



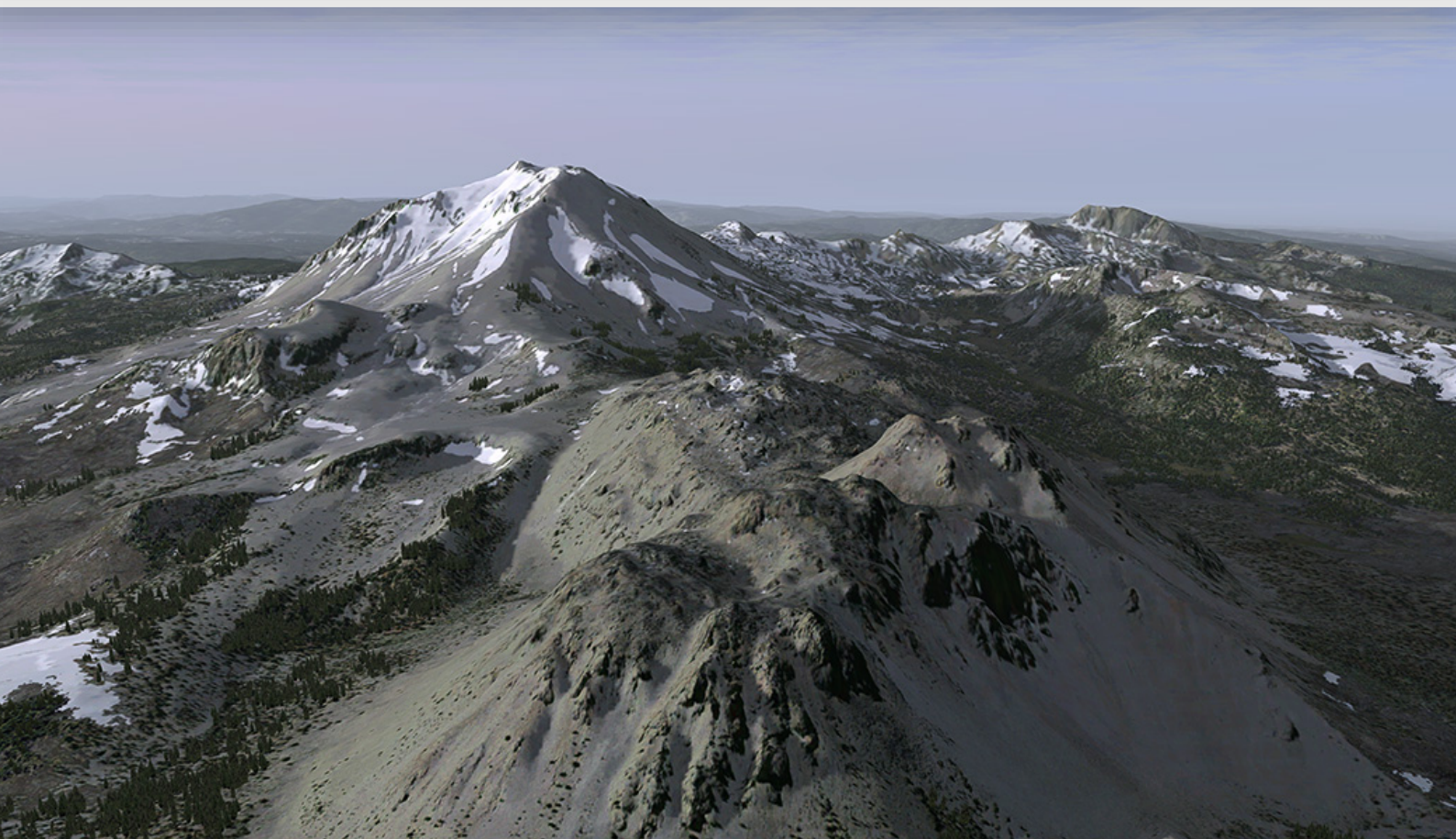
orbx
simulation systems



North America

Northern California

USER GUIDE SEPTEMBER 2016



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Thank you!

Orbx would like to thank you for purchasing FTX NA NCA – Northern California. FTX NA NCA has taken our team of developers nearly a year to produce. It is the sixth region in our North America series, continuing a tradition of award-winning region sceneries for FSX and P3D.

