



# Idaho CERCLA Disposal Facility Explanation of Significant Differences Update

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Sergio Hernandez

Project Manager  
CERCLA Cleanup

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**EM** *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

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# What We'll Cover

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- Recap of ICDF purpose
- Existing landfill status
- ICDF proposed Explanation of Significant Differences (ESD)
- Path forward



# ICDF Purpose

- ICDF was designed to allow onsite disposal of WAG 3 and CERCLA generated waste at INL
- Consolidation of waste to ICDF reduces risk of exposure of contaminants to human and ecological receptors
- The ICDF provides central containment of waste for long-term protection of human health and environment



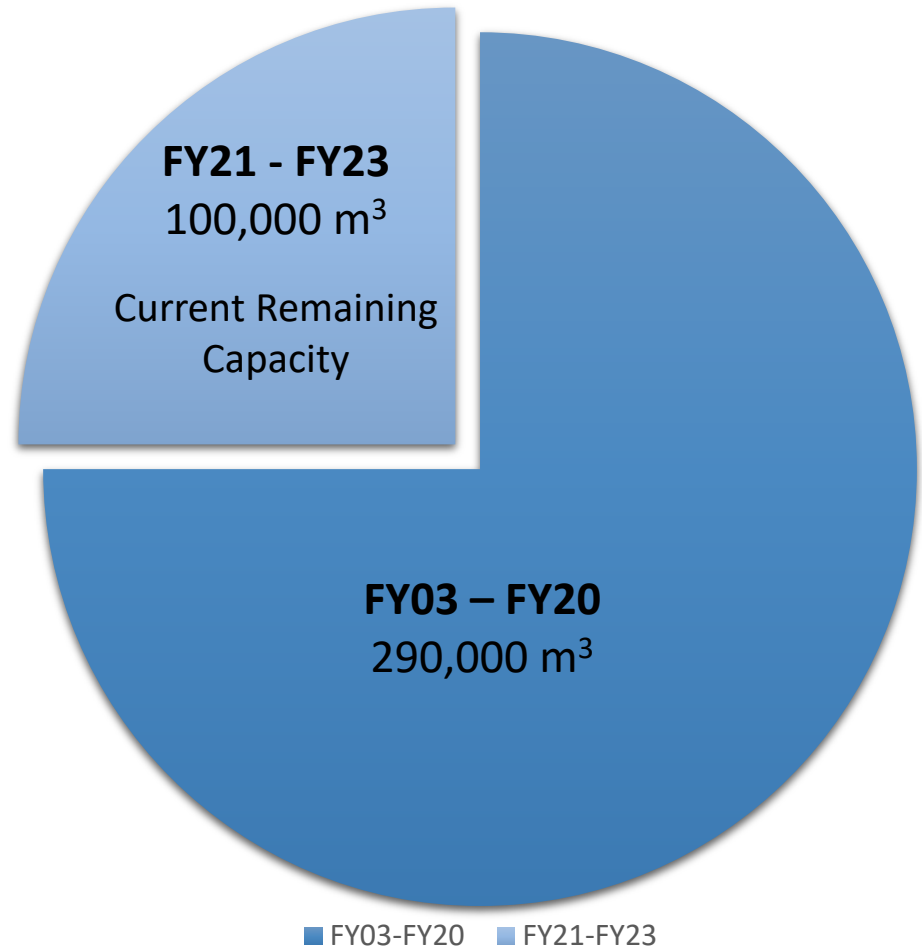
Aerial photo of ICDF looking south taken on September 7, 2021.



# ICDF Existing Landfill Status

## Existing ICDF Landfill (end of FY2020)

- Capacity 390,000 m<sup>3</sup>
  - ~75% Full
  - ~100,000 m<sup>3</sup> remaining disposal capacity
- More soils than debris



**Existing ICDF Landfill Volume**





# ICDF CERCLA Waste Projection

## CERCLA Waste Projections (2020-2050)

- Future considerations will seek to optimize footprint of existing landfill cell and future landfill cell on ICDF complex
- More debris than soils projected
- Receiving debris adds voids requiring additional fill (35% expansion factor)



# Proposed Explanation of Significant Differences (ESD)

- Increase Existing Landfill
  - Add 140,000 m<sup>3</sup> waste capacity for potential use
  - No change in cover/cap design
  - Meets ARARs (Applicable Relevant and Appropriate Requirements)
- Add New Landfill
  - Same design as existing landfill
  - Adds 530,000 m<sup>3</sup> to future disposal capacity
  - Same cover/cap design
  - Meets ARARs
- Expand ICDF Complex
  - Area of operation expanded from ~45 acres to ~97 acres
  - Buffer area expanded from ~70 acres to ~123 acres
- Extend Operational Life of ICDF Complex
  - From 2025 to 2050



