City map in city dialog: working tile sometimes not updated

Launch Freeciv 2.6.0-beta2, gui-gtk-3.0 client.
- Open attached savegame, take player pi and start
- Open Gao's city dialog
- In the city map, click on the city, this organizes tiles automatically
- Click on the grassland working tile to free it
=> nothing happens, the grassland still appears working.
- Close the city dialog and reopen it. The grassland working tile has changed. The actions worked as expected but the city map was not redrawn because production didn't change.

It seems to be client-independent; I can reproduce it with all of freeciv-gtk3, -gtk2, -qt, and -sdl2.

It's reproducible in S2.5, too, having set up a city in a 2.5 savegame with the same coordinates and terrain with the editor.

We need to make changes to worked tiles (and in principle other tile changes) able to trigger a city dialog refresh. For protocol-frozen branches the only way is to have handle_tile_info() look at whether it's a tile relevant to a current city dialog or something.

(On later branches, I vaguely wondered about changing the protocol to put a bitmap of worked tiles in the city packet, but in principle the city dialog cares about other tile changes — if the terrain changed, or another city started working a tile, the city dialog needs a refresh. So that's probably a non-starter.)
have handle_tile_info() look at whether it's a tile relevant to a current city dialog or something

The trick here would be finding out which cities have ptile in their map cheaply. But I can't think of a cheap way to do that; I think we'd have to either iterate over all cities or iterate outward from ptile to the max city radius. Neither sounds like a thing we'd want the client doing on every PACKET_TILE_INFO.

However, in this specific case we already know the IDs of the affected cities (from the 'worked' field), so we can just call refresh_city_dialog() on those. That is pretty cheap; it sets a flag in the city structure, and the GUI's idle callback will eventually iterate over all cities looking for that flag (which was probably going to happen anyway).

The attached patch does this. I've briefly tested that it resolves the original symptom, but not tested it any more thoroughly that than. If it is to go in 2.5.11 it could do with some more exercise than that.

I think that should completely fix the common case of clicking auto-arrange in a city dialog not updating that dialog. It may not update adjacent cities' dialogs though, and there are certainly remaining situations where a tile change ought to be reflected in an open city dialog but isn't.

It might also improve the odds of a city dialog being updated if a hostile unit moves onto a worked city tile. That should trigger a worked-tile change.

#5 - 2018-03-06 12:15 AM - Jacob Nevins
- Assignee deleted (Jacob Nevins)

I won't be able to commit this in the next few days. If anyone wants to test it further then commit it so it gets even more exercise, feel free. (I still intend for it to be committed before the next, now delayed, releases.)

#6 - 2018-03-22 09:27 AM - Jacob Nevins
- Sprint/Milestone changed from 2.5.11 to 2.5.12

#7 - 2018-03-24 02:02 PM - Jacob Nevins
- Status changed from Resolved to Closed
- Assignee set to Jacob Nevins

Files
freeciv-T0001-Y-3950-auto.sav.gz 16.8 KB 2018-03-03 Pierre R
25_736822.sav.bz2 13.7 KB 2018-03-04 Jacob Nevins
m-30-26-25-refresh-city-dialog-worked-tiles.patch 3.93 KB 2018-03-04 Jacob Nevins