Northern California

Northern California contains a stunning array of landscapes, the diversity of which is unrivalled by any other region in North America. The soaring Sierra Nevada mountain range forms a sturdy backbone along the eastern edge of the state, and with many peaks topping 10,000 feet (3,000 m), it is one of the highest mountain ranges in the continental U.S. Nestled within the Sierras are two magnificent natural wonders: the azure blue Lake Tahoe, largest alpine lake in North America, and the glacier-carved Yosemite Valley, with towering granite cliffs that attract over 3.7 million visitors a year.

Moving westward, you encounter “Gold Country”, setting of the famous California Gold Rush in the mid 1800s that prompted untold thousands to leave their homes and head to California in hopes of striking it rich. The enormous Central Valley forms the agricultural breadbasket of the state, with acres of farms producing everything from grapes and almonds to cattle and dairy products, and home to the cities of Sacramento (the state capitol), Fresno, Modesto, and Redding in the far north corner. Encircling the central valley are grass and evergreen oak-covered hills that are a tell-tale characteristic of California, baked to a vibrant gold by the plentiful sun.

Reaching the coast, the great city of San Francisco is draped across a peninsula separating the Pacific Ocean from San Francisco Bay, one of the finest natural harbors in the world. The bay is surrounded by a major metropolitan area known as the Bay Area, also consisting of the cities of Oakland, San Jose, and many others. The latter, San Jose, is actually the largest city in Northern California and is home to many of the world’s largest tech firms. Chances are that some of the hardware or software that you are using right now was designed there or in the surrounding area.

Equally spectacular is the Northern California coastline, spanning hundreds of miles and often obscured by dense advection fog, making for challenging flying. The forests along this coastline are home to the mighty Coastal Redwood, sometimes reaching in excess of 350 ft (100m) tall, earning them the title of world’s tallest tree.

And let’s not forget – FTX NCA doesn’t just stop with California, but actually contains the southernmost part of Oregon as well, in order to join with our award-winning FTX PNW region. Southern Oregon also has its share of scenic wonders, including Crater Lake (deepest lake in the United States and filling an extinct volcanic crater), and Klamath Lake with its extensive marshes.

Product Features

FTX NA NCA includes a range of custom-built landscapes including urban areas, farmland, hills, rural and alpine areas to recreate the diverse and iconic landscapes that Northern California is renowned for. The landclass textures are drawn from aerial and satellite photography of California and hand placed so as to accurately render the visual environment. Custom textures have been used to accurately portray the buildings and vegetation unique to California; you will notice that the oak-covered hillsides retain their leaves throughout the winter, just like the real California oaks, and the farms and urban areas are dotted with date palms, fan palms, and eucalyptus where appropriate.

FTX Northern California covers ~115,000 square miles (~300,000 sq km) reaching from southern Oregon all the way to Monterey Bay and east across the Sierra Nevada mountains to Lake Tahoe and Mammoth Basin. Major urban areas include Sacramento, San Francisco, San Jose, Stockton, and Fresno. Surrounding these are a wide variety of landscapes -- scenic coastlines, oak covered rolling hills, expansive agricultural areas, high mountains, volcanic peaks and lava flows, large wetlands and dry lakes -- and all have been recreated with great detail and accuracy. Every single square mile of landclass (=land use type) is hand placed and all major roads, railroads, rivers, lakes, powerlines, wind farms, and vertical obstructions are included for accurate VFR flying. More than two dozen key areas, urban as well as natural, are featured with seasonal photoreal coverage and are fully annotated with autogen. Custom models of landmark structures include iconic bridges, buildings, and hydro dams. Just like with our other region titles we've given each of the ~360 airports, airstrips, and seaplane bases in the region an upgrade, with more accurate placements of runways and taxiways as well as buildings, hangars, static aircraft, moving people (and creatures), and lots of "clutter". Last but not least all ground textures are hand-annotated with our custom autogen objects including the spectacular new and frame-rate friendly FTX Global-style night lighting.

- Superb ground textures from local sources
- Hand-placed landclass covers every sq mile
- Custom autogen textures and objects
- New (FTX Global) 3D night lighting effects
- Accurate roads, rivers, lakes, powerlines
- Over 360 airports have been upgraded
- Custom models of eight major Bay bridges
- More than 30 windfarms and many hydro dams
- Over 25 photoreal natural and urban areas
- includes Yosemite, Mt. Shasta, Crater Lake
- 10-m USGS terrain mesh with LIDAR inserts
- Continues coverage south from Orbx PNW

Product requirements

This scenery addon is designed to work in the following simulators: **Microsoft Flight Simulator X, Lockheed Martin Prepar3D v1, Lockheed Martin Prepar3D v2 and Lockheed Martin Prepar3D v3.**

Compatibility notes

Please visit <http://orbxsystems.com/forums/index.php?board=118.0> for the latest compatibility information between FTX NCA and third party addons.

