Today in Joshua Tree National Park

Update Feb 21, 2023

This is a web-based system that was inspired by availability of web-capable TVs in the visitor centers at the park.

The objective was to supply a set of visitor information on a “slide show” type presentation on thee TVs, entirely driven from a web site, so the same information could be displayed at multiple locations with minimal effort.

The system operates by collecting information from many sites, including the weather service, eps air quality, recreation.gov, nps.gov, the sensor at Lost Horse ranger Station, and information entered manually by a ranger here.

The system produces 3 kinds of output:

* A multi-section web page where the sections can be displayed sequentially at 15 second intervals. Designed for display on the visitor center TVs.
* A multi-topic web page that can be printed onto 5 pages with one topic on each page.
* A web page that prints as a single page with all the key information about today. This is intended to be printed at the visitor center and posted at each interp table or on a bulletin board.

There are also 3 admin pages with different levels of capability. These are simple web forms that allow local personnel to enter information for inclusion in the output pages.

* A fun welcome message
* Advice to visitors – a list of suggestions
* Notices and closures – a list of items
* Alert
* An event calendar.
* Campground status

Attached are:

* Notes on the data, including what data is on each page and issues
* PDFs of each of the pages.
* Admin pages and notes

All the pages (including this one) are visible at https://jotr.digitalmx.com. If you would like to experiment with the admin page, contact me for a test site. Please email comments to me at john@digitalmx.com

Information on each page

Today page is intended for web site viewing or printing and posting any desired pages

Rotate page is the rotating sequence of pages on a TV screen

Summary is a one-page summary intended to be printed and displayed at interp desks in VCs.

Number in parentheses is printed page or screen number

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Contains | **Today** | **Rotate** | **Summary** |
| Light | Weather today and tonight, sun and moon rise and set | ✓ (1) | ✓ (1) | ✓ |
| Park conditions | LHRS, also air quality, UV, fire danger. Updates every hour | ✓ (1) On-line but not printed | ✓ (1) |  |
| Alerts | One only. Expires automatically | ✓ (1) | ✓ (2) | ✓ |
| Notices | Bullet list | ✓ (1) | ✓ (2) | ✓ |
| Advice | Bullet list | ✓ (1) | ✓ (2)  1 permanent, 1 random from the list | ✓ |
| Weather | Day and night | ✓ (2)  3 days, 4 locations | ✓ (3)  3 days, Jumbo Rocks and Cottonwood |  |
| Events |  | ✓ (3)  Today and next 2 days | ✓ (4)  Today and tomorrow | ✓  Today only |
| Campgrounds | Sites, cost, availability  Rec.gov updates every 30 mins | ✓ (4)  Includes QR code to rec.gov | ✓ (5) |  |
| Fees | Type, Price, Where to buy | ✓ (5)  Includes QR code to rec.gov | ✓ (6) |  |

Notes:

All pages visible at https://jotr.digitalmx.com (live site) and http://jotrbeta.digitalmx.com (test site). Use “List of all pages” link at bottom of page.

Sections shown on rotate are set individually on each display. Can be just a single screen or rotations of any or all of the screens.

Access Local Settings on the Rotate page by clicking on the “Time now” display. It lets you change the headline message and choose which pages to show in rotation.

Park conditions change constantly so are not shown on printed pages.

Notes on the data

Light Light is the name of the pair of shaded blocks labeled Today and Tonight. After sunset, the two blocks change to Tonight and Tomorrow. The day block shows sky conditions, high temp, sunrise and sunset. The night block shows phase of the moon, low temp, moonrise and set. Temperatures are for Jumbo Rocks (middle of the park).

Park Conditions This is a collection of data. Temp Wind, and Humidity come from sensors at the LHRS. Air quality comes from airnow (eps). Fire Danger comes from Ranger Admin entry. UV comes from another weather site, and probably represents Twentynine Palms.

Alert Ranger can define an alert on the Ranger admin page. Alert will have a bold red border. If no alert is defined the “alternate alert” is shown. (Color has been removed from alternate alert.)

Announcements Ranger defines a list of announcements on admin page. No hard limit on how many.

Advice Ranger defines a “Fixed Advice” item and then a list of other advice items. Most pages display all the items in the list. The rotate page displays the fixed item and a random choice from the rest of the list. The random choice changes on every rotation.

Weather Weather comes from weather.gov, which has good local precision on forecast. Unfortunately, they have had reliability problems. If weather.gov goes down, the display will use an alternate source which is for 29 palms instead. The line under the weather tells you which one was used. It is extremely simple to change the number of days and choice of sites displayed.

Events Events use the calendar built into the Ranger Admin page. It permits repeating entries as well as single event entries. I can also access the calendar on the NPS web site. However, there are some issues about formatting and choice of events to include.

Campgrounds Lists all the campgrounds, divided into 3 groups: reserved, first come, and closed. For reserved campgrounds, available sites are retrieved from rec.gov every 30 minutes. It is also possible to specify available sites on first come areas. A marker is used after the availability to indicate how old the data is. No marker = 3 hours or less. ? = 3 to 12 hours; ?? = more than 12 hours (and number will disappear).

Fees Set by Site admin. Simple table display.

Note on the Rotate Page

The Rotate pages are designed for limited space on TV screens. If page content below the title bar exceeds the space available, the content is shrunk to make it fit. Shrink % is shown at the bottom of the pages.

Printing

When a page is printed, the margins are changed, type size is reduced, subheads reformatted, and some objects are not printed.

Data sources (page in progress .. not valid)

|  |  |  |  |
| --- | --- | --- | --- |
|  | **data** | **source** |  |
| 1 | title | template |  |
| 2 | date | auto |  |
| 3 | pithy statement | ranger |  |
| 4 | alerts | ranger |  |
|  | --weather |  |  |
|  | --closures |  |  |
|  | fire, others |  |  |
| 5 | day and night | auto |  |
|  | sunrise/set; |  |  |
|  | moonrise/set; phase |  |  |
| 6 | weather: today, tomorrow, next | auto: weather.gov |  |
|  | jr |  |  |
|  | br |  |  |
|  | cw |  |  |
| 7 | park conditions |  |  |
|  | uv | auto |  |
|  | air quality (jumbo rocks) \* | auto - |  |
|  | fire danger | ranger |  |
| 8 | campground status |  |  |
|  | indian cove |  |  |
|  | open/reserved/closed | ranger |  |
|  | sites |  |  |
|  | open sites (real time) | ranger/auto from rec.gov |  |
|  | repeat for each campground |  |  |
| 9 | events (for next 3 days) | ranger/auto from nps calendar |  |
|  | date/time at location |  |  |
|  | title |  |  |
|  | type |  |  |
|  | duration |  |  |
|  | comment |  |  |
|  |  |  |  |