



Naval Surface Warfare Center Indian Head Division

Presented to:

**NSWC Indian Head Division
Industry Day 2023**

Presented by:

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- 16 February 2023 -

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Distribution Statement A (22-208): Approved for Public Release; distribution is unlimited



Mission



Research, develop, test, evaluate (RDT&E), manufacture and provide in-service support of energetics and energetic systems. Provide Soldiers, Marines, Sailors and Airmen with information and technology to detect, locate, access, identify, render safe, recover, exploit and dispose of explosive threats.



Range and Speed

- Propellants
- Explosives
- Fuels
- Reactive materials
- Rocket motors
- Conventional ammunition

Lethality

- Novel explosives
- Reactive materials
- Warheads
- Casing
- Modeling and simulation (M&S)
- Conventional ammunition

Signatures Management

- Propellants
- Fuels
- Rocket motor design
- M&S
- Safe and arm (S&A) devices

Safety

- EOD
- S&A / Fuzing
- Aircrew escape
- Packaging, Handling, Storage, and Transportation of Energetics
- Insensitive munitions
- Chem bio defeat

FLY FARTHER

HIT HARDER

SAVE LIVES



What Are Energetics?



Energetics define a weapon system's performance:

- Range, speed, lethality, signatures management, safety, logistics

Energetics include:

- Ingredients (energetic materials, inert ingredients)
- Formulations (explosives, propellants, fuels)
- Energetic material systems (fuzes, rocket motors, warheads, munitions)

Energetics are essential to every warfighting domain:

- Undersea (*e.g.*, torpedo fuel, warheads, mines)
- Surface (*e.g.*, guns, STANDARD Missile, Sea Sparrow Missile)
- Air (*e.g.*, rockets, ejection seats, bombs, Sidewinder Missile)
- Expeditionary (*e.g.*, ordnance disposal, crew served weapons)



Energetic material systems are a critical enabler for all combat capability



The Navy's Arsenal



Purpose Built: established in 1890, IHD has been manufacturing energetics at war mobilization scales for over 125 years

Navy's Public Arsenal: SECNAV designated IHD as a Center for Industrial and Technical Excellence (CITE) for Energetics and Ordnance Systems Depot maintenance and Arsenal activities in 2014; the only such public naval arsenal

Government Owned: IHD focuses on military products with critical national security importance, significant safety/environmental risks, and low profit potential for the private sector; public-private-partnerships (P3) in place to bolster the industrial base

Necessary for Innovation: RDT&E, engineering and manufacturing combined at one site allows Navy to efficiently advance combat capability across ALL warfighting domains

IHD is the Navy's surge energetics manufacturing site with the capabilities and expertise needed for wartime mobilization

NAVSEA Warfare Centers: 10 Divisions – 1 Team



*NSWC Crane Division
Crane, Ind.*

*NSWC Carderock Division
West Bethesda, Md.*

*NSWC Panama City Division
Panama City, Fla.*

*NSWC Dahlgren Division
Dahlgren, Va.*

*NSWC Port Hueneme Division
Port Hueneme, Calif.*

*NSWC Philadelphia Division
Philadelphia, Penn.*

*NSWC Corona Division
Corona, Calif.*

***NSWC Indian Head Division
Indian Head, Md.***

Naval Surface Warfare Center

Naval Undersea Warfare Center



*NUWC Keyport Division
Keyport, Wash.*

*NUWC Newport Division
Newport, R.I.*



NSWC IHD Strategic Locations



Ogden, Utah: 22 civ.

- Co-located at Hill Air Force Base
- CAD / PAD Air Force Integrated Product Team

Crane, Ind.: 4 civ.

- Design and construct portable armories
- Provide automation for front gates

Indian Head, Md. (two sites): 1,874 civ., 55 mil.

- NAVSEA Center of Excellence for Energetics
- DoD EOD program lead
- Expeditionary Exploitation Unit ONE (EXU-1)

Camp Pendleton, Calif.: 6 civ.

- Demonstration and Assessment Team
- Assigned to D Department

Rock Island, Ill.: 7 civ.

- Quad-Cities Caliber Cartridge Case Facility
- Aligned with G Department

McAlester, Okla.: 50 civ.

- McAlester Army Ammunition Plant

Louisville, Ky.: 13 civ.

Naval Guns

Norfolk, Va.: 27 civ.

- Demonstration and Assessment Team
- Guns Division
- CBR-D

Picatinny, N.J.: 268 civ., 3 mil.

- Located at Picatinny Arsenal
- Joint CoE for Guns and Ammo
- Navy Package, Handling, Storage and Transportation, Guns and Ammo

*** Ctr. numbers not included**



Numbers at a Glance

FY22 Execution

\$626.6M direct / \$187.4M indirect

Total Contracting Effort

\$348.9M

Buildings Occupied

879

Total Square Feet

1,968,161

Civilian Staffing

Employees *

2,381

Top S&E Disciplines

**Scientists and Engineers:
892**

Average Years of Service

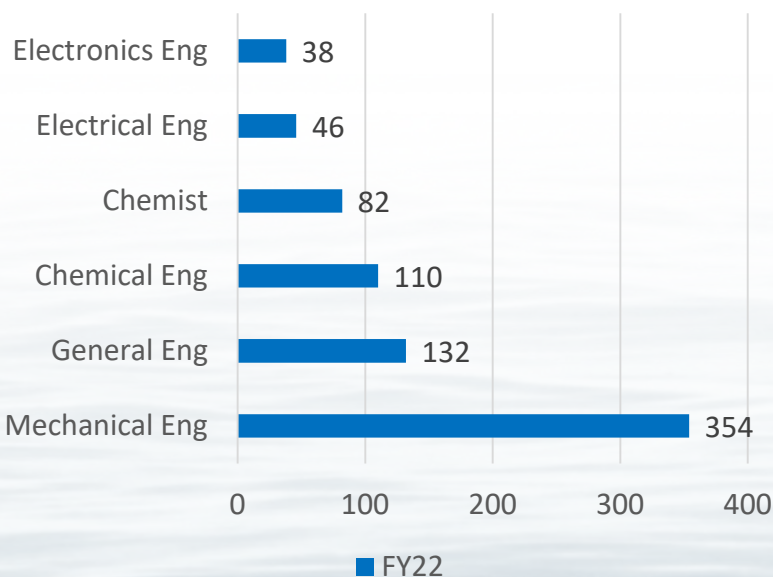
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Average Age of Workforce

44

Workforce Education (Technical)

**Bachelors: 581
Masters: 248
Ph. D.: 86**



* Does not include contractors