FLIGHTBEAM STUDIOS - KSFO

Flightbeam Studios KSFO is fully compatible with FTX NA NCA, after following these easy steps:

- Navigate to your "Microsoft Flight Simulator X\ORBX\FTX_NA\FTX_NA_NCA05_SCENERY\scenery" folder, and rename the following files so they have ".OFF" at the end instead of ".BGL":
- ADEX_FTX_NCA_KSFO_San_Francisco_Intl.BGL
- ADEX_FTX_NCA_KSFO_San_Francisco_Intl_CVX.bgl
- FTX_NCA_objects_KSFO_PLC.bgl
- Install Flightbeam KSFO (if you haven't already), and make sure it appears above the ORBX entries in the FSX/P3D scenery library.
- If you uninstall Flightbeam KSFO and would like to revert these changes, simply rename the file extensions of the above files from ".OFF" back to ".BGL".

AEROSOFT - US CITIES X SAN FRANCISCO

US Cities X San Francisco is partially compatible with FTX Northern California. We say partially, because US Cities X San Francisco isn't quite aligned to its real world location, which causes an obvious offset from our own photoreal San Francisco shoreline. The following instructions will deactivate the photoreal San Francisco harborfront in FTX NA NCA and remove the duplicate Bay Bridge in order to provide the highest possible degree of compatibility, but please be aware that it is not perfect, and seams will be visible.

- Navigate to Microsoft Flight Simulator X\AerOSOFT\USCitiesX-SanFrancisco\Scenery, and rename "SanFrancisco_BayBridge.bgl" to "SanFrancisco_BayBridge.off"
- Navigate to Microsoft Flight Simulator X\ORBX\FTX_NA\FTX_NA_NCA06_CVX\scenery, and rename "2_orthoimage_CA_COSF2011_SF_harborfront_60cm.bgl" to "2_orthoimage_CA_COSF2011_SF_harborfront_60cm.off"

FLIGHT1 - GROUND ENVIRONMENT X (GEX)

GEX is a default FSX/P3D texture replacement product and their textures will not appear inside FTX NA NCA since we use custom landclass textures which are called from within the ORBX folders only. This means you will see GEX outside the FTX NA NCA boundaries and our textures as soon as you cross over into NA NCA. There is nothing to do when flying inside FTX NA NCA. However, you may want to use FTX Central to switch to the 'Default' region when flying outside NA NCA with GEX in different parts of the world.

THIRD PARTY TERRAIN MESH

NA NCA comes with a complete set of high-resolution terrain mesh files. Third-party add-on terrain mesh files are compatible as long as they do not provide a higher grid resolution than 10m (the resolution of the NA NCA terrain mesh files) and their scenery library position is of lower display priority than FTX NA NCA.

REAL ENVIRONMENT XTREME (REX)

FTX NA NCA is 100% compatible with REX and you do not need to do anything special to use REX whilst flying over NA NCA. In fact, most of the Orbx developers and beta testers use REX, and it is an Orbx recommended add-on.



Quick Installation Guide

Installing Orbx FTX NCA is all managed by our FTX Central application. This app is responsible for many aspects in maintaining your Orbx installation. Please visit the support forums to learn more.

Once you have purchased NCA it will be added to your account and you can have FTX Central download and install it for you. The appropriate scenery library entries will also be managed by FTX Central.

You may also manually download NCA and then have FTX Central manage the installation for you once downloaded.

An internet connection is required for FTX Central to validate your license.

Please note that the above all refers to FTX Central 3. Earlier versions of FTX Central are no longer supported but will still function as before. The integration of FTX Central with your OrbxDirect account is only available with FTX Central version 3 and above.

