

Progression Map

The fire progression map is popular with the public.



Progression Map: *Unit Objectives*

At the end of this Unit each student should be able to:

- Given a specific example of a progression map, recognize those elements that need to be improved prior to the next shift and provide solutions in accordance with the GSTOP Standards.
- Explain the purpose and use of the progression map.

Progression Map: *Unit Objectives*

- Describe the critical features and standards associated with the progression map.
- Describe how the progression map differs from other fire incident maps.
- Give examples of optional features that could be included in a progression map.
- Describe the three methods of work to create a progression data set.

Unit Overview

1. Purpose
2. Critical Features
3. Optional Features
4. Design Criteria
5. Review & Discuss some Progression Maps
6. Methods of Work

The purpose of the *Progression Map* is to graphically show the progression of the incident over the landscape.

Map uses:

- A tool for fire managers to visualize incident development
- Public information
- Fire behavior analysis
- High profile display

Progression Map: *Critical Features*

- Title, including valid date and time
- Incident perimeter
- Differing colors for each time period
- Key landmarks
- Legend, scale, north, date produced, author

Progression Map: *Optional Features*

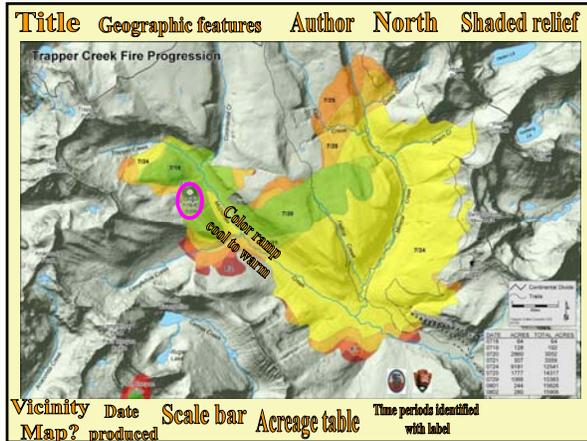
- Acreage impacted each time period.
- Cumulative acres for each day reduces confusion.
- Shaded relief base.
- Fire origin.

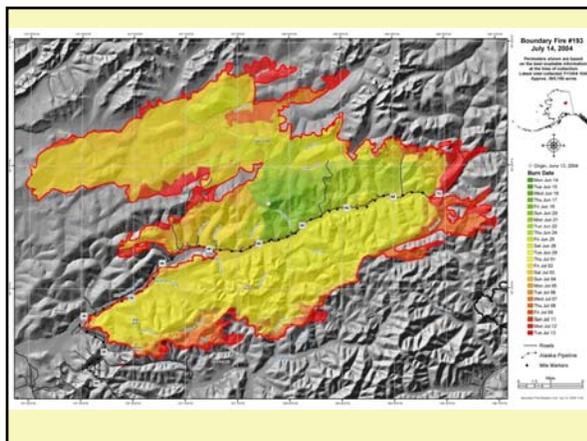
Progression Map: *Design Criteria*

- Review product with SITL
- Elevation shaded relief is a good way to show topography.
- If using DRG's in map:
 - Change green & white background colors to transparent.
 - Place perimeters beneath DRG's.
- Not all ICS elements should be shown.

Progression Map: *Design Criteria*

- Color ramp: cool to warm.
- More than 5 time periods shows trend.
- Not all shifts may be appropriate to display.
- Label polygons with time period.
- Consider how the map will be used later.