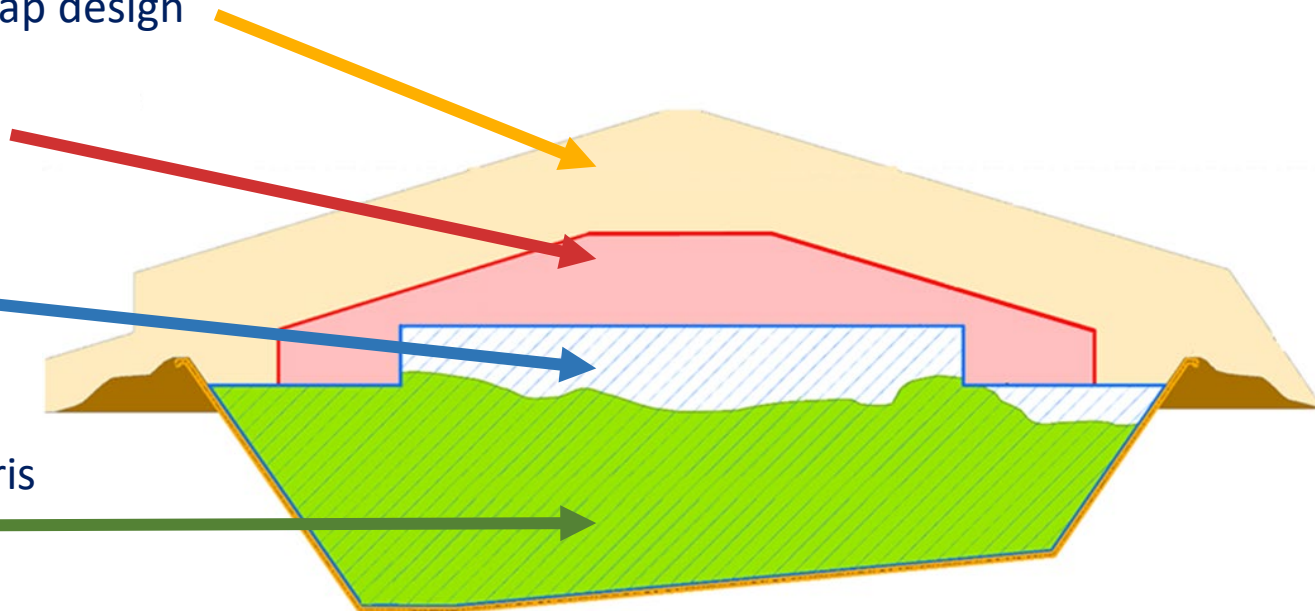
# Proposed Increase to Existing Landfill

- No change in cover/cap design

- Add potential waste capacity  $\approx 140,000 \text{ m}^3$

- Remaining disposal capacity  $\approx 100,000 \text{ m}^3$

- Placed Soils and Debris Waste  $\approx 290,000 \text{ m}^3$



**ICDF Landfill Waste Placement Utilization Profile  
(North to South)**

- Existing landfill planned disposal capacity  $\approx 390,000 \text{ m}^3$
- Proposed debris waste placement capacity  $\approx 140,000 \text{ m}^3$
- Soils and Debris Waste placed as of FY-2019  $\approx 290,000 \text{ m}^3$
- Primary geomembrane liner
- Planned ICDF landfill cover
- Land surface

NOTE: Z-factor has been exaggerated by 4.3 times for illustration purposes.  
Vertical datum NGVD-29



GIS Analyst: Dan Mahnami  
Date Drawn: 3/15/2021  
Path: X:\gis\_projects\icdf\_maps\Landfill\_Utilization\_EDP\2020\_WPU\_EDP\Graphics  
File Name: LRI\_to\_49548\_Profile\_Scenario\_w\_Cap\_Sep2019-ai\_v2.mxd