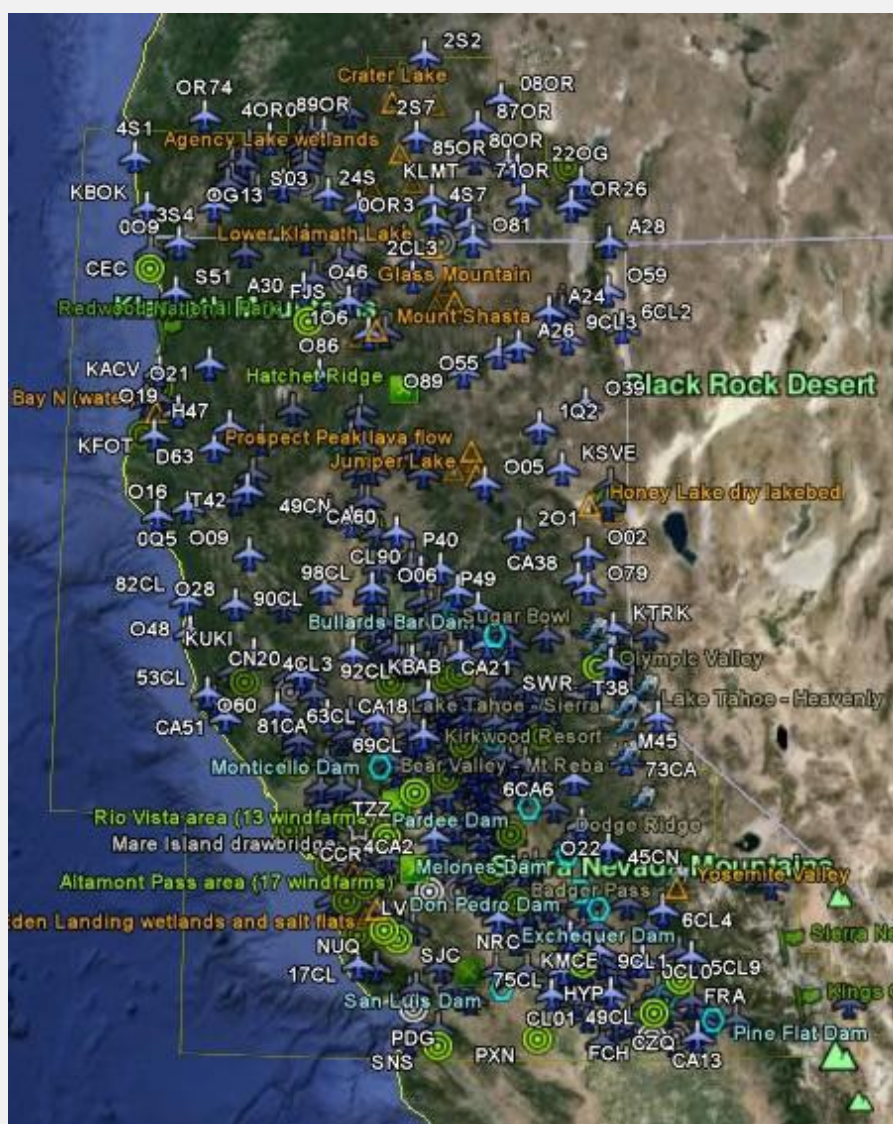


Scenery Coverage Area

You can view the coverage and features map shown on the previous page interactively in Google Earth by loading the FTX NCA Coverage and Features Map.kmz which you'll find in your ORBX\User Documents folder in your FSX root folder.

Once loaded into Google Earth, you can select all or some of the features included in the scenery, and the corresponding icons will appear inside the map boundary. You can click on each item on the map for a popup balloon which provides details for that airport or POI.

This is a useful tool to begin to explore the features and points of interest included in FTX NCA.



What is Custom Landclass?

Landclass are special files which reside in the scenery layer “pie”, and their role is to tell FSX what type of ground texture to place in any given square kilometer cell. In other words, landclass files tell the simulator to place a field here, a township there, forest here, and a railway yard there, and so on.

As far as we are aware, FTX is the first flight simulation product to feature totally hand-crafted landclass on such a large scale. Many global or country-specific addon landclass products for FSX are created using various data sources and compiled using automated scripts and then manually rectified for obvious errors.

Not so with FTX. The diagram below gives you an idea of the custom landclass which was shipped with FTX NCA. Every single square mile in the green highlighted areas was hand placed by expert landclass developers, using a combination of many sources, including street maps, aerial photos, and topography charts to name a few.



