arkansas

MSHA Fatality #5 - On Wednesday, January 26, 2022, a 54-year-old miner with 2 years experience was attempting to troubleshoot a brake issue when a dump truck rolled backwards over him. The dump truck operator was unaware that the miner was under the truck when he released the parking brake, allowing the dump truck to roll backward.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Block machinery or equipment against hazardous motion before performing repairs or maintenance.
- Communicate with mobile equipment operators and assure they acknowledge your presence, before traveling near mobile equipment. Do not assume that mobile equipment operators know that you are in the vicinity.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Jan 28 Powered Haulage Arizona

MSHA Fatality #6 - On Friday, January 28, 2022, a 56-year-old (contractor) concrete mixer truck driver with 3 years experience was fatally injured after losing control of his speed while descending the Northwest Ramp. The truck subsequently overturned, coming to rest against a berm after sliding 252 feet on its side. The crash resulted in fatal injuries to the driver and serious injuries to the passenger.

Cited Regulation: 56.14101(a)(3), 56.14100(a), 56.14131(a), 56.14100(c), and 56.9101

Root Cause:

- The contractor did not maintain braking systems in functional condition and did not remove equipment from service until defects that make continued operation hazardous were corrected.
- The contractor did not conduct adequate pre-operational examinations on mobile equipment prior to operation.
- The contractor did not ensure that miners wore seat belts.

Best Practices:

- Each shift, inspect mobile equipment before placing it into operation. Correct defects that pose a hazard to miners. Tag out and do not use mobile equipment until the identified hazards can be corrected.
- Train miners who are responsible for performing the examination on how to document the examination, how to correct the defects, where the completed documentation is turned in, and how records of corrections are kept.
- Ensure brakes can stop and hold mobile equipment with its typical load on the maximum grade it travels.
- Always wear and ensure miners are wearing the seat belt when operating mobile equipment.
- Maintain control of mobile equipment and drive at safe speeds.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Feb 14 Powered Haulage Nevada

MSHA Fatality #7 - On Monday, February 14, 2022, a 34-year-old maintenance technician with 10 years experience died when the lube truck she was driving over traveled the edge of a stope and fell approximately 60 feet into the stope drift.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Provide berms, bumper blocks, safety hooks, or similar impeding devices at dumping locations where there is a hazard of over travel.
- Examine working places before work begins for conditions that may adversely affect safety and health.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Feb 28 Machinery West Virginia

MSHA Fatality #8 - On Monday, February 28, 2022, a contract miner with 20 years experience died when he was crushed between the rib and a single boom face drill. The victim was alongside the drill using the onboard tram lever controls because the remote control was inoperable. when the accident occurred.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Mobile equipment shall be maintained in safe operating condition. Immediately remove mobile equipment in unsafe condition from service.
- Always operate mobile equipment from a safe location. Use the remote control or operate from within the operator's compartment if available.
- Determine the proper working position to avoid pinch points and Red Zone areas.
- Train miners on the safety aspects and safe operating procedures of mobile equipment before use. Review and discuss pinch points and Red Zone locations.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Mar 2 Fall of Roof/Rib Pennsylvania

MSHA Fatality #9 - On Wednesday, March 2, 2022, a 44-year-old scoop operator with 15 years experience was fatally injured when an overhang along the mine rib fell striking the miner and pushing him against the canopy of a twin boom roof bolting machine. The miner freed himself from the fall, but later died.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Remove overhangs with the continuous mining machine.
- Install support of proper length with surface area coverage, on cycle, and in a consistent pattern for the best protection against falls.
- Examine the roof, face, and ribs immediately before starting work in an area where people work and travel, including sound and vibration testing where applicable.
- Scale loose roof and ribs from a safe location. Prevent access to hazardous areas until you take corrective measures.
- Take additional safety precautions when encountering new and changing roof and rib conditions.
- Train miners on how to identify hazardous roof and rib conditions.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Mar 4 Machinery Nevada

MSHA Fatality #10 - On Friday, March 4, 2022, a 37-year-old bulldozer operator died when the bulldozer he was operating went over the edge of the highwall, landing upside down on the pit floor.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Dump loads at a safe distance from the edge of the highwall and then push the material over.
- Maintain control of mobile equipment while it is in operation.
- Perform ground condition and workplace examinations.
- Train miners to safely perform tasks.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Mar 20 Fall of Roof/Back Kentucky

MSHA Fatality #11 - On Sunday, March 20, 2022, a 33-year-old miner with 13 years experience died when he was struck by a roof fall while moving a waterline outby the retreat mining section. The intersection of the fall area was supported with five-foot fully grouted roof bolts and 10-foot cable bolts. The roof fall was approximately 40 feet long, 18 feet wide, and five feet thick.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Conduct a visual examination of the roof, face, and ribs immediately before any work is started in an area.
- Be alert to changing roof conditions, especially during retreat mining.
- Train miners on how to identify hazardous roof and rib conditions.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Mar 22 Other: Drowning Wisconsin

MSHA Fatality #12 - On Sunday, March 22, 2022, a 44-year-old heavy equipment operator with 6 years experience drowned after the floating pump station he was standing on capsized. At the time of the accident, the miner was assisting a co-worker in connecting a water discharge line.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Design and use floating platforms in a manner that complies with the manufacturer's specifications and recommendations.
- Before working on a floating platform:
  - implement safe work procedures that take into account potential hazards from rain, ice, freezing temperatures, and other environmental conditions.
  - perform adequate work place examinations, especially on floating platforms that are infrequently used. Check parts that are subject to rust, sun damage, water damage, etc. over long periods of time.
- Wear life jackets where there is danger from falling into water.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Jun 17 Machinery Georgia

