

The background of the slide features a faded Maltese cross logo of the North Charleston Fire Department. The cross is red with white outlines. At the top, a banner reads "NORTH CHARLESTON". At the bottom, a banner reads "FIRE DEPARTMENT". In the center of the cross is a circular seal. The seal has a blue outer ring with the text "CITY OF NORTH CHARLESTON" at the top, "PROGRESS THROUGH PERSEVERANCE" on the sides, and "JUNE 12, 1972" and "SOUTH CAROLINA" at the bottom. The center of the seal depicts a green tree.

Lithium Ion Battery Safety

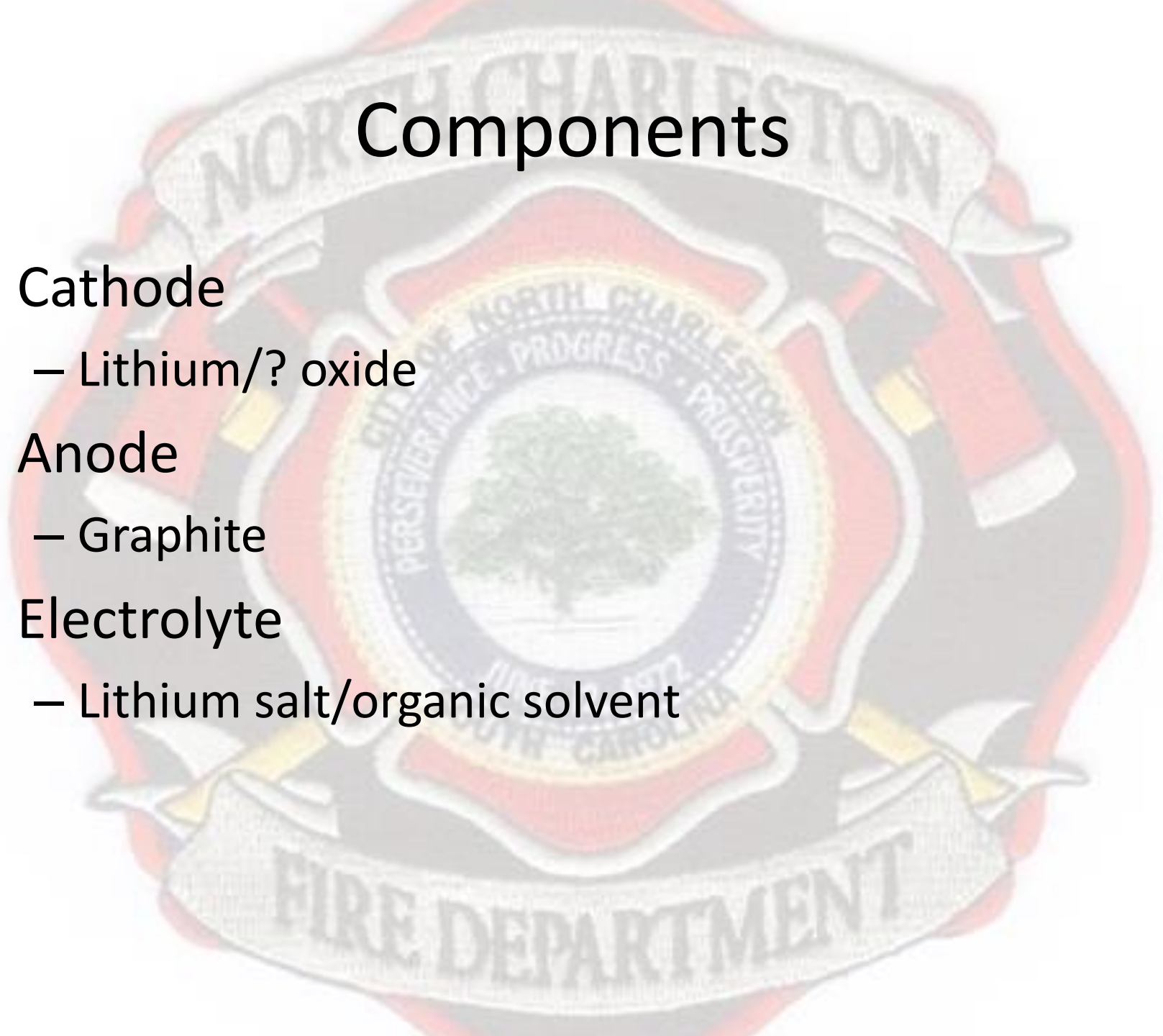
Uses/Advantages

The background of the slide features a large, faded Maltese cross logo of the North Charleston Fire Department. The logo is red and white, with a central circular seal. The seal contains a green tree and the text "CITY OF NORTH CHARLESTON" at the top, "PERSEVERANCE · PROGRESS · PROSPERITY" around the tree, and "MAY 12, 1972" and "NORTH CAROLINA" at the bottom. The words "NORTH CHARLESTON" are written in a banner at the top of the cross, and "FIRE DEPARTMENT" is written in a banner at the bottom.

- Uses
 - Electronics
 - Tools
- Advantages
 - Light weight
 - High energy density
 - Low memory effect

Components

- Cathode
 - Lithium/? oxide
- Anode
 - Graphite
- Electrolyte
 - Lithium salt/organic solvent



Causes for problems

- Overcharging or discharging
- Unbalanced cells
- Excessive current discharge
- Short circuits
- Physical damage
- Excessively hot storage
- Bad connections in multi cell make up
- Excessive vibrations
- Charging in below freezing conditions

Types of failures

- Damaged batteries
 - Unplug the battery
 - Remove from equipment (PPE)
 - Move the battery to a safe area away from other combustible materials
 - Consult manufacturer on discharge and disposal procedures
 - Wash off electrolyte



NORTH CHARLESTON



FIRE DEPARTMENT

Types of failures

- Overheated, venting or leaking cells
 - Hot cells should be disconnected
 - Venting or smoking cells should prompt evacuation
 - Dial 911
 - If safe to do so move the cell away from other combustibles





Types of failures

- Fires
 - Evacuate the area
 - Dial 911
 - If safe to do so use CO₂ , ABC or foam extinguisher
 - Do not breathe in smoke
 - If extinguished cool the battery with water
 - Make only one attempt to extinguish