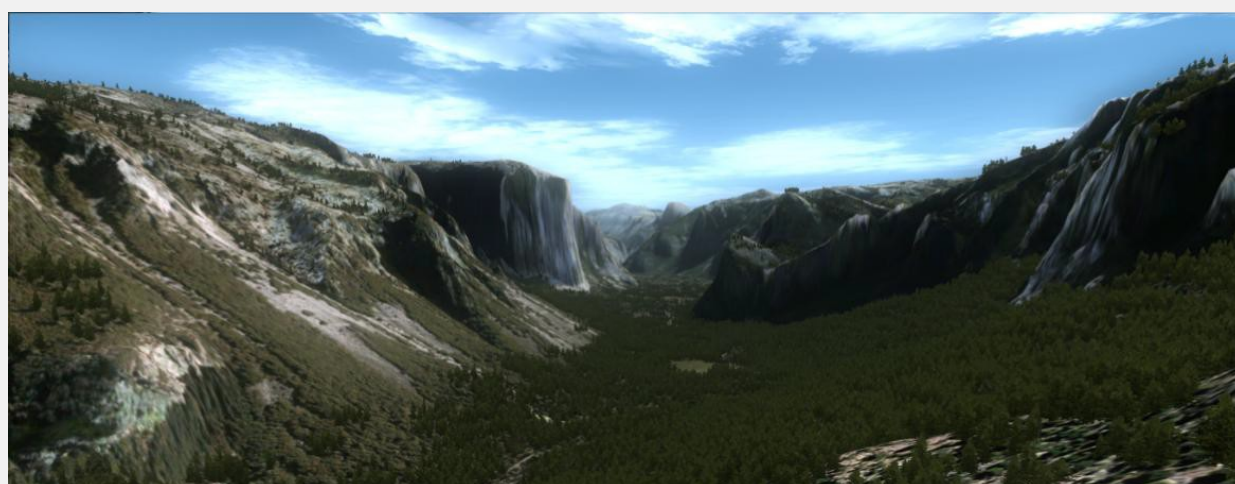
The result is nothing like you have ever experienced before, with an almost photoreal feel to all areas which have been edited, but with the added benefit of faster loading times, full five seasons’ support and hand- placed custom autogen and library objects in every single kilometer of the region.

Quick Reference Simulator Settings

The table below lists in a handy reference the minimum recommended settings required in your simulator to enjoy NCA the way Orbx designed it. These settings will run well on most PCs and take particular advantage of the custom mesh and photoreal imagery used in the scenery area.

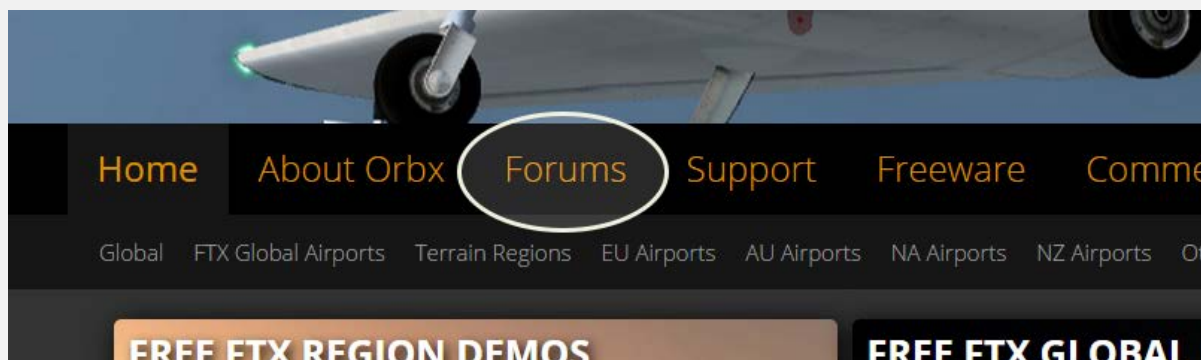
If you use the settings below you will be guaranteed the highest fidelity experience and the best balanced performance.

Setting	Value	Why?
Level of detail radius	Large	Reduces blurring of textures.
Global texture resolution	Max	Displays photoreal textures best.
Mesh complexity	100	Better terrain definition.
Mesh resolution	5m	5 m is required for NCA
Texture resolution	7 cm	Sharpest roads and freeways.
Scenery complexity	Extremely Dense	How Orbx designed FTX NCA.
Autogen density	Normal	Best FPS vs detail.
GA AI traffic	16-50%	Recommended for this scenery.
Road vehicle traffic	16%	No need to set higher for FTX.