**Profile Cross-section (September 22, 2019)**



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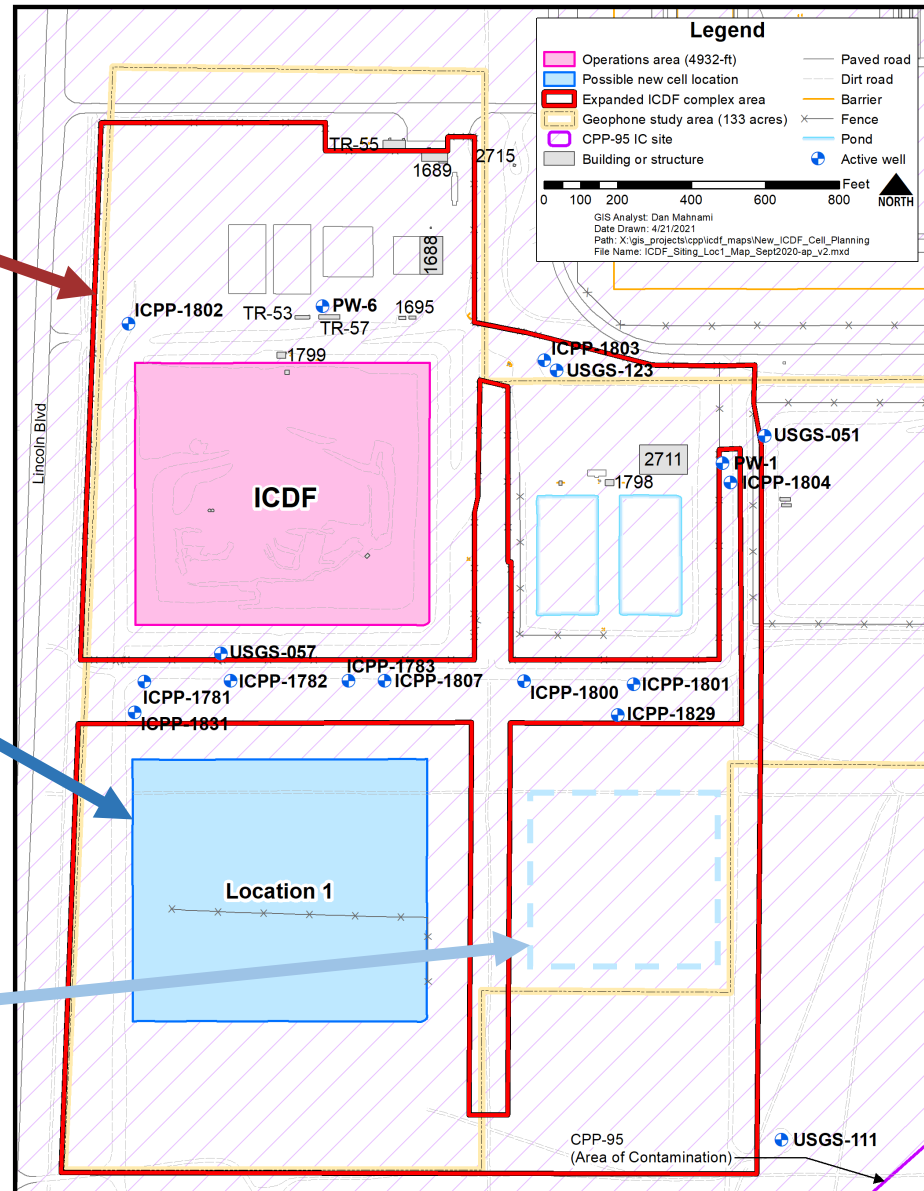
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# Proposed New Landfill

Expand ICDF Complex Area  
From ~45 to ~97 acres

Proposed location  
of New Landfill

Possible location for  
landfill leachate  
management area



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**Legend**

- Operations area (4932-ft)
- Possible new cell location
- Cell 1 & 2 geotechnical study area (40 acres)
- ICDF study area per the ROD (133 acres)
- CPP-95 IC site
- Building or structure
- Paved road
- Dirt road
- Barrier
- Fence
- Pond
- Active well