MSHA Fatality #13 - On Friday, June 17, 2022, a 16-year-old contract equipment operator with 3 weeks experience died when the compactor he was operating overturned, pinning him beneath the cab. As the miner was backing up, the left tire went off the edge of a four-foot embankment, causing the compactor to overturn.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Wear seat belts at all times when operating equipment.
- Train miners to perform tasks safely, and to recognize potential hazards.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Jun 20 Slip/Fall of Person Arkansas

MSHA Fatality #14 - On Monday, June 20, 2022, a 57-year-old contract drill operator with 2 years experience was working outside of his drill when he fell over a 25-foot highwall.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Wear fall protection when there is a danger of falling. Ensure fall protection has a suitable fall arrest and a secure anchorage system.
- Train miners to properly use their personal protective equipment and to recognize potential hazards from falls and to safely perform tasks.
- Provide communication systems when assigning miners to work alone.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Jun 20 Machinery Virginia

MSHA Fatality #15 - On Monday, June 20, 2022, a 50-year-old excavator operator with 9 weeks experience died when the excavator he was operating slid over an embankment and was engulfed by lime kiln dust.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Conduct workplace examinations prior to beginning work and assure hazards are corrected.
- Train miners to identify and report hazards and stay clear of potentially unstable areas.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

Jul 21 Machinery South Carolina

MSHA Fatality #16 - On Thursday, July 21, 2022, a 43-year-old miner with 47 **weeks** experience died after he became entangled in an auger conveyor.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices:

- Secure all conveyor covers in place during normal operation. Keep tools, clothing, and body parts away from moving conveyors.
- De-energize, lock out, tag out, and block machinery against hazardous motion before performing repairs or maintenance. Never perform work on a moving conveyor.
- Examine work areas and equipment. Report defects to miners and assure defects are corrected and recorded. Test emergency shut-off devices frequently.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Aug 4 Machinery Arkansas

MSHA Fatality #17 - On Thursday, August 4, 2022, a 67-year-old co-owner / president with 14 years experience died when he was struck by a bulldozer while he was working on it at the mine's shop.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices: Fatal Alert is not available.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

Aug 17 Powered Haulage West Virginia

MSHA Fatality #18 – On Wednesday, August 17, 2022, an underground coal mine accident resulted in the death of a miner.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices: Fatal Alert is not available.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

Aug 18 Slip/Fall of Person Utah

MSHA Fatality #19 - On Thursday, August 18, 2022, a coal mining accident occurred resulting in the death of a miner.

Cited Regulation: Final Report is not available.

Root Cause: Final Report is not available.

Best Practices: Fatal Alert is not available.

Use the following links to view additional information:		
Preliminary Report	Fatal Alert	Final Report

2022 – Combined Coal and MNM Fatals

MSHA investigates all deaths on mine property; however, some deaths are unrelated to mining activity and are not counted in the statistics MSHA uses to assess the safety performance of the mining industry. These deaths are termed "non-chargeable" and include homicides, suicides, deaths due to natural causes, and deaths involving trespassers.

MSHA uses a formal Fatality Review Committee to determine whether a questionable death is chargeable. Currently, there is one (1) 2022 mining accident pending chargeability determination.

The following are various links to *Safety Training Materials* on MSHA's website.

- Toolbox Safety Talks: *https://arlweb.msha.gov/epd/efsms/toolbox/*
- Mobile Equipment Safety: *https://www.msha.gov/training-education/safety-and-health-materials/safety-topic-mobile-equipment-surface-mines*
- Conveyor Systems: *https://www.msha.gov/training-education/safety-and-health-materials/safety-topic-conveyor-systems*
- Impoundments and Dams: *https://www.msha.gov/training-education/safety-and-health-materials/safety-topic-impoundments-and-dams*
- Seat Belts: *https://www.msha.gov/training-education/safety-and-health-materials/safety-topic-seat-belt-usage*
- Guarding: *https://www.msha.gov/guarding-slide-presentation-guarding-conveyor-belts-metal-and-nonmetal-mines*
- Training Videos: *https://www.msha.gov/msha-training-videos*
- Another very helpful item is MSHA's Data Retrieval System. With your Mine ID number, you can research the violation history and accident history of the mine. This is great site-specific information to use during annual refresher. When you type in the ID number, it will pop up a suggestion; always click on the suggestion instead of clicking enter. *https://www.msha.gov/mine-data-retrieval-system*

2022 – Combined Coal and MNM Fatals

2022 – Combined Coal and MNM Fatals

Best Practice for 3/22

- **Design and use floating platforms in a manner that complies with the manufacturer's specifications and recommendations.**
- **Before working on a floating platform:**
    - **implement safe work procedures that take** into account potential hazards from **rain, ice, freezing temperatures**, and other environmental conditions.
    - perform adequate work place examinations, **especially on floating platforms that are infrequently used. Check parts that are subject to rust, sun damage**, water damage, etc. over long periods of time.
- **Wear life jackets where there is danger** from falling into water.

Fatal Alert - 3/20 - On March 20, 2022, a 33 year-old miner died when he was struck by a roof fall while moving a waterline outby the retreat mining section. The intersection of the fall area was supported with five-foot fully grouted roof bolts and 10-foot cable bolts. The roof fall was approximately 40 feet long, 18 feet wide, and five feet thick.

Best Practices: for 3/20

Conduct a visual examination of the roof, face, and ribs immediately before any work is started in an area.

Be alert to changing roof conditions, especially during retreat mining.

Train miners on how to identify hazardous roof and rib conditions.

Best Practices: for 2/14/22

Provide berms, bumper blocks, safety hooks, or similar impeding devices at dumping locations where there is a hazard of over travel.

Examine working places before work begins for conditions that may adversely affect safety and health