Product Technical Support

Orbx has a very simple support policy: no question unanswered. That means, should you have any questions about NCA or its use, please feel free to register on the forums at orbxdirect.com and then log a support question in the FTX Payware Support Forum section. Orbx FTX experts will be available to review your support questions and you will usually get a reply on the forums within 12 hours, often much sooner than that.



To visit our support forums, click on the “Forums” button shown on the homepage of orbxdirect.com.

Please do NOT email support requests

Orbx provides world-class support on our forums, and it’s the only way in which you can receive support for NCA. Provided you adhere to the forum terms of use and have a legitimate copy of NCA, you will always be offered our support at no cost as we work toward a resolution to your problem each time.

Use the forum search function

Before you post a question, please try searching for the answer first, using the forum’s built in search function located on the forum menu bar.

What to include in your support requests

If at all possible, this is what we’d like to see provided for each request you log:

- A separate post on the FTX support forums for each issue (don’t tag new issue reports onto existing threads).
- Include your ORDER NUMBER from your NCA purchase in your post or forum signature section.
- A screenshot to highlight what you are talking about.
- A descriptive post title which clearly states what the issue is.
- Detailed comments in your post about what you are reporting on.

The Orbx support team is always on standby to assist you with any problems you may have, or will comment on your issue reports. Please remember, our priority is fixing any urgent issues first, and addressing bug reports second. Clearly though, any “show stopper” bugs will be given top priority though.

FTX Community Forums

FTX already has quite a thriving and active user community on the forums, with over 63,000 members as of September 2016. To visit the forums, just point your web browser to orbxdirect.com and from the front page click the “Forums” menu item.

You don’t need a user account to view other people’s posts and information posted by Orbx staff, but if you’d like to join in on the discussion there, simply create an account. It’s instant and no validation email is required. We like to keep things simple☺.

We hope to see you there soon!

Thanks for reading!

You’ve stuck with us through all these pages of information, and we appreciate you taking the time to read the user guide. We hope it gave you some tips and insights. See you on the forums!



The FTX NCA Team

Lead Developers

- **Holger Sandmann (Project Manager):** Geospatial data processing, including vector roads and railroads, rivers, lakes, and coastlines; vector textures; photoreal areas preparation; custom seasons file; landclass polygon files; landclass ground texture blendmasks; terrain elevation mesh; antennae, utility tower, and marine signals placement; moving road traffic; road and railroad extrusion bridges; lcllookup.bgl edits; Google Earth .kmz file; team management
- **Eugene Krikunov:** Landclass ground textures including blendmasks; night lighting system on ground textures and road vectors; autogen core files management; Golden Gate Park photoreal area and custom models
- **Dmitry Krikunov:** Landclass night textures and 3D lights annotations
- **Matt Tomkins:** Landclass ground textures
- **Scott Armstrong:** Enhancement and correction of all FTX NCA airports and airfields, placement of scenery objects at all airports
- **Alex Goff:** Photoreal areas processing, including seasonal variations, night textures, and autogen placement; custom models for those areas. Seasonal variations of landclass ground textures
- **Ken Hall:** Seasonal variations of landclass ground textures; autogen annotation; landclass placement
- **Misha Cajic:** Seasonal variations of landclass ground textures; autogen annotation
- **Neil Hill:** Initial enhancements of all airports, airfields, and seaplane bases; landclass placement.
- **Chris Clack:** Further refinements of all airports, airfields, and seaplane bases, including scenery objects and AI ground movement
- **Tim Harris:** Custom Golden Gate and Oakland Bay bridges; custom hydro dam models; windfarm turbines; airport components in .kmz file
- **Martin Pahnev:** Six additional custom bridge models

Additional Orbx Developers

- **Orbx Team:** Orbxlibs objects

Specialist Roles

- **John Venema:** Business management
- **Ed Correia:** Production Management
- **Ben McClintock:** FTX Central and website

Beta Testing Team

Rob Abernathy, Tommy Bernes, John Dow, Friedi Gulder, Craig Hanley, Eberhard Haberkorn, Gordon Madison, Vlad Maly, Phil Manhart, Rob Newman, Martin Reiffer, Wolter van der Spoel, Frank Schnibben, Keith Talbot, Jane Whittaker

End User License Agreement (EULA)

For the most recent version of the EULA, see orbxdirect.com/eula.

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