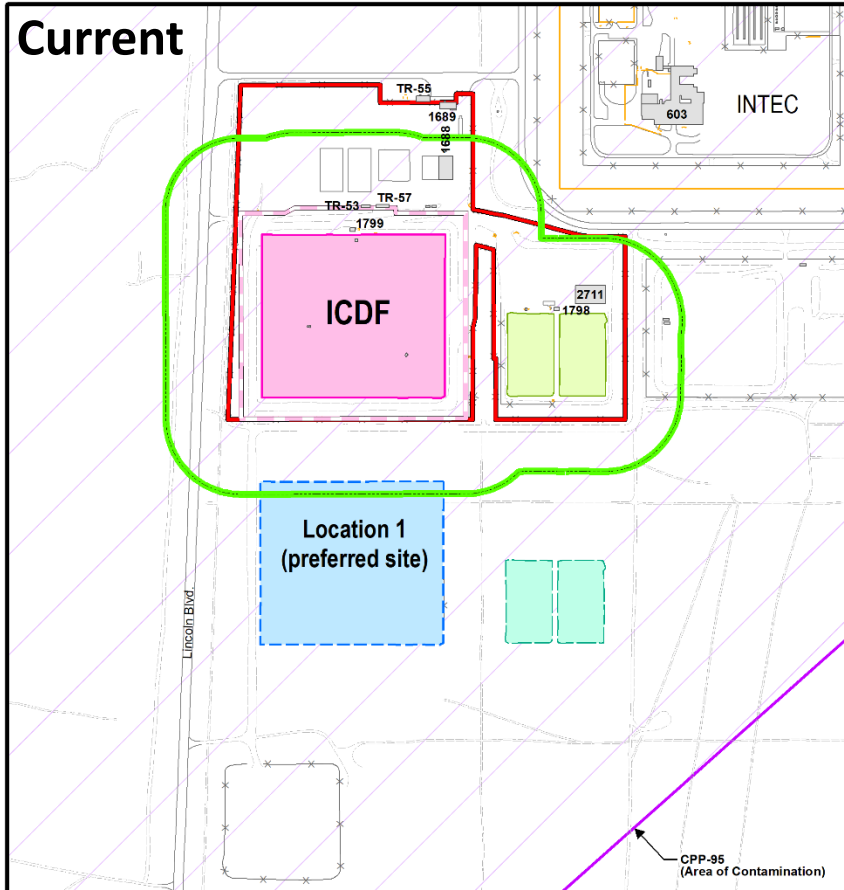
0 150 300 600 900 1,200 Feet

NORTH

GIS Analyst: Dan Mahami  
Date Drawn: 3/30/2021  
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File Name: ICDF\_Potential\_Locations\_Mar2021-at\_v1.mxd

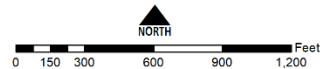
# Expanded Buffer Area

## Current



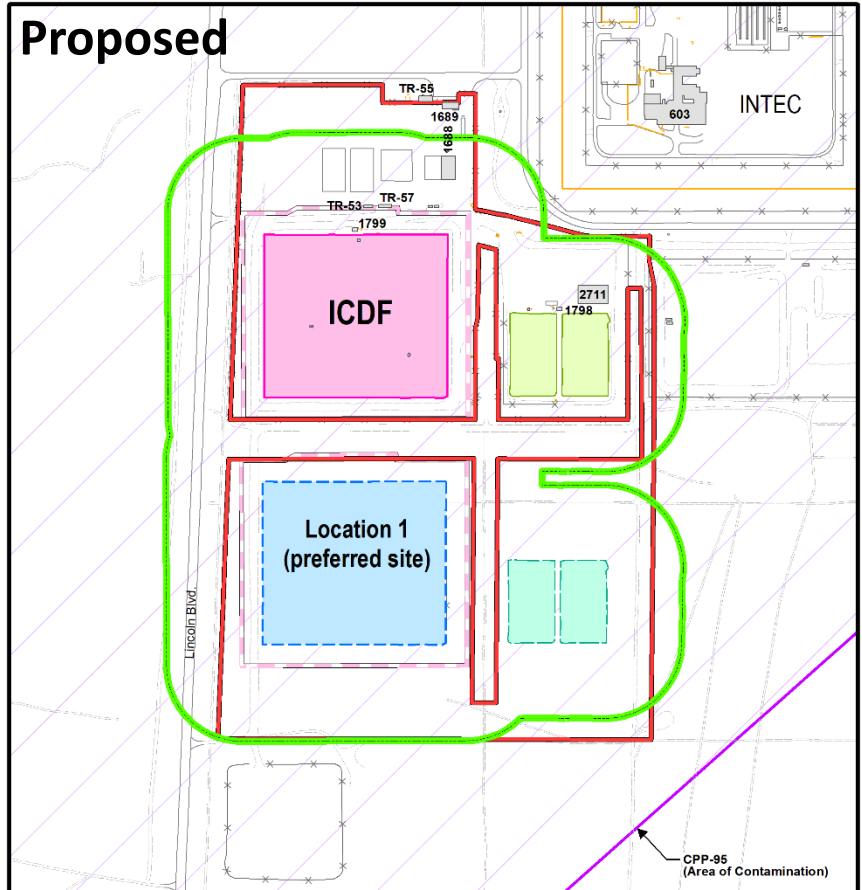
### Legend

- ICDF complex operation area (45 acres)
- Post-closure 100m buffer (70 acres)
- Operations area (4932-ft)
- Landfill post-closure footprint
- Location 1 (preferred site)
- Landfill leachate pond
- Location 1 landfill leachate pond
- CPP-95 IC site
- Building or structure
- Paved road
- Dirt or gravel road
- Jersey barrier
- Fence



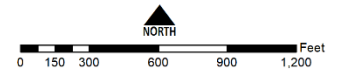
GIS Analyst: Dan Mahnami  
Date Drawn: 7/5/2021  
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File Name: ICDF\_Landfill\_and\_Leachate\_Buff\_100m-ap\_v1.mxd

## Proposed



### Legend

- Expanded ICDF complex operation area (97 acres)
- Post-closure 100m buffer (123 acres)
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# Path Forward

- Preliminary Preparation
  - Field Sampling Plan for Geotechnical Studies
  - Engineering evaluations
  - Environmental requirements
- Anticipated Timeline
  - The Explanation of Significant Differences to be completed FY22
  - Cost and schedule for follow-on design and siting will be developed in FY22



# Questions?