Progression Map: *Methods of work*

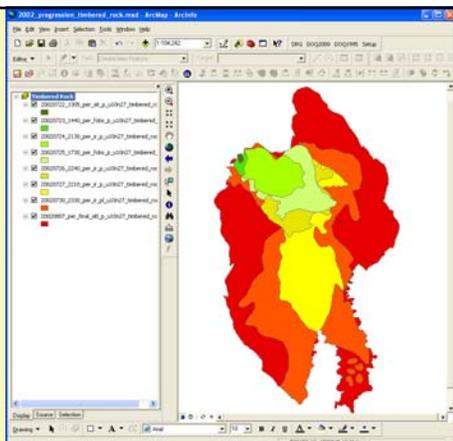
Three major methods of work

- **Stack** layers, earliest on top
- **Erase** previous period to create burned area layer for each time period
- Use **Update** to create single layer

Stack method

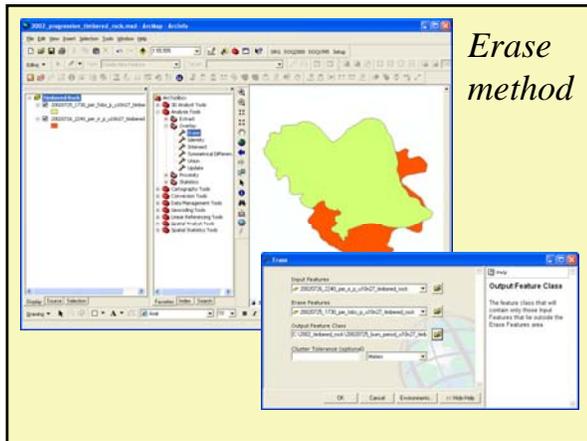
- Make polygon data consistent.
 - Spatial alignment, clip if necessary.
- Stack fire perimeters in the TOC.
 - Place first perimeter on top and most recent on bottom.
 - Continue until all time periods are in the TOC.
- Don't use transparency – colors will blend where perimeters overlap.

Stack method



Erase method

- Make polygon data consistent
 - Spatial alignment, clip if necessary
- Use geoprocessing to “erase” the incident polygon with the polygon from the previous period
- Continue until a burned area polygon theme has been created for all time periods



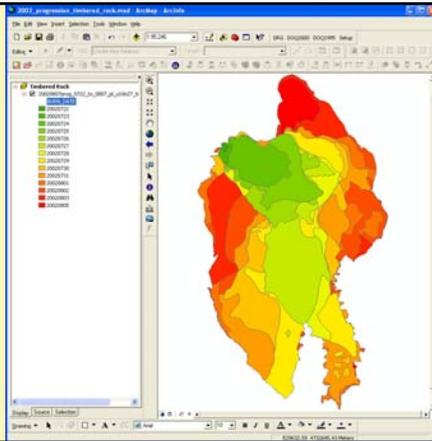
Update method

- Make polygon data consistent
 - Naming convention
 - Attributes for each time period (*burn_time*)
 - Spatial alignment, clip if necessary
- Geoprocessing *Update 2nd* shift with 1st shift
- *Update 3rd* shift with 1st overlay
- Continue until all time periods are in a single layer.

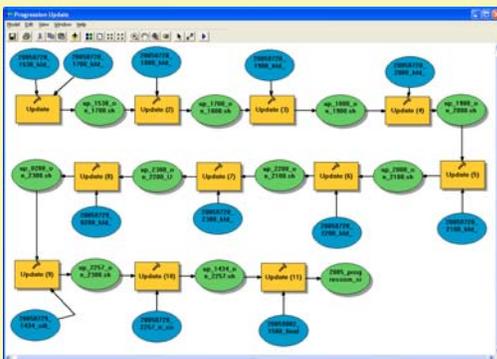
Update method cont.

- Calculate acres.
- Create spreadsheet summary by time period.
- Create map layout symbolizing on *burn_time* field

Update method



Use Model Builder



Model Builder

- Allows analysis to be run quickly.
- Enables more accurate processing.
- Can be edited in successive time periods.
- Provides documentation of the process used.
- Does require ArcInfo license, however.

Progression Map: Unit Review

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Progression Map: Unit Review

- Describe the critical features and standards associated with the progression map.
- Describe how the progression map differs from other fire incident maps.
- Give examples of optional features that could be included in a progression map.
- Describe the three methods of work to create a progression data set.
